

NASA SP-7039 (44)  
January 1994

# NASA PATENT ABSTRACTS BIBLIOGRAPHY

A CONTINUING BIBLIOGRAPHY  
SECTION 2 INDEXES

(NASA-SP-7039(44)-Sect-2) NASA  
PATENT ABSTRACTS BIBLIOGRAPHY: A  
CONTINUING BIBLIOGRAPHY. SECTION 2:  
INDEXES (SUPPLEMENT 44) (NASA)  
617 p

N94-23712

Unclass

00/82 0204387

## ACCESSION NUMBER RANGES

<i>Bibliography Number</i>	<i>STAR Accession Numbers</i>
NASA SP-7039 (04) SEC 1	N69-20701 - N73-33931
NASA SP-7039 (12) SEC 1	N74-10001 - N77-34042
NASA SP-7039 (13) SEC 1	N78-10001 - N78-22018
NASA SP-7039 (14) SEC 1	N78-22019 - N78-34034
NASA SP-7039 (15) SEC 1	N79-10001 - N79-21993
NASA SP-7039 (16) SEC 1	N79-21994 - N79-34158
NASA SP-7039 (17) SEC 1	N80-10001 - N80-22254
NASA SP-7039 (18) SEC 1	N80-22255 - N80-34339
NASA SP-7039 (19) SEC 1	N81-10001 - N81-21997
NASA SP-7039 (20) SEC 1	N81-21998 - N81-34139
NASA SP-7039 (21) SEC 1	N82-10001 - N82-22140
NASA SP-7039 (22) SEC 1	N82-22141 - N82-34341
NASA SP-7039 (23) SEC 1	N83-10001 - N83-23266
NASA SP-7039 (24) SEC 1	N83-23267 - N83-37053
NASA SP-7039 (25) SEC 1	N84-10001 - N84-22526
NASA SP-7039 (26) SEC 1	N84-22527 - N84-35284
NASA SP-7039 (27) SEC 1	N85-10001 - N85-22341
NASA SP-7039 (28) SEC 1	N85-22342 - N85-36162
NASA SP-7039 (29) SEC 1	N86-10001 - N86-22536
NASA SP-7039 (30) SEC 1	N86-22537 - N86-33262
NASA SP-7039 (31) SEC 1	N87-10001 - N87-20170
NASA SP-7039 (32) SEC 1	N87-20171 - N87-30248
NASA SP-7039 (33) SEC 1	N88-10001 - N88-20253
NASA SP-7039 (34) SEC 1	N88-20254 - N88-30583
NASA SP-7039 (35) SEC 1	N89-10001 - N89-20085
NASA SP-7039 (36) SEC 1	N89-20086 - N89-30155
NASA SP-7039 (37) SEC 1	N90-10001 - N90-20043
NASA SP-7039 (38) SEC 1	N90-20044 - N90-30170
NASA SP-7039 (39) SEC 1	N91-10001 - N91-21058
NASA SP-7039 (40) SEC 1	N91-21059 - N91-33053
NASA SP-7039 (41) SEC 1	N92-10001 - N92-22095
NASA SP-7039 (42) SEC 1	N92-22096 - N92-34247
NASA SP-7039 (43) SEC 1	N93-10001 - N93-19958
NASA SP-7039 (44) SEC 1	N93-19959 - N93-32425



NASA SP- 7039 (44)  
January 1994

# **NASA PATENT ABSTRACTS BIBLIOGRAPHY**

A CONTINUING BIBLIOGRAPHY  
SECTION 2 INDEXES

This publication was prepared by the NASA Center for AeroSpace Information, 800 Elkridge Landing Road, Linthicum Heights, MD 21090-2934, (301) 621-0390.



# INTRODUCTION

Several thousand inventions result each year from the aeronautical and space research supported by the National Aeronautics and Space Administration. The inventions having important use in government programs or significant commercial potential are usually patented by NASA. These inventions cover practically all fields of technology and include many that have useful and valuable commercial application.

NASA inventions best serve the interests of the United States when their benefits are available to the public. In many instances, the granting of nonexclusive or exclusive licenses for the practice of these inventions may assist in the accomplishment of this objective. This bibliography is published as a service to companies, firms, and individuals seeking new, licensable products for the commercial market.

The *NASA Patent Abstracts Bibliography (NASA PAB)* is a semiannual NASA publication containing comprehensive abstracts and indexes of NASA-owned inventions covered by U.S. patents and applications for patent. The citations included in *NASA PAB* were originally published in NASA's *Scientific and Technical Aerospace Reports (STAR)* and cover *STAR* announcements made since May 1969.

For the convenience of the user, each issue of *NASA PAB* has a separately bound Abstract Section (Section 1) and Index Section (Section 2). Although each Abstract Section covers only the indicated six-month period, the Index Section is cumulative covering all NASA-owned inventions announced in *STAR* since 1969. Thus a complete set of *NASA PAB* would consist of the Abstract Sections of Issue 04 (January 1974) and Issue 12 (January 1978) and the Abstract Section for all subsequent issues and the Index Section for the most recent issue.

The 131 citations published in this issue of the Abstract Section cover the period July 1993 through December 1993. The Index Section references over 5500 citations covering the period May 1969 through December 1993.

## ABSTRACT SECTION (SECTION 1)

This *PAB* issue includes 10 major subject divisions separated into 76 specific categories and one general category/division. (See Table of Contents for the scope note of each category, under which are grouped appropriate NASA inventions.) This scheme was devised in 1975 and revised in 1987 in lieu of the 34 category divisions which were utilized in *PAB* supplements (01) through (06) covering *STAR* abstracts from May 1969 through January 1974. Each entry in the Abstract Section consists of a *STAR* citation accompanied by an abstract and, when appropriate, a key illustration taken from the patent or application for patent. Entries are arranged by subject category in order of the ascending NASA Accession Number originally assigned for *STAR* to the invention. The range of NASA Accession Numbers within each issue is printed on the inside front cover.

*Abstract Citation Data Elements:* Each of the abstract citations has several data elements useful for identification and indexing purposes, as follows:

- NASA Accession Number
- NASA Case Number
- Inventor's Name
- Title of Invention
- U.S. Patent Application Serial Number
- U.S. Patent Number (for issued patents only)
- U.S. Patent Office Classification Number(s)  
(for issued patents only)

These data elements are identified in the Typical Citation and Abstract and in the indexes.

## INDEX SECTION (SECTION 2)

The Index Section is divided into five indexes. These indexes are cross-indexed and are used to locate a single invention or groups of inventions.

**Subject Index:** Lists all inventions according to appropriate alphabetized technical term and indicates the related NASA Case Number, the Subject Category Number, and the Accession Number.

**Inventor Index:** Lists all inventions according to alphabetized names of inventors and indicates the related NASA Case Number, the Subject Category Number, and the Accession Number.

**Source Index:** Lists all inventions according to alphabetized source of invention (i.e., name of contractor or government installation where invention was made) and indicates the related NASA Case Number, the Subject Category Number, and the Accession Number.

**Number Index:** Lists inventions in order of ascending (1) NASA Case Number, (2) U.S. Patent Application Serial number, (3) U.S. Patent Classification Number, and (4) U.S. Patent Number and indicates the related Subject Category Number and the Accession Number.

**Accession Number Index:** Lists all inventions in order of ascending Accession Number and indicates the related Subject Category Number, the NASA Case Number, the U.S. Patent Application Serial Number, the U.S. Patent Classification Number, and the U.S. Patent Number.

## HOW TO USE THIS PUBLICATION TO IDENTIFY NASA INVENTIONS

To identify one or more NASA inventions within a specific technical field or subject, several techniques are possible with the flexibility incorporated into the *NASA PAB*.

(1) *Using Subject Category:* To identify all NASA inventions in any one of the subject categories in this issue of *NASA PAB*, select the desired Subject Category in the Abstract Section (Section 1) and find the inventions abstracted thereunder.

(2) *Using Subject Index:* To identify all NASA inventions listed under a desired technical subject index term, (A) turn to the cumulative Subject Index in the Index Section and find the invention(s) listed under the desired technical subject term. (B) Note the indicated Accession Number and the Subject Category Number. (C) Using the indicated Accession Number, turn to the inside front cover of the Index Section to determine which issue of the Abstract Section includes the Accession Number desired. (D) To find the abstract of the particular invention in the issue of the Abstract Section selected, (1) use the Subject Category Number to locate the Subject Category and (2) use the Accession Number to locate the desired invention within the Subject Category listing.

(3) *Using Patent Classification Index:* To identify all inventions covered by issued NASA patents (not including applications for patent) within a desired Patent Classification, (A) turn to the Patent Classification Number in the Number Index of Section 2 and find the associated invention(s), and (B) follow the instructions outlined in (2)(B), and (D) above.



# TYPICAL CITATION AND ABSTRACT

NASA SPONSORED

ON MICROFICHE

ACCESSION NUMBER → N93-30416\*# National Aeronautics and Space Administration. ← CORPORATE SOURCE  
Pasadena Office, CA.

TITLE → VIRTUAL REALITY FLIGHT CONTROL DISPLAY WITH SIX-  
DEGREE-OF-FREEDOM CONTROLLER AND SPHERICAL  
ORIENTATION OVERLAY Patent Application

INVENTOR → BRIAN C. BECKMAN, inventor (to NASA) (Jet Propulsion Lab.,  
California Inst. of Tech., Pasadena.) 23 Apr. 1993 31 p  
(Contract NAS7-918)

CONTRACT NUMBER →

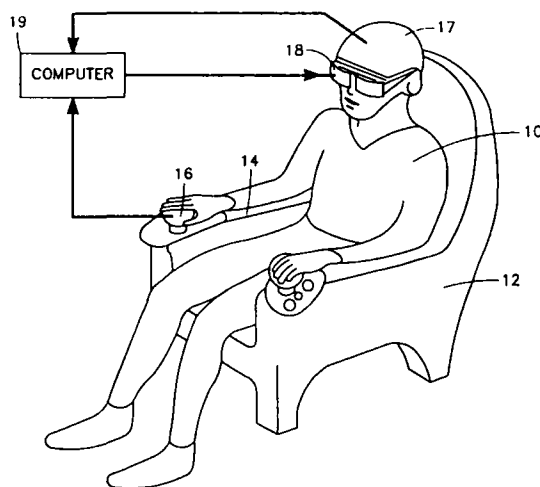
NASA CASE NUMBER AND → (NASA-CASE-NPO-18733-1-CU; NAS 1.71:NPO-18733-1-CU; US-  
US PATENT APPLICATION SERIAL NUMBER PATENT-APPL-SN-056503) Avail: CASI HC A03/MF A01

← AVAILABILITY SOURCE

A virtual reality flight control system displays to the pilot the image of a scene surrounding a vehicle or pod having six degrees of freedom of acceleration or velocity control by the pilot and traveling through inertial space, the image itself including a superimposed figure providing the pilot an instant reference of orientation consisting of superimposed sets of geometric figures whose relative orientations provide the pilot an instantaneous feel or sense of orientation changes with respect to some fixed coordinate system. They include a first set of geometric figures whose orientations are fixed to the pilot's vehicle and a second set of geometric figures whose orientations are fixed with respect to a fixed or interstellar coordinate system. The first set of figures is a first set of orthogonal great circles about the three orthogonal axes of the flight vehicle or pod and centered at and surrounding the pilot's head, while the second set of figures is a second set of orthogonal great circles about the three orthogonal axes of a fixed or interstellar coordinate system, also centered at and surrounding the pilot's head.

← ABSTRACT

NASA



← KEY ILLUSTRATION

# Subject Categories

(1969-1973)

## 01 Aerodynamics

Includes aerodynamics of bodies, combinations, internal flow in ducts and turbomachinery; wings, rotors, and control surfaces. For applications see: 02 Aircraft; and 32 Space Vehicles. For related information see also: 12 Fluid Mechanics; and 33 Thermodynamics and Combustion.

## 02 Aircraft

Includes fixed-wing airplanes, helicopters, gliders, balloons, ornithopters, etc.; and specific types of complete aircraft; e.g., ground effect machines, STOL, and VTOL; flight tests; operating problems; e.g., sonic boom; safety and safety devices; economics; and stability and control. For basic research see: 01 Aerodynamics. For related information see also: 31 Space Vehicles; and 32 Structural Mechanics.

## 03 Auxiliary Systems

Includes fuel cells, energy conversion cells, and solar cells; auxiliary gas turbines; hydraulic, pneumatic and electrical systems; actuators; and inverters. For related information see also: 09 Electronic Equipment; 22 Nuclear Engineering; and 28 Propulsion Systems.

## 04 Biosciences

Includes aerospace medicine, exobiology, radiation effects on biological systems; physiological and psychological factors. For related information see also: 05 Biotechnology.

## 05 Biotechnology

Includes life support systems, human engineering; protective clothing and equipment; crew training and evaluation, and piloting. For related information see also: 04 Biosciences.

## 06 Chemistry

Includes chemical analysis and identification; e.g., spectroscopy. For applications see: 17 Materials, Metallic; 18 Materials, Nonmetallic; and 27 Propellants.

## 07 Communications

Includes communications equipment and techniques; noise; radio and communications blackout; modulation telemetry; tracking radar and optical observation; and wave propagation. For basic research see: 23 Physics, General; and 21 Navigation.

## 08 Computers

Includes computer operation and programming; and data processing. For applications, see specific categories. For related information see also: 19 Mathematics.

## 09 Electronic Equipment

Includes electronic test equipment and maintainability; component parts; e.g., electron tubes, tunnel diodes, transistors, integrated circuitry; microminiaturization. For basic research see: 10 Electronics. For related information see also: 07 Communications; and 21 Navigation.

## 10 Electronics

Includes circuit theory; and feedback and control theory. For applications see: 09 Electronic Equipment. For related information see specific Physics categories.

## 11 Facilities, Research and Support

Includes airports; lunar and planetary bases including associated vehicles; ground support systems; related logistics; simulators; test facilities; e.g., rocket engine test stands, shock tubes, and wind tunnels; test ranges; and tracking stations.

## 12 Fluid Mechanics

Includes boundary-layer flow; compressible flow; gas dynamics; hydrodynamics; and turbulence. For related information see also: 01 Aerodynamics; and 33 Thermodynamics and Combustion.

## 13 Geophysics

Includes aeronomy; upper and lower atmosphere studies; oceanography; cartography; and geodesy. For related information see also: 20 Meteorology; 29 Space Radiation; and 30 Space Sciences.

## 14 Instrumentation and Photography

Includes design, installation, and testing of instrumentation systems; gyroscopes; measuring instruments and gauges; recorders, transducers; aerial photography; and telescopes and cameras.

## 15 Machine Elements and Processes

Includes bearings, seals, pumps, and other mechanical equipment; lubrication, friction, and wear; manufacturing processes and quality control; reliability; drafting; and materials fabrication, handling, and inspection.

## 16 Masers

Includes applications of masers and lasers. For basic research see: 26 Physics, Solid-State.

## 17 Materials, Metallic

Includes cermets; corrosion; physical and mechanical properties of materials; metallurgy; and applications as structural materials. For basic research see: 06 Chemistry. For related information see also: 18 Materials, Nonmetallic; and 32 Structural Mechanics.

## 18 Materials, Nonmetallic

Includes corrosion; physical and mechanical properties of materials; e.g., plastics; and elastomers, hydraulic fluids, etc. For basic research see: 06 Chemistry. For related information see also: 17 Materials, Metallic; 27 Propellants; and 32 Structural Mechanics.



**19 Mathematics**

Includes calculation methods and theory; and numerical analysis. For applications see specific categories. For related information see also: 08 Computers.

**20 Meteorology**

Includes climatology; weather forecasting; and visibility studies. For related information see also: 13 Geophysics; and 30 Space Sciences.

**21 Navigation**

Includes guidance; autopilots; star and planet tracking; inertial platforms; and air traffic control. For related information see also: 07 Communications.

**22 Nuclear Engineering**

Includes nuclear reactors and nuclear heat sources used for propulsion and auxiliary power. For basic research see: 24 Physics, Atomic, Molecular, and Nuclear. For related information see also: 03 Auxiliary Systems; and 28 Propulsion Systems.

**23 Physics, General**

Includes acoustics, cryogenics, mechanics, and optics. For astrophysics see: 30 Space Sciences. For geophysics and related information see also: 13 Geophysics; 20 Meteorology; and 29 Space Radiation.

**24 Physics, Atomic, Molecular, and Nuclear**

Includes atomic, molecular and nuclear physics. For applications see: 22 Nuclear Engineering. For related information see also: 29 Space Radiation.

**25 Physics, Plasma**

Includes magnetohydrodynamics. For applications see: 28 Propulsion Systems.

**26 Physics, Solid-State**

Includes semiconductor theory; and superconductivity. For applications see: 16 Masers. For related information see also: 10 Electronics.

**27 Propellants**

Includes fuels; igniters; and oxidizers. For basic research see: 06 Chemistry; and 33 Thermodynamics and Combustion. For related information see also: 28 Propulsion Systems.

**28 Propulsion Systems**

Includes air breathing, electric, liquid, solid, and magnetohydrodynamic propulsion. For nuclear propulsion see: 22 Nuclear Engineering. For basic research see: 23 Physics, General; and 33 Thermodynamics and Combustion. For applications see: 31 Space Vehicles. For related information see also: 27 Propellants.

**29 Space Radiation**

Includes cosmic radiation; solar flares; solar radiation; and Van Allen radiation belts. For related information see also: 13 Geophysics; and 24 Physics, Atomic, Molecular, and Nuclear.

**30 Space Sciences**

Includes astronomy and astrophysics; cosmology; lunar and planetary flight and exploration; and theoretical analysis of orbits and trajectories. For related information see also: 11 Facilities, Research and Support; and 31 Space Vehicles.

**31 Space Vehicles**

*Includes launch vehicles; manned space capsules; clustered and multistage rockets; satellites; sounding rockets and probes; and operating problems.* For basic research see: 30 Space Sciences. For related information see also: 28 Propulsion Systems; and 32 Structural Mechanics.

**32 Structural Mechanics**

Includes structural element design and weight analysis; fatigue; thermal stress; impact phenomena; vibration; flutter; inflatable structures; and structural tests. For related information see also: 17 Materials, Metallic; and 18 Materials, Nonmetallic.

**33 Thermodynamics and Combustion**

Includes ablation, cooling, heating, heat transfer, thermal balance, and other thermal effects; and combustion theory. For related information see also: 12 Fluid Mechanics; and 27 Propellants.

**34 General**

Includes information of a broad nature related to industrial applications and technology, and to basic research; defense aspects; information retrieval; management; law and related legal matters; and legislative hearings and documents.

# TABLE OF CONTENTS

Revised Subject Categories  
(Includes 1974 and 1987 revisions)

**AERONAUTICS** For related information see also *Astronautics*.

## **01 AERONAUTICS (GENERAL)**

### **02 AERODYNAMICS**

Includes aerodynamics of bodies, combinations, wings, rotors, and control surfaces; and internal flow in ducts and turbomachinery. For related information see also *34 Fluid Mechanics and Heat Transfer*.

### **03 AIR TRANSPORTATION AND SAFETY**

Includes passenger and cargo air transport operations; and aircraft accidents. For related information see also *16 Space Transportation* and *85 Urban Technology and Transportation*.

### **04 AIRCRAFT COMMUNICATIONS AND NAVIGATION**

Includes digital and voice communication with aircraft; air navigation systems (satellite and ground based); and air traffic control. For related information see also *17 Space Communications, Spacecraft Communications, Command and Tracking* and *32 Communications and Radar*.

### **05 AIRCRAFT DESIGN, TESTING AND PERFORMANCE**

Includes aircraft simulation technology. For related information see also *18 Spacecraft Design, Testing and Performance* and *39 Structural Mechanics*. For land transportation vehicles see *85 Urban Technology and Transportation*.

### **06 AIRCRAFT INSTRUMENTATION**

Includes cockpit and cabin display devices; and flight instruments. For related information see also *19 Spacecraft Instrumentation* and *35 Instrumentation and Photography*.

### **07 AIRCRAFT PROPULSION AND POWER**

Includes prime propulsion systems and systems components, e.g., gas turbine engines and compressors; and onboard auxiliary power plants for aircraft. For related information see also *20 Spacecraft Propulsion and Power*, *28 Propellants and Fuels*, and *44 Energy Production and Conversion*.

### **08 AIRCRAFT STABILITY AND CONTROL**

Includes aircraft handling qualities; piloting; flight controls; and autopilots. For related information see also *05 Aircraft Design, Testing and Performance*.

### **09 RESEARCH AND SUPPORT FACILITIES (AIR)**

Includes airports, hangars and runways; aircraft repair and overhaul facilities; wind tunnels; shock tubes; and aircraft engine test stands. For related information see also *14 Ground Support Systems and Facilities (Space)*.

**ASTRONAUTICS** For related information see also *Aeronautics*.

## **12 ASTRONAUTICS (GENERAL)**

For extraterrestrial exploration see *91 Lunar and Planetary Exploration*.

### **13 ASTRODYNAMICS**

Includes powered and free-flight trajectories; and orbital and launching dynamics.

### **14 GROUND SUPPORT SYSTEMS AND FACILITIES (SPACE)**

Includes launch complexes, research and production facilities; ground support equipment, e.g., mobile transporters; and simulators. For related information see also *09 Research and Support Facilities (Air)*.

### **15 LAUNCH VEHICLES AND SPACE VEHICLES**

Includes boosters; operating problems of launch/space vehicle systems; and reusable vehicles. For related information see also *20 Spacecraft Propulsion and Power*.

### **16 SPACE TRANSPORTATION**

Includes passenger and cargo space transportation, e.g., shuttle operations; and space rescue techniques. For related information see also *03 Air Transportation and Safety* and *18 Spacecraft Design, Testing and Performance*. For space suits see *54 Man/System Technology and Life Support*.

### **17 SPACE COMMUNICATIONS, SPACECRAFT COMMUNICATIONS, COMMAND AND TRACKING**

Includes telemetry, space communications networks; astronavigation and guidance; and radio blackout. For related information see also *04 Aircraft Communications and Navigation* and *32 Communications and Radar*.



## **18 SPACECRAFT DESIGN, TESTING AND PERFORMANCE**

Includes satellites; space platforms; space stations; spacecraft systems and components such as thermal and environmental controls; and attitude controls. For life support systems see *54 Man/System Technology and Life Support*. For related information see also *05 Aircraft Design, Testing and Performance*, *39 Structural Mechanics*, and *16 Space Transportation*.

## **19 SPACECRAFT INSTRUMENTATION**

For related information see also *06 Aircraft Instrumentation* and *35 Instrumentation and Photography*.

## **20 SPACECRAFT PROPULSION AND POWER**

Includes main propulsion systems and components, e.g., rocket engines; and spacecraft auxiliary power sources. For related information see also *07 Aircraft Propulsion and Power*, *28 Propellants and Fuels*, *44 Energy Production and Conversion*, and *15 Launch Vehicles and Space Vehicles*.

# **CHEMISTRY AND MATERIALS**

## **23 CHEMISTRY AND MATERIALS (GENERAL)**

### **24 COMPOSITE MATERIALS**

Includes physical, chemical, and mechanical properties of laminates and other composite materials. For ceramic materials see *27 Nonmetallic Materials*.

### **25 INORGANIC AND PHYSICAL CHEMISTRY**

Includes chemical analysis, e.g., chromatography; combustion theory; electrochemistry; and photochemistry. For related information see also *77 Thermodynamics and Statistical Physics*.

### **26 METALLIC MATERIALS**

Includes physical, chemical, and mechanical properties of metals, e.g., corrosion; and metallurgy.

### **27 NONMETALLIC MATERIALS**

Includes physical, chemical, and mechanical properties of plastics, elastomers, lubricants, polymers, textiles, adhesives, and ceramic materials. For composite materials see *24 Composite Materials*.

### **28 PROPELLANTS AND FUELS**

Includes rocket propellants, igniters and oxidizers; their storage and handling procedures; and aircraft fuels. For related information see also *07 Aircraft Propulsion and Power*, *20 Spacecraft Propulsion and Power*, and *44 Energy Production and Conversion*.

### **29 MATERIALS PROCESSING**

Includes space-based development of products and processes for commercial application. For biological materials see *55 Space Biology*.

# **ENGINEERING**

For related information see also *Physics*.

## **31 ENGINEERING (GENERAL)**

Includes vacuum technology; control engineering; display engineering; cryogenics; and fire prevention.

## **32 COMMUNICATIONS AND RADAR**

Includes radar; land and global communications; communications theory; and optical communications. For related information see also *04 Aircraft Communications and Navigation* and *17 Space Communications, Spacecraft Communications, Command and Tracking*. For search and rescue see *03 Air Transportation and Safety* and *16 Space Transportation*.

## **33 ELECTRONICS AND ELECTRICAL ENGINEERING**

Includes test equipment and maintainability; components, e.g., tunnel diodes and transistors; microminiaturization; and integrated circuitry. For related information see also *60 Computer Operations and Hardware* and *76 Solid-State Physics*.

## **34 FLUID MECHANICS AND HEAT TRANSFER**

Includes boundary layers; hydrodynamics; fluidics; mass transfer and ablation cooling. For related information see also *02 Aerodynamics* and *77 Thermodynamics and Statistical Physics*.

## **35 INSTRUMENTATION AND PHOTOGRAPHY**

Includes remote sensors; measuring instruments and gauges; detectors; cameras and photographic supplies; and holography. For aerial photography see *43 Earth Resources and Remote Sensing*. For related information see also *06 Aircraft Instrumentation* and *19 Spacecraft Instrumentation*.

## **36 LASERS AND MASERS**

Includes parametric amplifiers. For related information see also *76 Solid-State Physics*.

### **37 MECHANICAL ENGINEERING**

Includes auxiliary systems (nonpower); machine elements and processes; and mechanical equipment.

### **38 QUALITY ASSURANCE AND RELIABILITY**

Includes product sampling procedures and techniques; and quality control.

### **39 STRUCTURAL MECHANICS**

Includes structural element design and weight analysis; fatigue; and thermal stress. For applications see *05 Aircraft Design, Testing and Performance* and *18 Spacecraft Design, Testing and Performance*.

## **GEOSCIENCES**

For related information see also *Space Sciences*.

### **42 GEOSCIENCES (GENERAL)**

### **43 EARTH RESOURCES AND REMOTE SENSING**

Includes remote sensing of earth resources by aircraft and spacecraft; photogrammetry; and aerial photography. For instrumentation see *35 Instrumentation and Photography*.

### **44 ENERGY PRODUCTION AND CONVERSION**

Includes specific energy conversion systems, e.g., fuel cells; global sources of energy; geophysical conversion; and windpower. For related information see also *07 Aircraft Propulsion and Power*, *20 Spacecraft Propulsion and Power*, and *28 Propellants and Fuels*.

### **45 ENVIRONMENT POLLUTION**

Includes atmospheric, noise, thermal, and water pollution.

### **46 GEOPHYSICS**

Includes aeronomy; upper and lower atmosphere studies; ionospheric and magnetospheric physics; and geomagnetism. For space radiation see *93 Space Radiation*.

### **47 METEOROLOGY AND CLIMATOLOGY**

Includes weather forecasting and modification.

### **48 OCEANOGRAPHY**

Includes biological, dynamic, and physical oceanography; and marine resources. For related information see also *43 Earth Resources and Remote Sensing*.

## **LIFE SCIENCES**

### **51 LIFE SCIENCES (GENERAL)**

### **52 AEROSPACE MEDICINE**

Includes physiological factors; biological effects of radiation; and effects of weightlessness on man and animals.

### **53 BEHAVIORAL SCIENCES**

Includes psychological factors; individual and group behavior; crew training and evaluation; and psychiatric research.

### **54 MAN/SYSTEM TECHNOLOGY AND LIFE SUPPORT**

Includes human engineering; biotechnology; and space suits and protective clothing. For related information see also *16 Space Transportation*.

### **55 SPACE BIOLOGY**

Includes exobiology; planetary biology; and extraterrestrial life.

## **MATHEMATICAL AND COMPUTER SCIENCES**

### **59 MATHEMATICAL AND COMPUTER SCIENCES (GENERAL)**

### **60 COMPUTER OPERATIONS AND HARDWARE**

Includes hardware for computer graphics, firmware, and data processing. For components see *33 Electronics and Electrical Engineering*.

### **61 COMPUTER PROGRAMMING AND SOFTWARE**

Includes computer programs, routines, algorithms, and specific applications, e.g., CAD/CAM.

### **62 COMPUTER SYSTEMS**

Includes computer networks and special application computer systems.

**63 CYBERNETICS**

Includes feedback and control theory, artificial intelligence, robotics and expert systems. For related information see also *54 Man/System Technology and Life Support*.

**64 NUMERICAL ANALYSIS**

Includes iteration, difference equations, and numerical approximation.

**65 STATISTICS AND PROBABILITY**

Includes data sampling and smoothing; Monte Carlo method; and stochastic processes.

**66 SYSTEMS ANALYSIS**

Includes mathematical modeling; network analysis; and operations research.

**67 THEORETICAL MATHEMATICS**

Includes topology and number theory.

**PHYSICS** For related information see also *Engineering*.**70 PHYSICS (GENERAL)**

For precision time and time interval (PTTI) see *35 Instrumentation and Photography*; for geophysics, astrophysics or solar physics see *46 Geophysics*, *90 Astrophysics*, or *92 Solar Physics*.

**71 ACOUSTICS**

Includes sound generation, transmission, and attenuation. For noise pollution see *45 Environment Pollution*.

**72 ATOMIC AND MOLECULAR PHYSICS**

Includes atomic structure, electron properties, and molecular spectra.

**73 NUCLEAR AND HIGH-ENERGY PHYSICS**

Includes elementary and nuclear particles; and reactor theory. For space radiation see *93 Space Radiation*.

**74 OPTICS**

Includes light phenomena and optical devices. For lasers see *36 Lasers and Masers*.

**75 PLASMA PHYSICS**

Includes magnetohydrodynamics and plasma fusion. For ionospheric plasmas see *46 Geophysics*. For space plasmas see *90 Astrophysics*.

**76 SOLID-STATE PHYSICS**

Includes superconductivity. For related information see also *33 Electronics and Electrical Engineering* and *36 Lasers and Masers*.

**77 THERMODYNAMICS AND STATISTICAL PHYSICS**

Includes quantum mechanics; theoretical physics; and Bose and Fermi statistics. For related information see also *25 Inorganic and Physical Chemistry* and *34 Fluid Mechanics and Heat Transfer*.

**SOCIAL SCIENCES****80 SOCIAL SCIENCES (GENERAL)**

Includes educational matters.

**81 ADMINISTRATION AND MANAGEMENT**

Includes management planning and research.

**82 DOCUMENTATION AND INFORMATION SCIENCE**

Includes information management; information storage and retrieval technology; technical writing; graphic arts; and micrography. For computer documentation see *61 Computer Programming and Software*.

**83 ECONOMICS AND COST ANALYSIS**

Includes cost effectiveness studies.

**84 LAW, POLITICAL SCIENCE AND SPACE POLICY**

Includes NASA appropriation hearings; aviation law; space law and policy; international law; international cooperation; and patent policy.

**85 URBAN TECHNOLOGY AND TRANSPORTATION**

Includes applications of space technology to urban problems; technology transfer; technology assessment; and surface and mass transportation. For related information see *03 Air Transportation and Safety*, *16 Space Transportation*, and *44 Energy Production and Conversion*.

**SPACE SCIENCES** For related information see also *Geosciences*.

**88 SPACE SCIENCES (GENERAL)**

**89 ASTRONOMY**

Includes radio, gamma-ray, and infrared astronomy; and astrometry.

**90 ASTROPHYSICS**

Includes cosmology; celestial mechanics; space plasmas; and interstellar and interplanetary gases and dust. For related information see also *75 Plasma Physics*.

**91 LUNAR AND PLANETARY EXPLORATION**

Includes planetology; and manned and unmanned flights. For spacecraft design or space stations see *18 Spacecraft Design, Testing and Performance*.

**92 SOLAR PHYSIC**

Includes solar activity, solar flares, solar radiation and sunspots. For related information see *93 Space Radiation*.

**93 SPACE RADIATION**

Includes cosmic radiation; and inner and outer earth's radiation belts. For biological effects of radiation see *52 Aerospace Medicine*. For theory see *73 Nuclear and High-Energy Physics*.

**GENERAL**

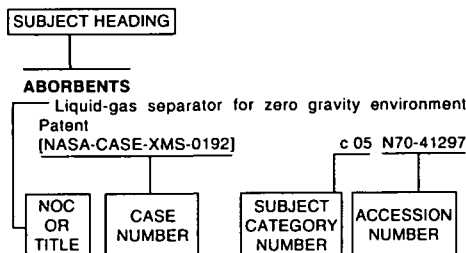
Includes aeronautical, astronautical, and space science related histories, biographies, and pertinent reports too broad for categorization; histories or broad overviews of NASA programs.

**99 GENERAL**

**Section 2 • Indexes**

<b>SUBJECT INDEX .....</b>	<b>A-1</b>
<b>INVENTOR INDEX .....</b>	<b>B-1</b>
<b>SOURCE INDEX .....</b>	<b>C-1</b>
<b>CONTRACT NUMBER INDEX .....</b>	<b>D-1</b>
<b>NUMBER INDEX .....</b>	<b>E-1</b>
<b>ACCESSION NUMBER INDEX .....</b>	<b>F-1</b>

### Typical Subject Index Listing



The subject heading is a key to the subject content of the document. A brief description of the document, e.g., title, title plus a title extension, or notation of content (NOC), is included for each subject entry to indicate the subject heading context; these descriptions are arranged under each subject heading in ascending accession number order. The case number serves as the prime access number to the patent documents. The subject category number indicates the category in Section 1 (Abstracts) in which the patent citation and abstract are located. The accession number denotes the number by which the citation is identified within the subject category.

## A

### ABERRATION

- High speed multi focal plane optical system  
[NASA-CASE-GSC-12683-1] c 74 N83-36898
- Control system for ruling blazed, aberration corrected diffraction gratings  
[NASA-CASE-GSC-13240-1] c 35 N92-10186
- Aberration correction of unstable resonators  
[NASA-CASE-NPO-18662-1-CU] c 74 N93-28428

### ABILITIES

- Kinesimetric method and apparatus  
[NASA-CASE-MSC-18929-1] c 39 N83-20280

### ABLATION

- Transpirationally cooled heat ablation system Patent  
[NASA-CASE-XMS-02677] c 31 N70-42075
- Hypersonic test facility Patent  
[NASA-CASE-XLA-00378] c 11 N71-15925
- Hypersonic test facility Patent  
[NASA-CASE-XLA-05378] c 11 N71-21475
- Ablation sensor Patent  
[NASA-CASE-XLA-01794] c 33 N71-21586
- Ablation sensor Patent  
[NASA-CASE-XLA-01791] c 14 N71-22991
- Ablative system  
[NASA-CASE-LEW-10359] c 33 N72-25911
- Altitude compensating ablative stiffening band for rocket motor nozzles  
[NASA-CASE-MFS-28728-1] c 20 N93-28950
- Ablative shielding for hypervelocity projectiles  
[NASA-CASE-MSC-21884-1] c 27 N93-29088

### ABLATIVE MATERIALS

- Method for making a heat insulating and ablative structure  
[NASA-CASE-XMS-01108] c 15 N69-24322
- Ablation sensor  
[NASA-CASE-XLA-01781] c 14 N69-39975
- Method for molding compounds Patent  
[NASA-CASE-XLA-01091] c 15 N71-10672

- Ablative resin Patent  
[NASA-CASE-XLE-05913] c 33 N71-14032
- Ablation structures Patent  
[NASA-CASE-XMS-01816] c 33 N71-15623
- Method and apparatus for making a heat insulating and ablative structure Patent  
[NASA-CASE-XMS-02009] c 33 N71-20834
- Thermal protection ablation spray system Patent  
[NASA-CASE-XLA-04251] c 18 N71-26100
- Stand-off type ablative heat shield  
[NASA-CASE-MSC-12143-1] c 33 N72-17947
- Ablative system  
[NASA-CASE-LEW-10359] c 33 N72-25911
- Ablative system  
[NASA-CASE-LEW-10359-2] c 33 N73-25952
- Ablation article and method  
[NASA-CASE-LAR-10439-1] c 33 N73-27796
- Dual measurement ablation sensor  
[NASA-CASE-LAR-10105-1] c 34 N74-15652
- Sprayable low density ablator and application process  
[NASA-CASE-MFS-23506-1] c 24 N78-24290
- Intumescent-ablator coatings using endothermic fillers  
[NASA-CASE-ARC-11043-1] c 24 N78-27180
- Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MFS-23626-1] c 24 N80-26388
- Controlled overspray spray nozzle  
[NASA-CASE-MFS-25139-1] c 34 N82-13376
- Sprayable lightweight ablative coating  
[NASA-CASE-MFS-28372-1] c 27 N92-16123
- ABORT APPARATUS**  
Coupling for linear shaped charge Patent  
[NASA-CASE-XLA-00189] c 33 N70-36846
- ABRASION**  
Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-3] c 37 N82-19540
- High temperature, flexible, fiber-preform seal  
[NASA-CASE-LEW-15085-1] c 37 N92-22043
- ABRASION RESISTANCE**  
Potassium silicate zinc coatings  
[NASA-CASE-GSC-10361-1] c 18 N72-23581
- Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polymethyl methacrylate lenses  
[NASA-CASE-ARC-11039-1] c 74 N78-32854
- Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c 37 N81-25371
- Heat sealable, flame and abrasion resistant coated fabric --- clothing and containers for space exploration  
[NASA-CASE-MSC-18382-1] c 27 N82-16238
- Heat sealable, flame and abrasion resistant coated fabric  
[NASA-CASE-MSC-18382-2] c 27 N84-14324
- Cryogenic anti-friction bearing with inner race  
[NASA-CASE-MFS-28384-1] c 37 N90-27112
- ABRASIVES**  
Method for machining holes in composite materials  
[NASA-CASE-MFS-28044-1] c 31 N87-25491
- ABSORBENTS**  
Liquid-gas separator for zero gravity environment Patent  
[NASA-CASE-XMS-01492] c 05 N70-41297
- Fluid flow control valve Patent  
[NASA-CASE-XLE-00703] c 15 N71-15967
- Noncontaminating swabs  
[NASA-CASE-MFS-18100] c 15 N72-11390
- Protein sterilization method of firefly luciferase using reduced pressure and molecular sieves  
[NASA-CASE-GSC-10225-1] c 06 N73-27086
- Oil and fat absorbing polymers  
[NASA-CASE-NPO-11609-2] c 27 N77-31308
- Absorbent product and articles made therefrom  
[NASA-CASE-MSC-18223-2] c 54 N84-11758
- ABSORBERS (EQUIPMENT)**  
Absorbent product to absorb fluids --- for collection of human wastes  
[NASA-CASE-MSC-18223-1] c 24 N82-29362
- Variable response load limiting device  
[NASA-CASE-LAR-12801-1] c 37 N88-23982
- ABSORBERS (MATERIALS)**  
Broadband choke for antenna structure  
[NASA-CASE-XMS-05303] c 07 N69-27462

- Analytical photoionization mass spectrometer with an argon gas filter between the light source and monochromator Patent  
[NASA-CASE-LAR-10180-1] c 06 N71-13461
- Filter system for control of outgas contamination in vacuum Patent  
[NASA-CASE-MFS-14711] c 15 N71-26185
- Constant temperature heat sink for calorimeters Patent  
[NASA-CASE-XMF-04208] c 33 N71-29051
- Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c 27 N77-30236
- Electromagnetic power absorber  
[NASA-CASE-NPO-13830-1] c 32 N80-14281
- Water-absorbing capacitor system for measuring relative humidity  
[NASA-CASE-NPO-16544-1-CU] c 35 N87-22953
- ABSORPTION**  
Differential optoacoustic absorption detector  
[NASA-CASE-NPO-13759-1] c 74 N78-17867
- Nebulization reflux concentrator  
[NASA-CASE-LAR-13254-1-CU] c 35 N86-29174
- ABSORPTION COOLING**  
Ten degree Kelvin hydride refrigerator  
[NASA-CASE-NPO-16393-1-CU] c 31 N87-21159
- ABSORPTION CROSS SECTIONS**  
Penetrating radiation system for detecting the amount of liquid in a tank Patent  
[NASA-CASE-MSC-12280] c 27 N71-16348
- ABSORPTION SPECTRA**  
Stark effect spectrophone for continuous absorption spectra monitoring --- a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c 25 N81-25159
- Method and apparatus for enhancing laser absorption sensitivity  
[NASA-CASE-NPO-16567-1-CU] c 36 N87-28006
- ABSORPTION SPECTROSCOPY**  
Digital control of diode laser for atmospheric spectroscopy  
[NASA-CASE-NPO-16000-1] c 36 N85-29264
- ABSORPTIVITY**  
Detector absorptivity measuring method and apparatus  
[NASA-CASE-LAR-10907-1] c 35 N76-29551
- Heat exchanger for electrothermal devices  
[NASA-CASE-LEW-14037-1] c 20 N87-16875
- Acoustophoresis method and apparatus  
[NASA-CASE-LAR-13388-1] c 25 N92-33611
- AC GENERATORS**  
Signal generator  
[NASA-CASE-XNP-05612] c 09 N69-21468
- Superconducting alternator  
[NASA-CASE-XLE-02824] c 03 N69-39890
- Superconducting alternator Patent  
[NASA-CASE-XLE-02823] c 09 N71-23443
- Electrical power generating system  
[NASA-CASE-MFS-25302-1] c 33 N83-28319
- Coupling an induction motor type generator to ac power lines --- making windmill generators compatible with public power lines  
[NASA-CASE-MFS-25302-2] c 33 N84-33660
- ACCELERATED LIFE TESTS**  
Predictive aging of polymers  
[NASA-CASE-NPO-17524-1-CU] c 27 N90-10261
- ACCELERATION**  
Single grid accelerator for an ion thruster  
[NASA-CASE-XLE-10453-2] c 28 N73-27699
- ACCELERATION (PHYSICS)**  
Centrifuge mounted motion simulator Patent  
[NASA-CASE-XAC-00399] c 11 N70-34815
- Gravity device Patent  
[NASA-CASE-XMF-00424] c 11 N70-38196
- Artificial gravity spin deployment system Patent  
[NASA-CASE-XNP-02595] c 31 N71-21881
- Active vibration isolator for flexible bodies Patent  
[NASA-CASE-LAR-10106-1] c 15 N71-27169
- Apparatus for applying simulator g-forces to an arm of an aircraft simulator pilot  
[NASA-CASE-LAR-10550-1] c 09 N74-30597
- G-load measuring and indicator apparatus  
[NASA-CASE-ARC-10806-1] c 35 N75-29381

## ACCELERATION PROTECTION

- Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c 54 N81-27806
- ACCELERATION PROTECTION**  
Universal pilot restraint suit and body support therefor  
Patent  
[NASA-CASE-XAC-00405] c 05 N70-41819  
G conditioning suit Patent  
[NASA-CASE-XLA-02898] c 05 N71-20268
- ACCELERATION STRESSES (PHYSIOLOGY)**  
Artificial gravity spin deployment system Patent  
[NASA-CASE-XNP-02595] c 31 N71-21881
- ACCELERATION TOLERANCE**  
Peak acceleration limiter for vibrational tester Patent  
[NASA-CASE-NPO-10556] c 14 N71-27185
- ACCELERATORS**  
Annular arc accelerator shock tube  
[NASA-CASE-NPO-13528-1] c 09 N77-10071  
Spring operated accelerator and constant force spring mechanism therefor  
[NASA-CASE-ARC-10898-1] c 35 N77-18417
- ACCELEROMETERS**  
Superconductive accelerometer Patent  
[NASA-CASE-XMF-01099] c 14 N71-15969  
Apparatus for controlling the velocity of an electromechanical drive for interferometers and the like  
Patent  
[NASA-CASE-XGS-03532] c 14 N71-17627  
Omnidirectional acceleration device Patent  
[NASA-CASE-HQN-10780] c 14 N71-30265  
Angular velocity and acceleration measuring apparatus  
[NASA-CASE-ERC-10292] c 14 N72-25410  
Temperature compensated digital inertial sensor --- circuit for maintaining inertial element of gyroscope or accelerometer at constant position  
[NASA-CASE-NPO-13044-1] c 35 N74-15094  
Accelerometer telemetry system  
[NASA-CASE-ARC-10849-1] c 17 N76-29347  
Smart accelerometer --- vibration damage detection  
[NASA-CASE-MS-21951-1] c 35 N92-23545  
Accelerometer method and apparatus for integral display and control functions  
[NASA-CASE-MS-21961-1] c 35 N92-29952  
Acceleration recorder and playback module  
[NASA-CASE-MS-22008-1] c 35 N93-17077
- ACCEPTABILITY**  
Cross correlation anomaly detection system  
[NASA-CASE-NPO-13283] c 38 N78-17395
- ACCEPTOR MATERIALS**  
III-V photocathode with nitrogen doping for increased quantum efficiency  
[NASA-CASE-NPO-12134-1] c 33 N76-31409
- ACCESS CONTROL**  
Computer access security code system  
[NASA-CASE-NPO-17525-1-CU] c 60 N90-25583
- ACCIDENT PREVENTION**  
CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c 06 N83-10040
- ACCOMMODATION**  
Visual accommodation trainer-tester  
[NASA-CASE-ARC-11426-1] c 09 N84-12193  
Visual accommodation trainer-tester  
[NASA-CASE-ARC-11426-2] c 52 N89-16256
- ACCUMULATORS**  
Direct radiation cooling of the collector of linear beam tubes  
[NASA-CASE-XNP-09227] c 15 N69-24319  
Small rocket engine Patent  
[NASA-CASE-XLE-00685] c 28 N70-41992  
Small plasma probe Patent  
[NASA-CASE-XLE-02578] c 25 N71-20747  
Electrostatic collector for charged particles  
[NASA-CASE-LEW-11192-1] c 09 N73-13208  
Accumulator  
[NASA-CASE-MFS-19287-1] c 34 N77-30399  
Method for fabricating solar cells having integrated collector grids  
[NASA-CASE-LEW-12819-2] c 44 N79-18444  
Urine collection device  
[NASA-CASE-MS-16433-1] c 52 N81-24711  
Urine collection apparatus --- feminine hygiene  
[NASA-CASE-MS-18381-1] c 52 N81-28740  
Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c 52 N81-29763  
Multistage depressed collector for dual mode operation --- for microwave transmitting tubes  
[NASA-CASE-LEW-13282-1] c 33 N82-24415  
Multistage spent particle collector and a method for making same  
[NASA-CASE-LEW-13914-1] c 37 N85-33489  
Digitized synchronous demodulator  
[NASA-CASE-GSC-13237-1] c 33 N91-14550  
Laser velocimeter for near-surface measurements  
[NASA-CASE-ARC-11917-1] c 35 N91-15520  
Nozzle diffuser for use with an open test section of a wind tunnel  
[NASA-CASE-LAR-14424-1-SB] c 09 N93-25996

## ACETALS

- Synthesis of polymeric schiff bases by reaction of acetals and amine compounds Patent  
[NASA-CASE-XMF-08652] c 06 N71-11243

## ACETATES

- Thermoplastic rubber comprising ethylene-vinyl acetate copolymer, asphalt and fluxing oil  
[NASA-CASE-NPO-08835-1] c 27 N78-33228

## ACETIC ACID

- N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14188-2] c 23 N91-14419

## ACETYL COMPOUNDS

- Phenoxy resins containing pendent ethynyl groups and cured resins obtained therefrom  
[NASA-CASE-LAR-13262-1] c 23 N85-28973

## ACETYLENE

- Dicyanoacetylene polymers Patent  
[NASA-CASE-XNP-03250] c 06 N71-23500  
Polyphenylquinoxalines containing pendant phenylethynyl and ethynyl groups --- for thermoplastic resins  
[NASA-CASE-LAR-12838-1] c 27 N83-34040  
Acetylene (ethynyl) terminated polyimide siloxane and process for preparation thereof  
[NASA-CASE-LAR-13318-1] c 27 N87-14516  
Ethynyl terminated ester oligomers and polymers therefrom  
[NASA-CASE-LAR-13118-2] c 27 N87-16907  
Acetylene terminated aspartimides and resins therefrom  
[NASA-CASE-LAR-14188-1] c 27 N90-23545  
N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14188-2] c 23 N91-14419

## ACIDS

- Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14489-1] c 37 N91-27562  
Polybenzimidazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14643-1] c 27 N92-29953

## ACOUSTIC ATTENUATION

- Ultrasonic calibration device --- for producing changes in acoustic attenuation and phase velocity  
[NASA-CASE-LAR-11435-1] c 35 N76-15432  
Acoustic guide for noise-transmission testing of aircraft  
[NASA-CASE-LAR-13111-1-CU] c 71 N87-21652  
Sound attenuation apparatus  
[NASA-CASE-LAR-13968-1] c 71 N91-27913  
Consecutive plate acoustic suppressor apparatus and methods  
[NASA-CASE-LEW-15430-1] c 71 N93-17051

## ACOUSTIC DUCTS

- Noise suppressor --- for turbofan engine by incorporating annular acoustically porous elements in exhaust and inlet ducts  
[NASA-CASE-LAR-11141-1] c 07 N74-32418

## ACOUSTIC EMISSION

- Acoustic emission frequency discrimination  
[NASA-CASE-MS-20467-1] c 35 N88-23966  
Impact tolerant material  
[NASA-CASE-LAR-12887-3] c 24 N90-21822  
Acoustic transducer apparatus with reduced thermal conduction  
[NASA-CASE-NPO-17620-1-CU] c 71 N91-14808  
Magnetic remanence method and apparatus to test materials for embrittlement  
[NASA-CASE-LAR-13817-4] c 39 N92-29101  
Magneto acoustic emission method for testing materials for embrittlement  
[NASA-CASE-LAR-13817-2] c 39 N92-29155  
High speed thin plate fatigue crack monitor  
[NASA-CASE-LAR-14816-1-SB] c 39 N93-19329

## ACOUSTIC EXCITATION

- Acoustic agglomeration methods and apparatus  
[NASA-CASE-NPO-15466-1] c 71 N85-22104  
A method and apparatus for indicating disbands in joint regions  
[NASA-CASE-LAR-14626-1] c 38 N92-17859

## ACOUSTIC IMPEDANCE

- Method for detecting hydrogen gas  
[NASA-CASE-XMF-03873] c 06 N69-39733  
Acoustic ground impedance meter  
[NASA-CASE-LAR-12995-1] c 35 N84-22933  
Reactanceless synthesized impedance bandpass amplifier  
[NASA-CASE-GSC-12788-1] c 33 N85-29145  
Method for thermal monitoring subcutaneous tissue  
[NASA-CASE-LAR-13028-1] c 52 N85-30618  
Impact tolerant material  
[NASA-CASE-LAR-12887-3] c 24 N90-21822  
A method and apparatus for indicating disbands in joint regions  
[NASA-CASE-LAR-14626-1] c 38 N92-17859

## ACOUSTIC LEVITATION

- Method and apparatus for shaping and enhancing acoustical levitation forces  
[NASA-CASE-MFS-25050-1] c 71 N81-15767  
Acoustic levitation methods and apparatus  
[NASA-CASE-NPO-15562-1] c 71 N82-27086  
Acoustic system for material transport  
[NASA-CASE-NPO-15453-1] c 71 N83-32515  
System for controlled acoustic rotation of objects  
[NASA-CASE-NPO-15522-1] c 71 N83-32516  
Acoustic suspension system  
[NASA-CASE-NPO-15435-1] c 71 N83-36846  
Contactless pellet fabrication  
[NASA-CASE-NPO-15592-1] c 71 N84-16940  
Acoustic rotation control  
[NASA-CASE-NPO-15689-1] c 71 N84-23233  
Sonic levitation apparatus  
[NASA-CASE-MFS-25828-1] c 71 N84-28568  
High temperature acoustic levitator  
[NASA-CASE-NPO-16022-1] c 71 N85-22105  
Gravity enhanced acoustic levitation method and apparatus  
[NASA-CASE-NPO-16147-1-CU] c 71 N85-29693  
Vibrating-chamber levitation systems  
[NASA-CASE-NPO-16142-1-CU] c 35 N86-20752  
Containerless high purity pulling process and apparatus for glass fiber  
[NASA-CASE-MFS-25905-2] c 31 N86-21718  
Apparatus for production of ultrapure amorphous metals utilizing acoustic cooling  
[NASA-CASE-NPO-15658-1] c 26 N86-32551  
Single mode levitation and translation  
[NASA-CASE-NPO-16675-1-CU] c 71 N88-24241  
Stabilization and oscillation of an acoustically levitated object  
[NASA-CASE-NPO-16896-1-CU] c 71 N89-13236  
Controlled sample orientation and rotation in an acoustic levitator  
[NASA-CASE-NPO-17086-1-CU] c 35 N89-14422  
Acoustic controlled rotation and orientation  
[NASA-CASE-NPO-16995-1-CU] c 71 N90-12289  
Acoustic positioning and orientation prediction  
[NASA-CASE-NPO-17511-1-CU] c 71 N91-14807  
Acoustic transducer apparatus with reduced thermal conduction  
[NASA-CASE-NPO-17620-1-CU] c 71 N91-14808  
Motion measurement of acoustically levitated object  
[NASA-CASE-NPO-18191-1-CU] c 09 N93-24601

## ACOUSTIC MEASUREMENT

- Instrumentation for measuring aircraft noise and sonic boom  
[NASA-CASE-LAR-11476-1] c 07 N76-27232  
Differential sound level meter  
[NASA-CASE-LAR-12106-1] c 71 N78-14867  
Pseudo continuous wave instrument --- ultrasonics  
[NASA-CASE-LAR-12260-1] c 35 N79-10390  
System for monitoring physical characteristics of fluids  
[NASA-CASE-NPO-15400-1] c 34 N83-31993  
Acoustic ground impedance meter  
[NASA-CASE-LAR-12995-1] c 35 N84-22933  
Rapid quantification of an internal property --- ultrasonic determination of bladder urine quantity  
[NASA-CASE-LAR-13689-1-NP] c 35 N87-23941  
Ultrasonic depth gauge for liquids under high pressure  
[NASA-CASE-LAR-13300-1-CU] c 35 N89-14407  
Acoustic device and method for measuring gas densities  
[NASA-CASE-NPO-18155-1-CU] c 71 N93-13421  
High speed thin plate fatigue crack monitor  
[NASA-CASE-LAR-14816-1-SB] c 39 N93-19329  
System for determining the angle of impact of an object on a structure  
[NASA-CASE-LAR-14817-1] c 35 N93-20569  
Constant frequency pulsed phase-locked loop measuring device  
[NASA-CASE-LAR-13823-1] c 35 N93-29084

## ACOUSTIC PROPAGATION

- Material suspension within an acoustically excited resonant chamber --- at near weightless conditions  
[NASA-CASE-NPO-13263-1] c 12 N75-24774  
Resolution enhanced sound detecting apparatus  
[NASA-CASE-NPO-14134-1] c 71 N79-23753

## ACOUSTIC PROPERTIES

- Wind tunnel microphone structure Patent  
[NASA-CASE-XNP-00250] c 11 N71-28779  
Acoustical transducer calibrating system and apparatus  
[NASA-CASE-FRC-10060-1] c 14 N73-27379  
Pseudo continuous wave instrument --- ultrasonics  
[NASA-CASE-LAR-12260-1] c 35 N79-10390  
Acoustic radiation stress measurement  
[NASA-CASE-LAR-13440-1] c 71 N87-21653

## ACOUSTICAL HOLOGRAPHY

- Hybrid holographic non-destructive test system  
[NASA-CASE-MFS-23114-1] c 38 N78-32447

## SUBJECT INDEX

## ACOUSTICS

- Image readout device with electronically variable spatial resolution  
[NASA-CASE-LAR-12633-1] c 33 N82-24416
- Acoustic rotation control  
[NASA-CASE-NPO-15689-1] c 71 N84-23233
- Acoustic particle separation  
[NASA-CASE-NPO-15559-1] c 71 N85-30765
- Acoustic convective system  
[NASA-CASE-NPO-17278-1-CU] c 31 N90-21215
- Acoustic positioning and orientation prediction  
[NASA-CASE-NPO-17511-1-CU] c 71 N91-14807
- Sound attenuation apparatus  
[NASA-CASE-LAR-13968-1] c 71 N91-27913
- System for determining the angle of impact of an object on a structure  
[NASA-CASE-LAR-14817-1] c 35 N93-17041
- Acoustophoresis separation method  
[NASA-CASE-LAR-13388-2] c 25 N93-20570

## ACOUSTO-OPTICS

- Apparatus for testing wiring harness by vibration generating means  
[NASA-CASE-MSC-15158-1] c 14 N72-17325
- Method and apparatus for background signal reduction in opto-acoustic absorption measurement  
[NASA-CASE-NPO-13683-1] c 35 N77-14411
- Differential optoacoustic absorption detector  
[NASA-CASE-NPO-13759-1] c 74 N78-17867
- Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c 25 N81-14015
- Stark effect spectrophotometer for continuous absorption spectra monitoring --- a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c 25 N81-25159
- Coherently pulsed laser source  
[NASA-CASE-NPO-15111-1] c 36 N82-29589
- Programmable hyperspectral image mapper with on-array processing  
[NASA-CASE-NPO-17794-1-CU] c 74 N92-30104

## ACRYLATES

- Ablative resin Patent  
[NASA-CASE-XLE-05913] c 33 N71-14032

## ACRYLONITRILES

- Method of carbonizing polyacrylonitrile fibers  
[NASA-CASE-AHC-11261-1] c 24 N83-25789

## ACTIVATED CARBON

- Sewage sludge additive  
[NASA-CASE-NPO-13877-1] c 45 N82-11634
- Purification system  
[NASA-CASE-MSC-21584-1] c 25 N92-33029

## ACTIVATION ENERGY

- Heat activated cell Patent  
[NASA-CASE-LEW-11359] c 03 N71-28579
- Method of making emf cell  
[NASA-CASE-LEW-11359-2] c 03 N72-20034

## ACTIVE CONTROL

- Smart tunnel: Docking mechanism  
[NASA-CASE-MSC-21360-1] c 18 N91-14374
- Active control of boundary layer transition and turbulence  
[NASA-CASE-LAR-13532-1] c 34 N91-14562
- Method and apparatus for minimizing multiple degree of freedom vibration transmission between two regions of a structure  
[NASA-CASE-LAR-14508-1-CU] c 39 N93-13420

## ACTIVITY (BIOLOGY)

- Bright light delivery system  
[NASA-CASE-MFS-28723-1] c 52 N93-17058

## ACTUATION

- Magnetically actuated compressor  
[NASA-CASE-GSC-12799-1] c 31 N85-21404

## ACTUATOR DISKS

- Cryogenic gyroscope housing --- with annular disks for gas spin-up  
[NASA-CASE-MFS-21136-1] c 35 N74-18323

## ACTUATORS

- Electromechanical actuator  
[NASA-CASE-XNP-05975] c 15 N69-23185
- Bimetallic power controlled actuator  
[NASA-CASE-XNP-09776] c 09 N69-39929
- Gas actuated bolt disconnect Patent  
[NASA-CASE-XLA-00326] c 03 N70-34667
- Hermetically sealed explosive release mechanism Patent  
[NASA-CASE-XGS-00824] c 15 N71-16078
- Burst diaphragm flow initiator Patent  
[NASA-CASE-MFS-12915] c 11 N71-17600
- Controllers Patent  
[NASA-CASE-XMS-07487] c 15 N71-23255
- Mechanical actuator Patent  
[NASA-CASE-XGS-04548] c 15 N71-24045
- Radiator deployment actuator Patent  
[NASA-CASE-MSC-11817-1] c 15 N71-26611
- Electromechanical control actuator system Patent  
[NASA-CASE-ERC-10022] c 15 N71-26635

Energy limiter for hydraulic actuators Patent

- [NASA-CASE-ARC-10131-1] c 15 N71-27754
- Telemetry actuated switch  
[NASA-CASE-ARC-10105] c 09 N72-17153
- Mechanically actuated triggered hand  
[NASA-CASE-MFS-20413] c 15 N72-21463
- Hermetically sealed elbow actuator  
[NASA-CASE-MFS-14710] c 09 N72-22195
- Ball screw linear actuator  
[NASA-CASE-NPO-11222] c 15 N72-25456
- Rotary actuator  
[NASA-CASE-NPO-10244] c 15 N72-26371
- Gas operated actuator  
[NASA-CASE-NPO-11340] c 15 N72-33477
- Redundant hydraulic control system for actuators  
[NASA-CASE-MFS-20944] c 15 N73-13466
- Electrolytic gas operated actuator  
[NASA-CASE-NPO-11369] c 15 N73-13467
- Manual actuator --- for spacecraft exercising machines  
[NASA-CASE-MFS-21481-1] c 37 N74-18127
- Optically actuated two position mechanical mover  
[NASA-CASE-NPO-13105-1] c 37 N74-21060
- Dual output variable pitch turbofan actuation system  
[NASA-CASE-LEW-12419-1] c 07 N77-14025
- Actuator device for artificial leg  
[NASA-CASE-MFS-23225-1] c 52 N77-14735
- Cyclical bi-directional rotary actuator  
[NASA-CASE-GSC-11883-1] c 37 N77-19458
- Actuator mechanism  
[NASA-CASE-GSC-11883-2] c 37 N78-31426
- Pressure limiting propellant actuating system  
[NASA-CASE-MSC-18179-1] c 20 N80-18097
- Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c 37 N81-17432
- Electrical servo actuator bracket --- fuel control valves on jet engines  
[NASA-CASE-FRC-11044-1] c 37 N81-33483
- Hydraulic actuator mechanism to control aircraft spoiler movements through dual input commands  
[NASA-CASE-LAR-12412-1] c 08 N82-24205
- Tubing and cable cutting tool  
[NASA-CASE-LAR-12786-1] c 37 N84-28085
- Slow opening valve --- valve design for shuttle portable oxygen system  
[NASA-CASE-MSC-20112-1] c 37 N85-20338
- Solar powered actuator with continuously variable auxiliary power control  
[NASA-CASE-MFS-25637-1] c 44 N85-21769
- Memory metal actuator  
[NASA-CASE-NPO-15960-1] c 37 N86-19604
- Thumb-actuated two-axis controller  
[NASA-CASE-ARC-11372-1] c 08 N86-27288
- Rotary stepping device with memory metal actuator  
[NASA-CASE-NPO-15482-1] c 37 N87-23970
- Fully redundant mechanical release actuator  
[NASA-CASE-LAR-13198-1] c 37 N87-23983
- Linear force device  
[NASA-CASE-MSC-20549-2] c 35 N88-24927
- Toggle release  
[NASA-CASE-MSC-21354-1] c 37 N88-24969
- Thermocouple for heating and cooling of memory metal actuators  
[NASA-CASE-NPO-17068-1-CU] c 35 N88-29151
- Control surface actuator  
[NASA-CASE-LAR-12852-1] c 05 N89-11738
- Antenna surface contour control system  
[NASA-CASE-LAR-13798-1] c 32 N89-25363
- Multi-fingered robotic hand  
[NASA-CASE-NPO-15959-2] c 37 N91-14616
- Single element magnetic suspension actuator  
[NASA-CASE-LAR-13981-1] c 37 N91-21539
- Permanent magnet flux-biased magnetic actuator with flux feedback  
[NASA-CASE-LAR-13785-1] c 70 N91-21824
- Fluid-loop reaction system  
[NASA-CASE-NPO-17204-1-CU] c 34 N91-25380
- Robotic tool change mechanism  
[NASA-CASE-GSC-13239-1] c 37 N91-31656
- Telerobot control system  
[NASA-CASE-NPO-18116-1-CU] c 37 N91-32509
- Feedback controlled optics with wavefront compensation  
[NASA-CASE-NPO-18194-1-CU] c 74 N91-32924
- High temperature, flexible pressure-actuated, brush seal  
[NASA-CASE-LEW-15086-1] c 37 N92-16318
- Electrorepulsive actuator  
[NASA-CASE-NPO-17684-1-CU] c 33 N92-22042
- Climbing robot --- caterpillar design  
[NASA-CASE-GSC-13442-1] c 37 N92-23547
- Quick-connect fasteners for assembling devices in space  
[NASA-CASE-MSC-21648-1] c 37 N92-24051
- Combined load test apparatus for flat panels  
[NASA-CASE-LAR-14698-1] c 39 N92-30028

Linear mass actuator

- [NASA-CASE-LAR-14352-1] c 37 N92-34173
- Preloaded latching device  
[NASA-CASE-MSC-21730-1] c 37 N93-13417
- Method and apparatus for minimizing multiple degree of freedom vibration transmission between two regions of a structure  
[NASA-CASE-LAR-14508-1-CU] c 39 N93-13420
- Fastening apparatus having shape memory alloy actuator  
[NASA-CASE-MSC-21935-1] c 37 N93-13423
- Extended task space control for robotic manipulators  
[NASA-CASE-NPO-18902-1-CU] c 37 N93-28129
- Single acting translation/rotational brake  
[NASA-CASE-LAR-14738-1] c 37 N93-29175

## ADAPTATION

- Method and apparatus for telemetry adaptive bandwidth compression  
[NASA-CASE-MSC-20821-1] c 17 N87-25348

## ADAPTERS

- Image magnification adapter for cameras Patent  
[NASA-CASE-XMF-03844-1] c 14 N71-26474
- Self indexing latch system  
[NASA-CASE-MFS-25956-1] c 37 N87-21333
- Pressure vessel flex joint  
[NASA-CASE-MSC-21748-1] c 37 N92-21727

## ADAPTIVE CONTROL

- Self-testing and repairing computer Patent  
[NASA-CASE-NPO-10567] c 08 N71-24633
- Synchronous dc direct drive system Patent  
[NASA-CASE-GSC-10065-1] c 10 N71-27136
- Ergometer  
[NASA-CASE-MFS-21109-1] c 05 N73-27941
- Adaptive voting computer system  
[NASA-CASE-MSC-13932-1] c 62 N74-14920
- Adaptive polarization separation  
[NASA-CASE-LAR-12196-1] c 33 N81-26358
- Apparatus for damping operator induced oscillations of a controlled system --- flight control  
[NASA-CASE-FRC-11041-1] c 33 N82-18493
- Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c 33 N83-31953
- Adaptive control system for line-commutated inverters  
[NASA-CASE-MFS-25209-1] c 33 N83-35227
- Adaptive data acquisition multiplexing system and method  
[NASA-CASE-MSC-21170-1] c 17 N91-14371

## ADAPTIVE FILTERS

- Adaptive tracking notch filter system Patent  
[NASA-CASE-XMF-01892] c 10 N71-22986
- Apparatus for damping operator induced oscillations of a controlled system --- flight control  
[NASA-CASE-FRC-11041-1] c 33 N82-18493

## ADAPTIVE OPTICS

- Fluorescent radiation converter  
[NASA-CASE-GSC-12528-1] c 74 N81-24900

## ADDING CIRCUITS

- Full binary adder Patent  
[NASA-CASE-XGS-00689] c 08 N70-34787
- Automatic fault correction system for parallel signal channels Patent  
[NASA-CASE-XNP-03263] c 09 N71-18843

## ADDITION RESINS

- Tackifier for addition polyimides containing monoethylphthalate  
[NASA-CASE-LAR-12642-1] c 27 N81-29229
- Vinyl capped addition polyimides  
[NASA-CASE-LEW-15027-1] c 27 N91-13566
- Vinyl capped addition polyimides  
[NASA-CASE-LEW-15027-2] c 27 N92-24053

## ADDITIVES

- Ammonium perchlorate composite propellant containing an organic transitional metal chelate catalytic additive Patent  
[NASA-CASE-LAR-10173-1] c 27 N71-14090
- Sewage sludge additive  
[NASA-CASE-NPO-13877-1] c 45 N82-11634
- Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-2] c 27 N86-27451
- Annealing group III-V compound doped silicon-germanium alloy for improved thermo-electric conversion efficiency  
[NASA-CASE-NPO-17259-1-CU] c 76 N90-19884
- Process for lowering the dielectric constant of polyimides using diamic acid additives  
[NASA-CASE-LAR-13902-1] c 27 N90-23546
- Polyimide processing additives  
[NASA-CASE-LAR-13669-1] c 27 N92-29157
- INAS hole-immobilized doping superlattice long-wave-infrared detector  
[NASA-CASE-NPO-17880-1-CU] c 76 N93-11056
- Overcharge and overdischarge protection of ambient temperature secondary lithium cells  
[NASA-CASE-NPO-18343-1-CU] c 33 N93-11456



## ADDRESSING

### ADDRESSING

Automatic multi-banking of memory for microprocessors  
[NASA-CASE-NPO-15295-1] c 60 N85-21992

### ADENOSINE TRIPHOSPHATE

Use of the enzyme hexokinase for the reduction of inherent light levels  
[NASA-CASE-XGS-05533] c 04 N69-27487  
Light detection instrument Patent  
[NASA-CASE-XGS-05534] c 23 N71-16355  
Lyophilized reaction mixtures Patent  
[NASA-CASE-XGS-05532] c 06 N71-17705  
Automatic instrument for chemical processing to detect microorganism in biological samples by measuring light reactions  
[NASA-CASE-GSC-11169-2] c 05 N73-32011  
Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c 51 N77-22794  
Rapid, quantitative determination of bacteria in water --- adenosine triphosphate  
[NASA-CASE-GSC-12158-1] c 51 N83-27569

### ADHESION

Stud-bonding gun  
[NASA-CASE-MFS-20299] c 15 N72-11392  
Improved refractory coatings --- sputtered coatings on substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c 26 N81-16209  
Refractory coatings  
[NASA-CASE-LEW-13169-2] c 26 N82-30371  
Method of insulating predesigned disbond areas into composite laminates  
[NASA-CASE-LAR-13225-1] c 24 N90-25197

### ADHESION TESTS

Apparatus for the determination of the existence or non-existence of a bonding between two members Patent  
[NASA-CASE-MFS-13686] c 15 N71-18132

### ADHESIVE BONDING

Solar cell mounting Patent  
[NASA-CASE-XNP-00826] c 03 N71-20895  
Honeycomb panel and method of making same Patent  
[NASA-CASE-XMF-01402] c 18 N71-21651  
Etching of aluminum for bonding Patent  
[NASA-CASE-XMF-02303] c 17 N71-23828  
Method and apparatus for attaching physiological monitoring electrodes Patent  
[NASA-CASE-XFR-07658-1] c 05 N71-26293  
Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-1] c 37 N75-15992  
Weld-bonded titanium structures  
[NASA-CASE-LAR-11549-1] c 37 N77-11397  
Method of adhering bone to a rigid substrate using a graphite fiber reinforced bone cement  
[NASA-CASE-NPO-13764-1] c 27 N78-17215  
Thermal barrier coating system  
[NASA-CASE-LEW-12554-1] c 34 N78-18355  
Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles  
[NASA-CASE-MSC-12619-2] c 27 N79-12221  
Surface finishing  
[NASA-CASE-MSC-12631-3] c 27 N81-14077  
Method of bonding plasticized elastomer to metal and articles produced thereby  
[NASA-CASE-MFS-25181-1] c 27 N82-24340  
Thermal barrier coating system having improved adhesion  
[NASA-CASE-LEW-1335901] c 27 N83-31855  
Impacting device for testing insulation  
[NASA-CASE-MFS-25862-2] c 37 N84-33807  
Hot melt adhesive attachment pad  
[NASA-CASE-LAR-12894-1] c 27 N85-20125  
High temperature polyimide film laminates and process for preparation thereof  
[NASA-CASE-LAR-13384-1] c 27 N86-20561  
Method of attaching strain gauges to various materials  
[NASA-CASE-LAR-13797-1] c 35 N88-30108  
Polyimide molding powder, coating, adhesive, and matrix resin  
[NASA-CASE-LAR-14163-1] c 27 N92-33014  
Flush mounting of thin film sensors  
[NASA-CASE-LAR-14446-1] c 31 N92-33020

### ADHESIVES

Polyimide adhesives  
[NASA-CASE-LAR-11397-1] c 27 N75-29263  
Polyimide adhesives  
[NASA-CASE-LAR-12181-1] c 27 N78-17205  
Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
[NASA-CASE-LAR-12099-1] c 27 N80-16158  
Aluminum ion-containing polyimide adhesives  
[NASA-CASE-LAR-12640-1] c 27 N82-11206  
Elastomer toughened polyimide adhesives  
[NASA-CASE-LAR-12775-1] c 27 N83-28240

Hot melt recharge system --- repairing damaged or missing tiles on space shuttle orbiter  
[NASA-CASE-LAR-12881-1] c 27 N84-14323  
Elastomer toughened polyimide adhesives --- bonding metal and composite material structures for aircraft and spacecraft  
[NASA-CASE-LAR-12775-2] c 27 N85-21349  
Thermal compensating mount  
[NASA-CASE-LAR-14207-1] c 35 N91-14590  
Processable polyimide adhesive and matrix composite resin  
[NASA-CASE-LAR-14101-1] c 27 N91-15403  
Permanent wire splicing by an explosive joining process  
[NASA-CASE-LAR-13825-1] c 31 N92-16162  
Method for non-destructive estimation of waveguide directional coupler dimensions  
[NASA-CASE-NPO-18454-1-CU] c 33 N92-17865  
Process for bonding elastomers to metals  
[NASA-CASE-LAR-13645-1] c 27 N93-25995

### ADIABATIC CONDITIONS

Volumetric measurement of tank volume  
[NASA-CASE-MSC-21500-1] c 35 N91-21493

### ADJOINTS

Neural network training by integration of adjoint systems of equations forward in time  
[NASA-CASE-NPO-18586-1-CU] c 63 N93-17276

### ADJUSTING

Instrument support with precise lateral adjustment Patent  
[NASA-CASE-XMF-00480] c 14 N70-39898  
Fine adjustment mount  
[NASA-CASE-MFS-20249] c 15 N72-11386  
Adjustable support  
[NASA-CASE-NPO-10721] c 15 N72-27484  
Clock setter  
[NASA-CASE-LAR-11458-1] c 35 N76-16392  
Adjustable mount for electro-optic transducers in an evacuated cryogenic system  
[NASA-CASE-LAR-13100-1] c 37 N87-23982  
Apparatus for precision focussing and positioning of a beam waist on a target  
[NASA-CASE-ARC-11916-1-SB] c 74 N92-16811  
Adjustable steam producing flexible orifice independent of fluid pressure  
[NASA-CASE-NPO-17625-1-CU] c 34 N92-21724

### ADSORPTION

Purification system  
[NASA-CASE-MSC-21584-1] c 25 N92-33029

### AERIAL RUDDERS

Thrust augmented spin recovery device  
[NASA-CASE-LAR-11970-2] c 08 N81-19130

### AEROACOUSTICS

Acoustically swept rotor --- helicopter noise reduction  
[NASA-CASE-ARC-11106-1] c 05 N80-14107

### AERODYNAMIC BALANCE

Airplane automatic control force trimming device for asymmetric engine failures  
[NASA-CASE-LAR-13280-1] c 08 N87-20999  
Dual strain gage balance system for measuring light loads  
[NASA-CASE-LAR-14419-1] c 35 N92-10185

### AERODYNAMIC BRAKES

Annular supersonic decelerator or drogue Patent  
[NASA-CASE-XLE-00222] c 02 N70-37939  
Lightweight, variable solidity knitted parachute fabric --- for aerodynamic decelerators  
[NASA-CASE-LAR-10776-1] c 02 N74-10034

### AERODYNAMIC CHARACTERISTICS

Variable sweep wing aircraft Patent  
[NASA-CASE-XLA-00221] c 02 N70-33266  
Flight craft Patent  
[NASA-CASE-XAC-02058] c 02 N71-16087  
Space shuttle vehicle and system  
[NASA-CASE-MSC-12433] c 31 N73-14854  
Airfoil shape for flight at subsonic speeds --- design analysis and aerodynamic characteristics of the GAW-1 airfoil  
[NASA-CASE-LAR-10585-1] c 02 N76-22154  
Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c 07 N81-14999  
Serrated trailing edges for improving lift and drag characteristics of lifting surfaces  
[NASA-CASE-LAR-13870-1-CU] c 05 N92-21587  
Multi-colored layers for visualizing aerodynamic flow effects  
[NASA-CASE-LAR-13742-1] c 02 N92-21588

### AERODYNAMIC CONFIGURATIONS

Variable-span aircraft Patent  
[NASA-CASE-XLA-00166] c 02 N70-34178  
Landing arrangement for aerial vehicle Patent  
[NASA-CASE-XLA-00806] c 02 N70-34858  
Space capsule Patent  
[NASA-CASE-XLA-00149] c 31 N70-37938  
Hypersonic reentry vehicle Patent  
[NASA-CASE-XMS-04142] c 31 N70-41631

Translating horizontal tail Patent  
[NASA-CASE-XLA-08801-1] c 02 N71-11043  
Variable geometry manned orbital vehicle Patent  
[NASA-CASE-XLA-03691-1] c 31 N71-15674  
Nacelle afterbody for jet engines Patent  
[NASA-CASE-XLA-10450] c 28 N71-21493  
Variable geometry rotor system  
[NASA-CASE-LAR-10557] c 02 N72-11018  
Ferry system  
[NASA-CASE-LAR-10574-1] c 11 N73-13257  
Multistage aerospace craft --- perspective drawings of conceptual design  
[NASA-CASE-XMF-02263] c 05 N74-10907  
Supersonic fan blading --- noise reduction in turbofan engines  
[NASA-CASE-LEW-11402-1] c 07 N74-28226  
Free wing assembly for an aircraft  
[NASA-CASE-FRC-10092-1] c 05 N79-12061  
Multi-body aircraft with an all-movable center fuselage actively controlling fuselage pressure drag  
[NASA-CASE-LAR-13511-1] c 05 N88-23765  
Actuated forebody strakes  
[NASA-CASE-LAR-13983-1] c 05 N90-23390  
Aerodynamic design optimization using sensitivity analysis and computational fluid dynamics  
[NASA-CASE-LAR-14815-1-CU] c 34 N92-29830

### AERODYNAMIC DRAG

Skin friction measuring device for aircraft  
[NASA-CASE-FRC-11029-1] c 06 N81-17057  
Serrated trailing edges for improving lift and drag characteristics of lifting surfaces  
[NASA-CASE-LAR-13870-1-CU] c 05 N92-21587  
Method of reducing drag in aerodynamic systems  
[NASA-CASE-LEW-14791-1] c 02 N92-34243

### AERODYNAMIC HEATING

Heat protection apparatus Patent  
[NASA-CASE-XLA-00892] c 33 N71-17897  
Heat flux measuring system Patent  
[NASA-CASE-XFR-03802] c 33 N71-23085  
Stand-off type ablative heat shield  
[NASA-CASE-MSC-12143-1] c 33 N72-17947  
Space station trash removal system  
[NASA-CASE-MSC-21723-1] c 18 N92-30315

### AERODYNAMIC INTERFERENCE

Over-the-wing propeller  
[NASA-CASE-LAR-13134-2] c 07 N87-16828  
Multi-body aircraft with an all-movable center fuselage actively controlling fuselage pressure drag  
[NASA-CASE-LAR-13511-1] c 05 N88-23765  
Atmospheric pressure flow reactor: Gas phase chemical kinetics under tropospheric conditions without wall effects  
[NASA-CASE-MSC-21384-1] c 34 N92-16243

### AERODYNAMIC LOADS

Propeller blade loading control Patent  
[NASA-CASE-XAC-00139] c 02 N70-34856  
Means for controlling aerodynamically induced twist  
[NASA-CASE-LAR-12175-1] c 05 N82-28279  
Over-the-wing propeller  
[NASA-CASE-LAR-13134-2] c 07 N87-16828

### AERODYNAMIC NOISE

Apparatus for reducing aerodynamic noise in a wind tunnel  
[NASA-CASE-MFS-23099-1] c 09 N76-23273  
Acoustically swept rotor --- helicopter noise reduction  
[NASA-CASE-MSC-11106-1] c 05 N80-14107  
Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c 07 N81-14999

### AERODYNAMIC STABILITY

Meteorological balloon Patent  
[NASA-CASE-XMF-04163] c 02 N71-23007  
Instrument for measuring the dynamic behavior of liquids Patent  
[NASA-CASE-XLA-05541] c 12 N71-26387  
Emergency earth orbital escape device  
[NASA-CASE-MSC-13281] c 31 N72-18859  
High lift aircraft --- with improved stability, control, performance, and noise characteristics  
[NASA-CASE-LAR-11252-1] c 05 N75-25914  
Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c 05 N77-17029  
Annular wing  
[NASA-CASE-FRC-11007-2] c 05 N82-26277  
Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12720-1] c 44 N83-21504  
Over-the-wing propeller  
[NASA-CASE-LAR-13134-2] c 07 N87-16828  
Actuated forebody strakes  
[NASA-CASE-LAR-13983-1] c 05 N90-23390

### AERODYNAMIC STALLING

Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c 02 N81-14968  
Stall departure resistance enhancer  
[NASA-CASE-LAR-14221-1] c 06 N93-19023

## SUBJECT INDEX

**AERODYNAMICS**

- Passive laminar flow control of crossflow vorticity  
[NASA-CASE-LAR-13563-1] c 34 N91-23410  
Aerodynamic design optimization using sensitivity  
analysis and computational fluid dynamics  
[NASA-CASE-LAR-14815-1-CU] c 34 N92-29830

**AEROELASTICITY**

- Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12458-1] c 44 N83-21503  
Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12720-1] c 44 N83-21504

**AERONAUTICAL ENGINEERING**

- Differential pressure cell Patent  
[NASA-CASE-XAC-00042] c 14 N70-34816

**AEROSOLS**

- Liquid aerosol dispenser  
[NASA-CASE-MFS-20829] c 12 N72-21310  
Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c 35 N76-22509  
Thermoluminescent aerosol analysis  
[NASA-CASE-LAR-12046-1] c 25 N78-15210  
Particle analyzing method and apparatus  
[NASA-CASE-NPO-15292-1] c 35 N83-27184  
Liquid seeding atomizer  
[NASA-CASE-ARC-11631-1] c 34 N87-21255

**AEROSPACE ENGINEERING**

- Solar cell including second surface mirrors Patent  
[NASA-CASE-NPO-10109] c 03 N71-11049  
Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-10337] c 15 N71-24046  
Soldering device Patent  
[NASA-CASE-XLA-08911] c 15 N71-27214  
Installing fiber insulation  
[NASA-CASE-MSC-16973-1] c 37 N81-14317

**AEROSPACE ENVIRONMENTS**

- Electrostatic thruster with improved insulators Patent  
[NASA-CASE-XLE-01902] c 28 N71-10574  
Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-01765] c 18 N71-10772  
Inorganic solid film lubricants Patent  
[NASA-CASE-XMF-03988] c 15 N71-21403  
Particle detection apparatus including a ballistic  
pendulum Patent  
[NASA-CASE-XMS-04201] c 14 N71-22990  
Alloys for bearings Patent  
[NASA-CASE-XLE-05033] c 15 N71-23810  
Method and apparatus for varying thermal conductivity  
Patent  
[NASA-CASE-XNP-05524] c 33 N71-24876  
Space simulator Patent  
[NASA-CASE-NPO-10141] c 11 N71-24964  
Cyclic switch Patent  
[NASA-CASE-LEW-10155-1] c 09 N71-29035  
Automatic biowaste sampling  
[NASA-CASE-MSC-14640-1] c 54 N76-14804  
Wobble gear drive mechanism --- for aerospace  
environments  
[NASA-CASE-WOO-00625] c 37 N78-17385  
Plasma cleaning device --- designed for high vacuum  
environments  
[NASA-CASE-MFS-22906-1] c 75 N78-27913  
Process for spinning flame retardant elastomeric  
compositions --- fabricating synthetic fibers for high oxygen  
environments  
[NASA-CASE-MSC-14331-3] c 27 N78-32262  
General purpose rocket furnace  
[NASA-CASE-MFS-23460-1] c 12 N79-26075  
Spray applicator for spraying coatings and other fluids  
in space  
[NASA-CASE-MSC-18852-1] c 37 N85-29283  
Space ultra-vacuum facility and method of operation  
[NASA-CASE-MFS-28139-1] c 29 N87-18679  
Method of making a flexible diaphragm  
[NASA-CASE-MSC-20797-1] c 37 N87-23981  
Space spider crane  
[NASA-CASE-LAR-13411-1-SB] c 18 N88-23828  
Gas particle radiator  
[NASA-CASE-LEW-14297-1] c 35 N89-12048  
Tank gauging apparatus and method  
[NASA-CASE-MSC-21059-2] c 35 N91-15511

**AEROSPACE MEDICINE**

- Instrument for use in performing a controlled Valsalva  
maneuver Patent  
[NASA-CASE-XMS-01615] c 05 N70-41329  
Cooling system for removing metabolic heat from an  
hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c 54 N78-32721

**AEROSPACE PLANES**

- Multistage aerospace craft --- perspective drawings of  
conceptual design  
[NASA-CASE-XMF-02263] c 05 N74-10907

**AEROSPACE SYSTEMS**

- Bidirectional drive and brake mechanism  
[NASA-CASE-MSC-21540-1] c 37 N91-32514

**AEROSPACE VEHICLES**

- Landing arrangement for aerial vehicles Patent  
[NASA-CASE-XLA-00142] c 02 N70-33286  
Landing pad assembly for aerospace vehicles Patent  
[NASA-CASE-XMF-02853] c 31 N70-36654  
Landing arrangement for aerospace vehicle Patent  
[NASA-CASE-XLA-00805] c 31 N70-38010  
Flexibly connected support and skin Patent  
[NASA-CASE-XLA-01027] c 31 N71-24035  
Nondestructive spot test method for titanium and  
titanium alloys  
[NASA-CASE-LAR-10539-1] c 17 N73-12547  
Aerospace vehicle  
[NASA-CASE-LAR-13155-1] c 05 N86-19310  
Composite flexible blanket insulation  
[NASA-CASE-ARC-11907-1-NP] c 24 N91-31236

**AFTERBODIES**

- Nacelle afterbody for jet engines Patent  
[NASA-CASE-XLA-10450] c 28 N71-21493  
Missile rolling tail brake torque system --- simulating  
bearing friction on canard controlled missiles  
[NASA-CASE-LAR-12751-1] c 15 N84-16231

**AFTERBURNING**

- Nozzle Patent  
[NASA-CASE-XLA-00154] c 28 N70-33374

**AGGLOMERATION**

- Acoustic agglomeration methods and apparatus  
[NASA-CASE-NPO-15466-1] c 71 N85-22104

**AGING (MATERIALS)**

- Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c 26 N75-29236  
Predictive aging of polymers  
[NASA-CASE-NPO-17524-1-CU] c 27 N90-10261

**AGRICULTURE**

- Solar-powered pump  
[NASA-CASE-NPO-13567-1] c 44 N76-29701  
Slow-release fertilizer  
[NASA-CASE-MSC-21953-1-NP] c 37 N93-17271  
Active synthetic soil  
[NASA-CASE-MSC-21954-1-NP] c 51 N93-19054

**AILERONS**

- Control device Patent  
[NASA-CASE-XAC-10019] c 15 N71-23809

**AIR**

- Gas purged dry box glove Patent  
[NASA-CASE-XLE-02531] c 05 N71-23080  
Superconductive magnetic-field-trapping device  
[NASA-CASE-XNP-01185] c 26 N73-28710  
Solid sorbent air sampler  
[NASA-CASE-MSC-20653-1] c 35 N86-26595

**AIR BREATHING ENGINES**

- Multiple pure tone elimination strut assembly --- air  
breathing engines  
[NASA-CASE-FRC-11062-1] c 71 N82-16800

**AIR CONDITIONING**

- Apparatus for supplying conditioned air at a substantially  
constant temperature and humidity  
[NASA-CASE-GSC-12191-1] c 31 N80-32583  
Automotive absorption air conditioner utilizing solar and  
motor waste heat  
[NASA-CASE-NPO-15183-1] c 44 N82-26776  
Air modulation apparatus  
[NASA-CASE-LEW-13524-1] c 07 N84-33410

**AIR CONDITIONING EQUIPMENT**

- Portable superclean air column device Patent  
[NASA-CASE-XMF-03212] c 15 N71-22721  
Air conditioning system and component therefore  
distributing air flow from opposite directions  
[NASA-CASE-GSC-11445-1] c 31 N74-27902  
Heat tube device  
[NASA-CASE-KSC-11395-1-CU] c 34 N91-21473

**AIR COOLING**

- Modification and improvements to cooled blades  
Patent  
[NASA-CASE-XLE-00092] c 15 N70-33264  
Acoustic convective system  
[NASA-CASE-NPO-17278-1-CU] c 31 N90-21215

**AIR FILTERS**

- Gas filter mounting structure  
[NASA-CASE-MSC-12297] c 14 N72-23457

**AIR FLOW**

- Wind tunnel airstream oscillating apparatus Patent  
[NASA-CASE-XLA-00112] c 11 N70-33287  
Method of obtaining permanent record of surface flow  
phenomena Patent  
[NASA-CASE-XLA-01353] c 14 N70-41366  
Gas turbine combustor Patent  
[NASA-CASE-LEW-10286-1] c 28 N71-28915  
Apparatus and method for generating large mass flow  
of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10612-1] c 12 N73-28144  
Air conditioning system and component therefore  
distributing air flow from opposite directions  
[NASA-CASE-GSC-11445-1] c 31 N74-27902

Controlled separation combustor --- airflow distribution  
in gas turbine engines

- [NASA-CASE-LEW-11593-1] c 20 N76-14190  
Method and apparatus for fluffing, separating, and  
cleaning fibers  
[NASA-CASE-LAR-11224-1] c 37 N76-18456  
Smoke generator  
[NASA-CASE-ARC-10905-1] c 37 N77-13418  
Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c 37 N78-17384  
Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c 07 N78-25089  
Active clearance control system for a turbomachine  
[NASA-CASE-LEW-12938-1] c 07 N82-32366  
Vapor fragrancier  
[NASA-CASE-LAR-13680-1] c 35 N87-25561  
Passive venting technique for shallow cavities  
[NASA-CASE-LAR-14031-1] c 05 N90-20079  
Acoustic convective system  
[NASA-CASE-NPO-17278-1-CU] c 31 N90-21215  
Active thermal isolation for temperature responsive  
sensors  
[NASA-CASE-LAR-14612-1] c 34 N92-29954  
Calibration apparatus for recess mounted pressure  
transducers  
[NASA-CASE-LAR-14724-1] c 35 N92-30030  
Method of measuring cross-flow vortices by use of an  
array of hot-film sensors  
[NASA-CASE-LAR-14824-1-SB] c 34 N93-26000  
Jet mixer noise suppressor using acoustic feedback  
[NASA-CASE-LEW-15170-1] c 71 N93-28953

**AIR INTAKES**

- Aeroflexible structures  
[NASA-CASE-XLA-06095] c 01 N69-39981  
Reversed cowl flap inlet thrust augmentor --- with  
adjustable airfoil  
[NASA-CASE-ARC-10754-1] c 07 N75-24736  
Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c 05 N79-24976  
Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c 07 N81-14999  
Control means for a gas turbine engine  
[NASA-CASE-LEW-14586-1] c 07 N83-31603

**AIR LOCKS**

- Spacecraft airlock Patent  
[NASA-CASE-XLA-02050] c 31 N71-22968  
Thruster maintenance system Patent  
[NASA-CASE-MFS-20325] c 28 N71-27095  
An airlock  
[NASA-CASE-MFS-20922] c 31 N72-20840  
Airlock  
[NASA-CASE-MFS-20922-1] c 18 N74-22136  
Apparatus for inserting and removing specimens from  
high temperature vacuum furnaces  
[NASA-CASE-LAR-10841-1] c 31 N74-27900

**AIR NAVIGATION**

- Autonomous navigation system --- gyroscopic pendulum  
for air navigation  
[NASA-CASE-ARC-11257-1] c 04 N81-21047  
Magnetic heading reference  
[NASA-CASE-LAR-12638-1] c 04 N84-14132

**AIR POLLUTION**

- Analytical photoionization mass spectrometer with an  
argon gas filter between the light source and  
monochromator Patent  
[NASA-CASE-LAR-10180-1] c 06 N71-13461  
Separation nut Patent  
[NASA-CASE-XGS-01971] c 15 N71-15922  
Monitoring atmospheric pollutants with a heterodyne  
radiometer transmitter-receiver  
[NASA-CASE-NPO-11919-1] c 35 N74-11284  
Fluorescence detector for monitoring atmospheric  
pollutants  
[NASA-CASE-NPO-13231-1] c 45 N75-27585  
Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c 45 N76-17556  
Indicator providing continuous indication of the presence  
of a specific pollutant in air  
[NASA-CASE-NPO-13474-1] c 45 N76-21742  
Method for detecting pollutants --- through chemical  
reactions and heat treatment  
[NASA-CASE-LAR-11405-1] c 45 N76-31714  
Combustion engine --- for air pollution control  
[NASA-CASE-NPO-13671-1] c 37 N77-31497  
Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c 44 N78-31527  
Combined air and water pollution control system  
[NASA-CASE-NST-00007-1] c 45 N91-14662

**AIR PURIFICATION**

- High pressure gas filter system Patent  
[NASA-CASE-MFS-12806] c 14 N71-17588  
Portable superclean air column device Patent  
[NASA-CASE-XMF-03212] c 15 N71-22721  
Cell and method for electrolysis of water and anode  
[NASA-CASE-MSC-16394-1] c 28 N81-24280

## AIR QUALITY

### AIR QUALITY

Vapor fragrances  
[NASA-CASE-LAR-13680-1] c 35 N87-25561

### AIR SAMPLING

Aerodynamic measuring device Patent  
[NASA-CASE-XLA-00481] c 14 N70-36824  
Sampler of gas borne particles  
[NASA-CASE-NPO-13396-1] c 35 N76-18401  
Automated syringe sampler --- remote sampling of air and water  
[NASA-CASE-LAR-12308-1] c 35 N81-29407  
Mobile sampler for use in acquiring samples of terrestrial atmospheric gases  
[NASA-CASE-NPO-15220-1] c 45 N83-25217

### AIR START

Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c 33 N80-26599

### AIR TRAFFIC CONTROL

Traffic control system and method Patent  
[NASA-CASE-GSC-10087-1] c 02 N71-19287  
Satellite aided vehicle avoidance system Patent  
[NASA-CASE-ERC-10090] c 21 N71-24948  
Position location system and method  
[NASA-CASE-GSC-10087-3] c 07 N72-12080  
Video processor for air traffic control beacon system  
[NASA-CASE-KSC-11155-1] c 04 N86-19304

### AIR TRANSPORTATION

Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797

### AIRBORNE EQUIPMENT

Inflatable radar reflector unit Patent  
[NASA-CASE-XMS-00893] c 07 N70-40063  
Airborne tracking sunphotometer apparatus and system  
[NASA-CASE-ARC-11622-1] c 44 N88-14492  
Airborne rescue system  
[NASA-CASE-ARC-11909-1] c 03 N91-31113

### AIRBORNE/SPACEBORNE COMPUTERS

Ripple add and ripple subtract binary counters Patent  
[NASA-CASE-XGS-04766] c 08 N71-18602  
Shared memory for a fault-tolerant computer  
[NASA-CASE-NPO-13139-1] c 60 N76-21914

### AIRCRAFT

System for indicating direction of intruder aircraft  
[NASA-CASE-ERC-10226-1] c 14 N73-16483  
Thin conformal antenna array for microwave power conversions  
[NASA-CASE-NPO-13886-1] c 32 N78-24391  
System for indicating fuel-efficient aircraft altitude  
[NASA-CASE-NPO-15351-2] c 06 N84-34443

### AIRCRAFT ACCIDENTS

Satellite aided vehicle avoidance system Patent  
[NASA-CASE-ERC-10090] c 21 N71-24948

### AIRCRAFT ANTENNAS

Spiral slotted phased antenna array  
[NASA-CASE-MSC-18532-1] c 32 N82-27558

### AIRCRAFT COMPARTMENTS

Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
[NASA-CASE-ARC-11040-2] c 24 N78-27184

### AIRCRAFT CONFIGURATIONS

Variable sweep wing configuration Patent  
[NASA-CASE-XLA-00230] c 02 N70-33255  
Television simulation for aircraft and space flight Patent  
[NASA-CASE-XFR-03107] c 09 N71-19449  
Dual-fuselage aircraft having yawable wing and horizontal stabilizer  
[NASA-CASE-ARC-10470-1] c 02 N73-26005  
Family of airfoil shapes for rotating blades --- for increased power efficiency and blade stability  
[NASA-CASE-LAR-12843-1] c 02 N84-11136  
Actuated forebody strakes  
[NASA-CASE-LAR-13983-1] c 05 N90-23390  
Apparatus and method for improving spin recovery on aircraft  
[NASA-CASE-LAR-14747-1] c 08 N93-20039

### AIRCRAFT CONSTRUCTION MATERIALS

Fuselage structure using advanced technology fiber reinforced composites  
[NASA-CASE-LAR-11688-1] c 24 N82-26384  
Curved cap corrugated sheet  
[NASA-CASE-LAR-12884-1] c 18 N84-33450  
Aluminum alloy  
[NASA-CASE-LAR-13924-1-CU] c 26 N89-28621  
Apparatus for elevated temperature compression or tension testing of specimens  
[NASA-CASE-LAR-14775-1] c 39 N92-30099

### AIRCRAFT CONTROL

Control for flexible parawing Patent  
[NASA-CASE-XLA-06958] c 02 N71-11038  
Altitude controls for VTOL aircraft Patent  
[NASA-CASE-XAC-08972] c 02 N71-20570

Control device Patent  
[NASA-CASE-XAC-10019] c 15 N71-23809

Direct lift control system Patent  
[NASA-CASE-LAR-10249-1] c 02 N71-26110

High speed flight vehicle control Patent  
[NASA-CASE-XLA-08967] c 02 N71-27088

Mechanically limited, electrically operated hydraulic valve system for aircraft controls Patent  
[NASA-CASE-XAC-00048] c 02 N71-29128

Flight control system  
[NASA-CASE-MSC-13397-1] c 21 N72-25595

Aircraft control system  
[NASA-CASE-ERC-10439] c 02 N73-19004

Display system  
[NASA-CASE-ERC-10350] c 14 N73-20474

Suppression of flutter  
[NASA-CASE-LAR-10682-1] c 02 N73-26004

Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c 05 N75-12930

High lift aircraft --- with improved stability, control, performance, and noise characteristics  
[NASA-CASE-LAR-11252-1] c 05 N75-25914

Filtering technique based on high-frequency plant modeling for high-gain control  
[NASA-CASE-LAR-12215-1] c 08 N79-23097

Velocity vector control system augmented with direct lift control  
[NASA-CASE-LAR-12268-1] c 08 N81-24106

Pitch attitude stabilization system utilizing engine pressure ratio feedback signals  
[NASA-CASE-LAR-12562-1] c 08 N81-26152

Leading edge flap system for aircraft control augmentation  
[NASA-CASE-LAR-12787-2] c 08 N85-19985

Airplane automatic control force trimming device for asymmetric engine failures  
[NASA-CASE-LAR-13280-1] c 08 N87-20999

Aircraft control position indicator  
[NASA-CASE-LAR-12984-1] c 06 N87-22678

High performance forward swept wing aircraft  
[NASA-CASE-ARC-11636-1] c 05 N88-28914

Actuated forebody strakes  
[NASA-CASE-LAR-13983-1] c 05 N90-23390

Selectable towline spin chute system  
[NASA-CASE-LAR-14322-1] c 02 N91-27139

Rotatable non-circular forebody flow controller  
[NASA-CASE-LAR-14212-1-CU] c 05 N91-31140

### AIRCRAFT DESIGN

Supersonic aircraft Patent  
[NASA-CASE-XLA-04451] c 02 N71-12243

Dual-fuselage aircraft having yawable wing and horizontal stabilizer  
[NASA-CASE-ARC-10470-1] c 02 N73-26005

Multi-stage aerospace craft --- perspective drawings of conceptual design  
[NASA-CASE-XMF-02263] c 05 N74-10907

High lift aircraft --- with improved stability, control, performance, and noise characteristics  
[NASA-CASE-LAR-11252-1] c 05 N75-25914

Oblique-wing supersonic aircraft  
[NASA-CASE-ARC-10470-3] c 05 N76-29217

Supersonic transport --- using canard surfaces  
[NASA-CASE-LAR-11932-1] c 05 N78-32086

Shapes for rotating airfoils  
[NASA-CASE-LAR-12396-1] c 02 N84-28732

Geometries for roughness shapes in laminar flow  
[NASA-CASE-LAR-13255-1] c 02 N87-16793

Multi-body aircraft with an all-movable center fuselage actively controlling fuselage pressure drag  
[NASA-CASE-LAR-13511-1] c 05 N88-23765

Compression pylon  
[NASA-CASE-LAR-13777-1] c 05 N90-20078

Apparatus and method for improving spin recovery on aircraft  
[NASA-CASE-LAR-14747-1] c 08 N93-20039

### AIRCRAFT DETECTION

Altitude measuring system  
[NASA-CASE-ERC-10412-1] c 09 N73-12211

Apparatus for measuring an aircraft's speed and height  
[NASA-CASE-LAR-12275-1] c 35 N79-18296

### AIRCRAFT ENGINES

Noise suppressor --- for turbofan engine by incorporating annular acoustically porous elements in exhaust and inlet ducts  
[NASA-CASE-LAR-11141-1] c 07 N74-32418

Dual cycle aircraft turbine engine  
[NASA-CASE-LAR-11310-1] c 07 N77-28118

Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c 33 N80-26599

Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c 07 N80-32392

Diesel engine catalytic combustor system --- aircraft engines  
[NASA-CASE-LEW-12995-1] c 37 N84-33808

Elevated temperature aluminum alloys  
[NASA-CASE-LAR-13632-1] c 26 N87-29650

### AIRCRAFT EQUIPMENT

Clear air turbulence detector  
[NASA-CASE-ERC-10081] c 14 N72-28437

Air speed and altitude probe  
[NASA-CASE-FRC-11009-1] c 06 N80-18036

Cooling system for high speed aircraft  
[NASA-CASE-LAR-12406-1] c 05 N81-26114

System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c 06 N82-16075

Piezoelectric deicing device  
[NASA-CASE-LEW-13773-2] c 33 N86-20671

Fire resistant polyamide based on 1-(diorganoxyphosphoryl)methyl-2,4- and -2,6-diamino benzene  
[NASA-CASE-ARC-11512-2] c 27 N86-32568

Lightning discharge protection rod  
[NASA-CASE-LAR-13470-1] c 03 N88-14083

Control surface actuator  
[NASA-CASE-LAR-12852-1] c 05 N89-11738

Wingtip vortex turbine  
[NASA-CASE-LAR-14116-1] c 05 N91-14345

Method of reducing drag in aerodynamic systems  
[NASA-CASE-LEW-14791-1] c 02 N92-34243

### AIRCRAFT FUEL SYSTEMS

Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c 37 N78-10467

### AIRCRAFT GUIDANCE

Terminal guidance system --- for guiding aircraft into preselected altitude and/or heading at terminal point  
[NASA-CASE-FRC-10049-1] c 04 N74-13420

Sun sensing guidance system for high altitude aircraft  
[NASA-CASE-FRC-11052-1] c 04 N82-23231

### AIRCRAFT HAZARDS

Inlet deflector for jet engines Patent  
[NASA-CASE-XLE-00388] c 28 N70-34788

### AIRCRAFT HYDRAULIC SYSTEMS

Gas turbine engine fuel control  
[NASA-CASE-LEW-11187-1] c 28 N73-19793

Hydraulic actuator mechanism to control aircraft spoiler movements through dual input commands  
[NASA-CASE-LAR-12412-1] c 08 N82-24205

Control surface actuator  
[NASA-CASE-LAR-12852-1] c 05 N89-11738

### AIRCRAFT INSTRUMENTS

Airplane take-off performance indicator Patent  
[NASA-CASE-XLA-00100] c 14 N70-36807

Aerodynamic measuring device Patent  
[NASA-CASE-XLA-00481] c 14 N70-36824

Aircraft instrument Patent  
[NASA-CASE-XLA-00487] c 14 N70-40157

Optical projector system Patent  
[NASA-CASE-XNP-03853] c 23 N71-21882

Combined optical attitude and altitude indicating instrument Patent  
[NASA-CASE-XLA-01907] c 14 N71-23268

Head-up attitude display  
[NASA-CASE-ERC-10392] c 21 N73-14692

G-load measuring and indicator apparatus  
[NASA-CASE-ARC-10806-1] c 35 N75-29381

Magnetic heading reference  
[NASA-CASE-LAR-11387-1] c 04 N76-20114

Aircraft-mounted crash-activated transmitter device  
[NASA-CASE-MFS-16609-3] c 03 N76-32140

Heads up display  
[NASA-CASE-LAR-12630-1] c 06 N84-27733

System for indicating fuel-efficient aircraft altitude  
[NASA-CASE-NPO-15351-2] c 06 N84-34443

Microwave temperature profiler for clear air turbulence prediction  
[NASA-CASE-NPO-18115-1-CU] c 47 N92-29148

### AIRCRAFT LANDING

Landing arrangement for aerial vehicle Patent  
[NASA-CASE-XLA-00806] c 02 N70-34858

Magnetic position detection method and apparatus  
[NASA-CASE-ARC-10179-1] c 21 N72-22619

Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c 05 N75-12930

Vehicle simulator binocular multiplanar visual display system  
[NASA-CASE-ARC-10808-1] c 09 N76-24280

Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c 09 N78-18083

Environmental fog/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c 09 N82-24212

Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13734-1-CU] c 09 N90-20096

### AIRCRAFT LAUNCHING DEVICES

Rotating launch device for a remotely piloted aircraft  
[NASA-CASE-ARC-10979-1] c 09 N77-19076

## SUBJECT INDEX

### AIRCRAFT MAINTENANCE

Bearing servicing tool  
[NASA-CASE-MSC-21881-1] c 37 N93-14871

### AIRCRAFT MANEUVERS

G-load measuring and indicator apparatus  
[NASA-CASE-ARC-10806-1] c 35 N75-29381

### AIRCRAFT MODELS

Test unit free-flight suspension system Patent  
[NASA-CASE-XLA-00939] c 11 N71-15926  
Variable geometry wind tunnels  
[NASA-CASE-XLA-07430] c 11 N72-22246  
Deploy/release system --- model aircraft flight control  
[NASA-CASE-LAR-11575-1] c 02 N76-16014  
Improved ceramic slip casting technique --- application to aircraft model fabrication  
[NASA-CASE-LAR-14471-1] c 27 N93-20041

### AIRCRAFT NOISE

Instrumentation for measuring aircraft noise and sonic boom  
[NASA-CASE-LAR-11476-1] c 07 N76-27232  
Acoustic guide for noise-transmission testing of aircraft  
[NASA-CASE-LAR-13111-1-CU] c 71 N87-21652

### AIRCRAFT PERFORMANCE

Ferry system  
[NASA-CASE-LAR-10574-1] c 11 N73-13257  
High performance forward swept wing aircraft  
[NASA-CASE-ARC-11636-1] c 05 N88-28914  
Method and system for monitoring and displaying engine performance parameters  
[NASA-CASE-LAR-14049-1] c 07 N89-23466  
Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13734-1-CU] c 09 N90-20096  
Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13854-1-CU] c 04 N91-31120  
Apparatus and method for improving spin recovery on aircraft  
[NASA-CASE-LAR-14747-1] c 08 N93-20039

### AIRCRAFT PILOTS

Apparatus for applying simulator g-forces to an arm of an aircraft simulator pilot  
[NASA-CASE-LAR-10550-1] c 09 N74-30597

### AIRCRAFT POWER SUPPLIES

Wingtip vortex turbine  
[NASA-CASE-LAR-14116-1] c 05 N91-14345

### AIRCRAFT SAFETY

Airplane take-off performance indicator Patent  
[NASA-CASE-XLA-00100] c 14 N70-36807  
Display research collision warning system  
[NASA-CASE-HQN-10703] c 21 N73-13643  
Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c 08 N74-30421  
Fire blocking systems for aircraft seat cushions  
[NASA-CASE-ARC-11423-1] c 03 N84-33394  
Variable response load limiting device  
[NASA-CASE-LAR-12801-1] c 37 N88-23982

### AIRCRAFT SPIN

Extended moment arm anti-spin device  
[NASA-CASE-LAR-12979-1] c 05 N85-21147  
Dual towline spin-recovery device  
[NASA-CASE-LAR-13076-1] c 08 N85-35200  
Electro-optical spin measurement system  
[NASA-CASE-LAR-13629-1] c 09 N91-14356  
Selectable towline spin chute system  
[NASA-CASE-LAR-14322-1] c 02 N91-27139  
Apparatus and method for improving spin recovery on aircraft  
[NASA-CASE-LAR-14747-1] c 08 N93-20039

### AIRCRAFT STABILITY

Mechanical stability augmentation system Patent  
[NASA-CASE-XLA-06339] c 02 N71-13422  
Suppression of flutter  
[NASA-CASE-LAR-10682-1] c 02 N73-26004  
High performance forward swept wing aircraft  
[NASA-CASE-ARC-11636-1] c 05 N88-28914

### AIRCRAFT STRUCTURES

Fatigue testing device Patent  
[NASA-CASE-XLA-02131] c 32 N70-42003  
Heat flux measuring system Patent  
[NASA-CASE-XFR-03802] c 33 N71-23085  
Three-axis adjustable loading structure  
[NASA-CASE-FRC-10051-1] c 35 N74-13129  
Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c 27 N76-16230  
Wingtip vortex dissipator for aircraft  
[NASA-CASE-LAR-11645-1] c 02 N77-10001  
Aircraft canopy lock  
[NASA-CASE-FRC-11065-1] c 05 N83-19737  
Metal matrix composite structural panel construction  
[NASA-CASE-LAR-12807-1] c 24 N84-11214

Elastomer toughened polyimide adhesives --- bonding metal and composite material structures for aircraft and spacecraft  
[NASA-CASE-LAR-12775-2] c 27 N85-21349

Optimized bolted joint  
[NASA-CASE-LAR-13250-1] c 37 N86-27630

Fire resistant polyamide based on 1-(diorganoxyphosphonyl)methyl-2,4- and -2,6-diamino benzene  
[NASA-CASE-ARC-11512-2] c 27 N86-32568  
The 1-((diorganoxy phosphonyl) methyl)-2,4- and -2,6-diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-2] c 23 N87-28605

Elevated temperature aluminum alloys  
[NASA-CASE-LAR-13632-1] c 26 N87-29650

Some 1-(diorganoxyphosphonyl)methyl-2,4- and -2,6-dinitro-benzenes  
[NASA-CASE-ARC-11425-3] c 23 N90-23475

**AIRCRAFT TIRES**  
Tire/wheel concept  
[NASA-CASE-LAR-11695-2] c 37 N81-24443

**AIRCRAFT WAKES**  
System for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations  
[NASA-CASE-FRC-11024-1] c 02 N80-28300

**AIRFOIL PROFILES**  
Family of airfoil shapes for rotating blades --- for increased power efficiency and blade stability  
[NASA-CASE-LAR-12843-1] c 02 N84-11136

**AIRFOILS**  
Minimum induced drag airfoil body Patent  
[NASA-CASE-XLA-00755] c 01 N71-13410  
Minimum induced drag airfoil body Patent  
[NASA-CASE-XLA-05828] c 01 N71-13411

Wind tunnel  
[NASA-CASE-LAR-10135-1] c 09 N79-21083

Surface finishing  
[NASA-CASE-MSC-12631-3] c 27 N81-14077

Aircraft rotor blade with passive tuned tab  
[NASA-CASE-ARC-11444-1] c 05 N85-29947

Airfoil flutter model suspension system  
[NASA-CASE-LAR-13522-1-SB] c 09 N87-25334

Porous plug for reducing orifice induced pressure error in airfoils  
[NASA-CASE-LAR-13569-1] c 35 N89-12841

High lift, low pitching moment airfoils  
[NASA-CASE-LAR-13215-1] c 02 N89-14224

Dual strain gage balance system for measuring light loads  
[NASA-CASE-LAR-14419-1] c 35 N92-10185

Active thermal isolation for temperature responsive sensors  
[NASA-CASE-LAR-14612-1] c 34 N92-29954

Boundary layer relaminarization device  
[NASA-CASE-LAR-14470-1] c 02 N93-11876

Swept wing attachment line contamination fence  
[NASA-CASE-LAR-13400-1] c 02 N93-22015

**AIRFRAMES**  
Dual-fuselage aircraft having yawable wing and horizontal stabilizer  
[NASA-CASE-ARC-10470-1] c 02 N73-26005

Cooling system for high speed aircraft  
[NASA-CASE-LAR-12406-1] c 05 N81-26114

Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c 01 N83-35992

**AIRSPPEED**  
Landing arrangement for aerial vehicle Patent  
[NASA-CASE-XLA-00806] c 02 N70-34858

Apparatus for measuring an aircraft's speed and height  
[NASA-CASE-LAR-12275-1] c 35 N79-18296

Air speed and attitude probe  
[NASA-CASE-FRC-11009-1] c 06 N80-18036

Miniature electrooptical air flow sensor  
[NASA-CASE-LAR-13065-1] c 35 N85-20295

**ALBUMINS**  
Human serum albumin crystals and method of preparation  
[NASA-CASE-MFS-28234-1] c 52 N90-20616

Amino acid sequences for the binding regions in serum albumin proteins  
[NASA-CASE-MFS-28402-1] c 51 N93-28952

**ALCOHOLS**  
Trifunctional alcohol  
[NASA-CASE-NPO-10714] c 06 N69-31244

Laser coolant and ultraviolet filter  
[NASA-CASE-MFS-20180] c 16 N72-12440

Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c 33 N85-29144

**ALDEHYDES**  
Direct synthesis of polymeric schiff bases from two amines and two aldehydes Patent  
[NASA-CASE-XMF-08655] c 06 N71-11239

## ALIGNMENT

Azine polymers and process for preparing the same Patent  
[NASA-CASE-XMF-08656] c 06 N71-11242

Aromatic diamine-aromatic dialdehyde high molecular weight Schiff base polymers prepared in a monofunctional Schiff base Patent  
[NASA-CASE-XMF-03074] c 06 N71-24740

Nuclear alkylated pyridine aldehyde polymers and conductive compositions thereof  
[NASA-CASE-NPO-10557] c 27 N78-17214

Polyvinyl alcohol cross-linked with two aldehydes  
[NASA-CASE-LEW-13504-1] c 25 N83-13188

**ALERTNESS**  
Method of encouraging attention by correlating video game difficulty with attention level  
[NASA-CASE-LAR-15022-1] c 53 N93-23128

**ALGAE**  
Process for selectively recovering algae and protozoa  
[NASA-CASE-MFS-26124-1-NPO] c 51 N93-29174

**ALGEBRA**  
High level language-based robotic control system  
[NASA-CASE-NPO-17918-2-CU] c 63 N92-17895

**ALGORITHMS**  
Systolic VLSI array for implementing the Kalman filter algorithm  
[NASA-CASE-NPO-17108-1-CU] c 33 N89-28713

Multistage estimation of received carrier signal parameters under very high dynamic conditions of the receiver  
[NASA-CASE-NPO-17911-1-CU] c 32 N90-27016

Predictive sensor method and apparatus  
[NASA-CASE-SSC-00006-1] c 35 N91-13691

Aerodynamic design optimization using sensitivity analysis and computational fluid dynamics  
[NASA-CASE-LAR-14815-1-CU] c 34 N92-29830

Multiresponse imager and imaging process for improved resolution  
[NASA-CASE-LAR-14779-1] c 74 N92-29951

A space-time neural network for processing both spatial and temporal data  
[NASA-CASE-MSC-21874-1] c 63 N92-30314

Obstacle avoidance for redundant robots using configuration control  
[NASA-CASE-NPO-17852-1-CU] c 63 N92-33019

Terminal slider control of nonlinear robotic systems  
[NASA-CASE-NPO-18584-1-CU] c 37 N93-11177

Modified fast frequency acquisition via adaptive least squares algorithm  
[NASA-CASE-NPO-17845-2-CU] c 61 N93-14882

Neural network training by integration of adjoint systems of equations forward in time  
[NASA-CASE-NPO-18586-1-CU] c 63 N93-17276

Fault-tolerant fiber optic backplane  
[NASA-CASE-LAR-14785-1] c 74 N93-19052

**ALIGNMENT**  
Instrument support with precise lateral adjustment Patent  
[NASA-CASE-XMF-00480] c 14 N70-39898

Portable alignment tool Patent  
[NASA-CASE-XMF-01452] c 15 N70-41371

Optical alignment system Patent  
[NASA-CASE-XNP-02029] c 14 N70-41955

Trigonometric vehicle guidance assembly which aligns the three perpendicular axes of two three-axes systems Patent  
[NASA-CASE-XMF-00684] c 21 N71-21688

Aligning and positioning device Patent  
[NASA-CASE-XMS-04178] c 15 N71-22798

Method and apparatus for aligning a laser beam projector Patent  
[NASA-CASE-NPO-11087] c 23 N71-29125

Roll alignment detector  
[NASA-CASE-GSC-10514-1] c 14 N72-20379

Zero gravity shadow shield aligner  
[NASA-CASE-KSC-10622-1] c 31 N72-21893

Alignment apparatus using a laser having a gravitationally sensitive cavity reflector  
[NASA-CASE-ARC-10444-1] c 16 N73-33397

Spacecraft docking and alignment system --- using television camera system  
[NASA-CASE-MSC-12559-1] c 18 N76-14186

Method of constructing dished ion thruster grids to provide hole array spacing compensation  
[NASA-CASE-LEW-11876-1] c 20 N76-21276

Optical alignment device  
[NASA-CASE-ARC-10932-1] c 74 N76-22993

Precision alignment apparatus for cutting a workpiece  
[NASA-CASE-LAR-11658-1] c 37 N77-14478

Guide for a typewriter  
[NASA-CASE-MFS-15218-1] c 37 N77-19457

Rotary target V-block  
[NASA-CASE-LAR-12007-3] c 35 N84-16523

Ingot slicing machine and method  
[NASA-CASE-NPO-15483-1] c 37 N85-21650

X-ray determination of parts alignment  
[NASA-CASE-MSC-20418-1] c 74 N86-20126

Simulator scene display evaluation device  
[NASA-CASE-ARC-11504-1] c 09 N86-32447  
Adjustable mount for electro-optic transducers in an evacuated cryogenic system  
[NASA-CASE-LAR-13100-1] c 37 N87-23982  
Alignment and assembly tool for very large diameter cylinders  
[NASA-CASE-MFS-28001-2] c 37 N88-14360  
Improved docking alignment system  
[NASA-CASE-MS-C-21372-1] c 35 N89-12842  
Space module assembly apparatus with docking alignment flexibility and restraint  
[NASA-CASE-MS-C-21211-1] c 18 N89-28553  
Tensile film clamps and mounting block for the rheovibron and autovibron viscoelastometer  
[NASA-CASE-LAR-13696-1] c 37 N90-20409  
Induction-type metal detector with increased scanning area capability  
[NASA-CASE-KSC-11386-1] c 35 N90-22023  
Thermal compensating mount  
[NASA-CASE-LAR-14207-1] c 35 N91-14590  
Multiple axis reticle  
[NASA-CASE-ARC-11886-1-SB] c 35 N91-14591  
Mechanical strain isolator mount  
[NASA-CASE-LAR-13580-1] c 37 N91-21541  
Alignment positioning mechanism  
[NASA-CASE-MS-C-21502-1] c 37 N91-21543  
Three dimensional moire pattern alignment  
[NASA-CASE-MS-C-21416-1] c 74 N91-32922  
High reliability robot friendly ORU interface  
[NASA-CASE-GSC-13360-1] c 37 N92-23377  
Method and apparatus for gripping test specimens  
[NASA-CASE-LEW-15345-1] c 37 N93-12327  
Apparatus for checking threaded hole perpendicularity  
[NASA-CASE-LEW-15444-1] c 35 N93-14840

**ALKALI HALIDES**

Fire extinguishant materials  
[NASA-CASE-ARC-11252-1] c 25 N83-36118

**ALKALI METALS**

Alkali-metal silicate protective coating  
[NASA-CASE-XGS-04119] c 18 N69-39979  
Analytical test apparatus and method for determining oxide content of alkali metal Patent  
[NASA-CASE-XLE-01997] c 06 N71-23527  
Alkali metal silicate protective coating Patent  
[NASA-CASE-XGS-04799] c 18 N71-24183  
Heat activated cell with alkali anode and alkali salt electrolyte Patent  
[NASA-CASE-LEW-11358] c 03 N71-26084  
Preparation of alkali metal dispersions  
[NASA-CASE-XNP-08876] c 17 N73-28573  
Process for preparing higher oxides of the alkali and alkaline earth metals  
[NASA-CASE-ARC-10992-1] c 26 N78-32229  
Alkali-metal silicate binders and methods of manufacture  
[NASA-CASE-GSC-12303-1] c 24 N79-31347  
Heat pipes containing alkali metal working fluid  
[NASA-CASE-LEW-12253-1] c 74 N83-19596  
Fire extinguishant materials  
[NASA-CASE-ARC-11252-1] c 25 N83-36118  
Alkali metal for ultraviolet band-pass filter  
[NASA-CASE-NPO-18433-1-CU] c 74 N92-34241  
AMTEC vapor-vapor series connected cells  
[NASA-CASE-NPO-18667-1-CU] c 33 N93-19330  
Ion exchange polymers and method for making  
[NASA-CASE-LEW-15576-1] c 27 N93-31316

**ALKALINE BATTERIES**

Method for determining the state of charge of batteries by the use of tracers Patent  
[NASA-CASE-XNP-01464] c 03 N71-10728  
Electrochemical coulometer and method of forming same Patent  
[NASA-CASE-XGS-05434] c 03 N71-20491  
Electrocatalyst for oxygen reduction  
[NASA-CASE-HQN-10537-1] c 06 N72-10138  
Inorganic-organic separators for alkaline batteries  
[NASA-CASE-LEW-12649-1] c 44 N78-25530  
Polyvinyl alcohol battery separator containing inert filler — alkaline batteries  
[NASA-CASE-LEW-13556-1] c 44 N81-27615  
Process of treating cellulosic membrane and alkaline with membrane separator  
[NASA-CASE-GSC-10019-1] c 44 N82-24641  
Separator for alkaline batteries and method of making same  
[NASA-CASE-GSC-10350-1] c 44 N82-24642  
Separator for alkaline electric cells and method of making  
[NASA-CASE-GSC-10017-1] c 44 N82-24643  
Separator for alkaline electric batteries and method of making  
[NASA-CASE-GSC-10018-1] c 44 N82-24644  
Aqueous alkali metal hydroxide insoluble cellulose ether membrane  
[NASA-CASE-XGS-05584-1] c 25 N82-29370

Advanced inorganic separators for alkaline batteries  
[NASA-CASE-LEW-13171-1] c 44 N82-29708  
Advanced inorganic separators for alkaline batteries and method of making the same  
[NASA-CASE-LEW-13171-2] c 44 N83-32176  
Additive for zinc electrodes — electric automobiles  
[NASA-CASE-LEW-13286-1] c 33 N84-14422  
Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c 33 N85-29144

**ALKALINE EARTH METALS**

Ion exchange polymers and method for making  
[NASA-CASE-LEW-15576-1] c 27 N93-31316

**ALKALINE EARTH OXIDES**

Process for preparing higher oxides of the alkali and alkaline earth metals  
[NASA-CASE-ARC-10992-1] c 26 N78-32229

**ALKYL COMPOUNDS**

Fluorohydroxy ethers  
[NASA-CASE-MFS-10507] c 06 N73-30101  
Process for preparing perfluorotriazine elastomers and precursors thereof  
[NASA-CASE-ARC-11402-1] c 27 N84-22744  
Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-2-SB] c 27 N90-21177  
Some 1-(diorganooxyphosphonyl)methyl-2,4- and -2,6-dinitro-benzenes  
[NASA-CASE-ARC-11425-3] c 23 N90-23475  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-4] c 23 N91-25185  
Substituted 1,1,1-triaryl 2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-7] c 23 N93-17412

**ALKYNES**

High performance channel injection sealant invention abstract  
[NASA-CASE-ARC-14408-1] c 27 N82-33523

**ALLOYING**

High temperature creep and oxidation resistant chromium silicide matrix alloy containing molybdenum  
[NASA-CASE-LEW-15697-1] c 26 N93-29172

**ALLOYS**

Brazing alloy Patent  
[NASA-CASE-XNP-03063] c 17 N71-23365  
Alloys for bearings Patent  
[NASA-CASE-XLE-05033] c 15 N71-23810  
Process for applying black coating to metals Patent  
[NASA-CASE-XLA-06199] c 15 N71-24875  
Adjustable mount for a trihedral mirror Patent  
[NASA-CASE-XNP-08907] c 23 N71-29123  
Enhanced diffusion welding  
[NASA-CASE-LEW-11388-1] c 15 N73-32358  
Brazing alloy binder  
[NASA-CASE-XMF-05868] c 26 N75-27125  
Brazing alloy  
[NASA-CASE-XNP-03878] c 26 N75-27127  
Castable hot corrosion resistant alloy  
[NASA-CASE-LEW-14134-2] c 26 N89-14303  
Solidification processing of alloys using an applied electric field  
[NASA-CASE-MFS-26083-1-CU] c 26 N90-26940  
Gradient tempering process  
[NASA-CASE-MFS-28496-1] c 26 N92-34239

**ALPHA PARTICLES**

Method and means for helium/hydrogen ratio measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c 25 N80-20334

**ALPHANUMERIC CHARACTERS**

X-Y alphanumeric character generator for oscilloscopes  
[NASA-CASE-GSC-11582-1] c 33 N75-19517

**ALTERNATING CURRENT**

Ac power amplifier Patent Application  
[NASA-CASE-LAR-10218-1] c 09 N70-34559  
Frequency control network for a current feedback oscillator Patent  
[NASA-CASE-GSC-10041-1] c 10 N71-19418  
Blood pressure measuring system for separating and separately recording dc signal and an ac signal Patent  
[NASA-CASE-XMS-06061] c 05 N71-23317  
Switching circuit Patent  
[NASA-CASE-XNP-06505] c 10 N71-24799  
Pulse width inverter Patent  
[NASA-CASE-MFS-10068] c 10 N71-25139  
Inverter with means for base current shaping for sweeping charge carriers from base region Patent  
[NASA-CASE-XGS-06226] c 10 N71-25950  
A dc to ac to dc converter having transistor synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c 09 N72-25253  
Phase protection system for ac power lines  
[NASA-CASE-MS-C-17832-1] c 33 N74-14956

Solar cell system having alternating current output  
[NASA-CASE-LEW-12806-2] c 44 N81-12542  
Power factor control system for ac induction motors  
[NASA-CASE-MFS-23988-1] c 33 N81-27395  
Non-contacting power transfer device  
[NASA-CASE-GSC-12595-1] c 33 N82-24422  
Motor power control circuit for ac induction motors  
[NASA-CASE-MFS-25323-1] c 33 N84-22886  
Coupling an induction motor type generator to ac power lines — making windmill generators compatible with public power lines  
[NASA-CASE-MFS-25302-2] c 33 N84-33660  
Three-phase power factor controller with induced EMF sensing  
[NASA-CASE-MFS-25852-1] c 33 N84-33661  
Power control for ac motor  
[NASA-CASE-MFS-25861-1] c 33 N85-22877  
Induction heating gun  
[NASA-CASE-LAR-13181-1] c 31 N85-29083

**ALTIMETERS**

Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c 32 N82-23376

**ALTITUDE**

Combined optical attitude and altitude indicating instrument Patent  
[NASA-CASE-XLA-01907] c 14 N71-23268

**ALTITUDE CONTROL**

Check valve assembly for a probe Patent  
[NASA-CASE-XLA-00128] c 15 N70-37925

**ALUMINUM**

Method of joining aluminum to stainless steel Patent  
[NASA-CASE-MFS-07369] c 15 N71-20443  
Thermal control coating Patent  
[NASA-CASE-XLA-01995] c 18 N71-23047  
Etching of aluminum for bonding Patent  
[NASA-CASE-XMF-02303] c 17 N71-23828  
Process for producing dispersion strengthened nickel with aluminum Patent  
[NASA-CASE-XLE-06969] c 17 N71-24142  
Plating nickel on aluminum castings Patent  
[NASA-CASE-XNP-04148] c 17 N71-24830  
Method of plating copper on aluminum Patent  
[NASA-CASE-XLA-08966-1] c 17 N71-25903  
Heat activated cell Patent  
[NASA-CASE-LEW-11359] c 03 N71-28579  
Method of making emf cell  
[NASA-CASE-LEW-11359-2] c 03 N72-20034  
Method of preparing graphite reinforced aluminum composite  
[NASA-CASE-MFS-21077-1] c 24 N75-28135  
Method of fluxless brazing and diffusion bonding of aluminum containing components  
[NASA-CASE-MS-C-14435-1] c 37 N76-18455  
Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c 44 N79-11469  
Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c 28 N81-15119  
Variable anodic thermal control coating  
[NASA-CASE-LAR-12719-1] c 44 N83-34449  
Oxygen diffusion barrier coating  
[NASA-CASE-LAR-13474-1-SB] c 26 N87-25455  
Composite passive damping struts for large precision structures  
[NASA-CASE-NPO-17914-1-CU] c 39 N91-13767  
Thermal treatment of silicon integrated circuit chips to prevent and heal voids in aluminum metallization  
[NASA-CASE-NPO-17678-1-CU] c 76 N91-28014  
Production of multile fibers  
[NASA-CASE-MFS-28431-1] c 24 N92-17870  
Method of forming a multiple layer dielectric and a hot film sensor therewith  
[NASA-CASE-LAR-13678-3] c 35 N93-14714  
Composite passive damping struts for large precision structures  
[NASA-CASE-NPO-17914-1-CU] c 39 N93-24596

**ALUMINUM ALLOYS**

Low temperature aluminum alloy Patent  
[NASA-CASE-XMF-02786] c 17 N71-20743  
Etching of aluminum for bonding Patent  
[NASA-CASE-XMF-02303] c 17 N71-23828  
Method of producing complex aluminum alloy parts of high temper, and products thereof  
[NASA-CASE-MS-C-19693-1] c 26 N78-24333  
Nical ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LEW-13339-1] c 26 N82-31505  
Metal matrix composite structural panel construction  
[NASA-CASE-LAR-12807-1] c 24 N84-11214  
Elevated temperature aluminum alloys  
[NASA-CASE-LAR-13632-1] c 26 N87-29650  
Aluminum alloy  
[NASA-CASE-LAR-13924-1-CU] c 26 N89-28621  
High temperature, oxidation resistant noble metal-Al alloy thermocouple  
[NASA-CASE-LEW-15515-1] c 35 N93-31298

## ALUMINUM COATINGS

- Nickel aluminide coated low alloy stainless steel  
[NASA-CASE-LEW-11267-1] c 17 N73-32414
- Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c 28 N74-33209
- Method of protecting the surface of a substrate --- by applying aluminide coating  
[NASA-CASE-LEW-11696-1] c 37 N75-13261
- Duplex aluminized coatings  
[NASA-CASE-LEW-11696-2] c 26 N75-19408
- Meteoroid impact position locator aid for manned space station  
[NASA-CASE-LAR-10629-1] c 35 N75-33367
- Method of protecting a surface with a silicon-slurry/aluminide coating --- coatings for gas turbine engine blades and vanes  
[NASA-CASE-LEW-13343-1] c 27 N82-28441
- Silicon-slurry/aluminide coating --- protecting gas turbine engine vanes and blades  
[NASA-CASE-LEW-13343] c 26 N83-31795

## ALUMINUM COMPOUNDS

- Synthesis of dawsonites --- for use in fire extinguishing operations  
[NASA-CASE-ARC-11326-1] c 25 N83-33977
- Fire extinguishant materials  
[NASA-CASE-ARC-11252-1] c 25 N83-36118
- Production of mullite fibers  
[NASA-CASE-MFS-28431-1] c 24 N92-17870

## ALUMINUM GALLIUM ARSENIDES

- Planar varactor frequency multiplier devices with blocking barrier  
[NASA-CASE-NPO-18428-1-CU] c 33 N92-23464

## ALUMINUM OXIDES

- Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-1] c 37 N75-15992
- Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-3] c 24 N79-25143
- Method and technique for installing light-weight, fragile, high-temperature fiber insulation  
[NASA-CASE-MSC-16934-3] c 24 N84-16262
- Guanidine based vehicle/binders for use with oxides, metals, and ceramics  
[NASA-CASE-LEW-15314-1] c 27 N92-23461
- Silicon carbide fiber reinforced strontium aluminosilicate glass-ceramic matrix composite  
[NASA-CASE-LEW-15263-1] c 24 N93-11543

## ALUMINUM SILICATES

- Inorganic thermal control pigment Patent  
[NASA-CASE-XNP-02139] c 18 N71-24184
- Fiber-reinforced monoclinic celsian matrix composite material  
[NASA-CASE-LEW-15269-1] c 24 N93-20040

## AMBIENT TEMPERATURE

- High stability amplifier  
[NASA-CASE-GSC-12646-1] c 33 N83-34191
- Anode for rechargeable ambient temperature lithium cells  
[NASA-CASE-NPO-18580-1-CU] c 33 N93-17278

## AMBIGUITY

- Phase ambiguity resolution for offset QPSK modulation systems  
[NASA-CASE-NPO-17853-1-CU] c 32 N91-25318

## AMIDES

- Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c 27 N79-22300
- Method for preparing addition type polyimide prepreps  
[NASA-CASE-LAR-12054-2] c 27 N81-14078

## AMINES

- Direct synthesis of polymeric schiff bases from two amines and two aldehydes Patent  
[NASA-CASE-XMF-08655] c 06 N71-11239
- Synthesis of polymeric schiff bases by reaction of acetals and amine compounds Patent  
[NASA-CASE-XMF-08652] c 06 N71-11243
- Polyimide foam for the thermal insulation and fire protection  
[NASA-CASE-ARC-10464-1] c 27 N74-12812
- Automated analysis of oxidative metabolites  
[NASA-CASE-ARC-10469-1] c 25 N75-12086
- Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c 23 N82-28353
- Method of neutralizing the corrosive surface of amine-cured epoxy resins  
[NASA-CASE-GSC-12686-1] c 27 N83-34039
- Metal (2) 4,4',4'' phthalocyanine tetraamines as curing agents for epoxy resins  
[NASA-CASE-ARC-11424-1] c 27 N85-34281
- Laminate comprising fibers embedded in cured amine terminated bis-imide  
[NASA-CASE-ARC-11421-3] c 24 N86-25416
- Amine terminated bisaspartimide polymer  
[NASA-CASE-ARC-11421-2] c 27 N86-31726

Aminophenoxycyclotriphosphazene cured epoxy resins and the composites, laminates, adhesives and structures thereof

- [NASA-CASE-ARC-11548-1] c 27 N87-25469
- Aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-3] c 23 N88-24692
- Polyimides with improved compression moldability  
[NASA-CASE-LAR-14457-1] c 27 N93-25997

## AMINO ACIDS

- Amino acid analysis  
[NASA-CASE-NPO-12130-1] c 25 N75-14844
- Amino acid sequences for the binding regions in serum albumin proteins  
[NASA-CASE-MFS-28402-1] c 51 N93-28952

## AMMONIA

- Solid state chemical source for ammonia beam maser Patent  
[NASA-CASE-XGS-01504] c 16 N70-41578

## AMMONIUM NITRATES

- High performance ammonium nitrate propellant  
[NASA-CASE-NPO-14260-1] c 28 N79-28342

## AMMONIUM PERCHLORATES

- Ammonium perchlorate composite propellant containing an organic transitional metal chelate catalytic additive Patent  
[NASA-CASE-LAR-10173-1] c 27 N71-14090
- Process for the leaching of AP from propellant  
[NASA-CASE-NPO-14109-1] c 28 N80-23471

## AMORPHOUS MATERIALS

- Corrosion resistant coating  
[NASA-CASE-NPO-15928-1] c 26 N85-29005
- Apparatus for production of ultrapure amorphous metals utilizing acoustic cooling  
[NASA-CASE-NPO-15658-1] c 26 N86-32551
- Oxygen diffusion barrier coating  
[NASA-CASE-LAR-13474-1-SB] c 26 N87-25455
- Method of intercalating large quantities of fibrous structures  
[NASA-CASE-LEW-15077-1] c 24 N92-16025
- Anode for rechargeable ambient temperature lithium cells  
[NASA-CASE-NPO-18580-1-CU] c 33 N93-17278

## AMORPHOUS SILICON

- Diamond composite films for protective coatings on metals and method of formation  
[NASA-CASE-NPO-18501-1-CU] c 27 N93-28426

## AMPLIFICATION

- Amplifier drift tester  
[NASA-CASE-XMS-05562-1] c 09 N69-39986
- Amplifier clamping circuit for horizon scanner Patent  
[NASA-CASE-XGS-01784] c 10 N71-20782
- Diversity receiving system with diversity phase lock Patent  
[NASA-CASE-XGS-01222] c 10 N71-20841
- Active RC networks  
[NASA-CASE-ARC-10042-2] c 10 N72-11256
- High voltage transistor amplifier with constant current load  
[NASA-CASE-NPO-11023] c 09 N72-17155
- Independent gain and bandwidth control of a traveling wave maser  
[NASA-CASE-NPO-13801-1] c 36 N78-18410
- Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c 32 N81-15179
- Automatic level control circuit  
[NASA-CASE-KSC-11170-1] c 33 N83-36356

## AMPLIFIER DESIGN

- Automatic gain control system  
[NASA-CASE-XMS-05307] c 09 N69-24330
- Bio-isolated dc operational amplifier --- for bioelectric measurements  
[NASA-CASE-ARC-10596-1] c 33 N74-21851
- High power metallic halide laser --- amplifying a copper chloride laser  
[NASA-CASE-NPO-14782-1] c 36 N82-28616
- Reactanceless synthesized impedance bandpass amplifier  
[NASA-CASE-GSC-12788-1] c 33 N85-29145
- Amplifier for measuring low-level signals in the presence of high common mode voltage  
[NASA-CASE-MFS-25868-1] c 33 N86-20670
- Low phase noise oscillator using two parallel connected amplifiers  
[NASA-CASE-GSC-13018-1] c 33 N87-21232

## AMPLIFIERS

- Stable amplifier having a stable quiescent point Patent  
[NASA-CASE-XGS-02812] c 09 N71-19466
- Method and apparatus for continuously monitoring blood oxygenation, blood pressure, pulse rate and the pressure pulse curve utilizing an ear oximeter as transducer Patent  
[NASA-CASE-XAC-05422] c 04 N71-23185
- High-gain, broadband traveling wave maser Patent  
[NASA-CASE-NPO-10548] c 16 N71-24831

Vibrophonocardiograph Patent

- [NASA-CASE-XFR-07172] c 05 N71-27234
- Transient augmentation circuit for pulse amplifiers Patent  
[NASA-CASE-XNP-01068] c 10 N71-28739
- RC networks and amplifiers employing the same  
[NASA-CASE-XAC-05462-2] c 10 N72-17171
- Full wave modulator-demodulator amplifier apparatus --- for generating rectified output signal  
[NASA-CASE-FRC-10072-1] c 33 N74-14939
- Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c 35 N75-15014
- Reflected-wave maser --- low noise amplifier  
[NASA-CASE-NPO-13490-1] c 36 N76-31512
- High stability amplifier  
[NASA-CASE-GSC-12646-1] c 33 N83-34191
- Low noise tuned amplifier  
[NASA-CASE-GSC-12567-1] c 33 N84-22887
- Low phase noise oscillator using two parallel connected amplifiers  
[NASA-CASE-GSC-13018-1] c 33 N87-21232
- Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N87-22895
- Integrated photo-responsive metal oxide semiconductor circuit  
[NASA-CASE-GSC-12782-1] c 33 N88-14271

## AMPLITUDE DISTRIBUTION ANALYSIS

- System for monitoring signal amplitude ranges  
[NASA-CASE-XMS-04061-1] c 09 N69-39885
- Single or joint amplitude distribution analyzer Patent  
[NASA-CASE-XNP-01383] c 09 N71-10659
- Analog-to-digital converter  
[NASA-CASE-XNP-00477] c 08 N73-28045

## AMPLITUDE MODULATION

- Signal generator  
[NASA-CASE-XNP-05612] c 09 N69-21468
- Demodulation system Patent  
[NASA-CASE-XAC-04030] c 10 N71-19472
- Amplitude modulated laser transmitter Patent  
[NASA-CASE-XMS-04269] c 16 N71-22895
- Vibrating element electrometer with output signal magnified over input signal by a function of the mechanical Q of the vibrating element Patent  
[NASA-CASE-XAC-02807] c 09 N71-23021
- Phase multiplying electronic scanning system Patent  
[NASA-CASE-NPO-10302] c 10 N71-26142
- Signal path series step biased multidevice high efficiency amplifier Patent  
[NASA-CASE-GSC-10668-1] c 07 N71-28430
- Gated compressor, distortionless signal limiter  
[NASA-CASE-NPO-11820-1] c 32 N74-19788
- Amplitude steered array  
[NASA-CASE-GSC-11446-1] c 33 N74-20860
- Stark-effect modulation of CO<sub>2</sub> laser with NH<sub>2</sub>D  
[NASA-CASE-NPO-11945-1] c 36 N76-18427
- Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c 33 N83-31953
- Control circuitry using electronic emulation of a synchro signal for accurate control of position and rate of rotation for shafts  
[NASA-CASE-MFS-28458-1] c 33 N91-26459
- Method and apparatus for second-rank tensor generation  
[NASA-CASE-NPO-17512-1-CU] c 74 N91-26918

## AMPLITUDES

- Noise limiter Patent  
[NASA-CASE-NPO-10169] c 10 N71-24844
- Acoustic rotation control  
[NASA-CASE-NPO-15689-1] c 71 N84-23233
- High voltage power supply  
[NASA-CASE-GSC-12818-1] c 33 N85-29147

## AMPOULES

- Ampoule sealing apparatus and process --- for housing a semiconductor growth charge under vacuum  
[NASA-CASE-LAR-12847-1] c 33 N83-16633
- Apparatus and method for heating a material in a transparent ampoule --- crystal growth  
[NASA-CASE-MFS-25436-1] c 27 N83-36220
- Reusable thermal cycling clamp  
[NASA-CASE-LAR-12868-1] c 37 N85-21651
- Method of preparing radially homogeneous mercury cadmium telluride crystals  
[NASA-CASE-MFS-25786-2] c 76 N90-20896

## ANALGESIA

- Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c 52 N81-14613
- Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-1] c 52 N81-29764

## ANALOG CIRCUITS

- Condition and condition duration indicator Patent  
[NASA-CASE-XMF-01097] c 10 N71-16058



# ANALOG COMPUTERS

- Automatic closed circuit television arc guidance control Patent  
[NASA-CASE-MFS-13046] c 07 N71-19433
- Electronic divider and multiplier using photocells Patent  
[NASA-CASE-XFR-05637] c 09 N71-19480
- Continuous Fourier transform method and apparatus --- for the analysis of simultaneous analog signal components  
[NASA-CASE-ARC-10466-1] c 60 N75-13539
- Electronic analog divider  
[NASA-CASE-LEW-11881-1] c 33 N77-17354
- Tuned analog network  
[NASA-CASE-GSC-12650-1] c 33 N84-14421
- Control circuitry using electronic emulation of a synchro signal for accurate control of position and rate of rotation for shafts  
[NASA-CASE-MFS-28458-1] c 33 N91-26459
- Analog hardware for learning neural networks  
[NASA-CASE-NPO-17664-1-CU] c 62 N91-32852
- Integrated, non-volatile, high-speed analog random access memory  
[NASA-CASE-NPO-17998-1-CU] c 60 N92-12438
- Nonvolatile programmable neural network synaptic array  
[NASA-CASE-NPO-18578-1-CU] c 33 N92-30086
- Cascaded VLSI neural network architecture for on-line learning  
[NASA-CASE-NPO-18645-1-CU] c 63 N92-34240
- The adaptive neuron model: An architecture for the rapid learning of nonlinear topological transformations  
[NASA-CASE-NPO-18579-1-CU] c 63 N93-11174
- Electronic still camera  
[NASA-CASE-MSC-21797-1] c 35 N93-17076
- ANALOG COMPUTERS**
- Analog spatial maneuver computer  
[NASA-CASE-GSC-10880-1] c 08 N72-11172
- Acceleration recorder and playback module  
[NASA-CASE-MSC-22008-1] c 35 N93-17077
- ANALOG DATA**
- Data compression processor Patent  
[NASA-CASE-NPO-10068] c 08 N71-19288
- Wide range data compression system Patent  
[NASA-CASE-XGS-02612] c 08 N71-19435
- Analog Signal to Discrete Time Interval Converter (ASDTIC)  
[NASA-CASE-ERC-10048] c 09 N72-25251
- Digital plus analog output encoder  
[NASA-CASE-GSC-12115-1] c 62 N76-31946
- Velocity measurement system  
[NASA-CASE-MFS-23363-1] c 35 N78-32396
- ANALOG SIMULATION**
- Apparatus for simulating optical transmission links  
[NASA-CASE-GSC-11877-1] c 74 N76-18913
- ANALOG TO DIGITAL CONVERTERS**
- Analog-to-digital conversion system Patent  
[NASA-CASE-XAC-00404] c 08 N70-40125
- Analog to digital converter Patent  
[NASA-CASE-XLA-00670] c 08 N71-12501
- Nonlinear analog-to-digital converter Patent  
[NASA-CASE-XAC-04031] c 08 N71-18594
- Drift compensation circuit for analog to digital converter Patent  
[NASA-CASE-XNP-04780] c 08 N71-19687
- Pneumatic oscillator Patent  
[NASA-CASE-LEW-10345-1] c 10 N71-25899
- Analog signal integration and reconstruction system Patent  
[NASA-CASE-NPO-10344] c 10 N71-26544
- Analog to digital converter tester Patent  
[NASA-CASE-XLA-06713] c 14 N71-28991
- Wide range analog-to-digital converter with a variable gain amplifier  
[NASA-CASE-NPO-11018] c 08 N72-21200
- Analog-to-digital converter  
[NASA-CASE-MSC-13110-1] c 08 N72-22163
- Analog-to-digital converter analyzing system  
[NASA-CASE-NPO-10560] c 08 N72-22166
- Digital control and information system  
[NASA-CASE-NPO-11016] c 08 N72-31226
- Counting digital filters  
[NASA-CASE-NPO-11821-1] c 08 N73-26175
- Analog-to-digital converter  
[NASA-CASE-XNP-00477] c 08 N73-28045
- Analog to digital converter  
[NASA-CASE-NPO-13385-1] c 33 N76-18345
- Analog to digital converter for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-3] c 60 N77-32731
- Electrochemical detection device --- for use in microbiology  
[NASA-CASE-LAR-11922-1] c 25 N79-24073
- Heads up display  
[NASA-CASE-LAR-12630-1] c 06 N84-27733

- Method of and apparatus for generating an interstitial point in a data stream having an even number of data points  
[NASA-CASE-MFS-25319-1] c 60 N85-33701
- Frequency domain laser velocimeter signal processor  
[NASA-CASE-LAR-13552-1-CU] c 33 N89-14385
- A digitally controlled system for effecting and presenting a selected electrical resistance  
[NASA-CASE-MFS-29149-1] c 33 N90-19492
- X ray sensitive area detection device  
[NASA-CASE-MFS-28232-1] c 74 N91-14835
- Electronic still camera  
[NASA-CASE-MSC-21797-1] c 35 N93-17076
- ANALOGIES**
- Auto and hetero-associative memory using a 2-D optical logic gate  
[NASA-CASE-NPO-17997-1-CU] c 60 N92-33057
- ANALYZERS**
- Fluid phase analyzer Patent  
[NASA-CASE-NPO-10691] c 14 N71-26199
- Automated fluid chemical analyzer Patent  
[NASA-CASE-XNP-09451] c 06 N71-26754
- Micrometeoroid analyzer  
[NASA-CASE-ARC-10443-1] c 14 N73-20477
- NDIR gas analyzer based on absorption modulation ratios for known and unknown samples  
[NASA-CASE-ARC-10802-1] c 35 N75-30502
- Cosmic dust analyzer  
[NASA-CASE-MSC-13802-2] c 35 N76-15431
- Optically selective, acoustically resonant gas detecting transducer  
[NASA-CASE-ARC-10639-1] c 35 N78-13400
- ANCHORS (FASTENERS)**
- Daze fasteners  
[NASA-CASE-LAR-13009-2] c 37 N87-22976
- Blind fastening apparatus  
[NASA-CASE-LAR-14542-1] c 37 N93-22384
- ANEOCHIC CHAMBERS**
- Almond test body --- for microwave anechoic chambers  
[NASA-CASE-LAR-13747-1-CU] c 32 N89-28672
- ANEMOMETERS**
- Anemometer with braking mechanism Patent  
[NASA-CASE-XMF-05224] c 14 N71-23726
- Maxometers (peak wind speed anemometers)  
[NASA-CASE-MFS-20916] c 14 N73-25460
- Radionuclide counting technique for measuring wind velocity and direction  
[NASA-CASE-LAR-12971-1] c 47 N84-28292
- Thermal remote anemometer system  
[NASA-CASE-LAR-13508-1] c 35 N92-21710
- ANGIOGRAPHY**
- Contour detector and data acquisition system for the left ventricular outline  
[NASA-CASE-ARC-10985-1] c 52 N79-10724
- ANGLE OF ATTACK**
- Angle detector  
[NASA-CASE-ARC-11036-1] c 35 N78-32395
- Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c 02 N81-14968
- Stall departure resistance enhancer  
[NASA-CASE-LAR-14221-1] c 06 N93-19023
- ANGLES (GEOMETRY)**
- Internal flare angle gauge Patent  
[NASA-CASE-XMF-04415] c 14 N71-24693
- Method for generating ultra-precise angles Patent  
[NASA-CASE-XGS-04173] c 19 N71-26674
- Rotating raster generator  
[NASA-CASE-FRC-10071-1] c 32 N74-20813
- Angular measurement system  
[NASA-CASE-MFS-25825-1] c 31 N86-29055
- Universal precision sine bar attachment  
[NASA-CASE-MFS-28253-1] c 37 N89-28831
- System for determining the angle of impact of an object on a structure  
[NASA-CASE-LAR-14817-1] c 35 N93-17041
- System for determining the angle of impact of an object on a structure  
[NASA-CASE-LAR-14817-1] c 35 N93-20569
- ANGULAR ACCELERATION**
- Angular accelerometer Patent  
[NASA-CASE-XMS-05936] c 14 N70-41682
- ANGULAR CORRELATION**
- Device for determining relative angular position between a spacecraft and a radiation emitting celestial body  
[NASA-CASE-GSC-11444-1] c 14 N73-28490
- ANGULAR DISTRIBUTION**
- Noncontacting method for measuring angular deflection  
[NASA-CASE-LAR-12178-1] c 74 N80-21138
- ANGULAR MOMENTUM**
- Stretch de-spin mechanism Patent  
[NASA-CASE-XGS-00619] c 30 N70-40016
- Rim inertial measuring system  
[NASA-CASE-LAR-12052-1] c 18 N81-29152

- Fluidic momentum controller  
[NASA-CASE-MSC-20906-2] c 35 N89-15379
- ANGULAR RESOLUTION**
- Angular measurement system Patent  
[NASA-CASE-XMF-00447] c 14 N70-33179
- Compliant joint  
[NASA-CASE-GSC-13153-1] c 37 N91-17387
- ANGULAR VELOCITY**
- Angular position and velocity sensing apparatus Patent  
[NASA-CASE-XGS-05680] c 14 N71-17585
- Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion  
[NASA-CASE-NPO-14170-1] c 37 N81-15364
- Interferometric angle monitor  
[NASA-CASE-GSC-12614-1] c 74 N83-32577
- Fluidic angular velocity sensor  
[NASA-CASE-NPO-16479-1-CU] c 35 N86-32695
- ANHYDRIDES**
- Perfluoro alkylene dioxy-bis-(4-phthalic anhydrides and oxy-bis-(perfluoroalkyleneoxyphthalic anhydrides  
[NASA-CASE-MFS-22356-1] c 23 N75-30256
- Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c 25 N80-16116
- Prepolymer dianhydrides  
[NASA-CASE-NPO-13899-1] c 27 N80-32515
- Maleimido substituted aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-1] c 23 N86-19376
- Novel polyimide compositions based on 4,4'-isophthaloyldipthalic anhydride (IDPA)  
[NASA-CASE-LAR-14194-1] c 24 N90-15148
- Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14162-1] c 27 N90-15259
- Copolyimide with a combination of flexibilizing groups  
[NASA-CASE-LAR-13821-1] c 27 N90-16950
- Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-2] c 25 N90-23497
- Aromatic polyimides containing a dimethylsilane-linked dianhydride  
[NASA-CASE-LAR-14198-1] c 27 N90-26956
- Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-3] c 23 N91-17141
- Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-4] c 23 N91-25185
- Addition polyimides with enhanced processability  
[NASA-CASE-LEW-15043-1] c 27 N91-32230
- A process for preparing 1,3-diamino-5-pentafluorosulfanylbene and polymers therefrom  
[NASA-CASE-LAR-14773-1-CU] c 27 N92-10105
- A process for preparing an assembly of an article and a polyimide which resists dimensional change, delamination, and debonding when exposed to changes in temperature  
[NASA-CASE-LAR-14538-1] c 27 N92-11201
- Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-6] c 23 N92-17882
- Substituted 1,1,1-triaryl 2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-7] c 23 N93-17412
- Polyimides with improved compression moldability  
[NASA-CASE-LAR-14457-1] c 27 N93-25997
- Polyimides containing the cyclobutene-3,4-dione moiety  
[NASA-CASE-LAR-14753-1] c 27 N93-25999
- Diphenylmethane-containing dianhydride and polyimides prepared therefrom  
[NASA-CASE-LAR-14487-1] c 27 N93-29085
- Process to prepare 1,3-diamino-5-pentafluorosulfanylbene  
[NASA-CASE-LAR-14773-2-CU] c 25 N93-29506
- ANILINE**
- Process for preparation of dianilinosilanes Patent  
[NASA-CASE-XMF-06409] c 06 N71-23230
- Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-4] c 23 N91-25185
- ANIMALS**
- Automatic real-time pair-feeding system for animals  
[NASA-CASE-ARC-10302-1] c 51 N74-15778
- Tread drum for animals --- having an electrical shock station  
[NASA-CASE-ARC-10917-1] c 51 N78-27733
- ANISOTROPIC MEDIA**
- Hybrid composite laminate structures  
[NASA-CASE-LEW-12118-1] c 24 N77-27188
- Methods of determining loads and fiber orientations in anisotropic non-crystalline materials using energy flux deviation  
[NASA-CASE-LAR-14399-1] c 39 N93-26102

# SUBJECT INDEX



**ANISOTROPY**

- Method for anisotropic etching in the manufacture of semiconductor devices  
[NASA-CASE-MS-C-21631-1] c 75 N91-32947  
High speed magneto-resistive random access memory  
[NASA-CASE-NPO-17954-1-CU] c 60 N93-14704

**ANNEALING**

- Recovery of radiation damaged solar cells through thermal annealing  
[NASA-CASE-XGS-04047-2] c 03 N72-11062  
CDS solid state phase insensitive ultrasonic transducer --- annealing cadmium sulfide crystals  
[NASA-CASE-LAR-12304-1] c 35 N80-20559

**ANNULAR NOZZLES**

- Rocket thrust chamber Patent  
[NASA-CASE-XLE-00145] c 28 N70-36806  
Annular slit colloid thruster Patent  
[NASA-CASE-GSC-10709-1] c 28 N71-25213

**ANNULAR PLATES**

- Annular supersonic decelerator or drogue Patent  
[NASA-CASE-XLE-00222] c 02 N70-37939  
Multiple plate hydrostatic viscous damper  
[NASA-CASE-LEW-12445-1] c 37 N81-22360

**ANNULI**

- Shaft transducer having dc output proportional to angular velocity  
[NASA-CASE-NPO-15706-1] c 35 N84-28017

**ANODES**

- Heat activated cell with alkali anode and alkali salt electrolyte Patent  
[NASA-CASE-LEW-11358] c 03 N71-26084  
Storage battery comprising negative plates of a wedge shaped configuration --- for preventing shape change induced malfunctions  
[NASA-CASE-NPO-11806-1] c 44 N74-19693  
Resistive anode image converter  
[NASA-CASE-HQN-10876-1] c 33 N76-27473  
Rechargeable battery which combats shape change of the zinc anode  
[NASA-CASE-HQN-10862-1] c 44 N76-29699  
Arc control in compact arc lamps  
[NASA-CASE-NPO-10870-1] c 33 N77-22386  
Multiple anode arc lamp system  
[NASA-CASE-NPO-10857-1] c 33 N80-14330  
Ion sputter textured graphite --- anode collector plates in electron tube devices  
[NASA-CASE-LEW-12919-1] c 24 N83-10117  
Method and apparatus for rebalancing a REDOX flow cell system  
[NASA-CASE-LEW-14127-1] c 33 N86-20680  
Organic cathode for a secondary battery  
[NASA-CASE-NPO-17604-1-CU] c 33 N91-14536  
Anode for rechargeable ambient temperature lithium cells  
[NASA-CASE-NPO-18580-1-CU] c 33 N93-17278  
Alkali metal carbon dioxide electrochemical system for energy storage and/or conversion of carbon dioxide to oxygen  
[NASA-CASE-LEW-14973-1] c 44 N93-28974

**ANODIC COATINGS**

- Temperature reducing coating for metals subject to flame exposure Patent  
[NASA-CASE-XLE-00035] c 33 N71-29151  
Anode for ion thruster  
[NASA-CASE-LEW-12048-1] c 20 N77-20162  
Variable anodic thermal control coating  
[NASA-CASE-LAR-12719-1] c 44 N83-34449

**ANOMALIES**

- Aircraft liftemeter  
[NASA-CASE-LAR-12518-1] c 06 N86-27280

**ANTENNA ARRAYS**

- Antenna system using parasitic elements and two driven elements at 90 deg angle fed 180 deg out of phase Patent  
[NASA-CASE-XLA-00414] c 07 N70-38200  
Multiple input radio receiver Patent  
[NASA-CASE-XLA-00901] c 07 N71-10775  
Horn feed having overlapping apertures Patent  
[NASA-CASE-GSC-10452] c 07 N71-12396  
Tracking antenna system Patent  
[NASA-CASE-GSC-10553-1] c 07 N71-19854  
Radar antenna system for acquisition and tracking Patent  
[NASA-CASE-XMS-09610] c 07 N71-24625  
Antenna array phase quadrature tracking system Patent  
[NASA-CASE-MS-C-12205-1] c 07 N71-27056  
Antenna array at focal plane of reflector with coupling network for beam switching Patent  
[NASA-CASE-GSC-10220-1] c 07 N71-27233  
Triaxial antenna Patent  
[NASA-CASE-XGS-02290] c 07 N71-28809  
Virtual wall slot circularly polarized planar array antenna  
[NASA-CASE-NPO-10301] c 07 N72-11148

**Stacked array of omnidirectional antennas**

- [NASA-CASE-LAR-10545-1] c 09 N72-21244  
Circularly polarized antenna  
[NASA-CASE-ERC-10214] c 09 N72-31235  
Phase control circuits using frequency multiplications for phased array antennas  
[NASA-CASE-ERC-10285] c 10 N73-16206  
Plural beam antenna  
[NASA-CASE-GSC-11013-1] c 09 N73-19234  
Amplitude steered array  
[NASA-CASE-GSC-11446-1] c 33 N74-20860  
Position determination systems --- using orbital antenna scan of celestial bodies  
[NASA-CASE-MS-C-12593-1] c 17 N76-21250  
Thin conformal antenna array for microwave power conversions  
[NASA-CASE-NPO-13886-1] c 32 N78-24391  
RF beam center location method and apparatus for power transmission system  
[NASA-CASE-NPO-13821-1] c 44 N78-28594  
Phased array antenna control  
[NASA-CASE-MS-C-14939-1] c 32 N79-11264  
Phase conjugation method and apparatus for an active retrodirective antenna array  
[NASA-CASE-NPO-13641-1] c 32 N79-24210  
Scannable beam forming interferometer antenna array system  
[NASA-CASE-GSC-12365-1] c 32 N80-28578  
Frequency translating phase conjugation circuit for active retrodirective antenna array --- microwave transmission  
[NASA-CASE-NPO-14536-1] c 32 N81-14185  
Coaxial phased array antenna  
[NASA-CASE-MS-C-16800-1] c 32 N81-14187  
Baseband signal combiner for large aperture antenna array  
[NASA-CASE-NPO-14641-1] c 32 N81-29308  
Cavity-backed, micro-strip dipole antenna array  
[NASA-CASE-MS-C-18606-1] c 32 N82-11336  
Spiral slotted phased antenna array  
[NASA-CASE-MS-C-18532-1] c 32 N82-27558  
Method and apparatus for self-calibration and phasing of array antenna  
[NASA-CASE-NPO-15920-1] c 33 N85-21493  
Ground plane interference elimination by passive element  
[NASA-CASE-NPO-16632-1-CU] c 32 N87-15390  
Stripline feed for a microstrip array of patch elements with teardrop shaped probes  
[NASA-CASE-NPO-17548-1-CU] c 32 N90-16104  
Parallel and series fed microstrip array with high efficiency and low cross polarization  
[NASA-CASE-NPO-18678-1-CU] c 32 N93-28422  
Planar microstrip YAGI antenna array  
[NASA-CASE-NPO-17873-2-CU] c 32 N93-29507

**ANTENNA COMPONENTS**

- Digital servo controller --- for rotating antenna shaft  
[NASA-CASE-KSC-10769-1] c 33 N74-29556  
Faraday rotation measurement method and apparatus  
[NASA-CASE-NPO-14839-1] c 35 N82-15381  
Ground plane interference elimination by passive element  
[NASA-CASE-NPO-16632-1-CU] c 32 N87-15390

**ANTENNA COUPLERS**

- Dual band combiner for horn antenna  
[NASA-CASE-NPO-14519-1] c 32 N80-23524

**ANTENNA DESIGN**

- Low noise single aperture multimode monopulse antenna feed system Patent  
[NASA-CASE-XNP-01735] c 07 N71-22750  
Nose cone mounted heat resistant antenna Patent  
[NASA-CASE-XMS-04312] c 07 N71-22984  
Antenna array phase quadrature tracking system Patent  
[NASA-CASE-MS-C-12205-1] c 07 N71-27056  
Unfurlable structure including coiled strips thrust launched upon tension release Patent  
[NASA-CASE-HQN-00937] c 07 N71-28979  
Antenna design for surface wave suppression Patent  
[NASA-CASE-XLA-10772] c 07 N71-28980  
Target acquisition antenna  
[NASA-CASE-GSC-10064-1] c 10 N72-22235  
Collapsible high gain antenna  
[NASA-CASE-KSC-10392] c 07 N73-26117  
Dish antenna having switchable beamwidth --- with truncated concave ellipsoid subreflector  
[NASA-CASE-GSC-11760-1] c 33 N75-19516  
Horn antenna having V-shaped corrugated slots  
[NASA-CASE-LAR-11112-1] c 32 N76-15330  
Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NPO-13568-1] c 32 N76-21365  
Furlable antenna --- antenna design  
[NASA-CASE-NPO-13553-1] c 33 N76-32457  
Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c 32 N80-29539

- Multiple band circularly polarized microstrip antenna  
[NASA-CASE-MS-C-18334-1] c 32 N80-32604  
Spiral slotted phased antenna array  
[NASA-CASE-MS-C-18532-1] c 32 N82-27558  
Ground plane interference elimination by passive element  
[NASA-CASE-NPO-16632-1-CU] c 32 N87-15390  
Switched steerable multiple beam antenna system  
[NASA-CASE-MS-C-20873-1-SB] c 32 N89-11961  
System and method for measuring ocean surface currents at locations remote from land masses using synthetic aperture radar  
[NASA-CASE-NPO-17937-1-CU] c 43 N91-21621  
Double-loop frequency-selected surfaces for multifrequency division multiplexing in a dual-reflector antenna  
[NASA-CASE-NPO-18701-1-CU] c 32 N92-30291  
A satellite-tracking millimeter-wave reflector antenna system for mobile satellite-tracking  
[NASA-CASE-NPO-18772-1-CU] c 32 N93-28955  
Planar microstrip YAGI antenna array  
[NASA-CASE-NPO-17873-2-CU] c 32 N93-29507

**ANTENNA FEEDS**

- Multi-feed cone Cassegrain antenna Patent  
[NASA-CASE-NPO-10539] c 07 N71-11285  
Horn feed having overlapping apertures Patent  
[NASA-CASE-GSC-10452] c 07 N71-12396  
Target acquisition antenna  
[NASA-CASE-GSC-10064-1] c 10 N72-22235  
Composite antenna feed  
[NASA-CASE-GSC-11046-1] c 07 N73-28013  
Low loss dichroic plate  
[NASA-CASE-NPO-13171-1] c 32 N74-11000  
High efficiency multifrequency feed  
[NASA-CASE-GSC-11909] c 32 N74-20863  
Single frequency, two feed dish antenna having switchable beamwidth  
[NASA-CASE-GSC-11968-1] c 32 N76-15329  
Reflex feed system for dual frequency antenna with frequency cutoff means  
[NASA-CASE-NPO-14022-1] c 32 N78-31321  
Antenna feed system for receiving circular polarization and transmitting linear polarization  
[NASA-CASE-NPO-14362-1] c 32 N80-16261  
Multifrequency broadband polarized horn antenna  
[NASA-CASE-NPO-14588-1] c 32 N81-25278  
Microwave switching power divider --- antenna feeds  
[NASA-CASE-GSC-12420-1] c 33 N82-16340  
Focal axis resolver for offset reflector antennas  
[NASA-CASE-GSC-12630-1] c 33 N83-36355  
Beam forming network  
[NASA-CASE-NPO-15743-1] c 32 N85-29118  
Stripline feed for a microstrip array of patch elements with teardrop shaped probes  
[NASA-CASE-NPO-17548-1-CU] c 32 N90-16104

**ANTENNA RADIATION PATTERNS**

- Broadband choke for antenna structure  
[NASA-CASE-XMS-05303] c 07 N69-27462  
Dual mode horn antenna Patent  
[NASA-CASE-XNP-01057] c 07 N71-15907  
Electronic scanning of 2-channel monopulse patterns Patent  
[NASA-CASE-GSC-10299-1] c 09 N71-24804  
High impact antenna Patent  
[NASA-CASE-NPO-10231] c 07 N71-26101  
Triaxial antenna Patent  
[NASA-CASE-XGS-02290] c 07 N71-28809  
Lightning tracking system  
[NASA-CASE-KSC-10729-1] c 09 N73-32110  
Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NPO-13568-1] c 32 N76-21365  
Coaxial phased array antenna  
[NASA-CASE-MS-C-16800-1] c 32 N81-14187  
Ground plane interference elimination by passive element  
[NASA-CASE-NPO-16632-1-CU] c 32 N87-15390

**ANTENNAS**

- Self-erecting reflector Patent  
[NASA-CASE-XGS-09190] c 31 N71-16102  
High impact antenna Patent  
[NASA-CASE-NPO-10231] c 07 N71-26101  
Collapsible antenna boom and transmission line Patent  
[NASA-CASE-MFS-20068] c 07 N71-27191  
Conical reflector antenna  
[NASA-CASE-NPO-10303] c 07 N72-22127  
Coupled cavity traveling wave tube with velocity tapering  
[NASA-CASE-LEW-12296-1] c 33 N82-26568  
Antenna grout replacement system  
[NASA-CASE-NPO-15202-1] c 27 N83-34043  
Measurement apparatus and procedure for the determination of surface emissivities  
[NASA-CASE-LAR-13455-1] c 32 N87-21206

## ANTIBIOTICS

### ANTIBIOTICS

Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c 52 N79-14750

### ANTIBODIES

Pseudomonas screening assay  
[NASA-CASE-NPO-17653-1-CU] c 51 N93-25994

### ANTICHOLINERGICS

Intranasal scopolamine preparation and method  
[NASA-CASE-MSC-21858-1] c 52 N92-11628

### ANTIFRICTION BEARINGS

Hybrid lubrication system and bearing Patent  
[NASA-CASE-XNP-01641] c 15 N71-22997  
Rolling element bearings Patent  
[NASA-CASE-XLE-09527-2] c 15 N71-26189  
High speed hybrid bearing comprising a fluid bearing and a rolling bearing connected in series  
[NASA-CASE-LEW-11152-1] c 15 N73-32359  
Production of hollow components for rolling element bearings by diffusion welding  
[NASA-CASE-LEW-11026-1] c 15 N73-33383  
Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications  
[NASA-CASE-LEW-11930-4] c 24 N79-17916  
Method of making bearing material  
[NASA-CASE-LEW-11930-3] c 24 N80-33482  
Cryogenic anti-friction bearing with inner race  
[NASA-CASE-MFS-28384-1] c 37 N90-27112  
Radial spline assembly for antifriction bearings  
[NASA-CASE-MFS-28629-1] c 37 N93-17084  
Radial spline assembly for antifriction bearings  
[NASA-CASE-MFS-28629-1] c 37 N93-26001

### ANTIGRAVITY

Anti-gravity device  
[NASA-CASE-MFS-22758-1] c 70 N75-26789

### ANTIHISTAMINICS

Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c 52 N81-14613  
Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-1] c 52 N81-29764

### ANTIREFLECTION COATINGS

Silicon nitride coated, plastic covered solar cell  
[NASA-CASE-LEW-11496-1] c 44 N77-14580  
Broadband optical radiation detector  
[US-PATENT-4,262,198] c 74 N83-19597

### ANVILS

Apparatus for making diamonds  
[NASA-CASE-MFS-20698] c 15 N72-20446  
High temperature solder device for flat cables  
[NASA-CASE-GSC-13344-1] c 26 N92-29094

### APERTURES

Focusing system for an ion source having apertured electrodes Patent  
[NASA-CASE-XNP-03332] c 09 N71-10618  
Threadless fastener apparatus Patent  
[NASA-CASE-XFR-05302] c 15 N71-23254  
On-film optical recording of camera lens settings  
[NASA-CASE-MSC-12363-1] c 14 N73-26431  
Method of forming aperture plate for electron microscope  
[NASA-CASE-ARC-10448-2] c 74 N75-12732  
Method of making an apertured casting --- using duplicate mold  
[NASA-CASE-LEW-11169-1] c 37 N76-23570  
Electron microscope aperture system  
[NASA-CASE-ARC-10448-3] c 35 N77-14408  
Water window imaging x ray microscope  
[NASA-CASE-MFS-28485-1] c 35 N92-29135  
Dynamic aperture fringe discriminator  
[NASA-CASE-NPO-18478-1-CU] c 74 N92-30084  
Electronic still camera  
[NASA-CASE-MSC-21797-1] c 35 N93-17076

### APOLLO PROJECT

Space suit  
[NASA-CASE-MSC-12609-1] c 05 N73-32012

### APOLLO SPACECRAFT

Energy absorbing structure Patent Application  
[NASA-CASE-MSC-12279-1] c 15 N70-35679  
Low onset rate energy absorber  
[NASA-CASE-MSC-12279] c 15 N72-17450

### APPLICATION SPECIFIC INTEGRATED CIRCUITS

Cascaded VLSI neural network architecture for on-line learning  
[NASA-CASE-NPO-18645-1-CU] c 63 N92-34240

### APPLICATIONS OF MATHEMATICS

Apparatus for computing square roots Patent  
[NASA-CASE-XGS-04768] c 08 N71-19437

### APPLICATIONS PROGRAMS (COMPUTERS)

High level language-based robotic control system  
[NASA-CASE-NPO-17918-2-CU] c 63 N92-17895

### APPROACH

Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c 04 N82-16059

### AQUATIC PLANTS

Method for treating wastewater using microorganisms and vascular aquatic plants  
[NASA-CASE-NSTL-10] c 45 N84-12654

### AQUEOUS SOLUTIONS

Anti-fog composition --- for prevention of fogging on surfaces such as space helmet visors and windshields  
[NASA-CASE-MSC-13530-2] c 23 N75-14834  
Automated system for identifying traces of organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c 25 N76-18245  
Method for separating biological cells --- suspended in aqueous polymer systems  
[NASA-CASE-MFS-23883-1] c 51 N80-16715  
Method of cross-linking polyvinyl alcohol and other water soluble resins  
[NASA-CASE-LEW-13103-1] c 27 N80-32516  
Electrophotolysis oxidation system for measurement of organic concentration in water  
[NASA-CASE-MSC-16497-1] c 25 N82-12166  
Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c 37 N82-12441  
Coal desulfurization by aqueous chlorination  
[NASA-CASE-NPO-14902-1] c 25 N82-29371  
Hydrodesulfurization of chlorinated coal  
[NASA-CASE-NPO-15304-1] c 25 N83-31743  
Passivation of high temperature superconductors  
[NASA-CASE-NPO-17949-1-CU] c 76 N92-10681

### ARAMID FIBER COMPOSITES

Glove attachment  
[NASA-CASE-MSC-21632-1] c 54 N92-34210

### ARC DISCHARGES

Device for preventing high voltage arcing in electron beam welding Patent  
[NASA-CASE-XMF-08522] c 15 N71-19486  
Self-repeating plasma generator having communicating annular and linear arc discharge passages Patent  
[NASA-CASE-XLA-03103] c 25 N71-21693  
Method and apparatus for nondestructive testing --- using high frequency arc discharges  
[NASA-CASE-MFS-21233-1] c 38 N74-15395  
Sustained arc ignition system  
[NASA-CASE-LEW-12444-1] c 33 N77-28385

### ARC HEATING

Electric-arc heater Patent  
[NASA-CASE-XLA-00330] c 33 N70-34540  
Electric arc device for heating gases Patent  
[NASA-CASE-XAC-00319] c 25 N70-41628  
Annular arc accelerator shock tube  
[NASA-CASE-NPO-13528-1] c 09 N77-10071

### ARC JET ENGINES

Magneto-plasma-dynamic arc thruster  
[NASA-CASE-LEW-11180-1] c 25 N73-25760  
Arcjet power supply and start circuit  
[NASA-CASE-LEW-14374-1] c 09 N88-28939

### ARC LAMPS

Starting circuit for vapor lamps and the like Patent  
[NASA-CASE-NXP-01058] c 09 N71-12540  
Compact, high intensity arc lamp with internal magnetic field producing means  
[NASA-CASE-NPO-11510-1] c 33 N77-21315  
Depressurization of arc lamps  
[NASA-CASE-NPO-10790-1] c 33 N77-21316  
Arc control in compact arc lamps  
[NASA-CASE-NPO-10870-1] c 33 N77-22386  
Purging means and method for Xenon arc lamps  
[NASA-CASE-NPO-11978] c 31 N78-17238  
Multiple anode arc lamp system  
[NASA-CASE-NPO-10857-1] c 33 N80-14330  
Self-clamping arc light reflector for welding torch  
[NASA-CASE-MFS-29207-1] c 74 N87-25843  
Arc lamp power supply using a voltage multiplier  
[NASA-CASE-LAR-13202-1] c 33 N88-23942

### ARC SPRAYING

Arc spray fabrication of metal matrix composite monotype  
[NASA-CASE-LEW-13828-1] c 24 N85-30027  
Process for HIP canning of composites  
[NASA-CASE-LEW-14990-1-CU] c 24 N91-17145

### ARC WELDING

Spectral method for monitoring atmospheric contamination of inert-gas welding shields Patent  
[NASA-CASE-XMF-02039] c 15 N71-15871  
Automatic closed circuit television arc guidance control Patent  
[NASA-CASE-MFS-13046] c 07 N71-19433  
Device for preventing high voltage arcing in electron beam welding Patent  
[NASA-CASE-XMF-08522] c 15 N71-19486  
Welding skate with computerized control Patent  
[NASA-CASE-XMF-07069] c 15 N71-23815

## SUBJECT INDEX

Grain refinement control in TIG arc welding  
[NASA-CASE-MSC-19095-1] c 37 N75-19683  
Self-clamping arc light reflector for welding torch  
[NASA-CASE-MFS-29207-1] c 74 N87-25843  
Welding torch gas cup extension  
[NASA-CASE-MFS-29252-1] c 37 N88-23980  
ARC length control for plasma welding  
[NASA-CASE-MSC-20900-1] c 37 N88-30131  
Trailer shield assembly for a welding torch  
[NASA-CASE-MFS-29260-1] c 37 N90-19602  
Substantially oxygen-free contact tube  
[NASA-CASE-LAR-14169-1] c 37 N92-17677  
Welding wire pressure sensor assembly  
[NASA-CASE-MFS-26216-1] c 37 N93-28951

**ARCHITECTURE**  
Foldable construction block  
[NASA-CASE-MSC-12233-2] c 32 N73-13921  
Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-2] c 18 N89-25266

**ARCHITECTURE (COMPUTERS)**  
Massively parallel processor computer  
[NASA-CASE-GSC-12223-1] c 60 N83-25378  
Distributed multipoint memory architecture  
[NASA-CASE-NPO-15342-1] c 60 N83-32342  
High dynamic global positioning system receiver  
[NASA-CASE-NPO-16171-1-CU] c 04 N86-27270  
Method for Viterbi decoding of large constraint length convolutional codes  
[NASA-CASE-NPO-17310-1-CU] c 17 N88-28946  
Nanosequence digital logic controller  
[NASA-CASE-NPO-16116-2] c 60 N88-29310  
Fault tolerant hypercube computer system architecture  
[NASA-CASE-NPO-16859-1-CU] c 60 N90-21527  
Programmable remapper with single flow architecture  
[NASA-CASE-MSC-21481-1] c 60 N91-13890  
System and method for a general purpose architecture for intelligent computer-aided training  
[NASA-CASE-MSC-21381-1] c 63 N91-13944  
Adaptive data acquisition multiplexing system and method  
[NASA-CASE-MSC-21170-1] c 17 N91-14371  
Distributed computing system with dual independent communications paths between computers and employing split tokens  
[NASA-CASE-NPO-17185-1-CU] c 62 N91-14772  
Synchronized computational architecture for generalized bilateral control of robot arms  
[NASA-CASE-NPO-17401-1-CU] c 63 N91-31885  
Highly parallel computer architecture for robotic computation  
[NASA-CASE-NPO-17632-1-CU] c 60 N91-32805  
Analog hardware for learning neural networks  
[NASA-CASE-NPO-17664-1-CU] c 62 N91-32852  
Optical inner product neural associative memory  
[NASA-CASE-NPO-18491-1-CU] c 60 N92-23546  
Electronic neural network for solving traveling salesman and similar global optimization problems  
[NASA-CASE-NPO-17807-2-CU] c 63 N92-29955  
Cascaded VLSI neural network architecture for on-line learning  
[NASA-CASE-NPO-18645-1-CU] c 63 N92-34240  
Neural network training by integration of adjoint systems of equations forward in time  
[NASA-CASE-NPO-18586-1-CU] c 63 N93-17276  
Special purpose parallel computer architecture for real-time control and simulation in robotic applications  
[NASA-CASE-NPO-17629-1-CU] c 60 N93-29608

**ARGON**  
Liquid crystal light valve structures  
[NASA-CASE-MSC-20036-1] c 76 N85-33826

**ARITHMETIC**  
VLSI binary updown counter  
[NASA-CASE-NPO-17205-1-CU] c 60 N90-21525

**ARM (ANATOMY)**  
Apparatus for applying simulator g-forces to an arm of an aircraft simulator pilot  
[NASA-CASE-LAR-10550-1] c 09 N74-30597  
Orthotic arm joint --- for use in mechanical arms  
[NASA-CASE-MFS-21611-1] c 54 N75-12616  
Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c 37 N79-28551  
Rotationally actuated prosthetic helping hand  
[NASA-CASE-MFS-28426-1] c 54 N91-32795  
Bar-holding prosthetic limb  
[NASA-CASE-MFS-28481-1] c 54 N93-14870  
Control system and method for prosthetic devices  
[NASA-CASE-MSC-21941-1] c 54 N93-17087

**ARMATURES**  
Direct current motor with stationary armature and field Patent  
[NASA-CASE-XGS-05290] c 09 N71-25999  
Solenoid valve including guide for armature and valve member  
[NASA-CASE-GSC-10607-1] c 15 N72-20442

- Electric motive machine including magnetic bearing  
[NASA-CASE-XGS-07805] c 15 N72-33476
- Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c 44 N80-29834
- AROMATIC COMPOUNDS**
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c 27 N74-21156
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c 27 N76-32315
- Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c 27 N78-31232
- Process for preparing thermoplastic aromatic polyimides  
[NASA-CASE-LAR-11828-1] c 27 N78-32261
- Curing agent for polyepoxides and epoxy resins and composites cured therewith --- preventing carbon fiber release  
[NASA-CASE-LEW-13226-1] c 27 N81-17260
- The 1,1,1-triaryl-2,2,2-trifluoroethanes and process for their synthesis  
[NASA-CASE-ARC-11097-1] c 25 N82-24312
- Bis (4-(3,4-dimethylene-pyrrolidyl)-phenyl) methane  
[NASA-CASE-LAR-13965-2-CU] c 23 N91-14418
- ARRAYS**
- Radio frequency arraying method for receivers  
[NASA-CASE-NPO-14328-1] c 32 N80-18253
- Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c 35 N82-31659
- Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-2] c 33 N83-24763
- Tm,Ho:YLF laser end-pumped by a semiconductor diode laser array  
[NASA-CASE-NPO-17282-1-CU] c 36 N91-15528
- Formation of self-aligned guard rings for monolithic Schottky-barrier diode arrays  
[NASA-CASE-NPO-17734-1-CU] c 33 N92-10146
- Method of measuring cross-flow vortices by use of an array of hot-film sensors  
[NASA-CASE-LAR-14824-1-SB] c 34 N93-26000
- ARTERIES**
- Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c 52 N74-27566
- ARTIFICIAL CLOUDS**
- Barium release system  
[NASA-CASE-LAR-10670-1] c 06 N73-30097
- ARTIFICIAL GRAVITY**
- Rotating space station simulator Patent  
[NASA-CASE-XLA-03127] c 11 N71-10776
- Artificial gravity spin deployment system Patent  
[NASA-CASE-XNP-02595] c 31 N71-21881
- Space vehicle with artificial gravity and earth-like environment  
[NASA-CASE-LEW-11101-1] c 31 N73-32750
- ARTIFICIAL INTELLIGENCE**
- Discrete event simulation tool for analysis of qualitative models of continuous processing systems  
[NASA-CASE-MSC-21465-1] c 61 N91-14741
- Analog hardware for delta-backpropagation neural networks  
[NASA-CASE-NPO-17564-1-CU] c 32 N92-22033
- Fast temporal neural learning using teacher forcing  
[NASA-CASE-NPO-18553-1-CU] c 63 N92-30085
- General method of pattern classification using the two-domain theory  
[NASA-CASE-MSC-21737-1] c 61 N93-18282
- ARTIFICIAL SATELLITES**
- Satellite communication system and method Patent  
[NASA-CASE-GSC-10118-1] c 07 N71-24621
- Gravity gradient attitude control system Patent  
[NASA-CASE-GSC-10555-1] c 21 N71-27324
- ASBESTOS**
- Reconstituted asbestos matrix --- for use in fuel or electrolysis cells  
[NASA-CASE-MSC-12568-1] c 24 N76-14204
- ASHES**
- Energy efficient continuous flow ash lockhopper  
[NASA-CASE-NPO-16985-1-CU] c 31 N91-15423
- ASPECT RATIO**
- Variable sweep wing aircraft Patent  
[NASA-CASE-XLA-00221] c 02 N70-33266
- Variable-span aircraft Patent  
[NASA-CASE-XLA-00166] c 02 N70-34178
- Variable sweep aircraft wing Patent  
[NASA-CASE-XLA-00350] c 02 N70-38011
- ASPHALT**
- Thermoplastic rubber comprising ethylene-vinyl acetate copolymer, asphalt and fluxing oil  
[NASA-CASE-NPO-08835-1] c 27 N78-33228
- ASSAYING**
- Rapid, quantitative determination of bacteria in water --- adenosine triphosphate  
[NASA-CASE-GSC-12158-1] c 51 N83-27569
- Kinetic tetrazolium microtiter assay  
[NASA-CASE-MSC-21979-1] c 51 N93-17049
- Pseudomonas screening assay  
[NASA-CASE-NPO-17653-1-CU] c 51 N93-25994
- ASSEMBLIES**
- Multiple Belleville spring assembly Patent  
[NASA-CASE-XNP-00840] c 15 N70-38225
- Bearing seat usable in a gas turbine engine  
[NASA-CASE-LEW-12477-1] c 37 N77-32501
- Foldable beam  
[NASA-CASE-LAR-12077-1] c 31 N81-25259
- Resilient seal ring assembly with spring means applying force to wedge member --- cryogenic applications  
[NASA-CASE-MFS-25678-1] c 37 N84-11497
- Self-locking mechanical center joint  
[NASA-CASE-LAR-12864-1] c 37 N85-30336
- X-ray determination of parts alignment  
[NASA-CASE-MSC-20418-1] c 74 N86-20126
- Emitted vibration measurement device and method  
[NASA-CASE-MFS-25981-1] c 35 N87-14670
- Fully redundant mechanical release actuator  
[NASA-CASE-LAR-13198-1] c 37 N87-23983
- ASSEMBLING**
- Magnetic attachment mechanism  
[NASA-CASE-MSC-21095-1] c 37 N89-12866
- Method of preforming and assembling superconducting circuit elements  
[NASA-CASE-LAR-14395-1-CU] c 33 N91-28490
- Backward assembly planning with DFA analysis  
[NASA-CASE-NPO-18817-1-CU] c 31 N93-12202
- Robot friendly probe and socket assembly  
[NASA-CASE-MSC-22028-1] c 37 N93-22007
- Spline screw autochanger  
[NASA-CASE-GSC-13435-1] c 37 N93-29505
- ASSEMBLY**
- Alignment and assembly tool for very large diameter cylinders  
[NASA-CASE-MFS-28001-2] c 37 N88-14360
- Blind fastening apparatus  
[NASA-CASE-LAR-14542-1] c 37 N93-22384
- Spline screw autochanger  
[NASA-CASE-GSC-13435-1] c 37 N93-29505
- ASSOCIATIVE PROCESSING (COMPUTERS)**
- Hybrid analog-digital associative neural network  
[NASA-CASE-NPO-17058-1-CU] c 62 N87-25803
- ASTRONAUT LOCOMOTION**
- Rotating space station simulator Patent  
[NASA-CASE-XLA-03127] c 11 N71-10776
- Space suit pressure stabilizer Patent  
[NASA-CASE-XLA-05332] c 05 N71-11194
- Equipotential space suit Patent  
[NASA-CASE-LAR-10007-1] c 05 N71-11195
- Hard space suit Patent  
[NASA-CASE-XAC-07043] c 05 N71-23161
- Foreshortened convolute section for a pressurized suit Patent  
[NASA-CASE-XMS-09637-1] c 05 N71-24730
- Locomotion and restraint aid Patent  
[NASA-CASE-ARC-10153] c 05 N71-28619
- Walking boot assembly  
[NASA-CASE-ARC-11101-1] c 54 N78-17675
- Spacesuit mobility knee joints  
[NASA-CASE-ARC-11058-2] c 54 N79-24651
- ASTRONAUT MANEUVERING EQUIPMENT**
- Hand-held self-maneuvering unit Patent  
[NASA-CASE-XMS-05304] c 05 N71-12336
- Space environmental work simulator Patent  
[NASA-CASE-XMF-07488] c 11 N71-18773
- Personal propulsion unit Patent  
[NASA-CASE-MFS-20130] c 28 N71-27585
- ASTRONAUT PERFORMANCE**
- Locomotion and restraint aid Patent  
[NASA-CASE-ARC-10153] c 05 N71-28619
- Spacesuit mobility joints  
[NASA-CASE-ARC-11058-1] c 54 N78-31735
- ASTRONAUT TRAINING**
- Training vehicle for controlling attitude Patent  
[NASA-CASE-XMS-02977] c 11 N71-10746
- Mechanical simulator of low gravity conditions Patent  
[NASA-CASE-MFS-10555] c 11 N71-19494
- Subgravity simulator Patent  
[NASA-CASE-XMS-04798] c 11 N71-21474
- ASTRONAUTS**
- Emergency lunar communications system  
[NASA-CASE-MFS-21042] c 07 N72-25171
- Manual actuator --- for spacecraft exercising machines  
[NASA-CASE-MFS-21481-1] c 37 N74-18127
- Bi-stem gripping apparatus  
[NASA-CASE-MFS-28185-1] c 37 N88-23979
- End effector with astronaut foot restraint  
[NASA-CASE-MSC-21721-1] c 54 N92-16559
- Glove attachment  
[NASA-CASE-MSC-21632-1] c 54 N92-34210
- ASTRONAVIGATION**
- Guidance and maneuver analyzer Patent  
[NASA-CASE-XNP-09572] c 14 N71-15621
- ASTRONOMICAL PHOTOGRAPHY**
- Apparatus for photographing meteors  
[NASA-CASE-LAR-10226-1] c 14 N73-19419
- ASYMMETRY**
- Method for the preparation of thin-skinned asymmetric reverse osmosis membranes and products thereof  
[NASA-CASE-ARC-11359-1] c 51 N84-28361
- Trellis coded modulation for transmission over fading mobile satellite channel  
[NASA-CASE-NPO-16904-2-CU] c 32 N91-14523
- Asymmetric soft-error resistant memory  
[NASA-CASE-NPO-17394-1-CU] c 60 N91-31810
- ATMOSPHERIC ATTENUATION**
- Tunable CW diode-pumped Tm,Ho:YLF laser operating at or near room temperature  
[NASA-CASE-NPO-18611-1-CU] c 36 N93-30415
- ATMOSPHERIC CHEMISTRY**
- All-optical photochromic spatial light modulators based on photoinduced electron transfer in rigid matrices  
[NASA-CASE-NPO-17612-1-CU] c 74 N92-16808
- ATMOSPHERIC COMPOSITION**
- Atmospheric sampling devices  
[NASA-CASE-NPO-11373] c 13 N72-25323
- Apparatus for sampling particulates in gases  
[NASA-CASE-HQN-10037-1] c 14 N73-27376
- Monitoring atmospheric pollutants with a heterodyne radiometer transmitter-receiver  
[NASA-CASE-NPO-11919-1] c 35 N74-11284
- Chelate-modified polymers for atmospheric gas chromatography  
[NASA-CASE-ARC-11154-1] c 25 N80-23383
- Mobile sampler for use in acquiring samples of terrestrial atmospheric gases  
[NASA-CASE-NPO-15220-1] c 45 N83-25217
- ATMOSPHERIC DENSITY**
- System for indicating fuel-efficient aircraft altitude  
[NASA-CASE-NPO-15351-2] c 06 N84-34443
- ATMOSPHERIC ENTRY**
- Flight craft Patent  
[NASA-CASE-XAC-02058] c 02 N71-16087
- Means for measuring the electron density gradients of the plasma sheath formed around a space vehicle Patent  
[NASA-CASE-XLA-06232] c 25 N71-20563
- Orbital and entry tracking accessory for globes --- to provide range requirements for reentry vehicles to any landing site  
[NASA-CASE-LAR-10626-1] c 19 N74-21015
- ATMOSPHERIC ENTRY SIMULATION**
- Plasma accelerator Patent  
[NASA-CASE-XLA-00675] c 25 N70-33267
- Flow field simulation Patent  
[NASA-CASE-LAR-11138] c 12 N71-20436
- ATMOSPHERIC MOISTURE**
- Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-2] c 36 N83-29681
- Wet atmospheric generation apparatus  
[NASA-CASE-MFS-28177-1] c 35 N91-21496
- ATMOSPHERIC PHYSICS**
- Rocket borne instrument to measure electric fields inside electrified clouds  
[NASA-CASE-KSC-10730-1] c 14 N73-32318
- ATMOSPHERIC PRESSURE**
- Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c 26 N80-14229
- Method of and apparatus for measuring temperature and pressure --- atmospheric sounding  
[NASA-CASE-GSC-12558-1] c 36 N85-21639
- Atmospheric pressure flow reactor: Gas phase chemical kinetics under tropospheric conditions without wall effects  
[NASA-CASE-MSC-21384-1] c 34 N92-16243
- Ultra-high temperature stability Joule-Thomson cooler with capability to accommodate pressure variations  
[NASA-CASE-NPO-18184-1-CU] c 35 N92-29156
- Atmospheric pressure flow reactor: Gas phase chemical kinetics under tropospheric conditions without wall effects  
[NASA-CASE-MSC-21384-2] c 35 N93-17626
- ATMOSPHERIC RADIATION**
- Method and apparatus for measuring solar activity and atmospheric radiation effects  
[NASA-CASE-ERC-10276] c 14 N73-26432
- ATMOSPHERIC REFRACTION**
- Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-1] c 36 N81-22344
- ATMOSPHERIC SCATTERING**
- Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c 36 N75-15028
- ATMOSPHERIC SOUNDING**
- Microwave limb sounder --- measuring trace gases in the upper atmosphere  
[NASA-CASE-NPO-14544-1] c 46 N82-12685

# ATMOSPHERIC TEMPERATURE

# SUBJECT INDEX

## ATMOSPHERIC TEMPERATURE

System for indicating fuel-efficient aircraft altitude  
[NASA-CASE-NPO-15351-2] c 06 N84-34443  
Method of and apparatus for measuring temperature and pressure --- atmospheric sounding  
[NASA-CASE-GSC-12558-1] c 36 N85-21639

## ATMOSPHERIC TURBULENCE

Passive optical wind and turbulence detection system  
Patent  
[NASA-CASE-XMF-14032] c 20 N71-16340  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c 35 N77-10493

## ATOMIC BEAMS

Variable energy, high flux, ground-state atomic oxygen source  
[NASA-CASE-NPO-16640-1-CU] c 72 N87-21661  
Method and apparatus for producing a thermal atomic oxygen beam  
[NASA-CASE-LEW-15614-1] c 72 N93-19026

## ATOMIC EXCITATIONS

Double photon excitation of high-Rydberg atoms as a long-lived submillimeter detector  
[NASA-CASE-NPO-16372-1] c 72 N86-33127

## ATOMIC STRUCTURE

Tailorable infrared sensing device with strain layer superlattice structure  
[NASA-CASE-NPO-16617-2-CU] c 35 N90-17118

## ATOMIZERS

Cryogenic cooling system Patent  
[NASA-CASE-NPO-10467] c 23 N71-26654  
Constant-output atomizer --- Inhalation therapy and aerosol research  
[NASA-CASE-MFS-25631-1] c 34 N84-12406  
Liquid seeding atomizer  
[NASA-CASE-ARC-11631-1] c 34 N87-21255

## ATS

Doppler frequency spread correction device for multiplex transmissions  
[NASA-CASE-XGS-02749] c 07 N69-39978

## ATTACHMENT

Wide temperature range electronic device with lead attachment  
[NASA-CASE-ERC-10224-2] c 09 N73-27150

## ATTENTION

Method of encouraging attention by correlating video game difficulty with attention level  
[NASA-CASE-LAR-15022-1] c 53 N93-28128

## ATTENUATORS

Rotary vane attenuator wherein rotor has orthogonally disposed resistive and dielectric cards  
[NASA-CASE-NPO-11418-1] c 14 N73-13420  
Pulse transducer with artifact signal attenuator --- heart rate sensors  
[NASA-CASE-FRC-11012-1] c 52 N80-23969  
Underwinding compression vortex attenuation device  
[NASA-CASE-LAR-14744-1] c 02 N93-19053  
Rocket engine nozzle attenuator  
[NASA-CASE-MFS-28739-1] c 20 N93-28324

## ATTITUDE (INCLINATION)

Analog spatial maneuver computer  
[NASA-CASE-GSC-10880-1] c 08 N72-11172  
Spacecraft attitude sensor  
[NASA-CASE-GSC-10890-1] c 21 N73-30640  
Interferometer mirror tilt correcting system  
[NASA-CASE-NPO-13687-1] c 35 N78-18391

## ATTITUDE CONTROL

Visual target for retrofire attitude control  
[NASA-CASE-XMS-12158-1] c 31 N69-27499  
Three axis controller Patent  
[NASA-CASE-XFR-00181] c 21 N70-33279  
Method and apparatus for determining satellite orientation utilizing spatial energy sources Patent  
[NASA-CASE-XGS-00466] c 21 N70-34297  
Attitude and propellant flow control system and method Patent  
[NASA-CASE-XMF-00185] c 21 N70-34539  
Space vehicle attitude control Patent  
[NASA-CASE-XNP-00465] c 21 N70-35395  
Attitude control for spacecraft Patent  
[NASA-CASE-XNP-00294] c 21 N70-36938  
Attitude orientation of spin-stabilized space vehicles Patent  
[NASA-CASE-XLA-00281] c 21 N70-36943  
Ejection unit Patent  
[NASA-CASE-XNP-00676] c 15 N70-38996  
Three-axis controller Patent  
[NASA-CASE-XAC-01404] c 05 N70-41581  
Training vehicle for controlling attitude Patent  
[NASA-CASE-XMS-02977] c 11 N71-10746  
Canopus detector including automotive gain control of photomultiplier tube Patent  
[NASA-CASE-XNP-03914] c 21 N71-10771  
Automatic balancing device Patent  
[NASA-CASE-LAR-10774] c 10 N71-13545

Spacecraft experiment pointing and attitude control system Patent

[NASA-CASE-XLA-05464] c 21 N71-14132  
Attitude control system Patent  
[NASA-CASE-XGS-04393] c 21 N71-14159  
Control system for rocket vehicles Patent  
[NASA-CASE-XLA-01163] c 21 N71-15582  
Reactance control system Patent  
[NASA-CASE-XMF-01598] c 21 N71-15583  
Spacecraft attitude detection system by stellar reference Patent  
[NASA-CASE-XGS-03431] c 21 N71-15642  
Three-axis finger tip controller for switches Patent  
[NASA-CASE-XAC-02405] c 09 N71-16089  
Thrust and direction control apparatus Patent  
[NASA-CASE-XLE-03583] c 31 N71-17629  
Attitude sensor for space vehicles Patent  
[NASA-CASE-XLA-00793] c 21 N71-22880  
Attitude control system for sounding rockets Patent  
[NASA-CASE-XGS-01654] c 31 N71-24750  
Voice operated controller Patent  
[NASA-CASE-XLA-04063] c 31 N71-33160  
Attitude sensor  
[NASA-CASE-LAR-10586-1] c 19 N74-15089  
Temperature compensated digital inertial sensor --- circuit for maintaining inertial element of gyroscope or accelerometer at constant position  
[NASA-CASE-NPO-13044-1] c 35 N74-15094  
Sun direction detection system  
[NASA-CASE-NPO-13722-1] c 74 N77-22951  
Thrust augmented spin recovery device  
[NASA-CASE-LAR-11970-2] c 08 N81-19130  
Programmable scan/read circuitry for charge coupled device imaging detectors --- spacecraft attitude control and star trackers  
[NASA-CASE-NPO-15345-1] c 74 N84-23247  
Propulsion apparatus and method using boil-off gas from a cryogenic liquid  
[NASA-CASE-MFS-25946-1] c 20 N86-26368  
Emission vibration measurement device and method  
[NASA-CASE-MFS-25981-1] c 35 N87-14670  
Aircraft control position indicator  
[NASA-CASE-LAR-12984-1] c 06 N87-22678  
Three axis attitude control system  
[NASA-CASE-GSC-12970-1] c 08 N88-23808  
Fluid-loop reaction system  
[NASA-CASE-NPO-17204-1-CU] c 34 N91-25380

## ATTITUDE GYROS

Space vehicle attitude control Patent  
[NASA-CASE-XNP-00465] c 21 N70-35395  
Attitude control system  
[NASA-CASE-MFS-22787-1] c 15 N77-10113

## ATTITUDE INDICATORS

Photosensitive device to detect bearing deviation Patent  
[NASA-CASE-XNP-00438] c 21 N70-35089  
Controllers Patent  
[NASA-CASE-XMS-07487] c 15 N71-23255  
Combined optical attitude and altitude indicating instrument Patent  
[NASA-CASE-XLA-01907] c 14 N71-23268  
Head-up attitude display  
[NASA-CASE-ERC-10392] c 21 N73-14692  
Attitude sensor  
[NASA-CASE-LAR-10586-1] c 19 N74-15089  
Translatory shock absorber for attitude sensors  
[NASA-CASE-MFS-22905-1] c 19 N76-22284  
Air speed and attitude probe  
[NASA-CASE-FRC-11009-1] c 06 N80-18036  
Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c 06 N83-33882

## ATTITUDE STABILITY

Dynamic precession damper for spin stabilized vehicles Patent  
[NASA-CASE-XLA-01989] c 21 N70-34295  
Apparatus for automatically stabilizing the attitude of a nonguided vehicle  
[NASA-CASE-ARC-10134] c 30 N72-17873  
Method of damping nutation motion with minimum spin axis attitude disturbance  
[NASA-CASE-GSC-12551-1] c 18 N83-28064

## AUDIO EQUIPMENT

Audio system with means for reducing noise effects  
[NASA-CASE-NPO-11631] c 10 N73-12244  
Acoustic device and method for measuring gas densities  
[NASA-CASE-NPO-18155-1-CU] c 71 N93-13421

## AUDIO FREQUENCIES

Signal path series step biased multidevice high efficiency amplifier Patent  
[NASA-CASE-GSC-10668-1] c 07 N71-28430  
Audio frequency marker system  
[NASA-CASE-NPO-11147] c 14 N72-27408  
Emergency locating transmitter  
[NASA-CASE-GSC-12821-2] c 33 N91-31530

## AUDIO SIGNALS

Method and apparatus for operating on companded PCM voice data  
[NASA-CASE-KSC-11285-1] c 32 N86-27513

## AUDITORY DEFECTS

Hearing aid malfunction detection system  
[NASA-CASE-MSC-14916-1] c 33 N78-10375  
Visual aid for the hearing impaired  
[NASA-CASE-GSC-13027-1-CU] c 35 N91-27522

## AUDITORY PERCEPTION

Auditory display for the blind  
[NASA-CASE-HQN-10832-1] c 71 N74-21014

## AUDITORY SIGNALS

Audio signal processor Patent  
[NASA-CASE-MSC-12223-1] c 07 N71-26181  
Audio system with means for reducing noise effects  
[NASA-CASE-NPO-11631] c 10 N73-12244

## AUDITORY STIMULI

Auditory display for the blind  
[NASA-CASE-HQN-10832-1] c 71 N74-21014

## AUGER EFFECT

Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MSC-18791-1] c 37 N83-36482

## AUSTENITE

Fastening apparatus having shape memory alloy actuator  
[NASA-CASE-MSC-21935-1] c 37 N93-13423

## AUSTENITIC STAINLESS STEELS

Nickel aluminide coated low alloy stainless steel  
[NASA-CASE-LEW-11267-1] c 17 N73-32414  
Device for measuring the ferrite content in an austenitic stainless-steel weld  
[NASA-CASE-MFS-22907-1] c 26 N76-18257

## AUTOCLAVES

System for sterilizing objects --- cleaning space vehicle systems  
[NASA-CASE-KSC-11085-1] c 54 N81-24724

## AUTOCORRELATION

Linear three-tap feedback shift register Patent  
[NASA-CASE-NPO-10351] c 08 N71-12503  
Correlation function apparatus Patent  
[NASA-CASE-XNP-00746] c 07 N71-21476

## AUTOMATIC CONTROL

Bus voltage compensation circuit for controlling direct current motor  
[NASA-CASE-XMS-04215-1] c 09 N69-39987  
Optical alignment system Patent  
[NASA-CASE-XNP-02029] c 14 N70-41955  
Pulsed energy power system Patent  
[NASA-CASE-MSC-13112] c 03 N71-11057  
Automatic balancing device Patent  
[NASA-CASE-LAR-10774] c 10 N71-13545  
Apparatus for welding torch angle and seam tracking control Patent  
[NASA-CASE-XMF-03287] c 15 N71-15607  
Leak detector Patent  
[NASA-CASE-LAR-10323-1] c 12 N71-17573  
Solar optical telescope dome control system Patent  
[NASA-CASE-MSC-10966] c 14 N71-19568  
Automatic welding speed controller Patent  
[NASA-CASE-XMF-01730] c 15 N71-23050  
Indexing microwave switch Patent  
[NASA-CASE-XNP-06507] c 09 N71-23548  
Automatic pump Patent  
[NASA-CASE-XNP-04731] c 15 N71-24042  
Automatic fatigue test temperature programmer Patent  
[NASA-CASE-XLA-02059] c 33 N71-24276  
Automatic battery charger Patent  
[NASA-CASE-XNP-04758] c 03 N71-24605  
Transistor servo system including a unique differential amplifier circuit Patent  
[NASA-CASE-XMF-05195] c 10 N71-24861  
Electron beam tube containing a multiple cathode array employing indexing means for cathode substitution Patent  
[NASA-CASE-NPO-10625] c 09 N71-26182  
Automatic signal range selector for metering devices Patent  
[NASA-CASE-XMS-06497] c 14 N71-26244  
Automated fluid chemical analyzer Patent  
[NASA-CASE-XNP-09451] c 06 N71-26754  
Automatic control of liquid cooling garment by cutaneous and external auditory meatus temperatures  
[NASA-CASE-MSC-13917-1] c 05 N72-15098  
Optimal control system for an electric motor driven vehicle  
[NASA-CASE-NPO-11210] c 11 N72-20244  
Automated equipotential plotter  
[NASA-CASE-NPO-11134] c 09 N72-21246  
Ion thruster magnetic field control  
[NASA-CASE-LEW-10835-1] c 28 N72-22771  
Temperature controller for a fluid cooled garment  
[NASA-CASE-ARC-10599-1] c 05 N73-26071

- Redundant speed control for brushless Hall effect motor  
[NASA-CASE-MFS-20207-1] c 09 N73-32107
- Programmable physiological infusion  
[NASA-CASE-ARC-10447-1] c 52 N74-22771
- Automatically operable self-leveling load table  
[NASA-CASE-MFS-22039-1] c 09 N75-12968
- Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c 35 N75-15014
- Traffic survey system --- using optical scanners  
[NASA-CASE-MFS-22631-1] c 66 N76-19888
- Automatic visual inspection system for microelectronics  
[NASA-CASE-NPO-13282] c 38 N78-17396
- Automatic fluid dispenser  
[NASA-CASE-ARC-10820-1] c 35 N78-19466
- Method for producing solar energy panels by automation  
[NASA-CASE-LEW-12541-1] c 44 N78-25529
- Circuit for automatic load sharing in parallel converter modules  
[NASA-CASE-NPO-14056-1] c 33 N79-24257
- Method for forming a solar array strip  
[NASA-CASE-NPO-13652-3] c 44 N80-14474
- Method of growing a ribbon crystal particularly suited for facilitating automated control of ribbon width  
[NASA-CASE-NPO-14295-1] c 76 N80-32245
- Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c 07 N81-19116
- Solar energy control system --- temperature measurement  
[NASA-CASE-MFS-25287-1] c 44 N82-18686
- Hydraulic actuator mechanism to control aircraft spoiler movements through dual input commands  
[NASA-CASE-LAR-12412-1] c 08 N82-24205
- Automatic weld torch guidance control system  
[NASA-CASE-MFS-25807] c 37 N83-20154
- Automatic thermal switch --- spacecraft applications  
[NASA-CASE-GSC-12553-1] c 34 N83-28356
- Linear magnetic bearings  
[NASA-CASE-GSC-12582-2] c 37 N85-20337
- Jet pump-drive system for heat removal  
[NASA-CASE-NPO-16494-1-CU] c 34 N85-29182
- Automatic oscillator frequency control system  
[NASA-CASE-GSC-12804-1] c 33 N86-20668
- Automated weld torch guidance control system  
[NASA-CASE-MFS-25807-2] c 37 N86-21850
- Airplane automatic control force trimming device for asymmetric engine failures  
[NASA-CASE-LAR-13280-1] c 08 N87-20999
- Self indexing latch system  
[NASA-CASE-MFS-25956-1] c 37 N87-21333
- Solder dross removal apparatus  
[NASA-CASE-MFS-28406-1] c 37 N91-13729
- Standard remote manipulator system docking target augmentation for automated docking  
[NASA-CASE-MFS-28419-1] c 18 N91-27200
- Ultra-high temperature stability Joule-Thomson cooler with capability to accommodate pressure variations  
[NASA-CASE-NPO-18184-1-CU] c 35 N92-29156
- Operator-tailored adjustable control station with movable monitors and cameras for viewing systems in robotics and teleoperations  
[NASA-CASE-NPO-17837-1-CU] c 74 N93-17273
- Welding wire pressure sensor assembly  
[NASA-CASE-MFS-26216-1] c 37 N93-28951
- Spline screw autochanger  
[NASA-CASE-GSC-13435-1] c 37 N93-29505
- AUTOMATIC CONTROL VALVES**  
Check valve assembly for a probe Patent  
[NASA-CASE-XLA-00128] c 15 N70-37925
- Metal valve pintle with encapsulated elastomeric body Patent  
[NASA-CASE-MSC-12116-1] c 15 N71-17648
- Semitoroidal diaphragm cavitating valve Patent  
[NASA-CASE-XNP-09704] c 12 N71-18615
- Valving device for automatic refilling in cryogenic liquid systems  
[NASA-CASE-NPO-11177] c 15 N72-17453
- Combined pressure regulator and shutoff valve  
[NASA-CASE-NPO-13201-1] c 37 N75-15050
- Iodine generator for reclaimed water purification  
[NASA-CASE-MSC-14632-1] c 54 N78-14784
- Automatic compression adjusting mechanism for internal combustion engines  
[NASA-CASE-MSC-18807-1] c 37 N83-36483
- AUTOMATIC FREQUENCY CONTROL**  
Automatic acquisition system for phase-lock loop  
[NASA-CASE-XGS-04994] c 09 N69-21543
- Audio signal processor Patent  
[NASA-CASE-MSC-12223-1] c 07 N71-26181
- Automatic frequency control loop including synchronous switching circuits  
[NASA-CASE-KSC-10393] c 09 N72-21247
- Self-tuning bandpass filter  
[NASA-CASE-ARC-10264-1] c 09 N73-20231
- Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N87-22895
- Frequency domain laser velocimeter signal processor  
[NASA-CASE-LAR-13552-1-CU] c 33 N89-14385
- AUTOMATIC GAIN CONTROL**  
Automatic gain control system  
[NASA-CASE-XMS-05307] c 09 N69-24330
- Amplifier drift tester  
[NASA-CASE-XMS-05562-1] c 09 N69-39986
- Self-tuning bandpass filter  
[NASA-CASE-ARC-10264-1] c 09 N73-20231
- Digital automatic gain amplifier  
[NASA-CASE-KSC-11008-1] c 33 N79-22373
- Automatic level control circuit  
[NASA-CASE-KSC-11170-1] c 33 N83-36356
- Frequency domain laser velocimeter signal processor  
[NASA-CASE-LAR-13552-1-CU] c 33 N89-14385
- AUTOMATIC TEST EQUIPMENT**  
Visual examination apparatus  
[NASA-CASE-ARC-10329-1] c 05 N73-26072
- Automatic microbial transfer device  
[NASA-CASE-LAR-11354-1] c 35 N75-27330
- Visual examination apparatus  
[US-PATENT-RE-28,921] c 52 N76-30793
- Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c 52 N79-12694
- Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c 34 N81-26402
- Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c 54 N82-26987
- AUTOMATION**  
Automated multi-level vehicle parking system  
[NASA-CASE-NPO-13058-1] c 37 N77-22480
- General method of pattern classification using the two-domain theory  
[NASA-CASE-MSC-21737-1] c 61 N93-18282
- AUTOMOBILE ENGINES**  
Automotive gas turbine fuel control  
[NASA-CASE-LEW-12785-1] c 37 N78-24545
- Controller for computer control of brushless dc motors --- automobile engines  
[NASA-CASE-NPO-13970-1] c 33 N81-20352
- AUTOMOBILE FUELS**  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c 44 N76-29700
- AUTONOMOUS NAVIGATION**  
Autonomous navigation system --- gyroscopic pendulum for air navigation  
[NASA-CASE-ARC-11257-1] c 04 N81-21047
- Bilevel shared control for teleoperators  
[NASA-CASE-NPO-17800-1-CU] c 37 N92-22036
- AUTONOMY**  
Closed-loop autonomous docking system  
[NASA-CASE-MFS-28421-1] c 18 N92-28750
- AUXILIARY POWER SOURCES**  
Independent power generator  
[NASA-CASE-LAR-11208-1] c 44 N78-32539
- Electrical power generating system  
[NASA-CASE-MFS-25302-1] c 33 N83-28319
- AVERAGE**  
Method of and apparatus for generating an interstitial point in a data stream having an even number of data points  
[NASA-CASE-MFS-25319-1] c 60 N85-33701
- AVIONICS**  
Aircraft control position indicator  
[NASA-CASE-LAR-12984-1] c 06 N87-22678
- AXES (REFERENCE LINES)**  
Moment of inertia test fixture Patent  
[NASA-CASE-XGS-01023] c 14 N71-22992
- Universal restrainer and joint Patent  
[NASA-CASE-XNP-02278] c 15 N71-28951
- Focal axis resolver for offset reflector antennas  
[NASA-CASE-GSC-12630-1] c 33 N83-36355
- AXES OF ROTATION**  
Three axis controller Patent  
[NASA-CASE-XFR-00181] c 21 N70-33279
- Proportional controller Patent  
[NASA-CASE-XAC-03392] c 03 N70-41954
- Trigonometric vehicle guidance assembly which aligns the three perpendicular axes of two three-axes systems Patent  
[NASA-CASE-XMF-00684] c 21 N71-21688
- Controllers Patent  
[NASA-CASE-XMS-07487] c 15 N71-23255
- Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c 06 N83-33882
- Centrifugal-reciprocating compressor  
[NASA-CASE-NPO-14597-2] c 37 N84-28081
- Shoulder and hip joint for hard space suits  
[NASA-CASE-ARC-11543-1] c 54 N86-28620
- AXIAL COMPRESSION LOADS**  
Impact monitoring apparatus  
[NASA-CASE-MSC-15626-1] c 14 N72-25411
- Compression test apparatus  
[NASA-CASE-MSC-18723-1] c 35 N83-21312
- AXIAL FLOW**  
Monogroove heat pipe design: Insulated liquid channel with bridging wick  
[NASA-CASE-MSC-20497-1] c 34 N85-29180
- Wingtip vortex propeller  
[NASA-CASE-LAR-13019-1] c 07 N85-35194
- AXIAL FLOW PUMPS**  
Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N87-21332
- Rotor self-lubricating axial stop  
[NASA-CASE-MFS-28273-1] c 37 N88-23974
- AXIAL FLOW TURBINES**  
Multistage multiple-reentry turbine Patent  
[NASA-CASE-XLE-00170] c 15 N70-36412
- Multistage multiple-reentry turbine Patent  
[NASA-CASE-XLE-00085] c 28 N70-39895
- Method and turbine for extracting kinetic energy from a stream of two-phase fluid  
[NASA-CASE-NPO-14130-1] c 34 N79-20335
- AXIAL LOADS**  
Locking device with rolling detents Patent  
[NASA-CASE-XMF-01371] c 15 N70-41829
- Method for measuring biaxial stress in a body subjected to stress inducing loads  
[NASA-CASE-MFS-23299-1] c 39 N77-28511
- Metallic threaded composite fastener  
[NASA-CASE-MSC-21580-1] c 37 N92-21726
- Pressure vessel flex joint  
[NASA-CASE-MSC-21748-1] c 37 N92-21727
- AXIAL STRESS**  
Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c 37 N76-18459
- Method for measuring biaxial stress in a body subjected to stress inducing loads  
[NASA-CASE-MFS-23299-1] c 39 N77-28511
- AZIMUTH**  
Optical tracking mount Patent  
[NASA-CASE-MFS-14017] c 14 N71-26627
- Long range laser traversing system  
[NASA-CASE-GSC-11262-1] c 36 N74-21091
- Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c 04 N77-19056
- Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c 06 N83-33882
- AZINES**  
Azine polymers and process for preparing the same Patent  
[NASA-CASE-XMF-08656] c 06 N71-11242
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c 27 N74-21156
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c 27 N76-32315
- Catalytic trimerization of aromatic nitriles and triaryl-s-triazine ring cross-linked high temperature resistant polymers and copolymers made thereby  
[NASA-CASE-LEW-12053-2] c 27 N79-28307
- Perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c 25 N81-14016
- Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c 27 N81-17259
- AZO COMPOUNDS**  
Molding process for imidazopyrrolone polymers  
[NASA-CASE-LAR-10547-1] c 31 N74-13177
- AZOLES**  
Vinyl stilbazoles  
[NASA-CASE-ARC-11429-3CU] c 27 N87-16908
- Polyimidazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14145-1] c 27 N92-28751
- Poly(1,3,4-oxadiazoles) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14427-1] c 23 N92-29141

## B

## BACK INJURIES

- Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c 52 N81-25662

## BACKGROUND NOISE

- Electronic background suppression method and apparatus for a field scanning sensor  
[NASA-CASE-XGS-05211] c 07 N69-39980
- Motion-sensitive optical correlator  
[NASA-CASE-NPO-18769-1-CU] c 74 N93-28133

## BACKGROUND RADIATION

- Method and apparatus for background signal reduction in opto-acoustic absorption measurement  
[NASA-CASE-NPO-13683-1] c 35 N77-14411

## BACKSCATTERING

- Method and apparatus for determining electromagnetic characteristics of large surface area passive reflectors Patent  
[NASA-CASE-XGS-02608] c 07 N70-41678

Mossbauer spectrometer radiation detector  
[NASA-CASE-LAR-11155-1] c 35 N74-15091

**BACKUPS**  
Flexible back-up bar Patent  
[NASA-CASE-XMF-00722] c 15 N70-40204  
Inherent redundancy electric heater  
[NASA-CASE-MFS-21462-1] c 33 N74-14935  
Impact tolerant material  
[NASA-CASE-LAR-12887-3] c 24 N90-21822  
Electromagnetic attachment mechanism  
[NASA-CASE-MSC-21463-1] c 37 N92-33018

**BACKWARD WAVES**  
Ladder supported ring bar circuit  
[NASA-CASE-LEW-13570-1] c 33 N84-16452  
Dielectric based submillimeter backward wave oscillator circuit  
[NASA-CASE-LEW-13736-1] c 33 N84-27974

**BACTERIA**  
Decontamination of petroleum products Patent  
[NASA-CASE-XNP-03835] c 06 N71-23499  
Bacterial contamination monitor  
[NASA-CASE-GSC-10879-1] c 14 N72-25413  
Method of detecting and counting bacteria in body fluids  
[NASA-CASE-GSC-11092-2] c 04 N73-27052  
Lyophilized spore dispenser  
[NASA-CASE-LAR-10544-1] c 37 N74-13178  
Method of detecting and counting bacteria  
[NASA-CASE-GSC-11917-2] c 51 N76-29891  
Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c 52 N79-14750  
Method and apparatus for eliminating luminol interference material  
[NASA-CASE-MSC-16260-1] c 51 N80-16714  
Rapid, quantitative determination of bacteria in water --- adenosine triphosphate  
[NASA-CASE-GSC-12158-1] c 51 N83-27569

**BACTERIOLOGY**  
Bacteria detection instrument and method  
[NASA-CASE-GSC-11533-1] c 14 N73-13435  
Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c 51 N77-22794  
Automated single-slide staining device  
[NASA-CASE-LAR-11649-1] c 51 N77-27677

**BAFFLES**  
Light radiation direction indicator with a baffle of two parallel grids  
[NASA-CASE-XNP-03930] c 14 N69-24331  
Anti-glare improvement for optical imaging systems Patent  
[NASA-CASE-NPO-10337] c 14 N71-15604  
Flexible ring slosh damping baffle Patent  
[NASA-CASE-LAR-10317-1] c 32 N71-16103  
Buoyant anti-slosh system Patent  
[NASA-CASE-XLA-04605] c 32 N71-16106  
Floating baffle to improve efficiency of liquid transfer from tanks  
[NASA-CASE-KSC-10639] c 15 N73-26472  
System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
[NASA-CASE-MFS-23513-1] c 74 N79-11865  
Pressure letdown method and device for coal conversion systems  
[NASA-CASE-NPO-15100-1] c 44 N84-14583  
Optical system with reflective baffles  
[NASA-CASE-ARC-11502-1] c 74 N86-20125

**BAGS**  
Relief container  
[NASA-CASE-XMS-06761] c 05 N69-23192  
Gas diffusion liquid storage bag and method of use for storing blood  
[NASA-CASE-NPO-13930-1] c 52 N79-14749

**BAKING**  
Bakeable McLeod gauge  
[NASA-CASE-XGS-01293-1] c 35 N79-33450  
A method and technique for installing light-weight fragile, high-temperature fiber insulation  
[NASA-CASE-MSC-18934-3] c 24 N82-26387

**BALANCE**  
Thermo-protective device for balances Patent  
[NASA-CASE-XAC-00648] c 14 N70-40400  
Device for monitoring a change in mass in varying gravimetric environments  
[NASA-CASE-MFS-21556-1] c 35 N74-26945  
Wind tunnel balance  
[NASA-CASE-ARC-11877-1-SB] c 09 N91-14357  
Multiple axis reticle  
[NASA-CASE-ARC-11886-1-SB] c 35 N91-14591

**BALANCING**  
Automatic balancing device Patent  
[NASA-CASE-LAR-10774] c 10 N71-13545  
Force-balanced, throttle valve Patent  
[NASA-CASE-NPO-10808] c 15 N71-27432

Lift balancing device  
[NASA-CASE-LAR-10348-1] c 11 N73-12264  
Method and apparatus for rebalancing a REDOX flow cell system  
[NASA-CASE-LEW-14127-1] c 33 N86-20680

**BALL BEARINGS**  
Two component bearing Patent  
[NASA-CASE-XLA-00013] c 15 N71-29136  
High speed rolling element bearing  
[NASA-CASE-LEW-10856-1] c 15 N72-22490  
Low mass rolling element for bearings  
[NASA-CASE-LEW-11087-1] c 15 N73-30458  
Hollow rolling element bearings  
[NASA-CASE-LEW-11087-3] c 37 N74-21064  
Drilled ball bearing with a one piece anti-tipping cage assembly  
[NASA-CASE-LEW-11925-1] c 37 N75-31446  
Spherical bearing --- to reduce vibration effects  
[NASA-CASE-MFS-23447-1] c 37 N79-11404  
Apparatus and method for inspecting a bearing ball  
[NASA-CASE-MFS-25833-1] c 35 N86-32698  
Turbomachinery rotor support with damping  
[NASA-CASE-MFS-28345-1] c 37 N91-14608  
Fully articulated four-point-bend loading fixture  
[NASA-CASE-LEW-14776-1] c 37 N91-21540  
Rolling friction robot fingers  
[NASA-CASE-GSC-13261-1] c 37 N92-29138

**BALLAST**  
Ballast system for maintaining constant pressure in a glove box  
[NASA-CASE-NPO-17786-1-CU] c 35 N90-17104

**BALLAST (MASS)**  
Life raft stabilizer  
[NASA-CASE-MSC-12393-1] c 02 N73-26006

**BALLASTS (IMPEDANCES)**  
Apparatus for ballasting high frequency transistors  
[NASA-CASE-XGS-05003] c 09 N69-24318  
Direct current ballast circuit for metal halide lamp  
[NASA-CASE-MSC-18407-1] c 33 N82-24427

**BALLISTICS**  
Fiber modified polyurethane foam for ballistic protection  
[NASA-CASE-ARC-10714-1] c 27 N76-15310

**BALLOON SOUNDING**  
Apparatus for controlling the temperature of balloon-borne equipment  
[NASA-CASE-GSC-11620-1] c 34 N74-23039

**BALLOON-BORNE INSTRUMENTS**  
Rotating-unbalanced-mass devices and methods for scanning balloon-borne-experiments, free-flying spacecraft, and space shuttle/space station attached experiments  
[NASA-CASE-MFS-28425-1] c 35 N92-33010

**BALLOONS**  
Hot air balloon deceleration and recovery system Patent  
[NASA-CASE-XLA-06824-2] c 02 N71-11037  
Inflation system for balloon type satellites Patent  
[NASA-CASE-XGS-03351] c 31 N71-16081  
System for stabilizing torque between a balloon and gondola  
[NASA-CASE-GSC-11077-1] c 02 N73-13008

**BALLS**  
Two-axis controller Patent  
[NASA-CASE-XFR-04104] c 03 N70-42073  
Quartz ball valve  
[NASA-CASE-NPO-14473-1] c 37 N80-23654  
Flexible robotic arm  
[NASA-CASE-GSC-13161-1] c 37 N92-33634

**BANDPASS FILTERS**  
Helical coaxial resonator RF filter  
[NASA-CASE-XGS-02816] c 07 N69-24323  
Compensating bandwidth switching transients in an amplifier circuit Patent  
[NASA-CASE-XNP-01107] c 10 N71-28859  
Signal-to-noise ratio determination circuit  
[NASA-CASE-GSC-11239-1] c 10 N73-25241  
High-Q bandpass resonators utilizing bandstop resonator pairs  
[NASA-CASE-GSC-10990-1] c 09 N73-26195  
Dichroic plate --- as bandpass filters  
[NASA-CASE-NPO-13506-1] c 35 N76-15435  
Notch filter  
[NASA-CASE-MFS-23303-1] c 32 N77-18307  
Adaptive polarization separation  
[NASA-CASE-LAR-12196-1] c 33 N81-26358  
Smoothing filter for digital to analog conversion  
[NASA-CASE-FRC-11025-1] c 33 N82-24417  
Tuned analog network  
[NASA-CASE-GSC-12650-1] c 33 N84-14421  
Low noise tuned amplifier  
[NASA-CASE-GSC-12567-1] c 33 N84-22887  
Reactanceless synthesized impedance bandpass amplifier  
[NASA-CASE-GSC-12788-1] c 33 N85-29145

Multispectral linear array multiband selection device  
[NASA-CASE-GSC-12911-1] c 74 N86-29650  
Alkali metal for ultraviolet band-pass filter  
[NASA-CASE-NPO-18433-1-CU] c 74 N92-34241  
Improved real-time imaging spectrometer  
[NASA-CASE-NPO-18410-1-CU] c 74 N93-29086

**BANDWIDTH**  
Narrow bandwidth video Patent  
[NASA-CASE-XMS-06740-1] c 07 N71-26579  
Self-tuning bandpass filter  
[NASA-CASE-ARC-10264-1] c 09 N73-20231  
Turnstile and flared cone UHF antenna  
[NASA-CASE-LAR-10970-1] c 33 N76-14372  
Independent gain and bandwidth control of a traveling wave maser  
[NASA-CASE-NPO-13801-1] c 36 N78-18410  
Dual band combiner for horn antenna  
[NASA-CASE-NPO-14519-1] c 32 N80-23524  
Method and apparatus for telemetry adaptive bandwidth compression  
[NASA-CASE-MSC-20821-1] c 17 N87-25348

**BARIIUM**  
Barium release system  
[NASA-CASE-LAR-10670-1] c 06 N73-30097

**BARIIUM COMPOUNDS**  
Ion thruster cathode  
[NASA-CASE-XLE-07087] c 06 N69-39889  
Fiber-reinforced monoclinic celsian matrix composite material  
[NASA-CASE-LEW-15269-1] c 24 N93-20040

**BARIIUM FLUORIDES**  
Method of making self lubricating fluoride- metal composite materials Patent  
[NASA-CASE-XLE-08511-2] c 18 N71-16105

**BARIIUM ION CLOUDS**  
Rocket having barium release system to create ion clouds in the upper atmosphere  
[NASA-CASE-LAR-10670-2] c 15 N74-27360

**BARIIUM OXIDES**  
An improved SNS superconducting junction with weak link barrier and method of producing  
[NASA-CASE-NPO-18552-1-CU] c 33 N92-24246

**BARIIUM TITANATES**  
Semiconductor-ferroelectric memory device  
[NASA-CASE-ERC-10307] c 08 N72-21198

**BARRIER LAYERS**  
Schottky barrier solar cell  
[NASA-CASE-NPO-13689-2] c 44 N81-29525  
Method of measuring field funneling and range straggling in semiconductor charge-collecting junctions  
[NASA-CASE-NPO-16584-1-CU] c 76 N86-25269  
System for venting gas from a liquid storage tank  
[NASA-CASE-MSC-21253-1] c 31 N90-20254  
Microwave field effect transistor  
[NASA-CASE-GSC-12442-2] c 33 N90-20282  
Planar varactor frequency multiplier devices with blocking barrier  
[NASA-CASE-NPO-18428-1-CU] c 33 N92-23464  
An improved SNS superconducting junction with weak link barrier and method of producing  
[NASA-CASE-NPO-18552-1-CU] c 33 N92-24246  
Multi-layer light-weight protective coating and method for application  
[NASA-CASE-LAR-14448-1] c 27 N93-11912  
Epitaxial heterojunctions of oxide semiconductors and metals on high temperature superconductors  
[NASA-CASE-NPO-18483-1-CU] c 76 N93-15151

**BARRIERS**  
Short range laser obstacle detector --- for surface vehicles using laser diode array  
[NASA-CASE-NPO-11856-1] c 36 N74-15145  
High-temperature, flexible, thermal barrier seal  
[NASA-CASE-LEW-14672-1] c 37 N91-27560

**BARS**  
Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c 18 N83-29303  
Bar-holding prosthetic limb  
[NASA-CASE-MFS-28481-1] c 54 N93-14870

**BASES (CHEMICAL)**  
Thermal control coating Patent  
[NASA-CASE-XLA-01995] c 18 N71-23047

**BATHING**  
Whole body cleaning agent containing N-acyltaurate  
[NASA-CASE-MSC-21589-1] c 54 N92-29137

**BATHS**  
Solder dross removal apparatus  
[NASA-CASE-MFS-28406-1] c 37 N91-13729

**BATTERY CHARGERS**  
Method and apparatus for battery charge control Patent  
[NASA-CASE-XGS-05432] c 03 N71-19438  
Electrochemical coulometer and method of forming same Patent  
[NASA-CASE-XGS-05434] c 03 N71-20491



- Coulometer and third electrode battery charging circuit Patent  
[NASA-CASE-GSC-10487-1] c 03 N71-24719
- Method and apparatus for conditioning of nickel-cadmium batteries  
[NASA-CASE-MFS-23270-1] c 44 N78-25531
- BAYARD-ALPERT IONIZATION GAGES**  
Ionization vacuum gauge with all but the end of the ion collector shielded Patent  
[NASA-CASE-XLA-07424-1] c 14 N71-18482
- BAYS (STRUCTURAL UNITS)**  
Deployable geodesic truss structure  
[NASA-CASE-LAR-13113-1] c 31 N87-25492  
Payload retention device  
[NASA-CASE-MSC-21906-1] c 37 N92-28727
- BEADS**  
Rotary bead dropper and selector for testing micrometeorite detectors Patent  
[NASA-CASE-XGS-03304-1] c 09 N71-22988  
Method for thermal monitoring subcutaneous tissue  
[NASA-CASE-LAR-13028-1] c 52 N85-30618
- BEAM LEADS**  
Integrated circuit package with lead structure and method of preparing the same  
[NASA-CASE-MFS-21374-1] c 33 N74-12951
- BEAM SPLITTERS**  
Optical range finder having nonoverlapping complete images  
[NASA-CASE-MSC-12105-1] c 14 N72-21409  
Laser extensometer  
[NASA-CASE-MFS-19259-1] c 36 N78-14380  
Over-under double-pass interferometer  
[NASA-CASE-NPO-13999-1] c 35 N78-18395  
Method and apparatus for splitting a beam of energy --- optical communication  
[NASA-CASE-GSC-12083-1] c 73 N78-32848  
Interferometer  
[NASA-CASE-NPO-14502-1] c 74 N81-17888  
Collimated beam manifold with the number of output beams variable at a given output angle  
[NASA-CASE-MFS-25312-1] c 74 N83-17305  
Dual-beam skin friction interferometer  
[NASA-CASE-ARC-11354-1] c 74 N83-21949  
High speed multi focal plane optical system  
[NASA-CASE-GSC-12683-1] c 74 N83-36898  
Projection lens scanning laser velocimeter system  
[NASA-CASE-ARC-11547-1] c 36 N87-17026  
Method and apparatus for second-rank tensor generation  
[NASA-CASE-NPO-17512-1-CU] c 74 N91-26918
- BEAM SWITCHING**  
Electronic beam switching commutator Patent  
[NASA-CASE-XGS-01451-1] c 09 N71-10677  
Antenna array at focal plane of reflector with coupling network for beam switching Patent  
[NASA-CASE-GSC-10220-1] c 07 N71-27233  
Dish antenna having switchable beamwidth --- with truncated concave ellipsoid subreflector  
[NASA-CASE-GSC-11760-1] c 33 N75-19516  
Single frequency, two feed dish antenna having switchable beamwidth  
[NASA-CASE-GSC-11968-1] c 32 N76-15329  
Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c 33 N76-27472
- BEAM WAVEGUIDES**  
Laser machining apparatus Patent  
[NASA-CASE-HQN-10541-2] c 15 N71-27135  
Optical frequency waveguide and transmission system Patent  
[NASA-CASE-HQN-10541-4] c 16 N71-27183  
Method and apparatus for aligning a laser beam projector Patent  
[NASA-CASE-NPO-11087] c 23 N71-29125  
Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c 33 N80-18287  
Multiprism collimator  
[NASA-CASE-GSC-12608-1] c 74 N83-10900
- BEAMS (RADIATION)**  
Method and means for recording and reconstructing holograms without use of a reference beam Patent  
[NASA-CASE-ERC-10020] c 16 N71-26154  
Optical frequency waveguide and transmission system  
[NASA-CASE-HQN-10541-3] c 23 N72-23695  
Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c 32 N80-24510  
Scannable beam forming interferometer antenna array system  
[NASA-CASE-GSC-12365-1] c 32 N80-28578  
Method for shaping and aiming narrow beams --- sonar mapping and target identification  
[NASA-CASE-NPO-14632-1] c 32 N82-18443  
Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N82-24072  
Sidelooking laser altimeter for a flight simulator  
[NASA-CASE-ARC-11312-1] c 36 N83-34304
- Off-axis coherently pumped laser  
[NASA-CASE-GSC-12592-1] c 36 N84-28065  
Beam forming network  
[NASA-CASE-NPO-15743-1] c 32 N85-29118  
Means for phase locking the outputs of a surface emitting laser diode array  
[NASA-CASE-NPO-16542-1-CU] c 36 N87-23960  
Schlieren system for visualizing the flow within a pipe of circular cross-section  
[NASA-CASE-LAR-13944-1] c 35 N92-11336
- BEAMS (SUPPORTS)**  
Foldable beam  
[NASA-CASE-LAR-12077-1] c 31 N81-25259  
Beam connector apparatus and assembly  
[NASA-CASE-MFS-25134-1] c 31 N83-31895  
Sequentially deployable maneuverable tetrahedral beam  
[NASA-CASE-LAR-13098-1] c 31 N86-19479  
Joint for deployable structures  
[NASA-CASE-NPO-16038-1] c 37 N86-19605  
Bi-stem gripping apparatus  
[NASA-CASE-MFS-28185-1] c 37 N88-23979  
Mobile remote manipulator system for a tetrahedral truss  
[NASA-CASE-MSC-20985-1] c 18 N88-26398  
Wind tunnel balance  
[NASA-CASE-ARC-11877-1-SB] c 09 N91-14357  
Synchronously deployable double fold beam and planar truss structure  
[NASA-CASE-LAR-13490-1] c 18 N91-27199
- BEARING**  
Emitted vibration measurement device and method  
[NASA-CASE-MFS-25981-1] c 35 N87-14670
- BEARING (DIRECTION)**  
Light radiation direction indicator with a baffle of two parallel grids  
[NASA-CASE-XNP-03930] c 14 N69-24331  
Radiation direction detector including means for compensating for photocell aging Patent  
[NASA-CASE-XLA-00183] c 14 N70-40239  
Interferometer direction sensor Patent  
[NASA-CASE-NPO-10320] c 14 N71-17655  
Omnidirectional acceleration device Patent  
[NASA-CASE-HQN-10780] c 14 N71-30265  
Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c 04 N77-19056  
Direction sensitive laser velocimeter --- determining the direction of particles using a helium-neon laser  
[NASA-CASE-LAR-12177-1] c 36 N81-24422  
System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c 06 N82-16075
- BEARINGS**  
Alloys for bearings Patent  
[NASA-CASE-XLE-05033] c 15 N71-23810  
Bearing and gimbal lock mechanism and spiral flex lead module Patent  
[NASA-CASE-GSC-10556-1] c 31 N71-26537  
Device for measuring bearing preload  
[NASA-CASE-MFS-20434] c 11 N72-25288  
Magnetic bearing --- for supplying magnetic fluxes  
[NASA-CASE-GSC-11079-1] c 37 N75-18574  
Magnetic bearing system  
[NASA-CASE-GSC-11978-1] c 37 N77-17464  
Hydrostatic bearing support  
[NASA-CASE-LEW-11158-1] c 37 N77-28486  
Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c 37 N77-32500  
Bearing seat usable in a gas turbine engine  
[NASA-CASE-LEW-12477-1] c 37 N77-32501  
Method of making bearing material  
[NASA-CASE-LEW-11930-3] c 24 N80-33482  
Suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NPO-14395-1] c 37 N82-21587  
Antenna grout replacement system  
[NASA-CASE-NPO-15202-1] c 27 N83-34043  
Magnetic bearing and motor  
[NASA-CASE-GSC-12726-1] c 37 N83-34323  
Unidirectional flexural pivot  
[NASA-CASE-GSC-12622-1] c 37 N84-12492  
Portable 90 degree proof loading device  
[NASA-CASE-MSC-20250-1] c 35 N86-19581  
Method of recertifying a loaded bearing member  
[NASA-CASE-LAR-14168-1] c 39 N92-34174  
Bearing servicing tool  
[NASA-CASE-MSC-21881-1] c 37 N93-14871  
System for testing bearings  
[NASA-CASE-MFS-28589-1] c 37 N93-29618
- BEDS (PROCESS ENGINEERING)**  
Catalyst bed removing tool Patent  
[NASA-CASE-XFR-00811] c 15 N70-36901  
Solar heated oil shale pyrolysis process  
[NASA-CASE-NPO-16392-1] c 25 N86-25428
- BEER LAW**  
A multichannel photoionization chamber for absorption analysis Patent  
[NASA-CASE-ERC-10044-1] c 14 N71-27090
- BEES**  
Decontamination of petroleum products Patent  
[NASA-CASE-XNP-03835] c 06 N71-23499
- BELLOWS**  
Balanced bellows spirometer  
[NASA-CASE-XAR-01547] c 05 N69-21473  
Printed circuit board with bellows rivet connection Patent  
[NASA-CASE-XNP-05082] c 15 N70-41960  
Spherical shield Patent  
[NASA-CASE-XNP-01855] c 15 N71-28937  
Internally supported flexible duct --- device for conducting fluids in high pressure systems  
[NASA-CASE-MFS-19193-1] c 37 N75-19686  
Protective telescoping shield for solar concentrator  
[NASA-CASE-NPO-16236-1] c 44 N86-27706  
Pressurized bellows flat contact heat exchanger interface  
[NASA-CASE-MSC-21271-1] c 34 N90-21999  
High-temperature, bellows hybrid seal  
[NASA-CASE-LEW-15570-1] c 37 N93-19027
- BELTS**  
Apparatus for forming drive belts  
[NASA-CASE-NPO-13205-1] c 31 N74-32917
- BEND TESTS**  
Delamination test apparatus and method  
[NASA-CASE-LAR-13985-1] c 24 N91-14430  
Fully articulated four-point-bend loading fixture  
[NASA-CASE-LEW-14776-1] c 37 N91-21540
- BENDING**  
Radio frequency shielded enclosure Patent  
[NASA-CASE-XMF-09422] c 07 N71-19436  
Means for suppressing or attenuating bending motion of elastic bodies Patent  
[NASA-CASE-XAC-05632] c 32 N71-23971  
Technique of elbow bending small jacketed transfer lines Patent  
[NASA-CASE-XNP-10475] c 15 N71-24679  
Forming tool for ribbon or wire  
[NASA-CASE-XLA-05966] c 15 N72-12408  
Automatic locking orthotic knee device  
[NASA-CASE-MFS-28633-1] c 54 N92-17866
- BENDING DIAGRAMS**  
Electrostatic charged particle analyzer having deflection members shaped according to the periodic voltage applied thereto Patent  
[NASA-CASE-XAC-05506-1] c 24 N71-16095
- BENDING FATIGUE**  
Apparatus for positioning and loading a test specimen Patent  
[NASA-CASE-XLE-01300] c 15 N70-41993  
Low temperature flexure fatigue cryostat Patent  
[NASA-CASE-XMF-02964] c 14 N71-17659
- BENDING MOMENTS**  
Missile launch release system Patent  
[NASA-CASE-XMF-03198] c 30 N70-40353  
Compliant hydrodynamic fluid journal bearing  
[NASA-CASE-LEW-13670-1] c 37 N86-19606
- BENDING VIBRATION**  
Viscous pendulum damper Patent  
[NASA-CASE-LAR-10274-1] c 14 N71-17626
- BENZENE**  
Intumescent composition, foamed product prepared therewith, and process for making same  
[NASA-CASE-ARC-10304-1] c 18 N73-26572  
Polymer of phosphonylmethyl-2,4- and -2,6-diaminobenzenes and polyfunctional monomer  
[NASA-CASE-ARC-11506-2] c 23 N86-32525  
Fire and heat resistant laminating resins based on maleimide and citraconimide substituted 1-(diorgano oxyphosphonyl) methyl -2,4- and -2,6- diaminobenzenes  
[NASA-CASE-ARC-11533-3] c 27 N87-24564  
The 1-(diorganooxyphosphonyl)-methyl-2,4- and -2,6-diamino benzenes  
[NASA-CASE-ARC-11425-4] c 23 N90-20133  
Some 1-(diorganooxyphosphonyl)methyl-2,4- and -2,6-dinitro-benzenes  
[NASA-CASE-ARC-11425-3] c 23 N90-23475  
Polybenzimidazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14643-1] c 27 N92-29953
- BERYLLIUM ALLOYS**  
Corrosion resistant beryllium Patent  
[NASA-CASE-LEW-10327] c 17 N71-33408  
Thin film strain transducer  
[NASA-CASE-WLP-10055-1] c 35 N84-28015
- BERYLLIUM HYDRIDES**  
Inhibited solid propellant composition containing beryllium hydride  
[NASA-CASE-NPO-10866-1] c 28 N79-14228



## BERYLLIUM OXIDES

- High temperature beryllium oxide capacitor  
[NASA-CASE-LEW-11938-1] c 33 N76-15373
- High modulus invert analog glass compositions containing beryllia  
[NASA-CASE-HQN-10931-2] c 27 N82-29452
- High modulus rare earth and beryllium containing silicate glass compositions --- for glass reinforcing fibers  
[NASA-CASE-HQN-10595-1] c 27 N82-29455

## BIAS

- Full complex modulation using two one-parameter spatial light modulators  
[NASA-CASE-MSC-22255-1] c 74 N93-28135

## BIDIRECTIONAL REFLECTANCE

- A reference standard for bidirectional reflection distribution function and bidirectional transmission distribution function measurement  
[NASA-CASE-MFS-28183-1] c 74 N89-13253

## BIMETALS

- Nonmagnetic thermal motor for a magnetometer  
[NASA-CASE-XAR-03786] c 09 N69-21313
- Thermostatic actuator  
[NASA-CASE-NPO-10637] c 15 N72-12409
- Thermal motor  
[NASA-CASE-NPO-11283] c 09 N72-25260
- Thermal compensating structural member  
[NASA-CASE-MFS-20433] c 15 N72-28496
- Bimetallic fluid displacement apparatus --- for stirring and heating stored gases and liquids  
[NASA-CASE-ARC-10441-1] c 35 N74-15126
- Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c 35 N77-32454

## BINARY CODES

- Time division radio relay synchronizing system using different sync code words for in sync and out of sync conditions Patent  
[NASA-CASE-GSC-10373-1] c 07 N71-19773
- Parallel generation of the check bits of a PN sequence Patent  
[NASA-CASE-XNP-04623] c 10 N71-26103
- Encoder/decoder system for a rapidly synchronizable binary code Patent  
[NASA-CASE-NPO-10342] c 10 N71-33407
- Binary coded sequential acquisition ranging system  
[NASA-CASE-NPO-11194] c 08 N72-25209
- Binary concatenated coding system  
[NASA-CASE-MSC-14082-1] c 60 N76-23850
- Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c 32 N77-20289
- Pseudo noise code and data transmission method and apparatus  
[NASA-CASE-GSC-12017-1] c 32 N77-30308
- Binary to binary coded decimal converter  
[NASA-CASE-GSC-12044-1] c 60 N78-17691
- Apparatus and method for stabilized phase detection for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c 33 N79-11313

## BINARY DATA

- Binary magnetic memory device Patent  
[NASA-CASE-XGS-00174] c 08 N70-34743
- Ripple add and ripple subtract binary counters Patent  
[NASA-CASE-XGS-04766] c 08 N71-18602
- Computing apparatus Patent  
[NASA-CASE-XGS-04765] c 08 N71-18693
- Digital synchronizer Patent  
[NASA-CASE-NPO-10851] c 07 N71-24613
- Differential phase shift keyed communication system  
[NASA-CASE-MSC-14065-1] c 32 N74-26654
- Modulator for tone and binary signals --- phase of modulation of tone and binary signals on carrier waves in communication systems  
[NASA-CASE-GSC-11743-1] c 32 N75-24981
- Binary to binary coded decimal converter  
[NASA-CASE-GSC-12044-1] c 60 N78-17691
- VLSI binary updown counter  
[NASA-CASE-NPO-17205-1-CU] c 60 N90-21525

## BINARY DIGITS

- Logarithmic converter Patent  
[NASA-CASE-XLA-00471] c 08 N70-34778
- Full binary adder Patent  
[NASA-CASE-XGS-00689] c 08 N70-34787
- Binary number sorter Patent  
[NASA-CASE-NPO-10112] c 08 N71-12502
- Binary sequence detector Patent  
[NASA-CASE-XNP-05415] c 08 N71-12505
- Display for binary characters Patent  
[NASA-CASE-XGS-04987] c 08 N71-20571
- Comparator for the comparison of two binary numbers Patent  
[NASA-CASE-XNP-04819] c 08 N71-23295
- High speed direct binary to binary coded decimal converter and scaler  
[NASA-CASE-KSC-10595] c 08 N73-12176

- A m-ary linear feedback shift register with binary logic  
[NASA-CASE-NPO-11868] c 10 N73-20254
- Binary concatenated coding system  
[NASA-CASE-MSC-14082-1] c 60 N76-23850
- Long period pseudo random number sequence generator  
[NASA-CASE-NPO-17241-1-CU] c 33 N90-23636

## BINARY FLUIDS

- Flow measuring apparatus  
[NASA-CASE-LEW-12078-1] c 35 N75-30503

## BINARY TO DECIMAL CONVERTERS

- Binary to binary-coded-decimal converter Patent  
[NASA-CASE-XNP-00432] c 08 N70-35423
- High speed binary to decimal conversion system Patent  
[NASA-CASE-XGS-01230] c 08 N71-19544
- BCD to decimal decoder Patent  
[NASA-CASE-KXS-06167] c 08 N71-24890
- High speed direct binary-to-binary coded decimal converter  
[NASA-CASE-KSC-10326] c 08 N72-21197
- Binary to binary coded decimal converter  
[NASA-CASE-GSC-12044-1] c 60 N78-17691

## BINDERS (MATERIALS)

- Bonded solid lubricant coating Patent  
[NASA-CASE-XMS-00259] c 18 N70-36400
- Brazing alloy binder  
[NASA-CASE-XMF-05868] c 26 N75-27125
- Alkali-metal silicate binders and methods of manufacture  
[NASA-CASE-GSC-12303-1] c 24 N79-31347
- Method of making single crystal fibers  
[NASA-CASE-LEW-14921-1] c 24 N91-13502
- Heat transfer device and method of making the same  
[NASA-CASE-LEW-14162-1] c 34 N91-13668
- Method of making carbide/fluoride/silver composites  
[NASA-CASE-LEW-14902-1] c 24 N91-27244
- Method of making contamination-free ceramic bodies  
[NASA-CASE-LEW-14984-1] c 27 N92-16122
- Guanidine based vehicle/binders for use with oxides, metals, and ceramics  
[NASA-CASE-LEW-15314-1] c 27 N92-23461
- Guanidine based vehicle/binders for use with oxides, metals, and ceramics  
[NASA-CASE-LEW-15314-2] c 27 N93-28423

## BINOCULARS

- Binocular device for displaying numerical information in field of view  
[NASA-CASE-LAR-11782-1] c 74 N77-20882

## BIOASSAY

- Apparatus for producing three-dimensional recordings of fluorescence spectra Patent  
[NASA-CASE-XGS-01231] c 14 N70-41676
- Flavin coenzyme assay  
[NASA-CASE-GSC-10565-1] c 06 N72-25149
- Method of detecting and counting bacteria in body fluids  
[NASA-CASE-GSC-11092-2] c 04 N73-27052
- Amino acid analysis  
[NASA-CASE-NPO-12130-1] c 25 N75-14844
- Servo-controlled intravital microscope system  
[NASA-CASE-NPO-13214-1] c 35 N75-25123
- Method of detecting and counting bacteria  
[NASA-CASE-GSC-11917-2] c 51 N76-29891
- Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c 52 N79-12694
- Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c 52 N79-14750
- Method and apparatus for eliminating luminol interference material  
[NASA-CASE-MSC-16260-1] c 51 N80-16714

## BIODEGRADATION

- Method for treating wastewater using microorganisms and vascular aquatic plants  
[NASA-CASE-NSTL-10] c 45 N84-12654

## BIODYNAMICS

- Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c 52 N79-26772
- Kinesimetric method and apparatus  
[NASA-CASE-MSC-18929-1] c 39 N83-20280
- Rotationally actuated prosthetic helping hand  
[NASA-CASE-MFS-28426-1] c 54 N91-32795

## BIOELECTRIC POTENTIAL

- Electrode for biological recording  
[NASA-CASE-XMS-02872] c 05 N69-21925
- Method of making a perspiration resistant biopotential electrode  
[NASA-CASE-MSC-90153-2] c 05 N72-25120
- Process for control of cell division  
[NASA-CASE-LAR-10773-3] c 51 N77-25769

## BIOELECTRICITY

- Plated electrodes Patent  
[NASA-CASE-XMS-04213-1] c 09 N71-26002
- Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c 51 N81-28698

## BIOENGINEERING

- Bio-isolated dc operational amplifier --- for bioelectric measurements  
[NASA-CASE-ARC-10596-1] c 33 N74-21851
- Actuator device for artificial leg  
[NASA-CASE-MFS-23225-1] c 52 N77-14735
- Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c 52 N77-14738
- Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c 52 N79-26772
- Subcutaneous electrode structure  
[NASA-CASE-ARC-11117-1] c 52 N81-14612
- Urine collection device  
[NASA-CASE-MSC-16433-1] c 52 N81-24711
- Bio-medical flow sensor --- intravenous procedures  
[NASA-CASE-MSC-18761-1] c 52 N83-27577
- Prosthetic occlusive device for an internal passageway  
[NASA-CASE-MFS-25740-1] c 52 N84-11744
- Medical clip  
[NASA-CASE-LAR-12650-1] c 52 N84-28388

## BIOINSTRUMENTATION

- Temperature compensated solid state differential amplifier Patent  
[NASA-CASE-XAC-00435] c 09 N70-35440
- Electrode construction Patent  
[NASA-CASE-ARC-10043-1] c 05 N71-11193
- Pressed disc type sensing electrodes with ion-screening means Patent  
[NASA-CASE-XMS-04212-1] c 05 N71-12346
- EEG sleep analyzer and method of operation Patent  
[NASA-CASE-MSC-13282-1] c 05 N71-24729
- Plated electrodes Patent  
[NASA-CASE-XMS-04213-1] c 09 N71-26002
- Ultrasonic biomedical measuring and recording apparatus --- for recording motion of internal organs such as heart valves  
[NASA-CASE-ARC-10597-1] c 52 N74-20726
- Subminiature insertable force transducer --- including a strain gage to measure forces in muscles  
[NASA-CASE-NPO-13423-1] c 33 N75-31329
- Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NPO-13643-1] c 52 N76-29896
- Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-1] c 52 N76-33835
- Thermistor holder for skin temperature measurements  
[NASA-CASE-ARC-10855-1] c 52 N77-10780
- Magnetic electrical connectors for biomedical percutaneous implants  
[NASA-CASE-KSC-11030-1] c 52 N77-25772
- Corneal seal device  
[NASA-CASE-LEW-12258-1] c 52 N77-28716
- Snap-in compressible biomedical electrode  
[NASA-CASE-MSC-14623-1] c 52 N77-28717
- Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c 52 N79-18580
- Induction powered biological radiosonde  
[NASA-CASE-ARC-11120-1] c 52 N80-18691
- Pulse transducer with artifact signal attenuator --- heart rate sensors  
[NASA-CASE-FRC-11012-1] c 52 N80-23969
- Method and automated apparatus for detecting coliform organisms  
[NASA-CASE-MSC-16777-1] c 51 N80-27067
- Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c 52 N80-27072
- Logic-controlled occlusive cuff system  
[NASA-CASE-MSC-14836-1] c 52 N82-11770
- Implantable electrical device  
[NASA-CASE-GSC-12560-1] c 52 N82-29863

## BIOLOGICAL EFFECTS

- Rotating bio-reactor cell culture apparatus  
[NASA-CASE-MSC-21293-1] c 51 N91-21700
- Extra-corporeal blood access, sensing, and radiation methods and apparatuses  
[NASA-CASE-MSC-21775-1] c 52 N92-11627
- Hollow fiber clinostat for simulating microgravity in cell culture  
[NASA-CASE-MFS-28370-1] c 35 N92-31790
- Kinetic tetrazolium microtiter assay  
[NASA-CASE-MSC-21979-1] c 51 N93-17049

## BIOLUMINESCENCE

- Light detection instrument Patent  
[NASA-CASE-XGS-05534] c 23 N71-16355
- Lyophilized reaction mixtures Patent  
[NASA-CASE-XGS-05532] c 06 N71-17705
- Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c 51 N77-22794
- Rapid, quantitative determination of bacteria in water --- adenosine triphosphate  
[NASA-CASE-GSC-12158-1] c 51 N83-27569

**BIOMEDICAL DATA**

- Biomedical radiation detecting probe Patent  
[NASA-CASE-XMS-01177] c 05 N71-19440  
Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-2] c 52 N79-26771

**BIOMETRICS**

- Pressed disc type sensing electrodes with ion- screening means Patent  
[NASA-CASE-XMS-04212-1] c 05 N71-12346  
Compressible biomedical electrode  
[NASA-CASE-MSC-13648] c 05 N72-27103  
Ultrasonic biomedical measuring and recording apparatus --- for recording motion of internal organs such as heart valves  
[NASA-CASE-ARC-10597-1] c 52 N74-20726  
Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c 52 N74-27566  
Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-1] c 52 N76-33835  
Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c 52 N79-18580  
Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-2] c 52 N79-26771  
Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c 52 N80-27072  
Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c 52 N81-20703  
Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c 52 N81-29763  
Rapid quantification of an internal property --- ultrasonic determination of bladder urine quantity  
[NASA-CASE-LAR-13689-1-NP] c 35 N87-23941

**BIOPROCESSING**

- Spiral vane bioreactor  
[NASA-CASE-MSC-21361-1] c 51 N91-21701

**BIOREACTORS**

- Bio-reactor chamber  
[NASA-CASE-MSC-20929-1] c 51 N91-14703  
Rotating bio-reactor cell culture apparatus  
[NASA-CASE-MSC-21293-1] c 51 N91-21700  
Spiral vane bioreactor  
[NASA-CASE-MSC-21361-1] c 51 N91-21701  
Horizontally rotated cell culture system with a coaxial tubular oxygenator  
[NASA-CASE-MSC-21294-1] c 51 N91-30667  
Three-dimensional cultured glioma cell lines  
[NASA-CASE-MSC-21843-1-NP] c 51 N92-24052  
Three-dimensional co-culture process  
[NASA-CASE-MSC-21560-1] c 51 N92-34229  
Three-dimensional cell to tissue assembly process  
[NASA-CASE-MSC-21559-1] c 51 N92-34231  
High aspect reactor vessel and method of use  
[NASA-CASE-MSC-21662-1] c 51 N92-34232  
Method for culturing mammalian cells in a perfused bioreactor  
[NASA-CASE-MSC-21293-2] c 51 N93-10109  
Method for culturing mammalian cells in a horizontally rotated bioreactor  
[NASA-CASE-MSC-21294-2] c 51 N93-10110  
High density cell culture system  
[NASA-CASE-MSC-22060-1] c 51 N93-19037  
Apparatus and method for cellulose processing using microwave pretreatment  
[NASA-CASE-MSC-21936-1-SB] c 25 N93-22036

**BIO TECHNOLOGY**

- Bio-reactor chamber  
[NASA-CASE-MSC-20929-1] c 51 N91-14703  
Rotating bio-reactor cell culture apparatus  
[NASA-CASE-MSC-21293-1] c 51 N91-21700  
Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-2] c 52 N92-11621

**BIOTELEMETRY**

- Telemeter adaptable for implanting in an animal Patent  
[NASA-CASE-XAC-05706] c 05 N71-12342  
Miniature multichannel biotelemetry system  
[NASA-CASE-NPO-13065-1] c 52 N74-26625  
Medical subject monitoring systems --- multichannel monitoring systems  
[NASA-CASE-MSC-14180-1] c 52 N76-14757  
Accelerometer telemetry system  
[NASA-CASE-ARC-10849-1] c 17 N76-29347  
Miniature ingestible telemeter devices to measure deep-body temperature  
[NASA-CASE-ARC-10583-1] c 52 N76-29894

**BIPOLAR TRANSISTORS**

- Voltage regulator for battery power source --- using a bipolar transistor  
[NASA-CASE-FRC-10116-1] c 33 N79-23345  
Power converter  
[NASA-CASE-FRC-11014-1] c 33 N82-18494  
High-gain AlGaAs/GaAs double heterojunction Darlington phototransistors for optical neural networks  
[NASA-CASE-NPO-18101-1-CU] c 74 N91-25841

Method and apparatus for increasing resistance of bipolar buried layer integrated circuit devices to single-event upsets

- [NASA-CASE-NPO-17573-2-CU] c 33 N92-16196

**BIPOLARITY**

Method and apparatus for increasing resistance of bipolar buried layer integrated circuit devices to single-event upsets

- [NASA-CASE-NPO-17573-2-CU] c 33 N92-16196

GaAs-based optoelectronic neurons

- [NASA-CASE-NPO-18497-1-CU] c 63 N92-24245

GaAs-based optoelectronic neurons

- [NASA-CASE-NPO-18497-1-CU] c 63 N93-24599

**BIREFRINGENCE**

Polarimeter for transient measurement Patent

- [NASA-CASE-XNP-08883] c 23 N71-16101

Birefringent filter design

- [NASA-CASE-LAR-13887-1] c 36 N92-16290

**BIREFRINGENT FILTERS**

Birefringent filter design

- [NASA-CASE-LAR-13887-1] c 36 N92-16290

**BISMALEIMIDE**

Amine terminated bisapartimide polymer

- [NASA-CASE-ARC-11421-2] c 27 N86-31726

Process for curing bismaleimide resins

- [NASA-CASE-ARC-11429-4CU] c 27 N87-15304

Vinyl stilbazoles

- [NASA-CASE-ARC-11429-3CU] c 27 N87-16908

Bis (4-(3,4-dimethylene-pyrrolidyl)-phenyl) methane

- [NASA-CASE-LAR-13965-2-CU] c 23 N91-14418

N-(3-ethynylphenyl)maleimide

- [NASA-CASE-LAR-14188-2] c 23 N91-14419

Polyimide from bis(n-isoprenyl)s of aryl diamides

- [NASA-CASE-LAR-14330-2-CU] c 27 N93-22033

**BISMUTH**

Manganese bismuth films with narrow transfer characteristics for Curie-point switching

- [NASA-CASE-NPO-11336-1] c 76 N79-16678

Alkali metal for ultraviolet band-pass filter

- [NASA-CASE-NPO-18433-1-CU] c 74 N92-34241

**BISMUTH COMPOUNDS**

Hall effect magnetometer

- [NASA-CASE-LEW-11632-2] c 35 N75-13213

**BISTABLE CIRCUITS**

AC logic flip-flop circuits Patent

- [NASA-CASE-XGS-00823] c 10 N71-15910

**BIT ERROR RATE**

Detection of multiple-bit errors from single-ion tracks in integrated circuits

- [NASA-CASE-NPO-18075-1-CU] c 33 N91-13622

**BIT SYNCHRONIZATION**

Telemetry word forming unit

- [NASA-CASE-XNP-09225] c 09 N69-24333

Transition tracking bit synchronization system

- [NASA-CASE-NPO-10844] c 07 N72-20140

Apparatus for deriving synchronizing pulses from pulses in a single channel PCM communications system

- [NASA-CASE-NPO-11302-1] c 07 N73-13149

Method and apparatus for a single channel digital communications system --- synchronization of received PCM signal by digital correlation with reference signal

- [NASA-CASE-NPO-11302-2] c 32 N74-10132

**BITERNARY CODE**

Minimal logic block encoder Patent

- [NASA-CASE-NPO-10595] c 10 N71-25917

**BITS**

Parallel generation of the check bits of a PN sequence Patent

- [NASA-CASE-XNP-04623] c 10 N71-26103

MOD 2 sequential function generator for multibit binary sequence

- [NASA-CASE-NPO-10636] c 08 N72-25210

Bit error rate measurement above and below bit rate tracking threshold

- [NASA-CASE-MSC-12743-1] c 32 N79-10263

**BITUMENS**

Oil shale extraction using super-critical extraction

- [NASA-CASE-NPO-15656-1] c 43 N84-23012

**BLACK BODY RADIATION**

Black-body furnace Patent

- [NASA-CASE-XLE-01399] c 33 N71-15625

Cavity radiometer Patent

- [NASA-CASE-XNP-08961] c 14 N71-24809

Conically shaped cavity radiometer with a dual purpose cone winding Patent

- [NASA-CASE-XNP-09701] c 14 N71-26475

Black body cavity radiometer Patent

- [NASA-CASE-NPO-10810] c 14 N71-27323

Stable density stratification solar pond

- [NASA-CASE-NPO-15419-2] c 44 N85-30474

**BLADDER**

Prosthetic urinary sphincter

- [NASA-CASE-MFS-23717-1] c 52 N81-25660

Rapid quantification of an internal property --- ultrasonic determination of bladder urine quantity

- [NASA-CASE-LAR-13689-1-NP] c 35 N87-23941

Rapidly quantifying the relative distention of a human bladder

- [NASA-CASE-LAR-13901-1-NP] c 52 N90-21519

Rapidly quantifying the relative distention of a human bladder

- [NASA-CASE-LAR-13901-2] c 52 N92-11621

**BLADE TIPS**

Modification and improvements to cooled blades Patent

- [NASA-CASE-XLE-00092] c 15 N70-33264

Tip cap for a rotor blade

- [NASA-CASE-LEW-13654-1] c 07 N84-22560

**BLADES**

Impact absorbing blade mounts for variable pitch blades

- [NASA-CASE-LEW-12313-1] c 37 N78-10468

**BLADES (CUTTERS)**

Line cutter Patent

- [NASA-CASE-XMS-04072] c 15 N70-42017

Tissue macerating instrument

- [NASA-CASE-LEW-12668-1] c 52 N78-14773

Crystal cleaving machine

- [NASA-CASE-GSC-12584-1] c 37 N82-32730

**BLAST LOADS**

Linear explosive comparison

- [NASA-CASE-LAR-10800-1] c 33 N72-27959

**BLOCK COPOLYMERS**

Imide/arylene ether copolymers

- [NASA-CASE-LAR-14159-1-CU] c 27 N92-31792

Imide/arylene ether copolymers containing phosphine oxide groups

- [NASA-CASE-LAR-14925-1] c 27 N93-20567

**BLOOD**

Reduction of blood serum cholesterol

- [NASA-CASE-NPO-12119-1] c 52 N75-15270

Gas diffusion liquid storage bag and method of use for storing blood

- [NASA-CASE-NPO-13930-1] c 52 N79-14749

Dialysis system --- using ion exchange resin membranes permeable to urea molecules

- [NASA-CASE-NPO-14101-1] c 52 N80-14687

Extra-corporeal blood access, sensing, and radiation methods and apparatuses

- [NASA-CASE-MSC-21775-1] c 52 N92-11627

**BLOOD FLOW**

Logic-controlled occlusive cuff system

- [NASA-CASE-MSC-14836-1] c 52 N82-11770

**BLOOD PRESSURE**

Blood pressure measuring system for separating and separately recording dc signal and an ac signal Patent

- [NASA-CASE-XMS-06061] c 05 N71-23317

Apparatus and method for processing Korotkov sounds --- for blood pressure measurement

- [NASA-CASE-MSC-13999-1] c 52 N74-26626

Arterial pulse wave pressure transducer

- [NASA-CASE-GSC-11531-1] c 52 N74-27566

Circuit for detecting initial systole and diastolic notch --- for monitoring arterial pressure

- [NASA-CASE-LEW-11581-1] c 54 N75-13531

**BLOOD VESSELS**

Non-invasive method and apparatus for measuring pressure within a pliable vessel

- [NASA-CASE-ARC-11264-2] c 52 N83-29991

**BLUFF BODIES**

Annular supersonic decelerator or drogue Patent

- [NASA-CASE-XLE-00222] c 02 N70-37939

**BLUNT BODIES**

Flow field simulation Patent

- [NASA-CASE-LAR-11138] c 12 N71-20436

**BODIES OF REVOLUTION**

Conforming polisher for aspheric surface of revolution Patent

- [NASA-CASE-XGS-02884] c 15 N71-22705

Moment of inertia test fixture Patent

- [NASA-CASE-XGS-01023] c 14 N71-22992

**BODY FLUIDS**

Programmable physiological infusion

- [NASA-CASE-ARC-10447-1] c 52 N74-22771

Method of detecting and counting bacteria

- [NASA-CASE-GSC-11917-2] c 51 N76-29891

Micro-fluid exchange coupling apparatus

- [NASA-CASE-ARC-11114-1] c 51 N81-14605

**BODY KINEMATICS**

Space suit having improved waist and torso movement

- [NASA-CASE-ARC-10275-1] c 05 N72-22092

Controller arm for a remotely related slave arm

- [NASA-CASE-ARC-11052-1] c 37 N79-28551

Kinesimetric method and apparatus

- [NASA-CASE-MSC-18929-1] c 39 N83-20280

**BODY MEASUREMENT (BIOLOGY)**

Biomedical ultrasonoscope

- [NASA-CASE-ARC-10994-1] c 52 N76-33835

Miniature implantable ultrasonic echosonometer

- [NASA-CASE-ARC-11035-1] c 52 N79-18580

## BODY TEMPERATURE

- Kinesimetric method and apparatus  
[NASA-CASE-MSC-18929-1] c 39 N83-20280
- Apparatus for determining changes in limb volume  
[NASA-CASE-MSC-18759-1] c 52 N83-27578

## BODY TEMPERATURE

- Garments for controlling the temperature of the body  
Patent  
[NASA-CASE-XMS-10269] c 05 N71-24147
- Miniature ingestible telemeter devices to measure deep-body temperature  
[NASA-CASE-ARC-10583-1] c 52 N76-29894
- Method for thermal monitoring subcutaneous tissue  
[NASA-CASE-LAR-13028-1] c 52 N85-30618

## BODY VOLUME (BIOLOGY)

- Whole body measurement systems --- for weightlessness simulation  
[NASA-CASE-MSC-13972-1] c 52 N74-10975
- Apparatus for determining changes in limb volume  
[NASA-CASE-MSC-18759-1] c 52 N83-27578

## BODY-WING CONFIGURATIONS

- Free wing assembly for an aircraft  
[NASA-CASE-FRC-10092-1] c 05 N79-12061
- Means for controlling aerodynamically induced twist  
[NASA-CASE-LAR-12175-1] c 05 N82-28279

## BOILERS

- Boiler for generating high quality vapor Patent  
[NASA-CASE-XLE-00785] c 33 N71-16104
- Shell side liquid metal boiler  
[NASA-CASE-NPO-10831] c 33 N72-20915
- Carbon granule probe microphone for leak detection --- recovery boilers  
[NASA-CASE-NPO-16027-1] c 35 N85-21597
- Induction boiler  
[NASA-CASE-MFS-28634-1] c 37 N92-24055

## BOILING

- Process for making a noble metal on tin oxide catalyst  
[NASA-CASE-LAR-13741-1-SB] c 25 N90-20180
- Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-2-SB] c 27 N90-21177

## BOLOMETERS

- Insertion loss measuring apparatus having transformer means connected across a pair of bolometers Patent  
[NASA-CASE-XNP-01193] c 10 N71-16057
- Thin film capacitive bolometer and temperature sensor Patent  
[NASA-CASE-NPO-10607] c 09 N71-27232
- Wedge immersed thermistor bolometers  
[NASA-CASE-XGS-01245-1] c 35 N79-33449

## BOLTED JOINTS

- Optimized bolted joint  
[NASA-CASE-LAR-13250-1] c 37 N86-27630
- Device for measuring hole elongation in a bolted joint  
[NASA-CASE-LAR-13453-1] c 37 N88-14361
- Clevis joint for deployable space structures  
[NASA-CASE-LAR-13898-1] c 37 N91-15544
- Robot-friendly connector --- space truss structures  
[NASA-CASE-MSC-21864-1] c 37 N92-23544
- Slip joint connector  
[NASA-CASE-MFS-28659-1] c 37 N93-17080
- Robot-friendly connector --- space truss structures  
[NASA-CASE-MSC-21864-1] c 37 N93-20117

## BOLTS

- Gas actuated bolt disconnect Patent  
[NASA-CASE-XLA-00326] c 03 N70-34667
- Despin weight release Patent  
[NASA-CASE-XLA-00679] c 15 N70-38601
- Inspection gage for boss Patent  
[NASA-CASE-XMF-04966] c 14 N71-17658
- Split nut separation system Patent  
[NASA-CASE-XNP-06914] c 15 N71-21489
- Fastener stretcher  
[NASA-CASE-GSC-11149-1] c 15 N73-30457
- Optimized bolted joint  
[NASA-CASE-LAR-13250-1] c 37 N86-27630
- Bearing-bypass material system test  
[NASA-CASE-LAR-13458-1] c 35 N88-23967
- High reliability robot friendly ORU interface  
[NASA-CASE-GSC-13360-1] c 37 N92-23377
- Saddle clamp assembly  
[NASA-CASE-MFS-28701-1] c 37 N93-17057
- Slip joint connector  
[NASA-CASE-MFS-28659-1] c 37 N93-17080
- Mold bolt and means for achieving close tolerances between bolts and bolt holes  
[NASA-CASE-MFS-28720-1] c 37 N93-30567

## BONDING

- Bonding graphite with fused silver chloride  
[NASA-CASE-XGS-00963] c 15 N69-39735
- Bonded joint and method --- for reducing peak shear stress in adhesive bonds  
[NASA-CASE-LAR-10900-1] c 37 N74-23064
- Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c 24 N75-30260

Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
[NASA-CASE-MSC-14182-1] c 27 N76-14264

Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c 44 N79-24431

Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-3] c 24 N79-25143

Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c 24 N81-33235

Attachment system for silica tiles --- thermal protection for space shuttle orbiter  
[NASA-CASE-MSC-18741-1] c 27 N82-29456

Surface texturing of fluoropolymers  
[NASA-CASE-LEW-13028-1] c 27 N82-33521

Heat sealable, flame and abrasion resistant coated fabric  
[NASA-CASE-MSC-18382-2] c 27 N84-14324

Insulation bonding test system  
[NASA-CASE-MFS-25862-1] c 27 N85-20126

Cryogenic insulation strength and bond tester  
[NASA-CASE-MFS-25910-1] c 39 N86-20841

Method for forming hermetic seals  
[NASA-CASE-NPO-16423-1-CU] c 37 N87-21334

Tool and process for miniature explosive joining of tubes  
[NASA-CASE-LAR-13662-1] c 37 N88-14359

Method for maintaining precise suction strip porosities  
[NASA-CASE-LAR-13638-1] c 31 N90-19427

Ceramic coatings on smooth surfaces  
[NASA-CASE-LEW-15164-1] c 27 N91-25298

A process for preparing an assembly of an article and a soluble polyimide which resists dimensional change, delamination, and debonding when exposed to changes in temperature  
[NASA-CASE-LAR-14763-1] c 27 N92-12121

A method and apparatus for indicating disbands in joint regions  
[NASA-CASE-LAR-14626-1] c 38 N92-17859

Core design for use with precision composite reflectors  
[NASA-CASE-NPO-17858-1-CU] c 24 N93-14700

## BONES

Ultrasonic bone densitometer  
[NASA-CASE-MFS-20994-1] c 35 N75-12271

Method and system for in vivo measurement of bone tissue using a two level energy source  
[NASA-CASE-MSC-14276-1] c 52 N77-14737

Method of adhering bone to a rigid substrate using a graphite fiber reinforced bone cement  
[NASA-CASE-NPO-13764-1] c 27 N78-17215

## BOOLEAN ALGEBRA

VLSI binary updown counter  
[NASA-CASE-NPO-17205-1-CU] c 60 N90-21525

## BOOMS (EQUIPMENT)

Folding boom assembly Patent  
[NASA-CASE-XGS-00938] c 32 N70-41367

Collapsible antenna boom and transmission line Patent  
[NASA-CASE-MFS-20068] c 07 N71-27191

Minimech self-deploying boom mechanism  
[NASA-CASE-GSC-10566-1] c 15 N72-18477

Mechanically extendible telescoping boom  
[NASA-CASE-NPO-11118] c 03 N72-25021

Extended moment arm anti-spin device  
[NASA-CASE-LAR-12979-1] c 05 N85-21147

Space station erectable manipulator placement system  
[NASA-CASE-MSC-21096-1] c 18 N89-12621

## BOOSTER RECOVERY

Recoverable rocket vehicle Patent  
[NASA-CASE-XMF-00389] c 31 N70-34176

Recoverable single stage spacecraft booster Patent  
[NASA-CASE-XMF-01973] c 31 N70-41588

Orbiter/launch system  
[NASA-CASE-LAR-12250-1] c 14 N81-26161

A two-stage earth-to-orbit transport with translating oblique wings for booster recovery  
[NASA-CASE-LAR-14156-1] c 16 N90-16781

## BOOSTER ROCKET ENGINES

Segmented back-up bar Patent  
[NASA-CASE-XMF-00640] c 15 N70-39924

Recoverable single stage spacecraft booster Patent  
[NASA-CASE-XMF-01973] c 31 N70-41588

Space Shuttle with rail system and aft thrust structure securing solid rocket boosters to external tank  
[NASA-CASE-MFS-25853-1] c 16 N84-27784

Earth-to-orbit vehicle providing a reusable orbital stage  
[NASA-CASE-LAR-13486-1] c 16 N90-22584

## BOOTS (FOOTWEAR)

Walking boot assembly  
[NASA-CASE-ARC-11101-1] c 54 N78-17675

## BOREHOLES

Method for machining holes in composite materials  
[NASA-CASE-MFS-28044-1] c 31 N87-25491

## BORIDES

Method of making a light weight battery plaque  
[NASA-CASE-LEW-13349-1] c 26 N84-22734

Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-1-SB] c 27 N88-29040

High temperature refractory member with radiation emissive overcoat  
[NASA-CASE-NPO-17122-1-CU] c 27 N91-14489

## BORING MACHINES

Boring bar drive mechanism Patent  
[NASA-CASE-XLA-03661] c 15 N71-33518

Borehole geological assessment  
[NASA-CASE-NPO-14231-1] c 46 N80-10709

## BORON

Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential of field effect device  
[NASA-CASE-GSC-11425-1] c 76 N74-20329

Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-2-SB] c 27 N90-21177

## BORON CARBIDES

Catalyst for growth of boron carbide single crystal whiskers  
[NASA-CASE-XHQ-03903] c 15 N69-21922

## BORON CHLORIDES

Preparation of B-trichloroborazine  
[NASA-CASE-ARC-11643-1-SB] c 23 N87-23698

## BORON COMPOUNDS

Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-1-SB] c 27 N88-29040

## BORON FLUORIDES

Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c 27 N78-31233

## BORON OXIDES

Toughened uni-piece fibrous insulation  
[NASA-CASE-ARC-11888-1] c 24 N92-16026

## BOROSILICATE GLASS

Method for repair of thin glass coatings --- on space shuttle orbiter tiles  
[NASA-CASE-KSC-11097-1] c 27 N82-33520

Toughened uni-piece fibrous insulation  
[NASA-CASE-ARC-11888-1] c 24 N92-16026

Pressure transducer and system for cryogenic environments  
[NASA-CASE-LAR-14579-1] c 35 N92-29097

Ceramic fiber reinforced glass-ceramic matrix composite  
[NASA-CASE-LEW-15262-1] c 24 N93-26100

## BOULES

Ingot slicing machine and method  
[NASA-CASE-NPO-15483-1] c 37 N85-21650

## BOUNDARY CONDITIONS

Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N91-28184

Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N93-24598

## BOUNDARY LAYER CONTROL

Double hinged flap Patent  
[NASA-CASE-XLA-01290] c 02 N70-42016

Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c 02 N81-14968

Active control of boundary layer transition and turbulence  
[NASA-CASE-LAR-13532-1] c 34 N91-14562

Passive laminar flow control of crossflow vorticity  
[NASA-CASE-LAR-13563-1] c 34 N91-23410

Method of reducing drag in aerodynamic systems  
[NASA-CASE-LEW-14791-1] c 02 N92-34243

Swept wing attachment line contamination fence  
[NASA-CASE-LAR-13400-1] c 02 N93-22015

## BOUNDARY LAYER FLOW

Combined riblet and lebu drag reduction system  
[NASA-CASE-LAR-13286-1] c 02 N88-14071

Boundary layer relaminarization device  
[NASA-CASE-LAR-14470-1] c 02 N93-11876

## BOUNDARY LAYER SEPARATION

Tertiary flow injection thrust vectoring system Patent  
[NASA-CASE-MFS-20831] c 28 N71-29153

Controlled separation combustor --- airflow distribution in gas turbine engines  
[NASA-CASE-LEW-11593-1] c 20 N76-14190

Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c 05 N79-24976

Stall departure resistance enhancer  
[NASA-CASE-LAR-14221-1] c 06 N93-19023

## BOUNDARY LAYER STABILITY

Swept wing attachment line contamination fence  
[NASA-CASE-LAR-13400-1] c 02 N93-22015

**BOUNDARY LAYER TRANSITION**

Detection of the transitional layer between laminar and turbulent flow areas on a wing surface --- using an accelerometer to measure pressure levels during wind tunnel tests

[NASA-CASE-LAR-12261-1] c 02 N80-20224

Crossflow vorticity sensor

[NASA-CASE-LAR-13436-1-CU] c 02 N88-23759

Method for laminar boundary layer transition visualization in flight

[NASA-CASE-LAR-13554-1] c 02 N89-12551

Active control of boundary layer transition and turbulence

[NASA-CASE-LAR-13532-1] c 34 N91-14562

**BOUNDARY LAYERS**

Traversing probe Patent

[NASA-CASE-XFR-02007] c 12 N71-24692

Apparatus for sensing temperature

[NASA-CASE-XLE-05230] c 14 N72-27410

Boundary layer relaminarization device

[NASA-CASE-LAR-14470-1] c 02 N93-11876

**BOXES (CONTAINERS)**

Storage container for electronic devices Patent

[NASA-CASE-MFS-20075] c 09 N71-26133

Double window viewing chamber assembly

[NASA-CASE-MFS-28057-1] c 09 N87-14355

**BRACKETS**

Electrical servo actuator bracket --- fuel control valves on jet engines

[NASA-CASE-FRC-11044-1] c 37 N81-33483

Airfoil flutter model suspension system

[NASA-CASE-LAR-13522-1-SB] c 09 N87-25334

Locking hinge

[NASA-CASE-MSC-21056-1] c 18 N88-23827

Robot cable-compliant devices

[NASA-CASE-GSC-13127-1] c 37 N91-17388

Removable hand hold

[NASA-CASE-LEW-15196-1] c 37 N92-29092

**BRAGG CELLS**

Synchronous strobe apparatus for flow visualization

[NASA-CASE-LAR-14556-1] c 36 N91-25392

**BRAIDED COMPOSITES**

Method and apparatus for three dimensional braiding

[NASA-CASE-LAR-14047-1] c 31 N93-19038

**BRAILLE**

Braille reading system

[NASA-CASE-LAR-13306-1] c 82 N87-29372

**BRAKES**

Preloaded brake disc

[NASA-CASE-MSC-21132-1] c 37 N88-29181

**BRAKES (FOR ARRESTING MOTION)**

Frangible tube energy dissipation Patent

[NASA-CASE-XLA-00754] c 15 N70-34850

Emergency escape system Patent

[NASA-CASE-XKS-07814] c 15 N71-27067

Sprag solenoid brake --- development and operations of electrically controlled brake

[NASA-CASE-MFS-21846-1] c 37 N74-26976

Reel safety brake

[NASA-CASE-GSC-11960-1] c 37 N77-14479

Motion restraining device

[NASA-CASE-NPO-13619-1] c 37 N78-16369

Moving body velocity arresting line --- stainless steel cables with energy absorbing sleeves

[NASA-CASE-LAR-12372-1] c 37 N82-18601

Bidirectional drive and brake mechanism

[NASA-CASE-MSC-21540-1] c 37 N91-32514

Single acting translation/rotational brake

[NASA-CASE-LAR-14738-1] c 37 N93-29175

**BRAKING**

Regenerative braking system Patent

[NASA-CASE-XMF-01096] c 10 N71-16030

Linear magnetic brake with two windings Patent

[NASA-CASE-XLE-05079] c 15 N71-17652

Anemometer with braking mechanism Patent

[NASA-CASE-XMF-05224] c 14 N71-23726

Roller locking brake

[NASA-CASE-GSC-13376-1] c 37 N92-21728

**BRAZING**

Pretreatment method for anti-wettable materials

[NASA-CASE-XMS-03537] c 15 N69-21471

Process for applying a protective coating for salt bath brazing Patent

[NASA-CASE-XLE-00046] c 15 N70-33311

Method of joining aluminum to stainless steel Patent

[NASA-CASE-MFS-07369] c 15 N71-20443

Brazing alloy Patent

[NASA-CASE-XNP-03063] c 17 N71-23365

Brazing alloy binder

[NASA-CASE-XMF-05868] c 26 N75-27125

Brazing alloy composition

[NASA-CASE-XMF-06053] c 26 N75-27126

Brazing alloy

[NASA-CASE-XNP-03878] c 26 N75-27127

Method of fluxless brazing and diffusion bonding of aluminum containing components

[NASA-CASE-MSC-14435-1] c 37 N76-18455

**BREATHING APPARATUS**

Transfer valve Patent

[NASA-CASE-XAC-01158] c 15 N71-23051

Self-contained breathing apparatus

[NASA-CASE-MSC-14733-1] c 54 N76-24900

Portable breathing system --- a breathing apparatus using a rebreathing system of heat exchangers for carbon dioxide removal

[NASA-CASE-MSC-16182-1] c 54 N80-10799

**BRICKS**

Foldable construction block

[NASA-CASE-MSC-12233-2] c 32 N73-13921

**BRIDGMAN METHOD**

Apparatus and procedure to detect a liquid-solid interface during crystal growth in a bridgman furnace

[NASA-CASE-LAR-13597-1-CU] c 25 N87-23713

**BRIGHTNESS**

Light intensity modulator controller Patent

[NASA-CASE-XMS-04300] c 09 N71-19479

**BRIGHTNESS DISCRIMINATION**

Television signal processing system Patent

[NASA-CASE-NPO-10140] c 07 N71-24742

Visual examination apparatus

[NASA-CASE-ARC-10329-1] c 05 N73-26072

Illumination control apparatus for compensating solar light

[NASA-CASE-KSC-11010-1] c 74 N79-12890

**BRITTLENESS**

Rock sampling --- apparatus for controlling particle size

[NASA-CASE-XNP-10007-1] c 46 N74-23068

Rock sampling --- method for controlling particle size distribution

[NASA-CASE-XNP-09755] c 46 N74-23069

Elastomer coated filler and composites thereof comprising at least 60% by weight of a hydrated filler and an elastomer containing an acid substituent

[NASA-CASE-NPO-14857-1] c 27 N83-19900

Directional solidification of superalloys

[NASA-CASE-MFS-28314-1] c 26 N91-14462

**BROADBAND**

Broadband choke for antenna structure

[NASA-CASE-XMS-05303] c 07 N69-27462

Flexible blade antenna Patent

[NASA-CASE-MSC-12101] c 09 N71-18720

Broadband frequency discriminator Patent

[NASA-CASE-NPO-10096] c 07 N71-24583

Broadband microwave waveguide window Patent

[NASA-CASE-XNP-08880] c 09 N71-24808

High-gain, broadband traveling wave maser Patent

[NASA-CASE-NPO-10548] c 16 N71-24831

Wideband VCO with high phase stability Patent

[NASA-CASE-XLA-03893] c 10 N71-27271

Composite antenna feed

[NASA-CASE-GSC-11046-1] c 07 N73-28013

Multifrequency broadband polarized horn antenna

[NASA-CASE-NPO-14588-1] c 32 N81-25278

Broadband optical radiation detector

[US-PATENT-4,262,198] c 74 N83-19597

Method of measuring sea surface water temperature with a satellite including wideband passive synthetic-aperture multichannel receiver

[NASA-CASE-NPO-15651-1] c 43 N85-21723

Multispectral variable magnification glancing incidence x ray telescope

[NASA-CASE-MFS-28013-4] c 89 N92-33012

**BROADBAND AMPLIFIERS**

Broadband stable power multiplier Patent

[NASA-CASE-XNP-10854] c 10 N71-26331

Cascaded complementary pair broadband transistor amplifiers Patent

[NASA-CASE-NPO-10003] c 10 N71-26415

**BROADCASTING**

Vehicle locating system utilizing AM broadcasting station carriers

[NASA-CASE-NPO-13217-1] c 32 N75-26194

Real-time data compression of broadcast video signals

[NASA-CASE-LEW-14945-1] c 32 N91-13598

Real-time data compression of broadcast video signals

[NASA-CASE-LEW-14945-2] c 32 N92-10128

**BROMINATION**

Toughening reinforced epoxy composites with brominated polymeric additives

[NASA-CASE-ARC-11427-1] c 24 N86-19380

Brominated graphitized carbon fibers

[NASA-CASE-LEW-14698-2] c 27 N92-10090

**BROMINE**

Hydrogen-bromine secondary battery

[NASA-CASE-NPO-13237-1] c 44 N76-18641

Brominated graphitized carbon fibers

[NASA-CASE-LEW-14698-2] c 27 N92-10090

**BROMINE COMPOUNDS**

Toughening reinforced epoxy composites with brominated polymeric additives

[NASA-CASE-ARC-11427-2] c 27 N86-27451

**BRONZES**

Thin wire pointing method

[NASA-CASE-NPO-15789-1] c 31 N83-19947

**BRUSH SEALS**

High temperature, flexible pressure-actuated, brush seal

[NASA-CASE-LEW-15086-1] c 37 N92-16318

**BRUSHES**

Method of making impurity-type semiconductor electrical contacts Patent

[NASA-CASE-XMF-01016] c 26 N71-17818

**BRUSHES (ELECTRICAL CONTACTS)**

Shaft transducer having dc output proportional to angular velocity

[NASA-CASE-NPO-15706-1] c 35 N84-28017

**BUBBLES**

Method of forming frozen spheres in a force-free drop tower

[NASA-CASE-NPO-14845-1] c 27 N82-28442

Acoustic bubble removal method

[NASA-CASE-NPO-15334-1] c 71 N83-35781

**BUCKLING**

Miniature vibration isolator Patent

[NASA-CASE-XLA-01019] c 15 N70-40156

Compression test assembly

[NASA-CASE-LAR-10440-1] c 14 N73-32323

**BUFFER STORAGE**

Data handling system based on source significance, storage availability and data received from the source Patent Application

[NASA-CASE-XNP-04162-1] c 08 N70-34675

Data transfer system Patent

[NASA-CASE-NPO-12107] c 08 N71-27255

Buffered analog converter

[NASA-CASE-KSC-10397] c 08 N72-25206

Common data buffer system --- communication with computational equipment utilized in spacecraft operations

[NASA-CASE-KSC-11048-1] c 62 N81-24779

Braille reading system

[NASA-CASE-LAR-13306-1] c 82 N87-29372

**BUFFERS (CHEMISTRY)**

Static continuous electrophoresis device

[NASA-CASE-MFS-25306-1] c 25 N83-13187

**BUILDINGS**

Foldable construction block

[NASA-CASE-MSC-12233-1] c 15 N72-25454

**BULBS**

External bulb variable volume maser

[NASA-CASE-GSC-12334-1] c 36 N79-14362

**BULKHEADS**

Tank construction for space vehicles Patent

[NASA-CASE-XMF-01899] c 31 N70-41948

Tube coupling device

[NASA-CASE-MFS-25964-2] c 37 N87-22977

Pressure vessel flex joint

[NASA-CASE-MSC-21748-1] c 37 N92-21727

**BUOYANCY**

Inflatable radar reflector unit Patent

[NASA-CASE-XMS-00893] c 07 N70-40063

**BURNERS**

Micronized coal burner facility

[NASA-CASE-LEW-13426-1] c 25 N84-16276

**BURNING RATE**

Burning rate control of solid propellants Patent

[NASA-CASE-XLE-03494] c 27 N71-21819

Burn rate testing apparatus

[NASA-CASE-XMS-09690] c 33 N72-25913

Nitramine propellants --- gun propellant burning rate

[NASA-CASE-NPO-14103-1] c 28 N78-31255

**BURNOUT**

Spherically-shaped rocket motor Patent

[NASA-CASE-XHQ-01897] c 28 N70-35381

**BURNS (INJURIES)**

Medical diagnosis system and method with multispectral imaging --- depth of burns and optical density of the skin

[NASA-CASE-NPO-14402-1] c 52 N81-27783

Method and apparatus for characterizing reflected ultrasonic pulses

[NASA-CASE-LAR-13966-1] c 71 N91-27914

**BUS CONDUCTORS**

Test apparatus for locating shorts during assembly of electrical buses

[NASA-CASE-ARC-

## BUTT JOINTS

- Channel-type shell construction for rocket engines and the like Patent  
[NASA-CASE-XLE-00144] c 28 N70-34860
- Segmented back-up bar Patent  
[NASA-CASE-XMF-00640] c 15 N70-39924
- Apparatus for welding sheet material --- butt joints  
[NASA-CASE-XMS-01330] c 37 N75-27376

## BUTTERFLY VALVES

- Flexible seal for valves Patent  
[NASA-CASE-XLE-00101] c 15 N70-33376
- Hybrid butterfly valve  
[NASA-CASE-SSC-00004-1] c 37 N91-14609

## BUTYRIC ACID

- Production of butanol by fermentation in the presence of cocultures of clostridium  
[NASA-CASE-NPO-16203-1] c 23 N85-35227

## BYPASSES

- Low power drain semi-conductor circuit  
[NASA-CASE-XGS-04999] c 09 N69-24317
- Helical coaxial resonator RF filter  
[NASA-CASE-XGS-02816] c 07 N69-24323
- Current regulating voltage divider  
[NASA-CASE-MFS-20935] c 09 N71-34212
- Use of unilluminated solar cells as shunt diodes for a solar array  
[NASA-CASE-GSC-10344-1] c 03 N72-27053
- Shunt regulation electric power system  
[NASA-CASE-GSC-10135] c 33 N78-17296
- Thrust reverser for a long duct fan engine --- for turbofan engines  
[NASA-CASE-LEW-13199-1] c 07 N82-26293
- Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095
- Valve malfunction detection apparatus  
[NASA-CASE-MFS-29904-1] c 35 N93-29503

## C

## CABLE FORCE RECORDERS

- Winch having cable position and load indicators Patent  
[NASA-CASE-MSC-12052-1] c 15 N71-24599

## CABLES

- Cable restraint  
[NASA-CASE-LAR-10129-1] c 15 N73-25512
- Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c 37 N76-22540
- Cable suspended windmill  
[NASA-CASE-LAR-13434-1] c 37 N90-23742

## CABLES (ROPES)

- High-voltage cable Patent  
[NASA-CASE-XNP-00738] c 09 N70-38201
- Cable arrangement for rigid tethering Patent  
[NASA-CASE-XLA-02332] c 32 N71-17609
- Extensible cable support Patent  
[NASA-CASE-XMF-07587] c 15 N71-18701
- Satellite appendage tie down cord Patent  
[NASA-CASE-XGS-02554] c 31 N71-21064
- Quick attach mechanism Patent  
[NASA-CASE-XFR-05421] c 15 N71-22994
- Flexible/rigidifiable cable assembly  
[NASA-CASE-MSC-13512-1] c 15 N72-22485
- Cable stabilizer for open shaft cable operated elevators  
[NASA-CASE-KSC-10513] c 15 N72-25453
- Reefing system  
[NASA-CASE-LAR-10129-2] c 37 N74-20063
- Emergency descent device  
[NASA-CASE-MFS-23074-1] c 54 N77-21844
- Belt for transmitting power from a cogged driving member to a cogged driven member  
[NASA-CASE-GSC-12289-1] c 37 N80-32717
- Moving body velocity arresting line --- stainless steel cables with energy absorbing sleeves  
[NASA-CASE-LAR-12372-1] c 37 N82-18601
- Selectable towline spin chute system  
[NASA-CASE-LAR-14322-1] c 02 N91-27139
- Counter-balanced, multiple cable construction crane  
[NASA-CASE-LAR-14565-1-CU] c 37 N92-34212

## CADMIUM COMPOUNDS

- Pretreatment of lubricated surfaces with sputtered cadmium oxide  
[NASA-CASE-LEW-14474-1] c 27 N91-28423
- Solid lubricants on pretreated surfaces  
[NASA-CASE-LEW-14474-2] c 27 N92-11186

## CADMIUM SULFIDES

- High field CdS detector for infrared radiation  
[NASA-CASE-LAR-11027-1] c 35 N74-18088
- CDS solid state phase insensitive ultrasonic transducer --- annealing cadmium sulfide crystals  
[NASA-CASE-LAR-12304-1] c 35 N80-20559
- Liquid crystal light valve structures  
[NASA-CASE-MSC-20036-1] c 76 N85-33826

## CALCIUM

- Ultrasonic bone densitometer  
[NASA-CASE-MFS-20994-1] c 35 N75-12271

## CALCIUM FLUORIDES

- Bonded solid lubricant coating Patent  
[NASA-CASE-XMS-00259] c 18 N70-36400
- Method of making self lubricating fluoride-metal composite materials Patent  
[NASA-CASE-XLE-08511-2] c 18 N71-16105

## CALCIUM OXIDES

- Process for the preparation of calcium superoxide  
[NASA-CASE-ARC-11053-1] c 25 N79-10162

## CALCIUM PHOSPHATES

- Process for the preparation of brushite crystals  
[NASA-CASE-ERC-10338] c 04 N72-33072
- Slow-release fertilizer  
[NASA-CASE-MSC-21953-1-NP] c 37 N93-17271
- Active synthetic soil  
[NASA-CASE-MSC-21954-1-NP] c 51 N93-19054

## CALCULATORS

- Sun angle calculator  
[NASA-CASE-MSC-12617-1] c 35 N76-29552

## CALCULI

- Apparatus for disintegrating kidney stones  
[NASA-CASE-GSC-12652-1] c 52 N84-34913

## CALIBRATING

- Self-calibrating displacement transducer Patent  
[NASA-CASE-XLA-00781] c 09 N71-22999
- Pressure transducer calibrator Patent  
[NASA-CASE-XNP-01660] c 14 N71-23036
- Apparatus for testing a pressure responsive instrument Patent  
[NASA-CASE-XMF-04134] c 14 N71-23755
- Phonocardiogram simulator Patent  
[NASA-CASE-XKS-10804] c 05 N71-24606
- Laser calibrator Patent  
[NASA-CASE-XLA-03410] c 16 N71-25914
- Radar calibration sphere  
[NASA-CASE-XLA-11154] c 07 N72-21117
- Gauge calibration by diffusion  
[NASA-CASE-XGS-07752] c 14 N73-30390
- System for calibrating pressure transducer  
[NASA-CASE-LAR-10910-1] c 35 N74-13132
- In situ transfer standard for ultrahigh vacuum gage calibration  
[NASA-CASE-LAR-10862-1] c 35 N74-15092
- Ergometer calibrator --- for any ergometer utilizing rotating shaft  
[NASA-CASE-MFS-21045-1] c 35 N75-15932
- Ultrasonic calibration device --- for producing changes in acoustic attenuation and phase velocity  
[NASA-CASE-LAR-11435-1] c 35 N76-15432
- High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c 35 N76-24523
- Electronically scanned pressure sensor module with in SITU calibration capability  
[NASA-CASE-LAR-12230-1] c 35 N79-14347
- Calibrating pressure switch  
[NASA-CASE-XMF-04494-1] c 33 N79-33392
- Electromagnetic power absorber  
[NASA-CASE-NPO-13830-1] c 32 N80-14281
- Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c 34 N81-26402
- Method and apparatus for precision control of radiometer  
[NASA-CASE-NPO-15398-1] c 35 N84-22931
- Strain gage calibration  
[NASA-CASE-LAR-12743-1] c 35 N84-28019
- Means and method for calibrating a photon detector utilizing electron-photon coincidence  
[NASA-CASE-NPO-15644-1] c 35 N84-33767
- Method and apparatus for self-calibration and phasing of array antenna  
[NASA-CASE-NPO-15920-1] c 33 N85-21493
- Ultrasonic angle beam standard reflector --- ultrasonic nondestructive inspection  
[NASA-CASE-LAR-13153-1] c 71 N86-21276
- Simulator scene display evaluation device  
[NASA-CASE-ARC-11504-1] c 09 N86-32447
- Spinning disk calibration method and apparatus for laser Doppler velocimeter  
[NASA-CASE-ARC-11510-1] c 35 N86-32697
- Antimultipath communication by injecting tone into null in signal spectrum  
[NASA-CASE-NPO-16414-1-CU] c 32 N87-25511
- Miniature remote dead weight calibrator  
[NASA-CASE-LAR-13564-1] c 35 N87-25558
- Multiple axis reticle  
[NASA-CASE-ARC-11886-1-SB] c 35 N91-14591
- Calibration apparatus for recess mounted pressure transducers  
[NASA-CASE-LAR-14724-1] c 35 N92-30030

## CALORIMETERS

- Constant temperature heat sink for calorimeters Patent  
[NASA-CASE-XMF-04208] c 33 N71-29051
- Heat flow calorimeter --- measures output of Ni-Cd batteries  
[NASA-CASE-GSC-11434-1] c 34 N74-27859
- Containerless high temperature calorimeter apparatus  
[NASA-CASE-MFS-23923-1] c 35 N81-19426

## CAMERA SHUTTERS

- Electrically-operated rotary shutter Patent  
[NASA-CASE-XNP-00637] c 14 N70-40273
- Fast opening diaphragm Patent  
[NASA-CASE-XLA-03660] c 15 N71-21060
- Cyclically operable optical shutter  
[NASA-CASE-NPO-10758] c 14 N73-14427
- Rotary solenoid shutter drive assembly and rotary inertia damper and stop plate assembly --- for use with cameras mounted in satellites  
[NASA-CASE-GSC-11560-1] c 33 N74-20861

## CAMERAS

- Measurement of time differences between luminous events Patent  
[NASA-CASE-XLA-01987] c 23 N71-23976
- Image magnification adapter for cameras Patent  
[NASA-CASE-XMF-03844-1] c 14 N71-26474
- Film feed camera having a detent means Patent  
[NASA-CASE-LAR-10686] c 14 N71-28935
- Laser camera and diffusion filter therefore Patent  
[NASA-CASE-NPO-10417] c 16 N71-33410
- Optical binocular scanning apparatus  
[NASA-CASE-NPO-11002] c 14 N72-22441
- On-film optical recording of camera lens settings  
[NASA-CASE-MSC-12363-1] c 14 N71-26431
- Exposure interlock for oscilloscope cameras  
[NASA-CASE-LAR-10319-1] c 14 N73-32322
- Real time moving scene holographic camera system  
[NASA-CASE-MFS-21087-1] c 35 N74-17153
- Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c 35 N75-15014
- Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c 35 N75-19613
- Real time, large volume, moving scene holographic camera system  
[NASA-CASE-MFS-22537-1] c 35 N75-27328
- Holographic motion picture camera with Doppler shift compensation  
[NASA-CASE-MFS-22517-1] c 35 N76-18402
- Stereoscopic camera and viewing systems with undistorted depth presentation and reduced or eliminated erroneous acceleration and deceleration perceptions, or with perceptions produced or enhanced for special effects  
[NASA-CASE-NPO-18028-1-CU] c 74 N92-16809
- Polarization perception device  
[NASA-CASE-MSC-21915-1] c 74 N92-30027
- Electronic still camera  
[NASA-CASE-MSC-21797-1] c 35 N93-17076
- Operator-tailored adjustable control station with movable monitors and cameras for viewing systems in robotics and teleoperations  
[NASA-CASE-NPO-17837-1-CU] c 74 N93-17273
- Near real-time stereo vision system  
[NASA-CASE-NPO-18593-1-CU] c 74 N93-18276

## CAMS

- Controlled caging and uncaging mechanism  
[NASA-CASE-GSC-11063-1] c 37 N77-27400
- Cam-operated pitch-change apparatus  
[NASA-CASE-LEW-13050-1] c 07 N79-14095
- CAM controlled retractable door latch  
[NASA-CASE-MSC-20304-1] c 37 N82-31690

## CANARD CONFIGURATIONS

- Thrust and direction control apparatus Patent  
[NASA-CASE-XLE-03583] c 31 N71-17629
- Supersonic transport --- using canard surfaces  
[NASA-CASE-LAR-11932-1] c 05 N78-32086
- Missile rolling tail brake torque system --- simulating bearing friction on canard controlled missiles  
[NASA-CASE-LAR-12751-1] c 15 N84-16231

## CANCELLATION

- System and method for cancelling expansion waves in a wave rotor  
[NASA-CASE-LEW-15218-1] c 34 N93-11172

## CANCER

- Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c 52 N79-14751
- Hyperthermia heating apparatus --- cancer therapy  
[NASA-CASE-NPO-14549-2] c 52 N82-33996

## CANNING

- One step HIP canning of powder metallurgy composites  
[NASA-CASE-LEW-14719-1] c 24 N90-23493

## CANOPIES

- Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c 27 N76-16230
- Method for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-1] c 09 N82-29330
- Aircraft canopy lock  
[NASA-CASE-FRC-11065-1] c 05 N83-19377

## SUBJECT INDEX

### CANS

- Canister closing device Patent  
[NASA-CASE-XLA-01446] c 15 N71-21528  
Extrusion can  
[NASA-CASE-NPO-10812] c 15 N73-13464  
Process for HIP canning of composites  
[NASA-CASE-LEW-14990-1-CU] c 24 N91-17145

### CANTILEVER BEAMS

- Inflatable support structure Patent  
[NASA-CASE-XLA-01731] c 32 N71-21045  
Cantilever mounted resilient pad gas bearing  
[NASA-CASE-LEW-12569-1] c 37 N79-10418

### CANTILEVER MEMBERS

- Deployable solar cell array  
[NASA-CASE-NPO-10883] c 31 N72-22874  
Miniature biaxial strain transducer  
[NASA-CASE-LAR-11648-1] c 35 N77-14407  
Cantilever clamp fitting  
[NASA-CASE-MFS-28328-1] c 37 N91-13731

### CAPACITANCE

- Device for determining the accuracy of the flare on a flared tube  
[NASA-CASE-XKS-03495] c 14 N69-39785  
Floating two force component measuring device Patent  
[NASA-CASE-XAC-04885] c 14 N71-23790  
Thin film capacitive bolometer and temperature sensor Patent  
[NASA-CASE-NPO-10607] c 09 N71-27232  
Capacitive tank gaging apparatus being independent of liquid distribution  
[NASA-CASE-MFS-21629] c 14 N72-22442  
Capacitance multiplier and filter synthesizing network  
[NASA-CASE-NPO-11948-1] c 33 N74-32712  
Direct reading inductance meter  
[NASA-CASE-NPO-13792-1] c 35 N77-32455  
Dynamic capacitor having a peripherally driven element and system incorporating the same  
[NASA-CASE-XNP-02899-1] c 33 N79-21265  
Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N87-22895  
Ice detector  
[NASA-CASE-LAR-13776-1] c 35 N88-29149  
Driven shielding capacitive proximity sensor  
[NASA-CASE-GSC-13377-1] c 63 N93-14701

### CAPACITANCE SWITCHES

- Electrical discharge apparatus for forming Patent  
[NASA-CASE-XMF-00375] c 15 N70-34249  
Ultra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit Patent  
[NASA-CASE-XGS-00381] c 09 N70-34819  
Feedback integrator with grounded capacitor Patent  
[NASA-CASE-XAC-10607] c 10 N71-23669

### CAPACITORS

- Temperature sensitive capacitor device  
[NASA-CASE-XNP-09750] c 14 N69-39937  
Space vehicle electrical system Patent  
[NASA-CASE-XMF-00517] c 03 N70-34157  
Apparatus having coaxial capacitor structure for measuring fluid density Patent  
[NASA-CASE-XLE-00143] c 14 N70-36618  
Meteoroid sensing apparatus having a coincidence network connected to a pair of capacitors Patent  
[NASA-CASE-XLE-01246] c 14 N71-10797  
Capacitor and method of making same Patent  
[NASA-CASE-LEW-10364-1] c 09 N71-13522  
Measurement of time differences between luminous events Patent  
[NASA-CASE-XLA-01987] c 23 N71-23976  
Ripple indicator  
[NASA-CASE-KSC-10162] c 09 N72-11225  
Thermoelectric radiometer utilizing polymer film  
[NASA-CASE-ARC-10138-1] c 14 N72-24477  
Screened circuit capacitors  
[NASA-CASE-LAR-10294-1] c 26 N72-28762  
Micrometeoroid analyzer  
[NASA-CASE-ARC-10443-1] c 14 N73-20477  
Insulated electrocardiographic electrodes --- without paste electrolyte  
[NASA-CASE-MSC-14339-1] c 05 N75-24716  
High temperature beryllium oxide capacitor  
[NASA-CASE-LEW-11938-1] c 33 N76-15373  
Energy storage apparatus  
[NASA-CASE-GSC-12030-1] c 44 N78-24608  
Regulated high efficiency, lightweight capacitor-diode multiplier dc to dc converter  
[NASA-CASE-LEW-12791-1] c 33 N78-32341  
Dynamic capacitor having a peripherally driven element and system incorporating the same  
[NASA-CASE-XNP-02899-1] c 33 N79-21265  
Laser activated MTOS microwave device  
[NASA-CASE-NPO-16112-1] c 33 N86-19516  
Water-absorbing capacitor system for measuring relative humidity  
[NASA-CASE-NPO-16544-1-CU] c 35 N87-22953

Method and apparatus for determining time, direction, and composition of impacting space particles

- [NASA-CASE-LAR-13392-1-CU] c 19 N91-14412  
Flexible heating head for induction heating apparatus and method  
[NASA-CASE-LAR-14418-1] c 32 N92-31257  
High energy and high power density ultracapacitors and supercapacitors  
[NASA-CASE-NPO-18568-1-CU] c 33 N93-17274  
Enhanced fatigue and retention in ferroelectric thin film memory capacitors by post-top electrode anneal treatment  
[NASA-CASE-NPO-18551-1-CU] c 33 N93-17277  
Cascaded transformerless DC-DC voltage amplifier with optically isolated switching devices  
[NASA-CASE-NPO-17994-1-CU] c 33 N93-18278

### CAPILLARY FLOW

- Capillary radiator Patent  
[NASA-CASE-XLE-03307] c 33 N71-14035  
Fluid lubricant system Patent  
[NASA-CASE-XNP-03972] c 15 N71-23048  
Soldering device Patent  
[NASA-CASE-XLA-08911] c 15 N71-27214  
Capillary flow weld-bonding  
[NASA-CASE-LAR-11726-1] c 37 N76-27568  
Polymeric heat pipe wick  
[NASA-CASE-GSC-13019-1] c 34 N88-29133  
Capillary heat transport and fluid management device  
[NASA-CASE-MFS-28217-1] c 34 N89-14392

### CAPILLARY TUBES

- Fluid flow restrictor Patent  
[NASA-CASE-NPO-10117] c 15 N71-15608  
Water separating system Patent  
[NASA-CASE-XMS-13052] c 14 N71-20427  
Mercury capillary interrupter Patent  
[NASA-CASE-XNP-02251] c 12 N71-20896  
Diffused waveguiding capillary tube with distributed feedback for a gas laser  
[NASA-CASE-NPO-13544-1] c 36 N76-18428  
Ceramic heat pipe wick  
[NASA-CASE-GSC-13199-1] c 27 N90-23541

### CARBAZOLES

- Method of using photovoltaic cell using poly-N-vinylcarbazole complex Patent  
[NASA-CASE-NPO-10373] c 03 N71-18698

### CARBIDES

- Absorbable-susceptor joining of ceramic surfaces  
[NASA-CASE-NPO-15640-1] c 27 N84-22748  
Carbide-fluoride-silver self-lubricating composite  
[NASA-CASE-LEW-14196-2] c 37 N87-25585

### CARBOHYDRATES

- Decontamination of petroleum products Patent  
[NASA-CASE-XNP-03835] c 06 N71-23499  
Apparatus and method for cellulose processing using microwave pretreatment  
[NASA-CASE-MSC-21936-1-SB] c 25 N93-22036

### CARBON

- Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
[NASA-CASE-ARC-11040-2] c 24 N78-27184  
Electrophotolysis oxidation system for measurement of organic concentration in water  
[NASA-CASE-MSC-16497-1] c 25 N82-12166  
Apparatus and method for destructive removal of particles contained in flowing fluid  
[NASA-CASE-NPO-15426-1] c 35 N84-17555  
Chromium electrodes for REDOX cells  
[NASA-CASE-LEW-13653-1] c 44 N84-28205  
Deposition of diamondlike carbon films  
[NASA-CASE-LEW-14080-1] c 31 N85-20153  
Carbon granule probe microphone for leak detection --- recovery boilers  
[NASA-CASE-NPO-16027-1] c 35 N85-21597  
Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587  
Krypton based adsorption type cryogenic refrigerator  
[NASA-CASE-NPO-17334-1-CU] c 31 N88-23917  
Cryogenic regenerator including saran-carbon heat conduction matrix  
[NASA-CASE-NPO-17291-1-CU] c 34 N88-23946  
Graphite fluoride from iodine intercalated graphitized carbon  
[NASA-CASE-LEW-15360-1] c 25 N92-34206

### CARBON ARCS

- Water cooled contactor for anode in carbon arc mechanism  
[NASA-CASE-XMS-03700] c 15 N69-24266  
Diamondlike flakes  
[NASA-CASE-LEW-13837-2] c 24 N85-21267

### CARBON COMPOUNDS

- Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00284] c 15 N71-16075

## CARBON-CARBON COMPOSITES

- Surfactant-assisted liquefaction of particulate carbonaceous substances  
[NASA-CASE-NPO-13904-1] c 25 N79-11152  
Diamondlike flake composites  
[NASA-CASE-LEW-13837-1] c 24 N84-22695  
Graphite fluoride from iodine intercalated graphitized carbon  
[NASA-CASE-LEW-15360-1] c 25 N92-34206

### CARBON DIOXIDE

- Techniques for insulating cryogenic fuel containers Patent  
[NASA-CASE-XLA-01967] c 31 N70-42015  
Miniature carbon dioxide sensor and methods  
[NASA-CASE-MSC-13332-1] c 14 N72-21408  
Metabolic rate meter and method  
[NASA-CASE-MSC-12239-1] c 52 N79-21750  
Converting a CO<sub>2</sub> atmosphere to a high-purity O<sub>2</sub> supply  
[NASA-CASE-LAR-14398-1] c 25 N92-30098  
Alkali metal carbon dioxide electrochemical system for energy storage and/or conversion of carbon dioxide to oxygen  
[NASA-CASE-LEW-14973-1] c 44 N93-28974

### CARBON DIOXIDE LASERS

- Repetitively pulsed, wavelength selective laser Patent  
[NASA-CASE-ERC-10178] c 16 N71-24832  
Power supply for carbon dioxide lasers  
[NASA-CASE-GSC-11222-1] c 16 N73-32391  
Stark-effect modulation of CO<sub>2</sub> laser with NH<sub>2</sub>D  
[NASA-CASE-NPO-11945-1] c 36 N76-18427

### CARBON DIOXIDE REMOVAL

- Catalyst cartridge for carbon dioxide reduction unit  
[NASA-CASE-LAR-10551-1] c 25 N74-12813  
Regenerable device for scrubbing breathable air of CO<sub>2</sub> and moisture without special heat exchanger equipment  
[NASA-CASE-MSC-14771-1] c 54 N77-32722  
Portable breathing system --- a breathing apparatus using a rebreathing system of heat exchangers for carbon dioxide removal  
[NASA-CASE-MSC-16182-1] c 54 N80-10799  
Method and apparatus for bio-regenerative life support system  
[NASA-CASE-MSC-21629-1] c 54 N91-31803

### CARBON FIBER REINFORCED PLASTICS

- Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c 24 N79-16915  
Circumferential shaft seal  
[NASA-CASE-LEW-12119-1] c 37 N80-28711  
Curing agent for polyepoxides and epoxy resins and composites cured therewith --- preventing carbon fiber release  
[NASA-CASE-LEW-13226-1] c 27 N81-17260

### CARBON FIBERS

- Method and device for detection of a substance --- determining carbon fiber release in fire situations  
[NASA-CASE-NPO-14940-1] c 33 N83-31954  
Mixed polyvalent-monovalent metal coating for carbon-graphite fibers  
[NASA-CASE-NPO-14987-1] c 24 N83-33950  
High resistance and raised modulus carbon fibers  
[NASA-TM-76884] c 24 N85-25436  
Brominated graphitized carbon fibers  
[NASA-CASE-LEW-14698-2] c 27 N92-10090  
Intercalated hybrid graphite fiber composite  
[NASA-CASE-LEW-15241-1] c 24 N92-17861  
Heat transfer device  
[NASA-CASE-LEW-14162-4] c 24 N93-20568  
Apparatus for intercalating large quantities of fibrous structures  
[NASA-CASE-LEW-15077-2] c 24 N93-29609  
Method for producing hybrid graphite composite  
[NASA-CASE-LEW-15241-2] c 24 N93-31296

### CARBON MONOXIDE

- Carbon monoxide monitor --- using real time operation  
[NASA-CASE-MFS-22060-1] c 35 N75-29380  
Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-1-SB] c 25 N90-23517  
Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-2-SB] c 25 N91-21270

### CARBON-CARBON COMPOSITES

- Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267  
Lightweight piston  
[NASA-CASE-LAR-13150-1] c 24 N87-27742  
Composite piston  
[NASA-CASE-LAR-13435-1] c 37 N88-23981  
Reusable high-temperature heat pipes and heat pipe panels  
[NASA-CASE-LAR-13761-1] c 34 N90-20323  
Lightweight piston architecture  
[NASA-CASE-LAR-13926-1] c 37 N90-22042  
Method for producing hybrid graphite composite  
[NASA-CASE-LEW-15241-2] c 24 N93-31296



## CARBONACEOUS MATERIALS

Fluidized bed desulfurization  
[NASA-CASE-NPO-15924-1] c 25 N85-35253

## CARBONATES

Polyurethanes of fluorine containing polycarbonates  
[NASA-CASE-MFS-10512] c 06 N73-30099  
Synthesis of dawsonites --- for use in fire extinguishing operations  
[NASA-CASE-ARC-11326-1] c 25 N83-33977

## CARBONIZATION

Method of carbonizing polyacrylonitrile fibers  
[NASA-CASE-ARC-11261-1] c 24 N83-25789

## CARBONYL COMPOUNDS

Coal desulfurization --- using iron pentacarbonyl  
[NASA-CASE-NPO-14272-1] c 25 N81-33246  
Polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-13633-1] c 27 N87-24575  
Polyimides with carbonyl and ether connecting groups between the aromatic rings  
[NASA-CASE-LAR-14001-1] c 27 N92-33008  
Methyl substituted polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-14351-1] c 27 N92-33015

## CARBORANE

Process for the preparation of polycarbonylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c 27 N81-27271  
Carboranylclotriphosphazenes and their polymers --- thermal insulation  
[NASA-CASE-ARC-11176-1] c 27 N82-18389  
Carboranylmethylene-substituted phosphazenes and polymers thereof  
[NASA-CASE-ARC-11370-1] c 27 N84-22750

## CARBOXYLIC GROUP

Novel polycarboxylic prepolymeric materials and polymers thereof Patent  
[NASA-CASE-NPO-10596] c 06 N71-25929

## CARBOXYLIC ACIDS

Preparation of polyimides from mixtures of monomeric diamines and esters of polycarboxylic acids  
[NASA-CASE-LEW-11325-1] c 06 N73-27980  
Fluorinated esters of polycarboxylic acids  
[NASA-CASE-MFS-21040-1] c 06 N73-30098  
Metal phthalocyanine polymers  
[NASA-CASE-ARC-11405-1] c 27 N84-27884  
Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c 33 N85-29144  
Metal phthalocyanine intermediates for the preparation of polymers  
[NASA-CASE-ARC-11405-2] c 27 N86-19455

## CARCINOGENS

Apparatus for producing three-dimensional recordings of fluorescence spectra Patent  
[NASA-CASE-XGS-01231] c 14 N70-41676

## CARDIAC VENTRICLES

Contour detector and data acquisition system for the left ventricular outline  
[NASA-CASE-ARC-10985-1] c 52 N79-10724

## CARDIOGRAPHY

Digital cardiographometer system Patent  
[NASA-CASE-XMS-02399] c 05 N71-22896  
Reference apparatus for medical ultrasonic transducer  
[NASA-CASE-ARC-10753-1] c 54 N75-27760

## CARDIOLOGY

Ratemeter  
[NASA-CASE-MFS-20418] c 14 N73-24473  
Myocardium wall thickness transducer and measuring method  
[NASA-CASE-NPO-13644-1] c 52 N76-29895

## CARDIOTACHOMETERS

Digital computing cardiographometer  
[NASA-CASE-MFS-20284-1] c 52 N74-12778

## CARDIOVASCULAR SYSTEM

G conditioning suit Patent  
[NASA-CASE-XLA-02898] c 05 N71-20268  
Method and apparatus for continuously monitoring blood oxygenation, blood pressure, pulse rate and the pressure pulse curve utilizing an ear oximeter as transducer Patent  
[NASA-CASE-XAC-05422] c 04 N71-23185  
Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NPO-13643-1] c 52 N76-29896  
Medical clip  
[NASA-CASE-LAR-12650-1] c 52 N84-28388

## CARGO

Portable pallet weighing apparatus  
[NASA-CASE-GSC-12789-1] c 35 N85-20294  
Payload retention device  
[NASA-CASE-MSC-21906-1] c 37 N92-28727

## CARRIER FREQUENCIES

Bi-carrier demodulator with modulation Patent  
[NASA-CASE-XMF-01160] c 07 N71-11298

Automatic carrier acquisition system  
[NASA-CASE-NPO-11628-1] c 07 N73-30113  
Demodulator for carrier transducers  
[NASA-CASE-NUC-10107-1] c 33 N74-17930  
Decision feedback loop for tracking a polyphase modulated carrier  
[NASA-CASE-NPO-13103-1] c 32 N74-20811  
Discriminator aided phase lock acquisition for suppressed carrier signals  
[NASA-CASE-NPO-14311-1] c 33 N82-29539  
Dual frequency optical carrier technique for transmission of reference frequencies in dispersive media  
[NASA-CASE-NPO-18007-1-CU] c 74 N92-11791

## CARRIER LIFETIME

Method of increasing minority carrier lifetime in silicon web or the like  
[NASA-CASE-NPO-15530-1] c 76 N83-35888  
Method and apparatus for measuring minority carrier lifetime in a direct band-gap semiconductor  
[NASA-CASE-NPO-16337-1-CU] c 33 N87-22894

## CARRIER WAVES

Variable frequency oscillator with temperature compensation Patent  
[NASA-CASE-XNP-03916] c 09 N71-28810  
Modulator for tone and binary signals --- phase of modulation of tone and binary signals on carrier waves in communication systems  
[NASA-CASE-GSC-11743-1] c 32 N75-24981

## CARRIERS

Storage container for electronic devices Patent  
[NASA-CASE-MFS-20075] c 09 N71-26133  
Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c 34 N74-27744

## CARTESIAN COORDINATES

Random function tracer Patent  
[NASA-CASE-XLA-01401] c 15 N71-21179  
Two dimensional vernier  
[NASA-CASE-MSC-21700-1] c 35 N92-22039

## CARTRIDGES

Endless tape cartridge Patent  
[NASA-CASE-XGS-00769] c 14 N70-41647  
Endless tape transport mechanism Patent  
[NASA-CASE-XGS-01223] c 07 N71-10609  
Catalyst cartridge for carbon dioxide reduction unit  
[NASA-CASE-LAR-10551-1] c 25 N74-12813

## CASCADE CONTROL

Reversible ring counter employing cascaded single SCR stages Patent  
[NASA-CASE-XGS-01473] c 09 N71-10673  
Synchronous dc direct drive system Patent  
[NASA-CASE-GSC-10065-1] c 10 N71-27136  
Multiloop RC active filter apparatus having low parameter sensitivity with low amplifier gain  
[NASA-CASE-LAR-10192] c 09 N72-21245

## CASCADE FLOW

Cascade plug nozzle --- for jet noise reduction  
[NASA-CASE-LAR-11674-1] c 07 N76-18117  
Thrust reverser for a long duct fan engine --- for turbofan engines  
[NASA-CASE-LEW-13199-1] c 07 N82-26293  
Degassifying and mixing apparatus for liquids --- potable water for spacecraft  
[NASA-CASE-MSC-18936-1] c 35 N83-29652

## CASE BONDED PROPELLANTS

Solid propellant motor  
[NASA-CASE-NPO-11458A] c 20 N78-32179

## CASES (CONTAINERS)

Non-magnetic battery case Patent  
[NASA-CASE-XGS-00886] c 03 N71-11053  
Protected isotope heat source --- for atmospheric reentry protection and heat transmission to spacecraft  
[NASA-CASE-LEW-11227-1] c 73 N75-30876  
Portable heatable container  
[NASA-CASE-NPO-14237-1] c 44 N80-20808  
Low temperature storage container for transporting perishables to space station  
[NASA-CASE-MFS-28248-1] c 31 N88-24817

## CASSEGRAIN ANTENNAS

Cassegrain antenna subreflector flange for suppressing ground noise Patent  
[NASA-CASE-XNP-00683] c 09 N70-35425  
Multi-feed cone Cassegrain antenna Patent  
[NASA-CASE-NPO-10539] c 07 N71-11285  
Millimeter wave radiometer for radio astronomy Patent  
[NASA-CASE-XNP-09832] c 30 N71-23723  
Dual frequency microwave reflex feed  
[NASA-CASE-NPO-13091-1] c 09 N73-12214  
Low loss dichroic plate  
[NASA-CASE-NPO-13171-1] c 32 N74-11000

## CASSEGRAIN OPTICS

Wide acceptance angle, high concentration ratio, optical collector  
[NASA-CASE-MFS-28295-1] c 74 N91-13999

## CASTING

Hydraulic casting of liquid polymers Patent  
[NASA-CASE-XNP-07659] c 06 N71-22975  
Texturing polymer surfaces by transfer casting --- cardiovascular prosthesis  
[NASA-CASE-LEW-13120-1] c 27 N82-28440  
Castable hot corrosion resistant alloy  
[NASA-CASE-LEW-14134-2] c 26 N89-14303  
High density tape casting system  
[NASA-CASE-NPO-16901-1-CU] c 31 N90-19425  
Pressure rig for repetitive casting  
[NASA-CASE-LAR-14050-1] c 31 N90-21216  
A tough performance simultaneous semi-interpenetrating polymer network  
[NASA-CASE-LAR-14339-1] c 27 N90-26955  
Helmet of a laminate construction of polycarbonate and polysulfone polymeric material  
[NASA-CASE-MSC-21503-1] c 27 N92-10091  
Polyimide molding powder, coating, adhesive, and matrix resin  
[NASA-CASE-LAR-14163-1] c 27 N92-33014  
Low pressure process for continuous fiber reinforced polyamic acid resin matrix composite laminates  
[NASA-CASE-LAR-14954-1] c 24 N92-34214  
Silicon carbide fiber reinforced strontium aluminosilicate glass-ceramic matrix composite  
[NASA-CASE-LEW-15263-1] c 24 N93-11543

## CASTINGS

Method of making an apertured casting --- using duplicate mold  
[NASA-CASE-LEW-11169-1] c 37 N76-23570

## CATALYSIS

Decomposition unit Patent  
[NASA-CASE-XMS-00583] c 28 N70-38504  
Apparatus for photon excited catalysis  
[NASA-CASE-NPO-13566-1] c 25 N77-32255  
Start up system for hydrogen generator used with an internal combustion engine  
[NASA-CASE-NPO-13849-1] c 28 N80-10374

## CATALYSTS

Catalyst for growth of boron carbide single crystal whiskers  
[NASA-CASE-XHO-03903] c 15 N69-21922  
Catalyst bed removing tool Patent  
[NASA-CASE-XFR-00811] c 15 N70-36901  
Ignition means for monopropellant Patent  
[NASA-CASE-XNP-00876] c 28 N70-41311  
Hydrogen leak detection device Patent  
[NASA-CASE-MFS-11537] c 14 N71-20442  
Catalyst cartridge for carbon dioxide reduction unit  
[NASA-CASE-LAR-10551-1] c 25 N74-12813  
Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c 25 N80-16116  
Mixed polyvalent-monovalent metal coating for carbon-graphite fibers  
[NASA-CASE-NPO-14987-1] c 24 N83-33950  
Photoelectrochemical electrodes  
[NASA-CASE-NPO-15458-1] c 25 N84-12262  
Negative electrode catalyst for the iron chromium redox energy storage system  
[NASA-CASE-LEW-14028-1] c 44 N86-19721  
Isotope exchange in oxide-containing catalyst  
[NASA-CASE-LAR-13542-2-SB] c 25 N90-20154  
Process for making a noble metal on tin oxide catalyst  
[NASA-CASE-LAR-13741-1-SB] c 25 N90-20180  
Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-1-SB] c 25 N90-23517  
Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-2-SB] c 25 N91-21270  
Atomic oxygen protective coating with resistance to undercutting at defect sites  
[NASA-CASE-LEW-15306-1] c 27 N93-20566  
Method for retarding oxidation of an organic substrate  
[NASA-CASE-LEW-15306-2] c 27 N93-28425

## CATALYTIC ACTIVITY

Diesel engine catalytic combustor system --- aircraft engines  
[NASA-CASE-LEW-12995-1] c 37 N84-33808

## CATCHERS

Load limiting energy absorbing lightweight debris catcher  
[NASA-CASE-MSC-21562-1] c 16 N92-16007

## CATHETERIZATION

Transducer circuit and catheter transducer Patent  
[NASA-CASE-ARC-10132-1] c 09 N71-24597  
Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NPO-13643-1] c 52 N76-29896  
Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-1] c 52 N83-21785  
Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095



## CATHODE RAY TUBES

- Single or joint amplitude distribution analyzer Patent  
[NASA-CASE-XNP-01383] c 69 N71-10659
- Display for binary characters Patent  
[NASA-CASE-XGS-04987] c 08 N71-20571
- Electron beam tube containing a multiple cathode array employing indexing means for cathode substitution Patent  
[NASA-CASE-NPO-10625] c 09 N71-26182
- Color television systems using a single gun color cathode ray tube Patent  
[NASA-CASE-ERC-10098] c 09 N71-28618
- High contrast cathode ray tube  
[NASA-CASE-ERC-10468] c 09 N72-20206
- Digital video display system using cathode ray tube  
[NASA-CASE-NPO-11342] c 09 N72-25248
- CRT blanking and brightness control circuit  
[NASA-CASE-KSC-10647-1] c 10 N72-31273
- Display system  
[NASA-CASE-ERC-10350] c 14 N73-20474
- Very high intensity light source using a cathode ray tube --- electron beams  
[NASA-CASE-XNP-01296] c 33 N75-27250

## CATHODES

- Ion thruster cathode Patent Application  
[NASA-CASE-LEW-10814-1] c 28 N70-35422
- Electronic cathode having a brush-like structure and a relatively thick oxide emissive coating Patent  
[NASA-CASE-XLE-04501] c 09 N71-23190
- Heat activated cell with alkali anode and alkali salt electrolyte Patent  
[NASA-CASE-LEW-11358] c 03 N71-26084
- Ion thruster with a combination keeper electrode and electron baffle  
[NASA-CASE-NPO-11880] c 28 N73-24783
- Storage battery comprising negative plates of a wedge shaped configuration --- for preventing shape change induced malfunctions  
[NASA-CASE-NPO-11806-1] c 44 N74-19693
- Method and apparatus for rebalancing a REDOX flow cell system  
[NASA-CASE-LEW-14127-1] c 33 N86-20680
- Apparatus for mounting a field emission cathode  
[NASA-CASE-LEW-14108-1] c 33 N87-28832
- Dual cathode system for electron beam instruments  
[NASA-CASE-NPO-16878-1-CU] c 35 N90-20351
- Organic cathode for a secondary battery  
[NASA-CASE-NPO-17604-1-CU] c 33 N91-14536
- Copper chloride cathode for a secondary battery  
[NASA-CASE-NPO-17640-1-CU] c 33 N91-14538
- Plasma gun with coaxial powder feed and adjustable cathode  
[NASA-CASE-LEW-14901-1] c 75 N91-25875
- Metal chloride cathode for a battery  
[NASA-CASE-NPO-17809-1-CU] c 33 N91-27478
- Alkali metal carbon dioxide electrochemical system for energy storage and/or conversion of carbon dioxide to oxygen  
[NASA-CASE-LEW-14973-1] c 44 N93-28974

## CATHOLYTES

- Organic cathode for a secondary battery  
[NASA-CASE-NPO-17604-1-CU] c 33 N91-14536

## CATIONS

- Ionene membrane separator  
[NASA-CASE-NPO-11091] c 18 N72-22567
- Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c 27 N81-15104
- Procedure to prepare transparent silica gels  
[NASA-CASE-LAR-13476-1-CU] c 76 N87-29360

## CAVITATION FLOW

- Semitoroidal diaphragm cavitating valve Patent  
[NASA-CASE-XNP-09704] c 12 N71-18615

## CAVITIES

- Black body cavity radiometer Patent  
[NASA-CASE-NPO-10810] c 14 N71-27323
- Method of coating through-holes Patent  
[NASA-CASE-XMF-05999] c 15 N71-29032
- Burrowing apparatus  
[NASA-CASE-XNP-07169] c 15 N73-32362
- Method of constructing dished ion thruster grids to provide hole array spacing compensation  
[NASA-CASE-LEW-11876-1] c 20 N76-21276
- Method of making hollow elastomeric bodies  
[NASA-CASE-NPO-13535-1] c 37 N76-31524
- Method and apparatus for producing concentric hollow spheres --- inertial confinement fusion targets  
[NASA-CASE-NPO-14596-1] c 31 N81-33319
- Cavity-backed, micro-strip dipole antenna array  
[NASA-CASE-MSC-18606-1] c 32 N82-11336
- High performance channel injection sealant invention abstract  
[NASA-CASE-ARC-14408-1] c 27 N82-33523
- Maser cavity servo-tuning system  
[NASA-CASE-NPO-15890-1-CU] c 33 N85-29143

- Passive venting technique for shallow cavities  
[NASA-CASE-LAR-14031-1] c 05 N90-20079
- Pressure rig for repetitive casting  
[NASA-CASE-LAR-14050-1] c 31 N90-21216
- Circumferential pressure probe  
[NASA-CASE-LAR-13775-1] c 35 N90-23706
- Measurement of waves in flows across a surface  
[NASA-CASE-NPO-17479-1-CU] c 34 N91-13658
- Passive venting technique for shallow cavities  
[NASA-CASE-LAR-13875-1] c 05 N91-27156

## CAVITY RESONATORS

- Helical coaxial resonator RF filter  
[NASA-CASE-XGS-02816] c 07 N69-24323
- System for improving signal-to-noise ratio of a communication signal Patent Application  
[NASA-CASE-MSC-12259-1] c 07 N70-12616
- Temperature-compensating means for cavity resonator of amplifier Patent  
[NASA-CASE-XNP-00449] c 14 N70-35220
- Holder for crystal resonators Patent  
[NASA-CASE-XNP-03637] c 15 N71-21311
- System for improving signal-to-noise ratio of a communication signal  
[NASA-CASE-MSC-12259-2] c 07 N72-33146
- Infrared tunable laser  
[NASA-CASE-ARC-10463-1] c 09 N73-32111
- Tunable cavity resonator with ramp shaped supports  
[NASA-CASE-HQN-10790-1] c 36 N74-11313
- Laser apparatus  
[NASA-CASE-GSC-12237-1] c 36 N80-14384
- Laser Resonator  
[NASA-CASE-GSC-12565-1] c 36 N84-14509
- Off-axis coherently pumped laser  
[NASA-CASE-GSC-12592-1] c 36 N84-28065
- Maser cavity servo-tuning system  
[NASA-CASE-NPO-15890-1-CU] c 33 N85-29143
- Three point lead screw positioning apparatus  
[NASA-CASE-LEW-15216-1] c 37 N92-17678
- Electro-optic resonant phase modulator  
[NASA-CASE-NPO-18702-1-CU] c 74 N92-23551

## CELESTIAL BODIES

- Device for determining relative angular position between a spacecraft and a radiation emitting celestial body  
[NASA-CASE-GSC-11444-1] c 14 N73-28490
- Position determination systems --- using orbital antenna scan of celestial bodies  
[NASA-CASE-MSC-12593-1] c 17 N76-21250
- Radiant energy intensity measurement system Patent  
[NASA-CASE-XNP-06510] c 14 N71-23797

## CELL ANODES

- Heat activated cell Patent  
[NASA-CASE-LEW-11359] c 03 N71-28579
- Method of making emf cell  
[NASA-CASE-LEW-11359-2] c 03 N72-20034
- Electrically rechargeable REDOX flow cell  
[NASA-CASE-LEW-12220-1] c 44 N77-14581

## CELL CATHODES

- Overcharge and overdischarge protection of ambient temperature secondary lithium cells  
[NASA-CASE-NPO-18343-1-CU] c 33 N93-11456

## CELL DIVISION

- Process for control of cell division  
[NASA-CASE-LAR-10773-3] c 51 N77-25769

## CELLS

- Mixture separation cell Patent  
[NASA-CASE-XMS-02952] c 18 N71-20742

## CELLS (BIOLOGY)

- System for and method of freezing biological tissue  
[NASA-CASE-GSC-12173-1] c 51 N79-10694
- Method for separating biological cells --- suspended in aqueous polymer systems  
[NASA-CASE-MFS-23883-1] c 51 N80-16715
- Electrophoresis device  
[NASA-CASE-MFS-25426-1] c 25 N83-10126
- Controlled method of reducing electrophoretic mobility of various substances  
[NASA-CASE-MFS-26049-1-NP] c 25 N89-28603
- Rotating bio-reactor cell culture apparatus  
[NASA-CASE-MSC-21293-1] c 51 N91-21700
- Spiral vane bioreactor  
[NASA-CASE-MSC-21361-1] c 51 N91-21701
- Horizontally rotated cell culture system with a coaxial tubular oxygenator  
[NASA-CASE-MSC-21294-1] c 51 N91-30667
- Three-dimensional cultured glioma cell lines  
[NASA-CASE-MSC-21843-1-NP] c 51 N92-24052
- Controlled method of reducing electrophoretic mobility of macromolecules, particles, or cells  
[NASA-CASE-MFS-26049-2-NP] c 25 N92-28728
- Hollow fiber clinostat for simulating microgravity in cell culture  
[NASA-CASE-MFS-28370-1] c 35 N92-31790
- Three-dimensional co-culture process  
[NASA-CASE-MSC-21560-1] c 51 N92-34229

- Three-dimensional cell to tissue assembly process  
[NASA-CASE-MSC-21559-1] c 51 N92-34231
- High aspect reactor vessel and method of use  
[NASA-CASE-MSC-21662-1] c 51 N92-34232
- Method for culturing mammalian cells in a perfused bioreactor  
[NASA-CASE-MSC-21293-2] c 51 N93-10109
- Method for culturing mammalian cells in a horizontally rotated bioreactor  
[NASA-CASE-MSC-21294-2] c 51 N93-10110
- High density cell culture system  
[NASA-CASE-MSC-22060-1] c 51 N93-19037

## CELLULOSE

- Process of treating cellulosic membrane and alkaline with membrane separator  
[NASA-CASE-GSC-10019-1] c 44 N82-24641
- Separator for alkaline electric cells and method of making  
[NASA-CASE-GSC-10017-1] c 44 N82-24643
- Alkaline electrochemical cells and method of making  
[NASA-CASE-GSC-10349-1] c 44 N82-24645
- Aqueous alkali metal hydroxide insoluble cellulose ether membrane  
[NASA-CASE-XGS-05584-1] c 25 N82-29370
- Apparatus and method for cellulose processing using microwave pretreatment  
[NASA-CASE-MSC-21936-1-SB] c 25 N93-22036

## CELLULOSE NITRATE

- Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267

## CENTERBODIES

- Multi-body aircraft with an all-movable center fuselage actively controlling fuselage pressure drag  
[NASA-CASE-LAR-13511-1] c 05 N88-23765

## CENTRAL PROCESSING UNITS

- Pipelined digital SAR azimuth correlator using hybrid FFT-transversal filter  
[NASA-CASE-NPO-15519-1] c 32 N84-34651

## CENTRIFUGAL COMPRESSORS

- Centrifugal-reciprocating compressor  
[NASA-CASE-NPO-14597-2] c 37 N84-28081

## CENTRIFUGAL FORCE

- Counter pumping debris excluder and separator --- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c 07 N78-25090
- Vortex motion phase separator for zero gravity liquid transfer  
[NASA-CASE-KSC-11387-1] c 29 N90-20236
- Rotating-unbalanced-mass devices and methods for scanning balloon-borne-experiments, free-flying spacecraft, and space shuttle/space station attached experiments  
[NASA-CASE-MFS-28425-1] c 35 N92-33010

## CENTRIFUGES

- Centrifuge mounted motion simulator Patent  
[NASA-CASE-XAC-00399] c 11 N70-34815
- Separator Patent  
[NASA-CASE-XLA-00415] c 15 N71-16079
- Centrifugal lyophobic separator  
[NASA-CASE-LAR-10194-1] c 34 N74-30608
- Fluid control apparatus and method  
[NASA-CASE-LAR-11110-1] c 34 N75-26282
- Biocentrifuge system capable of exchanging specimen cages while in operational mode  
[NASA-CASE-MFS-23825-1] c 51 N81-32829

## CERAMIC BONDING

- Method of making a diffusion bonded refractory coating Patent  
[NASA-CASE-XLE-01604-2] c 15 N71-15610
- Method of forming ceramic to metal seal Patent  
[NASA-CASE-XNP-01263-2] c 15 N71-26312
- Composite piston  
[NASA-CASE-LAR-13435-1] c 37 N88-23981

## CERAMIC COATINGS

- Evaporant holder  
[NASA-CASE-XLA-03105] c 15 N69-27483
- Unfired-ceramic flame-resistant insulation and method of making the same Patent  
[NASA-CASE-XMF-01030] c 18 N70-41583
- Ceramic insulation for radiant heating environments and method of preparing the same Patent  
[NASA-CASE-MFS-14253] c 33 N71-24858
- Method of making a cermet Patent  
[NASA-CASE-LEW-10219-1] c 18 N71-28729
- Two-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-1] c 27 N76-22377
- Three-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-2] c 27 N76-23426
- Spray coating apparatus having a rotatable workpiece holder  
[NASA-CASE-ARC-11110-1] c 37 N82-24492
- Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c 18 N83-20996

Thermal barrier coating system having improved adhesion  
[NASA-CASE-LEW-1335901] c 27 N83-31855

Thermal barrier coating system  
[NASA-CASE-LEW-13324-2] c 24 N85-21266

Ceramic-ceramic shell tile thermal protection system and method thereof  
[NASA-CASE-ARC-11641-1] c 24 N88-18628

Ceramic coatings on smooth surfaces  
[NASA-CASE-LEW-15164-1] c 27 N91-25298

Metallic threaded composite fastener  
[NASA-CASE-MS-C-21580-1] c 37 N92-21726

Plasma sprayed ceramic thermal barrier coating for NiAl-based intermetallic alloys  
[NASA-CASE-LEW-15535-1] c 26 N93-31294

**CERAMIC FIBERS**

Fiber-reinforced monoclinic celsian matrix composite material  
[NASA-CASE-LEW-15269-1] c 24 N93-20040

Ceramic fiber reinforced glass-ceramic matrix composite  
[NASA-CASE-LEW-15262-1] c 24 N93-26100

**CERAMIC HONEYCOMBS**

Ceramic honeycomb structures and the method thereof  
[NASA-CASE-ARC-11652-1] c 27 N87-23737

**CERAMIC MATRIX COMPOSITES**

Method of preparing fiber reinforced ceramic material  
[NASA-CASE-LEW-14392-1] c 27 N87-28656

Fiber reinforced ceramic material  
[NASA-CASE-LEW-14392-2] c 27 N89-29538

Silicon carbide fiber reinforced strontium aluminosilicate glass-ceramic matrix composite  
[NASA-CASE-LEW-15263-1] c 24 N93-11543

Fiber-reinforced monoclinic celsian matrix composite material  
[NASA-CASE-LEW-15269-1] c 24 N93-20040

SiC fiber-reinforced Celsian glass-ceramic matrix composite  
[NASA-CASE-LEW-15264-1] c 24 N93-31293

Method of producing a ceramic fiber-reinforced glass-ceramic matrix composite  
[NASA-CASE-LEW-15264-2] c 24 N93-31299

**CERAMIC NUCLEAR FUELS**

Method of making a cermet Patent  
[NASA-CASE-LEW-10219-1] c 18 N71-28729

**CERAMICS**

Transpiration cooled turbine blade manufactured from wires Patent  
[NASA-CASE-XLE-00020] c 15 N70-33226

Foamed in place ceramic refractory insulating material Patent  
[NASA-CASE-XGS-02435] c 18 N71-22998

Method for fiberizing ceramic materials Patent  
[NASA-CASE-XNP-00597] c 18 N71-23088

Method of coating through-holes Patent  
[NASA-CASE-XMF-05999] c 15 N71-29032

Extrusion can  
[NASA-CASE-NPO-10812] c 15 N73-13464

Thermal shock resistant hafnia ceramic material  
[NASA-CASE-LAR-10894-1] c 18 N73-14584

Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c 27 N78-17206

High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c 27 N78-19302

Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles  
[NASA-CASE-MS-C-12619-2] c 27 N79-12221

High temperature resistant cermet and ceramic compositions  
[NASA-CASE-NPO-13690-2] c 27 N79-14213

Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c 37 N81-25371

Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-2] c 37 N82-26674

Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c 27 N82-29453

Absorbable-susceptor joining of ceramic surfaces  
[NASA-CASE-NPO-15640-1] c 27 N84-22748

Method of fabricating an abradable gas path seal  
[NASA-CASE-LEW-13269-2] c 37 N84-22957

Shell tile thermal protection system  
[NASA-CASE-LAR-12862-1] c 27 N84-27886

Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-1-SB] c 27 N88-29040

Fiber reinforced ceramic material  
[NASA-CASE-LEW-14392-2] c 27 N89-29538

Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-2-SB] c 27 N90-21177

Pressure rig for repetitive casting  
[NASA-CASE-LAR-14050-1] c 31 N90-21216

Ceramic heat pipe wick  
[NASA-CASE-GSC-13199-1] c 27 N90-23541

Lightweight ceramic insulation and method  
[NASA-CASE-MS-C-20782-1] c 27 N90-23566

Method of making single crystal fibers  
[NASA-CASE-LEW-14921-1] c 24 N91-13502

Metallic seal for thermal barrier coating systems  
[NASA-CASE-LEW-15020-1] c 27 N91-15412

Ceramic coatings on smooth surfaces  
[NASA-CASE-LEW-15164-1] c 27 N91-25298

Plasma gun with coaxial powder feed and adjustable cathode  
[NASA-CASE-LEW-14901-1] c 75 N91-25875

Method of preforming and assembling superconducting circuit elements  
[NASA-CASE-LAR-14395-1-CU] c 33 N91-28490

Composite flexible blanket insulation  
[NASA-CASE-ARC-11907-1-NP] c 24 N91-31236

Low cost, formable, high T(sub c) superconducting wire  
[NASA-CASE-LEW-14676-1] c 33 N91-31529

Method of making contamination-free ceramic bodies  
[NASA-CASE-LEW-14984-1] c 27 N92-16122

Composite thermal barrier coating  
[NASA-CASE-LEW-14999-1] c 24 N92-21725

Guanidine based vehicle/binders for use with oxides, metals, and ceramics  
[NASA-CASE-LEW-15314-1] c 27 N92-23461

Boron-carbon-silicon polymers and ceramic and a process for the production thereof  
[NASA-CASE-ARC-11891-2-SB] c 27 N92-34160

Method and apparatus for evaluating multilayer objects for imperfections  
[NASA-CASE-LAR-14581-1-SB] c 38 N93-12204

Method of applying a thermal barrier coating system to a substrate  
[NASA-CASE-LEW-15020-2] c 24 N93-14706

Sintering silicon nitride  
[NASA-CASE-LEW-15489-1] c 27 N93-17062

Improved ceramic slip casting technique --- application to aircraft model fabrication  
[NASA-CASE-LAR-14471-1] c 27 N93-20041

Guanidine based vehicle/binders for use with oxides, metals, and ceramics  
[NASA-CASE-LEW-15314-2] c 27 N93-28423

Mold bolt and means for achieving close tolerances between bolts and bolt holes  
[NASA-CASE-MFS-28720-1] c 37 N93-30567

**CEREBROSPINAL FLUID**

Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-1] c 52 N83-21785

Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095

**CERMETS**

Process of casting heavy slips Patent  
[NASA-CASE-XLE-00106] c 15 N71-16076

Method of making a cermet Patent  
[NASA-CASE-LEW-10219-1] c 18 N71-28729

Cermet composition and method of fabrication --- heat resistant alloys and powders  
[NASA-CASE-NPO-13120-1] c 27 N76-15311

High temperature oxidation resistant cermet compositions  
[NASA-CASE-NPO-13666-1] c 27 N77-13217

High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c 27 N78-19302

High temperature resistant cermet and ceramic compositions  
[NASA-CASE-NPO-13690-2] c 27 N79-14213

Coating with overlay metallic-cermet alloy systems  
[NASA-CASE-LEW-13639-2] c 26 N84-27855

Overlay metallic-cermet alloy coating systems  
[NASA-CASE-LEW-13639-1] c 26 N84-33555

**CESIUM**

Method for removing oxygen impurities from cesium Patent  
[NASA-CASE-XNP-04262-2] c 17 N71-26773

Method of producing I-123 --- by bombardment of cesium causing spallation  
[NASA-CASE-LEW-11390-2] c 25 N76-27383

**CESIUM DIODES**

Thermionic tantalum emitter doped with oxygen Patent  
[NASA-CASE-NPO-11138] c 03 N70-34646

Cavity emitter for thermionic converter Patent  
[NASA-CASE-NPO-10412] c 09 N71-28421

Thermionic energy converters  
[NASA-CASE-LEW-12443-1] c 44 N83-32175

**CESIUM ENGINES**

Variable thrust ion engine utilizing thermally decomposable solid fuel Patent  
[NASA-CASE-XMF-00923] c 28 N70-36802

Method of producing porous tungsten ionizers for ion rocket engines Patent  
[NASA-CASE-XLE-00455] c 28 N70-38197

**CESIUM VAPOR**

Electric power generation system directory from laser power  
[NASA-CASE-NPO-13308-1] c 36 N75-30524

**CHALCOGENIDES**

Photoelectrochemical cells including chalcogenophosphate photoelectrodes  
[NASA-CASE-LAR-12958-1] c 44 N84-23019

**CHAMBERS**

Diffuser/ejector system for a very high vacuum environment  
[NASA-CASE-MFS-25791-1] c 09 N84-27749

**CHANGE DETECTION**

Real-time image difference detection using a polarization rotation spatial light modulator  
[NASA-CASE-NPO-17144-1-CU] c 74 N88-25305

**CHANNEL FLOW**

Method of making a regeneratively cooled combustion chamber Patent  
[NASA-CASE-XLE-00150] c 28 N70-41818

Heated element fluid flow sensor Patent  
[NASA-CASE-MS-C-12084-1] c 12 N71-17569

Multicolor printing plate joining  
[NASA-CASE-LEW-13598-1] c 35 N84-22930

**CHANNELS (DATA TRANSMISSION)**

Automatic fault correction system for parallel signal channels Patent  
[NASA-CASE-XNP-03263] c 09 N71-18843

Helical recorder arrangement for multiple channel recording on both sides of the tape  
[NASA-CASE-GSC-10614-1] c 09 N72-11224

Asynchronous, multiplexing, single line transmission and recovery data system --- for satellite use  
[NASA-CASE-NPO-13321-1] c 32 N75-26195

High-speed data link for moderate distances and noisy environments  
[NASA-CASE-NPO-14152-1] c 32 N80-18252

Fault-tolerant fiber optic backplane  
[NASA-CASE-LAR-14785-1] c 74 N93-19052

**CHARACTER RECOGNITION**

Automatic character skew and spacing checking network --- of digital tape drive systems  
[NASA-CASE-GSC-11925-1] c 33 N76-18353

System and method for character recognition  
[NASA-CASE-NPO-11337-1] c 74 N81-19896

**CHARACTERIZATION**

Method of characterizing residual stress in ferromagnetic materials using a pulse histogram of acoustic emission signals  
[NASA-CASE-LAR-14239-1] c 26 N93-14705

**CHARGE COUPLED DEVICES**

Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c 43 N79-17288

CCD correlated quadruple sampling processor  
[NASA-CASE-NPO-14426-1] c 33 N81-27396

Programmable scan/read circuitry for charge coupled device imaging detectors --- spacecraft attitude control and star trackers  
[NASA-CASE-NPO-15345-1] c 74 N84-23247

Laser pulse detection method and apparatus  
[NASA-CASE-NPO-16030-1] c 36 N84-25037

X ray sensitive area detection device  
[NASA-CASE-MFS-28232-1] c 74 N91-14835

Portable dynamic fundus instrument  
[NASA-CASE-MS-C-21675-1] c 52 N92-28755

Electronic still camera  
[NASA-CASE-MS-C-21797-1] c 35 N93-17076

**CHARGE DISTRIBUTION**

Method of erasing target material of a vidicon tube or the like Patent  
[NASA-CASE-XNP-06028] c 09 N71-23189

Charge storage diode modulators and demodulators  
[NASA-CASE-NPO-10189-1] c 33 N77-21314

**CHARGE EFFICIENCY**

State-of-charge coulometer  
[NASA-CASE-NPO-15759-1] c 35 N85-21596

Method for determining the point of zero zeta potential of semiconductor  
[NASA-CASE-LAR-12893-1] c 76 N85-30923

**CHARGE EXCHANGE**

Ion beam thruster shield  
[NASA-CASE-LEW-12082-1] c 20 N77-10148

**CHARGE TRANSFER**

Magnetic counter Patent  
[NASA-CASE-XNP-08836] c 09 N71-12515

Pressure transducer --- using a monomeric charge transfer complex sensor  
[NASA-CASE-NPO-11150] c 35 N78-17359

# SUBJECT INDEX

# CHEMICAL REACTIONS

Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-31727

Secondary Li battery incorporating 12-Crown-4 ether  
[NASA-CASE-NPO-17922-1-CU] c 33 N92-28753

**CHARGE TRANSFER DEVICES**  
Charge transfer reaction laser with preionization means  
[NASA-CASE-NPO-13945-1] c 36 N78-27402

Time delay and integration detectors using charge transfer devices  
[NASA-CASE-GSC-12324-1] c 33 N81-33403

Image readout device with electronically variable spatial resolution  
[NASA-CASE-LAR-12633-1] c 33 N82-24416

**CHARGED PARTICLES**  
Method of forming thin window drifted silicon charged particle detector Patent  
[NASA-CASE-XLE-00808] c 24 N71-10560

Electrostatic charged particle analyzer having deflection members shaped according to the periodic voltage applied thereto Patent  
[NASA-CASE-XAC-05506-1] c 24 N71-16095

Electrostatic collector for charged particles  
[NASA-CASE-LEW-11192-1] c 09 N73-13208

Method and apparatus for neutralizing potentials induced on spacecraft surfaces  
[NASA-CASE-GSC-11963-1] c 33 N77-10429

Apparatus for measuring charged particle beam  
[NASA-CASE-MFS-25641-1] c 72 N84-28575

Multistage spent particle collector and a method for making same  
[NASA-CASE-LEW-13914-1] c 37 N85-33489

**CHARGING**  
Synchronous orbit battery cyclor  
[NASA-CASE-GSC-11211-1] c 03 N72-25020

**CHARRING**  
Ablation sensor  
[NASA-CASE-XLA-01781] c 14 N69-39975

Ablation sensor Patent  
[NASA-CASE-XLA-01794] c 33 N71-21586

**CHASSIS**  
Chassis unit insert tightening-extract device  
[NASA-CASE-XMS-01077-1] c 37 N79-33467

Articulated suspension system  
[NASA-CASE-NPO-17354-1-CU] c 37 N90-17153

**CHECKOUT**  
Electronic checkout system for space vehicles Patent  
[NASA-CASE-XKS-08012-2] c 31 N71-15566

Rapid activation and checkout device for batteries  
[NASA-CASE-MFS-22749-1] c 44 N76-14601

Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c 33 N81-26359

**CHELATES**  
Ammonium perchlorate composite propellant containing an organic transitional metal chelate catalytic additive Patent  
[NASA-CASE-LAR-10173-1] c 27 N71-14090

Chelate-modified polymers for atmospheric gas chromatography  
[NASA-CASE-ARC-11154-1] c 25 N80-23383

Production of mullite fibers  
[NASA-CASE-MFS-28431-1] c 24 N92-17870

**CHEMICAL ANALYSIS**  
Analytical test apparatus and method for determining oxide content of alkali metal Patent  
[NASA-CASE-XLE-01997] c 06 N71-23527

Automated fluid chemical analyzer Patent  
[NASA-CASE-XNP-09451] c 06 N71-26754

Method for determining presence of OH in magnesium oxide  
[NASA-CASE-NPO-10774] c 06 N72-17095

Micrometeoroid analyzer  
[NASA-CASE-ARC-10443-1] c 14 N73-20477

Chromato-fluorographic drug detector --- device for detecting and recording fluorescent properties of materials  
[NASA-CASE-ARC-10633-1] c 25 N74-26947

Amino acid analysis  
[NASA-CASE-NPO-12130-1] c 25 N75-14844

Gas chromatograph injection system  
[NASA-CASE-ARC-10344-2] c 35 N75-26334

Alkaline electrochemical cells and method of making  
[NASA-CASE-GSC-10349-1] c 44 N82-24645

Particle analyzing method and apparatus  
[NASA-CASE-NPO-15292-1] c 35 N83-27184

System for monitoring physical characteristics of fluids  
[NASA-CASE-NPO-15400-1] c 34 N83-31993

Method and apparatus for mapping the distribution of chemical elements in an extended medium  
[NASA-CASE-GSC-12808-1] c 25 N85-21279

**CHEMICAL AUXILIARY POWER UNITS**  
Ion-exchange membrane with platinum electrode assembly Patent  
[NASA-CASE-XMS-02063] c 03 N71-29044

# CHEMICAL BONDS

Fluorine-containing polyformals  
[NASA-CASE-XMF-06900-1] c 27 N79-21191

Perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c 25 N81-14016

Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c 23 N82-28353

The 1-((diorganoxyphosphonyl)-methyl)-2,4- and -2,6-diamido benzenes  
[NASA-CASE-ARC-11425-4] c 23 N90-20133

Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-2-SB] c 27 N90-21177

Polyimides containing amide and perfluoroisopropyl connecting groups  
[NASA-CASE-LAR-14608-1] c 27 N92-17676

**CHEMICAL COMPOSITION**  
Phototropic composition of matter  
[NASA-CASE-XGS-03736] c 14 N72-22443

Nitramine propellants --- gun propellant burning rate  
[NASA-CASE-NPO-14103-1] c 28 N78-31255

Composition and method for making polyimide resin-reinforced fabric  
[NASA-CASE-LEW-12933-1] c 27 N81-19296

Non-toxic invert analog glass compositions of high modulus  
[NASA-CASE-HQN-10328-2] c 27 N82-29454

High modulus rare earth and beryllium containing silicate glass compositions --- for glass reinforcing fibers  
[NASA-CASE-HQN-10595-1] c 27 N82-29455

Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-2] c 27 N83-29392

Acetylene (ethynyl) terminated polyimide siloxane and process for preparation thereof  
[NASA-CASE-LAR-13318-1] c 27 N87-14516

Novel polyimide compositions based on 4,4': isophthaloyldiphthalic anhydride (IDPA)  
[NASA-CASE-LAR-14194-1] c 24 N90-15148

Brominated graphitized carbon fibers  
[NASA-CASE-LEW-14698-2] c 27 N92-10090

Metal etching composition  
[NASA-CASE-MFS-29576-1] c 25 N92-25399

Polyimidazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14145-1] c 27 N92-28751

Poly(1,3,4-oxadiazoles) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14427-1] c 23 N92-29141

Spectroscopic wear detector  
[NASA-CASE-LEW-15200-1] c 20 N93-18856

Polybenzoxazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14606-1-CU] c 23 N93-23077

**CHEMICAL COMPOUNDS**  
Ultraviolet atomic emission detector  
[NASA-CASE-HQN-10756-1] c 14 N72-25428

**CHEMICAL ELEMENTS**  
Apparatus for remote handling of materials --- mixing or analyzing dangerous chemicals  
[NASA-CASE-LAR-10634-1] c 37 N74-18123

**CHEMICAL ENGINEERING**  
Process for the preparation of calcium superoxide  
[NASA-CASE-ARC-11053-1] c 25 N79-10162

**CHEMICAL EXPLOSIONS**  
Hypervelocity gun --- using both electric and chemical energy for projectile propulsion  
[NASA-CASE-XLE-03186-1] c 09 N79-21084

**CHEMICAL INDICATORS**  
Self-contained, single-use hose and tubing cleaning module  
[NASA-CASE-MSC-20857-1] c 37 N87-17035

**CHEMICAL MACHINING**  
Masking device Patent  
[NASA-CASE-XNP-02092] c 15 N70-42033

**CHEMICAL PROPERTIES**  
Method of producing alternating ether siloxane copolymers Patent  
[NASA-CASE-XMF-02584] c 06 N71-20905

Polyurethanes of fluorine containing polycarbonates  
[NASA-CASE-MFS-10512] c 06 N73-30099

Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-1] c 06 N73-33076

Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids  
[NASA-CASE-MFS-22411-1] c 37 N74-21058

**CHEMICAL REACTIONS**  
Process for interfacial polymerization of pyromellitic dianhydride and 1,2,4,5-tetraamino-benzene Patent  
[NASA-CASE-XLA-03104] c 06 N71-11235

Synthesis of polymeric schiff bases by schiff-base exchange reactions Patent  
[NASA-CASE-XMF-08651] c 06 N71-11236

Preparation of ordered poly /arylenesiloxane/ polymers  
[NASA-CASE-XMF-10753] c 06 N71-11237

Imidazopyrrolone/imide copolymers Patent  
[NASA-CASE-XLA-08802] c 06 N71-11238

High resolution developing of photosensitive resists Patent  
[NASA-CASE-XGS-04993] c 14 N71-17574

Inorganic solid film lubricants Patent  
[NASA-CASE-XMF-03988] c 15 N71-21403

Process for preparation of dianilinosilanes Patent  
[NASA-CASE-XMF-06409] c 06 N71-23230

Aromatic diamine-aromatic dialdehyde high molecular weight Schiff base polymers prepared in a monofunctional Schiff base Patent  
[NASA-CASE-XMF-03074] c 06 N71-24740

Hydroxy terminated perfluoro ethers Patent  
[NASA-CASE-NPO-10768] c 06 N71-27254

Metal containing polymers from cyclic tetrameric phenylphosphonitriamides Patent  
[NASA-CASE-HQN-10364] c 06 N71-27363

Gas liquefaction and dispensing apparatus Patent  
[NASA-CASE-NPO-10070] c 15 N71-27372

Epoxy-aziridine polymer product Patent  
[NASA-CASE-NPO-10701] c 06 N71-28620

Process for preparation of high-molecular-weight polyaryloxysilanes Patent  
[NASA-CASE-XMF-08674] c 06 N71-28807

Trialkyl-dihalotantalum and niobium compounds Patent  
[NASA-CASE-XNP-04023] c 06 N71-28808

Method of making foamed materials in zero gravity  
[NASA-CASE-XMF-09902] c 15 N72-11387

Preparation of high purity copper fluoride  
[NASA-CASE-LEW-10794-1] c 06 N72-17093

Firely pump-metering system  
[NASA-CASE-GSC-10218-1] c 15 N72-21465

Apparatus for producing metal powders  
[NASA-CASE-XLE-06461-2] c 17 N72-28535

Nondestructive spot test method for titanium and titanium alloys  
[NASA-CASE-LAR-10539-1] c 17 N73-12547

Self-cycling fluid heater  
[NASA-CASE-MSC-15567-1] c 33 N73-16918

Method of forming difunctional polyisobutylene  
[NASA-CASE-NPO-10893] c 27 N73-22710

Polyurethanes from fluoroalkyl propylene glycol polyethers  
[NASA-CASE-MFS-10506] c 06 N73-30100

Fluorine containing polyurethane  
[NASA-CASE-MFS-10509] c 06 N73-30103

Novel polymers and method of preparing same  
[NASA-CASE-NPO-10998-1] c 06 N73-32029

Polyimide foam for the thermal insulation and fire protection  
[NASA-CASE-ARC-10464-1] c 27 N74-12812

Intumescent composition, foamed product prepared therewith and process for making same  
[NASA-CASE-ARC-10304-2] c 27 N74-27037

Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c 25 N75-26043

Utilization of oxygen difluoride for syntheses of fluoropolymers  
[NASA-CASE-NPO-12061-1] c 27 N76-16228

Method for detecting pollutants --- through chemical reactions and heat treatment  
[NASA-CASE-LAR-11405-1] c 45 N76-31714

Process for preparing higher oxides of the alkali and alkaline earth metals  
[NASA-CASE-ARC-10992-1] c 26 N78-32229

Method for preparing addition type polyimide prepreps  
[NASA-CASE-LAR-12054-2] c 27 N81-14078

The 1,1,1-triaryl-2,2,2-trifluoroethanes and process for their synthesis  
[NASA-CASE-ARC-11097-1] c 25 N82-24312

Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c 23 N82-28353

Process for producing tris (n-methylamino) methylsilane  
[NASA-CASE-MFS-25721-1] c 25 N85-21280

Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-5] c 27 N85-21352

Fire-resistant phosphorus containing polyimides and copolyimides  
[NASA-CASE-ARC-11522-2] c 27 N85-34280

Sulfone-ester polymers containing pendent ethynyl groups  
[NASA-CASE-LAR-13316-1] c 27 N86-27450

Preparation of B-trichloroborazine  
[NASA-CASE-ARC-11643-1-SB] c 23 N87-23698

The 1-((diorganoxy phosphonyl) methyl)-2,4- and -2,6-diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-2] c 23 N87-28605

Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-4] c 23 N91-25185

- Poly 1, 2, 4-triazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14440-1] c 23 N92-10066  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-6] c 23 N92-17882  
Polyimides via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14145-1] c 27 N92-28751  
Polybenzimidazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14643-1] c 27 N92-29953  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-7] c 23 N93-17412  
Atmospheric pressure flow reactor: Gas phase chemical kinetics under tropospheric conditions without wall effects  
[NASA-CASE-MSC-21384-2] c 35 N93-17626  
Polybenzoxazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14606-1-CU] c 23 N93-23077

CHEMICAL REACTORS

- Chemical vapor deposition reactor --- providing uniform film thickness  
[NASA-CASE-NPO-13650-1] c 25 N79-28253  
Sodium storage and injection system  
[NASA-CASE-NPO-14384-1] c 37 N80-10494  
Method of producing silicon --- gas phase reactor multiple injector liquid feed system  
[NASA-CASE-NPO-14382-1] c 31 N80-18231  
Fluidized bed coal combustion reactor  
[NASA-CASE-NPO-14273-1] c 25 N82-11144  
Solar heated fluidized bed gasification system  
[NASA-CASE-NPO-15071-1] c 44 N82-16475  
Thermal reactor --- liquid silicon production from silane gas  
[NASA-CASE-NPO-14369-1] c 44 N83-10501  
Pressure letdown method and device for coal conversion systems  
[NASA-CASE-NPO-15100-1] c 44 N84-14583  
Apparatus and method to keep the walls of a free-space reactor free from deposits of solid materials  
[NASA-CASE-NPO-15851-1] c 37 N85-21652  
Remotely controllable mixing system  
[NASA-CASE-MFS-28153-1] c 31 N86-32589  
Atmospheric pressure flow reactor: Gas phase chemical kinetics under tropospheric conditions without wall effects  
[NASA-CASE-MSC-21384-2] c 35 N93-17626

CHEMICAL TESTS

- Nondestructive spot test method for titanium and titanium alloys  
[NASA-CASE-LAR-10539-1] c 17 N73-12547  
Nondestructive spot test method for magnesium and magnesium alloys  
[NASA-CASE-LAR-10953-1] c 17 N73-27446  
Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-6] c 25 N85-30039

CHEMILUMINESCENCE

- Method and apparatus for eliminating luminol interference material  
[NASA-CASE-MSC-16260-1] c 51 N80-16714

CHEMISORPTION

- Oxygen chemisorption cryogenic refrigerator  
[NASA-CASE-NPO-16734-1-CU] c 31 N88-14223

CHEMOTHERAPY

- Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c 52 N81-14613

CHIPS (ELECTRONICS)

- Head for high speed spinner having a vacuum chuck --- holding silicon dioxide chips for etching  
[NASA-CASE-NPO-15227-1] c 37 N81-33482  
Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c 37 N82-12441  
Miniaturization of flight deflection measurement system  
[NASA-CASE-LAR-13628-1] c 35 N90-23707  
Laterally stacked Schottky diodes for infrared sensor applications  
[NASA-CASE-NPO-17426-1-CU] c 33 N91-21434  
Thermal treatment of silicon integrated circuit chips to prevent and heal voids in aluminum metallization  
[NASA-CASE-NPO-17678-1-CU] c 76 N91-28014  
Method and apparatus for increasing resistance of bipolar buried layer integrated circuit devices to single-event upsets  
[NASA-CASE-NPO-17573-2-CU] c 33 N92-16196  
VLSI architecture for a Reed-Solomon decoder  
[NASA-CASE-NPO-17897-1-CU] c 33 N92-33011  
Cascaded VLSI neural network architecture for on-line learning  
[NASA-CASE-NPO-18645-1-CU] c 63 N92-34240

CHIPS (MEMORY DEVICES)

- VLSI single-chip (255,223) Reed-Solomon encoder with interleaver  
[NASA-CASE-NPO-17280-1-CU] c 17 N90-21061

CHIRP SIGNALS

- Method for shaping and aiming narrow beams --- sonar mapping and target identification  
[NASA-CASE-NPO-14632-1] c 32 N82-18443

CHLORIDES

- The 5-(4-Ethynylphenoxy) isophthalic chloride  
[NASA-CASE-LAR-13316-2] c 27 N87-14515  
Metal chloride cathode for a battery  
[NASA-CASE-NPO-17809-1-CU] c 33 N91-27478  
Poly 1, 2, 4-triazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14440-1] c 23 N92-10066

CHLORINATION

- Specialized halogen generator for purification of water  
Patent  
[NASA-CASE-XLA-08913] c 14 N71-28933  
Coal desulfurization by aqueous chlorination  
[NASA-CASE-NPO-14902-1] c 25 N82-29371  
Hydrodesulfurization of chlorinated coal  
[NASA-CASE-NPO-15304-1] c 25 N83-31743

CHLORINE

- Fluidized bed desulfurization  
[NASA-CASE-NPO-15924-1] c 25 N85-35253

CHLOROPRENE RESINS

- Flexible fire retardant polyisocyanate modified neoprene foam --- for thermal protective devices  
[NASA-CASE-ARC-10180-1] c 27 N74-12814

CHOKES

- Current dependent filter inductance  
[NASA-CASE-ERC-10139] c 09 N72-17154

CHOKES (RESTRICTIONS)

- Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c 07 N74-31270  
Adjustable steam producing flexible orifice independent of fluid pressure  
[NASA-CASE-NPO-17625-1-CU] c 34 N92-21724

CHOLESTEROL

- Reduction of blood serum cholesterol  
[NASA-CASE-NPO-12119-1] c 52 N75-15270

CHROMATOGRAPHY

- Chromato-fluorographic drug detector --- device for detecting and recording fluorescent properties of materials  
[NASA-CASE-ARC-10633-1] c 25 N74-26947  
Modulated voltage metastable ionization detector  
[NASA-CASE-ARC-11503-1] c 35 N85-34374

CHROMIUM

- Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c 44 N78-19599  
Efficiency of silicon solar cells containing chromium  
[NASA-CASE-NPO-15179-1] c 44 N82-26777  
Process for improving moisture resistance of epoxy resins by addition of chromium ions  
[NASA-CASE-LAR-13226-1] c 27 N85-34282  
Negative electrode catalyst for the iron chromium redox energy storage system  
[NASA-CASE-LEW-14028-1] c 44 N86-19721

CHROMIUM ALLOYS

- Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c 26 N75-29236  
Niral ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LEW-13339-1] c 26 N82-31505  
High temperature creep and oxidation resistant chromium silicide matrix alloy containing molybdenum  
[NASA-CASE-LEW-15697-1] c 26 N93-29172

CHROMIUM CARBIDES

- Method of making carbide/fluoride/silver composites  
[NASA-CASE-LEW-14902-1] c 24 N91-27244

CHROMIUM COMPOUNDS

- Chromium electrodes for REDOX cells  
[NASA-CASE-LEW-13653-1] c 44 N84-28205

CHROMOSOMES

- Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c 52 N79-12694

CINEMATOGRAPHY

- High speed photo-optical time recording  
[NASA-CASE-KSC-10294] c 14 N72-18411  
Holographic motion picture camera with Doppler shift compensation  
[NASA-CASE-MFS-22517-1] c 35 N76-18402

CIRCADIAN RHYTHMS

- Bright light delivery system  
[NASA-CASE-MFS-28723-1] c 52 N93-17058

CIRCLES (GEOMETRY)

- Two dimensional vernier  
[NASA-CASE-MSC-21700-1] c 35 N92-22039

CIRCUIT BOARDS

- Electrical feed-through connection for printed circuit boards and printed cable  
[NASA-CASE-XMF-01483] c 14 N69-27431  
Printed cable connector Patent  
[NASA-CASE-XMF-00369] c 09 N70-36494  
Printed circuit board with bellows rivet connection Patent  
[NASA-CASE-XNP-05082] c 15 N70-41960  
Electrical spot terminal assembly Patent  
[NASA-CASE-NPO-10034] c 15 N71-17685  
Polyimide resin-fiberglass cloth laminates for printed circuit boards  
[NASA-CASE-MFS-20408] c 18 N73-12604  
Circuit board package with wedge shaped covers  
[NASA-CASE-MFS-21919-1] c 10 N73-25243  
Tool for use in lifting pin supported objects  
[NASA-CASE-LAR-11709-1] c 37 N74-32918  
Shock absorbing mount for electrical components  
[NASA-CASE-NPO-13253-1] c 37 N75-18573  
Connector --- for connecting circuits on different layers of multilayer printed circuit boards  
[NASA-CASE-LAR-11709-1] c 37 N76-27567  
Traveling wave tube circuit  
[NASA-CASE-LEW-12013-1] c 33 N79-10339  
High stability amplifier  
[NASA-CASE-GSC-12646-1] c 33 N83-34191  
Beam forming network  
[NASA-CASE-NPO-15743-1] c 32 N85-29118

CIRCUIT BREAKERS

- Mercury capillary interrupter Patent  
[NASA-CASE-XNP-02251] c 12 N71-20896  
Diode and protection fuse unit Patent  
[NASA-CASE-XKS-03381] c 09 N71-22796  
Separation simulator Patent  
[NASA-CASE-XKS-04631] c 10 N71-23663  
Detenting servomotor Patent  
[NASA-CASE-XNP-06936] c 15 N71-24695  
Circuit breaker utilizing magnetic latching relays Patent  
[NASA-CASE-MSC-11277] c 09 N71-29008  
Multiple circuit protector device  
[NASA-CASE-XMS-02744] c 33 N75-27249  
Solar concentrator protective system  
[NASA-CASE-NPO-15662-1] c 44 N84-28204

CIRCUIT DIAGRAMS

- Excitation and detection circuitry for a flux responsive magnetic head  
[NASA-CASE-XNP-04183] c 09 N69-24329  
Signal multiplexer  
[NASA-CASE-XGS-01110] c 07 N69-24334  
Ring counter  
[NASA-CASE-XGS-03095] c 09 N69-27463  
Solid state switch  
[NASA-CASE-XNP-09228] c 09 N69-27500  
Ultra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit Patent  
[NASA-CASE-XGS-00381] c 09 N70-34819  
Frequency shift keyed demodulator Patent  
[NASA-CASE-XGS-02889] c 07 N71-11282  
Difference circuit Patent  
[NASA-CASE-XNP-08274] c 10 N71-13537  
High voltage transistor circuit Patent  
[NASA-CASE-XNP-06937] c 09 N71-19516  
Weld control system using thermocouple wire Patent  
[NASA-CASE-MFS-06074] c 15 N71-20393  
Correlation function apparatus Patent  
[NASA-CASE-XNP-00746] c 07 N71-21476  
Diode and protection fuse unit Patent  
[NASA-CASE-XKS-03381] c 09 N71-22796  
Buck boost voltage regulation circuit Patent  
[NASA-CASE-GSC-10735-1] c 10 N71-26085  
Active RC networks  
[NASA-CASE-ARC-10042-2] c 10 N72-11256  
Microcircuit negative cutter  
[NASA-CASE-XLA-09843] c 15 N72-27485  
Self-regulating proportionally controlled heating apparatus and technique  
[NASA-CASE-GSC-11752-1] c 77 N75-20140  
Symmetrical odd-modulus frequency divider  
[NASA-CASE-NPO-13426-1] c 33 N75-31330  
Trielectrode capacitive pressure transducer  
[NASA-CASE-ARC-10711-2] c 33 N76-21390  
Frequency discriminator and phase detector circuit  
[NASA-CASE-NPO-11515-1] c 33 N77-13315

CIRCUIT PROTECTION

- Protection for energy conversion systems  
[NASA-CASE-XGS-04808] c 03 N69-25146  
Protective circuit of the spark gap type  
[NASA-CASE-XAC-08981] c 09 N69-39897  
Electrical load protection device Patent  
[NASA-CASE-MSC-12135-1] c 09 N71-12526  
Apparatus for overcurrent protection of a push-pull amplifier Patent  
[NASA-CASE-MSC-12033-1] c 09 N71-13531

- Method of coating circuit paths on printed circuit boards with solder Patent  
[NASA-CASE-XMF-01599] c 09 N71-20705
- Power supply circuit Patent  
[NASA-CASE-XMS-00913] c 10 N71-23543
- Selective plating of etched circuits without removing previous plating Patent  
[NASA-CASE-XGS-03120] c 15 N71-24047
- Failure sensing and protection circuit for converter networks Patent  
[NASA-CASE-GSC-10114-1] c 10 N71-27366
- Power responsive overload sensing circuit Patent  
[NASA-CASE-GSC-10667-1] c 10 N71-33129
- Saturation current protection apparatus for saturable core transformers  
[NASA-CASE-ERC-10075-2] c 09 N72-22196
- Electrical insulating layer process  
[NASA-CASE-LEW-10489-1] c 15 N72-25447
- Phase protection system for ac power lines  
[NASA-CASE-MS-17832-1] c 33 N74-14956
- Overvoltage protection network  
[NASA-CASE-ARC-10197-1] c 33 N74-17929
- Shock absorbing mount for electrical components  
[NASA-CASE-NPO-13253-1] c 37 N75-18573
- Multiple circuit protector device  
[NASA-CASE-XMS-02744] c 33 N75-27249
- Multi-cell battery protection system  
[NASA-CASE-LEW-12039-1] c 44 N78-14625
- Fused switch  
[NASA-CASE-XMS-01244-1] c 33 N79-33393
- Base drive for paralleled inverter systems  
[NASA-CASE-NPO-14163-1] c 33 N81-14220
- Shielded conductor cable system  
[NASA-CASE-MS-12745-1] c 33 N81-27397
- Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c 33 N81-33404
- Thermal switch disc for short circuit protection of batteries  
[NASA-CASE-MS-21428-1] c 33 N91-14537
- CIRCUIT RELIABILITY**  
Split-cross-bridge resistor for testing for proper fabrication of integrated circuits  
[NASA-CASE-NPO-16021-1] c 33 N85-30187
- Cross-contact chain  
[NASA-CASE-NPO-16784-1] c 33 N87-10231
- CIRCUITS**  
Connector - Electrical  
[NASA-CASE-XLA-01288] c 09 N69-21470
- Binary magnetic memory device Patent  
[NASA-CASE-XGS-00174] c 08 N70-34743
- Electronic motor control system Patent  
[NASA-CASE-XMF-01129] c 09 N70-38712
- Starting circuit for vapor lamps and the like Patent  
[NASA-CASE-XNP-01058] c 09 N71-12540
- Drift compensation circuit for analog to digital converter Patent  
[NASA-CASE-XNP-04780] c 08 N71-19687
- High voltage divider system Patent  
[NASA-CASE-XLE-02008] c 09 N71-21583
- Solar cell and circuit array and process for nullifying magnetic fields Patent  
[NASA-CASE-XGS-03390] c 03 N71-23187
- Dual polarity full wave dc motor drive Patent  
[NASA-CASE-XNP-07477] c 09 N71-26092
- Temperature regulation circuit Patent  
[NASA-CASE-XNP-02792] c 14 N71-28958
- Pulse generating circuit employing switch means on ends of delay line for alternately charging and discharging same Patent  
[NASA-CASE-XNP-00745] c 10 N71-28960
- Digital pulse width selection circuit Patent  
[NASA-CASE-XLA-07788] c 09 N71-29139
- Power responsive overload sensing circuit Patent  
[NASA-CASE-GSC-10667-1] c 10 N71-33129
- Pulsed excitation voltage circuit for transducers  
[NASA-CASE-FRC-10036] c 09 N72-22200
- Thermal to electrical power conversion system with solid-state switches with Seebeck effect compensation  
[NASA-CASE-NPO-11388] c 03 N72-23048
- Controllable load insensitive power converters  
[NASA-CASE-ERC-10268] c 09 N72-25252
- Failsafe multiple transformer circuit configuration  
[NASA-CASE-NPO-11078] c 09 N72-25262
- Microcircuit negative cutter  
[NASA-CASE-XLA-09843] c 15 N72-27485
- Infinite range electronics gain control circuit  
[NASA-CASE-GSC-10786-1] c 10 N72-28241
- Active tuned circuit  
[NASA-CASE-GSC-11340-1] c 10 N72-33230
- Heat detection and compositions and devices therefor  
[NASA-CASE-NPO-10764-1] c 14 N73-14428
- Driving lamps by induction  
[NASA-CASE-MFS-21214-1] c 09 N73-30181
- Circuit for detecting initial systole and diastolic notch --- for monitoring arterial pressure  
[NASA-CASE-LEW-11581-1] c 54 N75-13531
- Peak holding circuit for extremely narrow pulses  
[NASA-CASE-MS-14129-1] c 33 N75-18479
- High voltage distributor  
[NASA-CASE-GSC-11849-1] c 33 N76-16332
- Circuit for automatic load sharing in parallel converter modules  
[NASA-CASE-NPO-14056-1] c 33 N79-24257
- Method and apparatus for fabricating improved solar cell modules  
[NASA-CASE-NPO-14416-1] c 44 N81-14389
- Control system for an induction motor with energy recovery  
[NASA-CASE-MFS-25477-1] c 33 N84-14424
- Ladder supported ring bar circuit  
[NASA-CASE-LEW-13570-1] c 33 N84-16452
- Programmable scan/read circuitry for charge coupled device imaging detectors --- spacecraft attitude control and star trackers  
[NASA-CASE-NPO-15345-1] c 74 N84-23247
- Dielectric based submillimeter backward wave oscillator circuit  
[NASA-CASE-LEW-13736-1] c 33 N84-27974
- High voltage power supply  
[NASA-CASE-GSC-12818-1] c 33 N85-29147
- Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333
- Amplifier for measuring low-level signals in the presence of high common mode voltage  
[NASA-CASE-MFS-25868-1] c 33 N86-20670
- Processing circuit with asymmetry corrector and convolutional encoder for digital data  
[NASA-CASE-MS-20187-1] c 33 N87-25531
- Arcjet power supply and start circuit  
[NASA-CASE-LEW-14374-1] c 09 N88-28939
- Power supply conditioning circuit  
[NASA-CASE-NPO-17233-1-CU] c 33 N88-29095
- Method and circuit for shaping laser output pulses  
[NASA-CASE-LAR-14203-1] c 36 N89-28817
- Control circuitry using electronic emulation of a synchro signal for accurate control of position and rate of rotation for shafts  
[NASA-CASE-MFS-28458-1] c 33 N91-26459
- Method of preforming and assembling superconducting circuit elements  
[NASA-CASE-LAR-14395-1-CU] c 33 N91-28490
- Asymmetric soft-error resistant memory  
[NASA-CASE-NPO-17394-1-CU] c 60 N91-31810
- Method and circuit for controlling the evolution time interval of a laser output pulse  
[NASA-CASE-LAR-13772-1] c 36 N92-31788
- Electromagnetic attachment mechanism  
[NASA-CASE-MS-21463-1] c 37 N92-33018
- CIRCULAR CONES**  
Optical inspection apparatus Patent  
[NASA-CASE-XMF-00462] c 14 N70-34298
- CIRCULAR CYLINDERS**  
Light intensity modulator controller Patent  
[NASA-CASE-XMS-04300] c 09 N71-19479
- CIRCULAR POLARIZATION**  
Electromagnetic polarization systems and methods Patent  
[NASA-CASE-GSC-10021-1] c 09 N71-24595
- Virtual wall slot circularly polarized planar array antenna  
[NASA-CASE-NPO-10301] c 07 N72-11148
- Circularly polarized antenna  
[NASA-CASE-ERC-10214] c 09 N72-31235
- Stripline feed for a microstrip array of patch elements with teardrop shaped probes  
[NASA-CASE-NPO-17548-1-CU] c 32 N90-16104
- CIRCULAR TUBES**  
Evacuated displacement compression molding  
[NASA-CASE-LAR-10782-1] c 31 N74-14133
- Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797
- Substantially oxygen-free contact tube  
[NASA-CASE-LAR-14169-1] c 37 N92-17677
- CIRCULATION CONTROL AIRFOILS**  
Helicopter anti-torque system using strakes  
[NASA-CASE-LAR-13233-1] c 05 N84-33400
- CIRCULATORS (PHASE SHIFT CIRCUITS)**  
Circulator having quarter wavelength resonant post and parametric amplifier circuits utilizing the same Patent  
[NASA-CASE-XNP-02140] c 09 N71-23097
- Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c 36 N80-18372
- CIRCUMFERENCES**  
Circumferential pressure probe  
[NASA-CASE-LAR-13775-1] c 35 N90-23706
- CLADDING**  
Cladding for transverse-pumped solid-state laser  
[NASA-CASE-NPO-17355-1-CU] c 36 N91-17360
- Process for the manufacture of seamless metal-clad fiber-reinforced organic matrix composite structures  
[NASA-CASE-LAR-13562-2] c 24 N91-25199
- Optical fiber fluorosensor  
[NASA-CASE-LAR-14525-1-CU] c 74 N93-22008
- Transversely polarized source cladding for an optical fiber  
[NASA-CASE-LAR-14652-1-SB] c 74 N93-22039
- CLAMPING CIRCUITS**  
Amplifier clamping circuit for horizon scanner Patent  
[NASA-CASE-XGS-01784] c 10 N71-20782
- CLAMPS**  
Portable alignment tool Patent  
[NASA-CASE-XMF-01452] c 15 N70-41371
- Hydraulic grip Patent  
[NASA-CASE-XLA-05100] c 15 N71-17696
- Clamping assembly for inertial components Patent  
[NASA-CASE-XMS-02184] c 15 N71-20813
- Central spar and module joint Patent  
[NASA-CASE-XNP-02341] c 15 N71-21531
- Quick attach mechanism Patent  
[NASA-CASE-XFR-05421] c 15 N71-22994
- Prosthetic occlusive device for an internal passageway  
[NASA-CASE-MFS-25740-1] c 52 N84-11744
- Clamp-mount device  
[NASA-CASE-MFS-25510-1] c 37 N84-16560
- Reusable thermal cycling clamp  
[NASA-CASE-LAR-12868-1] c 37 N85-21651
- Self-clamping arc light reflector for welding torch  
[NASA-CASE-MFS-29207-1] c 74 N87-25843
- Releasable clamping apparatus  
[NASA-CASE-MFS-28192-1] c 37 N90-17154
- Tensile film clamps and mounting block for the rheovibron and autovibron viscoelastometer  
[NASA-CASE-LAR-13696-1] c 37 N90-20409
- Caniliver clamp fitting  
[NASA-CASE-MFS-28328-1] c 37 N91-13731
- Post clamp  
[NASA-CASE-LEW-14862-1] c 37 N91-14617
- Overcenter collet space station truss fastener  
[NASA-CASE-MS-21504-1] c 18 N91-21221
- Apparatus for joining trusses  
[NASA-CASE-MFS-28545-1] c 31 N91-25306
- Quick action clamp  
[NASA-CASE-LEW-14887-1] c 37 N91-27561
- Power saw  
[NASA-CASE-MS-21469-1] c 37 N91-31655
- Automatic system for installation and replacement of Space Station components  
[NASA-CASE-LEW-14906-1] c 37 N93-12203
- Saddle clamp assembly  
[NASA-CASE-MFS-28701-1] c 37 N93-17057
- An apparatus for gripping test specimens  
[NASA-CASE-LEW-15345-2] c 37 N93-28127
- Spline screw autochanger  
[NASA-CASE-GSC-13435-1] c 37 N93-29505
- Service equipment for use in hostile environments  
[NASA-CASE-LEW-14906-2] c 37 N93-31314
- CLASSIFICATIONS**  
General method of pattern classification using the two-domain theory  
[NASA-CASE-MS-21737-1] c 61 N91-13911
- CLASSIFIERS**  
Acoustophoresis separation method  
[NASA-CASE-LAR-13388-2] c 25 N93-20570
- CLASSIFYING**  
General method of pattern classification using the two-domain theory  
[NASA-CASE-MS-21737-1] c 61 N93-18282
- CLAYS**  
Inorganic thermal control pigment Patent  
[NASA-CASE-XNP-02139] c 18 N71-24184
- CLEAN ROOMS**  
Air conditioned suit  
[NASA-CASE-LAR-10076-1] c 05 N73-20137
- CLEANERS**  
Purge device for thrust engines Patent  
[NASA-CASE-XMS-04826] c 28 N71-28849
- Noncontaminating swabs  
[NASA-CASE-MFS-18100] c 15 N72-11390
- Apparatus and method to keep the walls of a free-space reactor free from deposits of solid materials  
[NASA-CASE-NPO-15851-1] c 37 N85-21652
- Orbital debris sweeper and method  
[NASA-CASE-MS-21534-1] c 18 N91-21222
- Whole body cleaning agent containing N-acyltaurate  
[NASA-CASE-MS-21589-1] c 54 N92-29137
- CLEANING**  
Disk pack cleaning table Patent Application  
[NASA-CASE-LAR-10590-1] c 15 N70-26819

## CLEAR AIR TURBULENCE

System for sterilizing objects --- cleaning space vehicle systems  
[NASA-CASE-KSC-11085-1] c 54 N81-24724  
Apparatus and method to keep the walls of a free-space reactor free from deposits of solid materials  
[NASA-CASE-NPO-15851-1] c 37 N85-21652  
Self-contained, single-use hose and tubing cleaning module  
[NASA-CASE-MSC-20857-1] c 37 N87-17035  
Orbital debris sweeper and method  
[NASA-CASE-MSC-21534-1] c 18 N91-21222

### CLEAR AIR TURBULENCE

Clear air turbulence detector  
[NASA-CASE-ERC-10081] c 14 N72-28437  
Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c 36 N75-15028  
CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c 06 N83-10040  
Microwave temperature profiler for clear air turbulence prediction  
[NASA-CASE-NPO-18115-1-CU] c 47 N92-29148

### CLEARANCES

Active clearance control system for a turbomachine  
[NASA-CASE-LEW-12938-1] c 07 N82-32366  
Control means for a gas turbine engine  
[NASA-CASE-LEW-14586-1] c 07 N83-31603

### CLEAVAGE

Crystal cleaving machine  
[NASA-CASE-GSC-12584-1] c 37 N82-32730  
Workpiece positioning vise  
[NASA-CASE-GSC-12762-1] c 37 N84-28083

### CLIMBING FLIGHT

Aircraft instrument Patent  
[NASA-CASE-XLA-00487] c 14 N70-40157  
Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13734-1-CU] c 09 N90-20096

### CLINICAL MEDICINE

Process for the preparation of brushite crystals  
[NASA-CASE-ERC-10338] c 04 N72-33072  
Measurement of gas production of microorganisms --- using pressure sensors  
[NASA-CASE-LAR-11326-1] c 35 N75-33368  
Production of I-123  
[NASA-CASE-LEW-11390-3] c 25 N76-29379  
Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c 52 N79-12694  
Medical diagnosis system and method with multispectral imaging --- depth of burns and optical density of the skin  
[NASA-CASE-NPO-14402-1] c 52 N81-27783  
Process of making medical clip  
[NASA-CASE-LAR-12650-2] c 52 N84-28389  
Sharps container  
[NASA-CASE-MSC-21776-1] c 31 N92-33612

### CLIPS

Medical clip  
[NASA-CASE-LAR-12650-1] c 52 N84-28388  
Process of making medical clip  
[NASA-CASE-LAR-12650-2] c 52 N84-28389  
Airborne rescue system  
[NASA-CASE-ARC-11909-1] c 03 N91-31113

### CLOCKS

Time synchronization system utilizing moon reflected coded signals Patent  
[NASA-CASE-NPO-10143] c 10 N71-26326  
Counter Patent  
[NASA-CASE-XNP-06234] c 10 N71-27137  
Fault tolerant clock apparatus utilizing a controlled minority of clock elements  
[NASA-CASE-MSC-12531-1] c 35 N75-30504  
Clock setter  
[NASA-CASE-LAR-11458-1] c 35 N76-16392  
Real-time simulation clock  
[NASA-CASE-LAR-14056-1] c 35 N90-23713

### CLOSED CIRCUIT TELEVISION

Spacecraft docking and alignment system --- using television camera system  
[NASA-CASE-MSC-12559-1] c 18 N76-14186

### CLOSED CYCLES

Closed loop ranging system Patent  
[NASA-CASE-XNP-01501] c 21 N70-41930  
Digital phase-locked loop  
[NASA-CASE-GSC-11623-1] c 33 N75-25040  
Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c 44 N76-27664

### CLOSED ECOLOGICAL SYSTEMS

Recovery of potable water from human wastes in below-G conditions Patent  
[NASA-CASE-XLA-03213] c 05 N71-11207  
Space vehicle with artificial gravity and earth-like environment  
[NASA-CASE-LEW-11101-1] c 31 N73-32750  
Regenerable device for scrubbing breathable air of CO<sub>2</sub> and moisture without special heat exchanger equipment  
[NASA-CASE-MSC-14771-1] c 54 N77-32722

Cell and method for electrolysis of water and anode  
[NASA-CASE-MSC-16394-1] c 28 N81-24280  
Method and apparatus for bio-regenerative life support system  
[NASA-CASE-MSC-21629-1] c 54 N91-31803

### CLOSTRIDIUM

Production of butanol by fermentation in the presence of cocultures of clostridium  
[NASA-CASE-NPO-16203-1] c 23 N85-35227

### CLOSURES

Canister closing device Patent  
[NASA-CASE-XLA-01446] c 15 N71-21528  
Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c 54 N78-31736

### CLOUD CHAMBERS

Heat transfer device  
[NASA-CASE-MFS-22938-1] c 34 N76-18374

### CLOUD COVER

Cloud cover sensor  
[NASA-CASE-NPO-14936-1] c 47 N83-32232

### CLOUDS (METEOROLOGY)

Rocket borne instrument to measure electric fields inside electrified clouds  
[NASA-CASE-KSC-10730-1] c 14 N73-32318  
Electric field measuring and display system --- for cloud formations  
[NASA-CASE-KSC-10731-1] c 33 N74-27862

### CLUTCHES

Directional gear ratio transmissions  
[NASA-CASE-LAR-12644-1] c 37 N84-28084  
Non-backdrivable free wheeling coupling  
[NASA-CASE-MSC-20475-1] c 37 N87-17037  
Rotary stepping device with memory metal actuator  
[NASA-CASE-NPO-15482-1] c 37 N87-23970

### CLUTTER

Clutter free synthetic aperture radar correlator  
[NASA-CASE-NPO-14035-1] c 32 N83-19968  
Method and apparatus for measuring distance  
[NASA-CASE-MSC-20912-1] c 32 N88-26568  
Motion detection, novelty filtering, and target tracking using an interferometric technique with a GaAs phase conjugate mirror  
[NASA-CASE-NPO-17784-1-CU] c 74 N91-13998

### CMOS

Complementary DMOS-VMOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c 33 N79-12321  
Integrated, non-volatile, high-speed analog random access memory  
[NASA-CASE-NPO-17998-1-CU] c 60 N92-12438  
Nonvolatile programmable neural network synaptic array  
[NASA-CASE-NPO-18578-1-CU] c 33 N92-30086

### COAGULATION

Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14489-1] c 37 N91-27562

### COAL

Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c 43 N79-25443  
Thickness measurement system  
[NASA-CASE-MFS-23721-1] c 31 N79-28370  
Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c 43 N79-31706  
Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c 43 N80-14423  
Coal-shale interface detector  
[NASA-CASE-MFS-23720-1] c 43 N80-23711  
Coal desulfurization --- using iron pentacarbonyl  
[NASA-CASE-NPO-14272-1] c 25 N81-33246  
Coal desulfurization by aqueous chlorination  
[NASA-CASE-NPO-14902-1] c 25 N82-29371  
Hydrodesulfurization of chlorinated coal  
[NASA-CASE-NPO-15304-1] c 25 N83-31743  
Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NPO-15767-1] c 23 N84-16255  
Supercritical solvent coal extraction  
[NASA-CASE-NPO-15210-1] c 25 N84-22709  
Longwall shearer tracking system  
[NASA-CASE-MFS-25717-1] c 35 N84-33768  
Shuttle car loading system  
[NASA-CASE-NPO-15949-1] c 85 N85-34722  
Fluidized bed desulfurization  
[NASA-CASE-NPO-15924-1] c 25 N85-35253

### COAL GASIFICATION

Solar heated fluidized bed gasification system  
[NASA-CASE-NPO-15071-1] c 44 N82-16475  
Pressure letdown method and device for coal conversion systems  
[NASA-CASE-NPO-15100-1] c 44 N84-14583  
Micronized coal burner facility  
[NASA-CASE-LEW-13426-1] c 25 N84-16276  
Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-2] c 28 N91-14495

## SUBJECT INDEX

### COAL LIQUEFACTION

Surfactant-assisted liquefaction of particulate carbonaceous substances  
[NASA-CASE-NPO-13904-1] c 25 N79-11152

### COAL UTILIZATION

Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c 44 N78-31527  
Continuous coal processing method  
[NASA-CASE-NPO-13758-2] c 31 N81-15154  
Fluidized bed coal combustion reactor  
[NASA-CASE-NPO-14273-1] c 25 N82-11144

### COATING

Method of coating circuit paths on printed circuit boards with solder Patent  
[NASA-CASE-XMF-01599] c 09 N71-20705  
Process for applying black coating to metals Patent  
[NASA-CASE-XLA-06199] c 15 N71-24875  
Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c 37 N78-13436  
Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c 44 N78-19599  
Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c 27 N78-31233  
Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polymethyl methacrylate lenses  
[NASA-CASE-ARC-11039-1] c 74 N78-32854  
Contactless pellet fabrication  
[NASA-CASE-NPO-15592-1] c 71 N84-16940  
Corrosion resistant coating  
[NASA-CASE-NPO-15928-1] c 26 N85-29005  
Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587  
Ceramic coatings on smooth surfaces  
[NASA-CASE-LEW-15164-1] c 27 N91-25298  
Polyimide molding powder, coating, adhesive, and matrix resin  
[NASA-CASE-LAR-14163-1] c 27 N92-33014  
Process for applying a superconductive powder to a wide variety of substrates  
[NASA-CASE-LAR-14729-1-CU] c 33 N93-19051  
Oxidation resistant overlay coatings for low expansion substrates  
[NASA-CASE-LEW-15154-2] c 27 N93-31300

### COATINGS

Bonded solid lubricant coating Patent  
[NASA-CASE-XMS-00259] c 18 N70-36400  
High contrast cathode ray tube  
[NASA-CASE-ERC-10468] c 09 N72-20206  
Durable antistatic coating for polymethylmethacrylate  
[NASA-CASE-NPO-13867-1] c 27 N78-14164  
Edge coating of flat wires  
[NASA-CASE-XMF-05757-1] c 31 N79-21227  
Advanced inorganic separators for alkaline batteries and method of making the same  
[NASA-CASE-LEW-13171-2] c 44 N83-32176  
Diamondlike flake composites  
[NASA-CASE-LEW-13837-1] c 24 N84-22695  
Diamondlike flakes  
[NASA-CASE-LEW-13837-2] c 24 N85-21267  
Method for laminar boundary layer transition visualization in flight  
[NASA-CASE-LAR-13554-1] c 02 N89-12551  
Process for making a noble metal on tin oxide catalyst  
[NASA-CASE-LAR-13741-1-SB] c 25 N90-20180  
Method of inseting predesigned disbond areas into composite laminates  
[NASA-CASE-LAR-13225-1] c 24 N90-25197  
Polymer-coated surfaces to control surface zeta potential  
[NASA-CASE-MFS-26050-1] c 27 N92-25397  
Process for bonding elastomers to metals  
[NASA-CASE-LAR-13645-1] c 27 N93-25995  
Process to prepare  
1,3-diamino-5-pentafluorosulfanylbenzene  
[NASA-CASE-LAR-14773-2-CU] c 25 N93-29506

### COAXIAL CABLES

Transmission line thermal short Patent  
[NASA-CASE-XNP-09775] c 09 N71-20445  
Coaxial cable connector Patent  
[NASA-CASE-XNP-04732] c 09 N71-20851  
Transducer circuit and catheter transducer Patent  
[NASA-CASE-ARC-10132-1] c 09 N71-24597  
Collapsible antenna boom and transmission line Patent  
[NASA-CASE-MFS-20068] c 07 N71-27191  
Vibration isolation system using compression springs  
[NASA-CASE-NPO-11012] c 15 N72-11391  
Hermetically sealed semiconductor  
[NASA-CASE-GSC-10791-1] c 15 N73-14469  
System for stabilizing cable phase delay utilizing a coaxial cable under pressure  
[NASA-CASE-NPO-13138-1] c 33 N74-17927



- Refrigerated coaxial coupling --- for microwave equipment  
[NASA-CASE-NPO-13504-1] c 33 N75-30430
- High power RF coaxial switch  
[NASA-CASE-NPO-14229-1] c 33 N80-18285
- Coaxial cable connector  
[NASA-CASE-NPO-16764-1-CU] c 33 N88-14270
- Coaxial turnstile junction  
[NASA-CASE-GSC-13422-1] c 33 N92-23462
- COAXIAL PLASMA ACCELERATORS**  
Self-energized plasma compressor  
[NASA-CASE-MFS-22145-2] c 75 N76-17951
- COBALT**  
Process for improving mechanical properties of epoxy resins by addition of cobalt ions  
[NASA-CASE-LAR-13230-1] c 24 N84-34571
- Metal (2,4,4',4'') phthalocyanine tetraamines as curing agents for epoxy resins  
[NASA-CASE-ARC-11424-1] c 27 N85-34281
- COBALT ALLOYS**  
High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-00726] c 17 N71-15644
- High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-02991] c 17 N71-16025
- High temperature ferromagnetic cobalt-base alloy Patent  
[NASA-CASE-XLE-03629] c 17 N71-23248
- Cobalt-base alloy  
[NASA-CASE-LEW-10436-1] c 17 N73-32415
- COBALT COMPOUNDS**  
Method of intercalating large quantities of fibrous structures  
[NASA-CASE-LEW-15077-1] c 24 N92-16025
- Fabrication of nanometer single crystal metallic CoSi<sub>2</sub> structures on Si  
[NASA-CASE-NPO-17736-2-CU] c 24 N92-18561
- COBALT OXIDES**  
High contrast cathode ray tube  
[NASA-CASE-ERC-10468] c 09 N72-20206
- COCKPIT SIMULATORS**  
Controlled visibility device for an aircraft Patent  
[NASA-CASE-XFR-04147] c 11 N71-10748
- COCKPITS**  
Aircraft canopy lock  
[NASA-CASE-FRC-11065-1] c 05 N83-19737
- CODERS**  
Encoder/decoder system for a rapidly synchronizable binary code Patent  
[NASA-CASE-NPO-10342] c 10 N71-33407
- Modular encoder  
[NASA-CASE-NPO-10629] c 08 N72-18184
- Method and apparatus for decoding compatible convolutional codes  
[NASA-CASE-MS-C-14070-1] c 32 N74-32598
- Digital plus analog output encoder  
[NASA-CASE-GSC-12115-1] c 62 N76-31946
- Twin-capacitive shaft angle encoder with analog output signal  
[NASA-CASE-ARC-10897-1] c 33 N77-31404
- VLSI single-chip (255,223) Reed-Solomon encoder with interleaver  
[NASA-CASE-NPO-17280-1-CU] c 17 N90-21061
- Electrostatically suspended rotor for angular encoder  
[NASA-CASE-MFS-28294-1] c 31 N91-14508
- Laser optical disk position encoder with active heads  
[NASA-CASE-GSC-13175-1] c 74 N92-29133
- Picture data compression coder using subband/transform coding with a Lempel-Ziv-based coder  
[NASA-CASE-LEW-15700-1] c 82 N93-28130
- CODING**  
Error correcting method and apparatus Patent  
[NASA-CASE-XNP-02748] c 08 N71-22749
- Rate data encoder  
[NASA-CASE-LAR-10128-1] c 08 N73-20217
- Binary concatenated coding system  
[NASA-CASE-MS-C-14082-1] c 60 N76-23850
- Differential pulse code modulation  
[NASA-CASE-MS-C-12506-1] c 32 N77-12239
- Automatic multi-banking of memory for microprocessors  
[NASA-CASE-NPO-15295-1] c 60 N85-21992
- Method for Viterbi decoding of large constraint length convolutional codes  
[NASA-CASE-NPO-17310-1-CU] c 17 N88-28946
- Real-time data compression of broadcast video signals  
[NASA-CASE-LEW-14945-2] c 32 N92-10128
- Laser optical disk position encoder with active heads  
[NASA-CASE-GSC-13175-1] c 74 N92-29133
- Picture data compression coder using subband/transform coding with a Lempel-Ziv-based coder  
[NASA-CASE-LEW-15700-1] c 82 N93-28130
- COEFFICIENT OF FRICTION**  
Static coefficient test method and apparatus  
[NASA-CASE-GSC-11893-1] c 35 N76-31489
- Locking redundant link  
[NASA-CASE-LAR-11900-1] c 37 N79-14382
- COENZYMES**  
Flavin coenzyme assay  
[NASA-CASE-GSC-10565-1] c 06 N72-25149
- COHERENT ELECTROMAGNETIC RADIATION**  
Folded traveling wave maser structure Patent  
[NASA-CASE-XNP-05219] c 16 N71-15550
- Focused image holography with extended sources Patent  
[NASA-CASE-ERC-10019] c 16 N71-15551
- Off-axis coherently pumped laser  
[NASA-CASE-MFS-12592-1] c 36 N84-28065
- COHERENT LIGHT**  
Hybrid holographic system using reflected and transmitted object beams simultaneously Patent  
[NASA-CASE-MFS-20074] c 16 N71-15565
- Amplitude modulated laser transmitter Patent  
[NASA-CASE-XMS-04269] c 16 N71-22895
- Device for measuring light scattering wherein the measuring beam is successively reflected between a pair of parallel reflectors Patent  
[NASA-CASE-XER-11203] c 14 N71-28994
- COHERENT RADIATION**  
Laser communication system for controlling several functions at a location remote to the laser  
[NASA-CASE-LAR-10311-1] c 16 N73-16536
- Monitoring atmospheric pollutants with a heterodyne radiometer transmitter-receiver  
[NASA-CASE-NPO-11919-1] c 35 N74-11284
- Apparatus for scanning the surface of a cylindrical body  
[NASA-CASE-NPO-11861-1] c 36 N74-20009
- Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c 28 N74-27425
- Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback  
[NASA-CASE-NPO-13346-1] c 36 N76-29575
- Coherently pulsed laser source  
[NASA-CASE-NPO-15111-1] c 36 N82-29589
- COINCIDENCE CIRCUITS**  
Frequency measurement by coincidence detection with standard frequency  
[NASA-CASE-MS-C-14649-1] c 33 N76-16331
- COLD CATHODES**  
Meteoroid detector  
[NASA-CASE-LAR-10483-1] c 14 N73-32327
- COLD GAS**  
Annular arc accelerator shock tube  
[NASA-CASE-NPO-13528-1] c 09 N77-10071
- COLD WELDING**  
Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c 37 N81-19455
- COLD WORKING**  
Hydroforming techniques using epoxy molds Patent  
[NASA-CASE-XLE-05641-1] c 15 N71-26346
- COLLAPSE**  
Collapsible pistons  
[NASA-CASE-MS-C-13789-1] c 11 N73-32152
- COLLECTION**  
Automatic liquid inventory collecting and dispensing unit  
[NASA-CASE-LAR-11071-1] c 35 N75-19611
- Absorbent product to absorb fluids --- for collection of human wastes  
[NASA-CASE-MS-C-18223-1] c 24 N82-29362
- Improved method and apparatus for waste collection and storage  
[NASA-CASE-MS-C-21025-1] c 31 N87-25495
- COLLIMATION**  
Long range laser traversing system  
[NASA-CASE-GSC-11262-1] c 36 N74-21091
- Optical alignment device  
[NASA-CASE-ARC-10932-1] c 74 N76-22993
- Spatial filter for Q-switched lasers  
[NASA-CASE-LEW-12164-1] c 36 N77-32478
- Dual acting slit control mechanism  
[NASA-CASE-LAR-11370-1] c 35 N80-28686
- Method for shaping and aiming narrow beams --- sonar mapping and target identification  
[NASA-CASE-NPO-14632-1] c 32 N82-18443
- Dual laser optical system and method for studying fluid flow  
[NASA-CASE-MFS-25315-1] c 36 N83-29680
- Ion beam accelerator system  
[NASA-CASE-NPO-15547-1] c 72 N84-16959
- Sonic levitation apparatus  
[NASA-CASE-MFS-25828-1] c 71 N84-28568
- Laser schlieren crystal monitor  
[NASA-CASE-MFS-28060-1] c 76 N87-25862
- Ion generator and ion application system  
[NASA-CASE-MFS-28122-1] c 72 N88-24253
- Self-collimated unstable resonator semiconductor laser  
[NASA-CASE-NPO-18386-1-CU] c 36 N93-18277
- COLLIMATORS**  
X-ray reflection collimator adapted to focus X-radiation directly on a detector Patent  
[NASA-CASE-XHO-04106] c 14 N70-40240
- Collimator of multiple plates with axially aligned identical random arrays of apertures  
[NASA-CASE-MFS-20546-2] c 14 N73-30389
- Multiplate focusing collimator --- for scanning small near radiation sources  
[NASA-CASE-MFS-20932-1] c 35 N75-19616
- Method for shaping and aiming narrow beams --- sonar mapping and target identification  
[NASA-CASE-NPO-14632-1] c 32 N82-18443
- Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N82-24072
- Multiprism collimator  
[NASA-CASE-GSC-12608-1] c 74 N83-10900
- Gamma ray collimator  
[NASA-CASE-SSC-00013-1] c 38 N91-32515
- Schlieren system for visualizing the flow within a pipe of circular cross-section  
[NASA-CASE-LAR-13944-1] c 35 N92-11336
- COLLISION AVOIDANCE**  
Cooperative Doppler radar system Patent  
[NASA-CASE-LAR-10403] c 21 N71-11766
- Satellite aided vehicle avoidance system Patent  
[NASA-CASE-ERC-10090] c 21 N71-24948
- Stacked array of omnidirectional antennas  
[NASA-CASE-LAR-10545-1] c 09 N72-21244
- Display research collision warning system  
[NASA-CASE-HON-10703] c 21 N73-13643
- Apparatus for aiding a pilot in avoiding a midair collision between aircraft  
[NASA-CASE-LAR-10717-1] c 21 N73-30641
- Satellite aided vehicle avoidance system  
[NASA-CASE-ERC-10419-1] c 03 N75-30132
- COLLISIONS**  
Tool and process for miniature explosive joining of tubes  
[NASA-CASE-LAR-13662-1] c 37 N88-14359
- COLLOIDAL GENERATORS**  
Colloid propulsion method and apparatus Patent  
[NASA-CASE-XLE-00817] c 28 N70-33265
- COLLOIDAL PROPELLANTS**  
Colloid propulsion method and apparatus Patent  
[NASA-CASE-XLE-00817] c 28 N70-33265
- Low viscosity magnetic fluid obtained by the colloidal suspension of magnetic particles Patent  
[NASA-CASE-XLE-01512] c 12 N70-40124
- Annular slit collimator Patent  
[NASA-CASE-GSC-10709-1] c 28 N71-25213
- COLLOIDS**  
The 2 deg/90 deg laboratory scattering photometer --- particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c 74 N78-13874
- COLOR**  
Nondestructive spot test method for magnesium and magnesium alloys  
[NASA-CASE-LAR-10953-1] c 17 N73-27446
- Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c 04 N82-16059
- Method for laminar boundary layer transition visualization in flight  
[NASA-CASE-LAR-13554-1] c 02 N89-12551
- Enhanced single layer multi-color or luminescent display with coactivators  
[NASA-CASE-LAR-14181-1] c 76 N91-21911
- Single layer multi-color luminescent display  
[NASA-CASE-LAR-13616-1] c 74 N91-31950
- Single layer multi-color luminescent display and method of making  
[NASA-CASE-LAR-13616-3] c 74 N92-29158
- A method of making a single layer multi-color luminescent display  
[NASA-CASE-LAR-14811-1] c 33 N92-30389
- A method of making a single layer multi-color luminescent display  
[NASA-CASE-LAR-14811-1] c 33 N93-20119
- COLOR PHOTOGRAPHY**  
Method of recording a gas flow pattern Patent  
[NASA-CASE-XMF-01779] c 12 N71-20815
- Method for retarding dye fading during archival storage of developed color photographic film --- inert atmosphere  
[NASA-CASE-MFS-23250-1] c 35 N82-11432
- COLOR TELEVISION**  
Color television systems using a single gun color cathode ray tube Patent  
[NASA-CASE-ERC-10098] c 09 N71-28618
- Color television system  
[NASA-CASE-MS-C-12146-1] c 07 N72-17109



## COLOR VISION

- Scan converting video tape recorder  
[NASA-CASE-NPO-10166-1] c 07 N73-22076
- Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c 35 N76-16391
- System for producing chroma signals  
[NASA-CASE-MSC-14683-1] c 74 N77-18893
- Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c 09 N78-18083

## COLOR VISION

- Color perception tester  
[NASA-CASE-KSC-10278] c 05 N72-16015

## COLUMNS

- Lightweight structural columns --- space erectable trusses  
[NASA-CASE-LAR-12095-1] c 31 N81-25258

## COLUMNS (PROCESS ENGINEERING)

- Micropacked column for a chromatographic system  
[NASA-CASE-XNP-04816] c 06 N69-39936

## COLUMNS (SUPPORTS)

- Telescoping columns --- parabolic antenna support  
[NASA-CASE-LAR-12195-1] c 31 N81-27324

## COMBINATORIAL ANALYSIS

- Apparatus for computing square roots Patent  
[NASA-CASE-XGS-04768] c 08 N71-19437

## COMBINED CYCLE POWER GENERATION

- Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-2] c 28 N91-14495

## COMBINED STRESS

- Combined load test apparatus for flat panels  
[NASA-CASE-LAR-14698-1] c 39 N92-30028

## COMBUSTION

- Combustion detector  
[NASA-CASE-LAR-10739-1] c 14 N73-16484
- A system for controlling the oxygen content of a gas produced by combustion  
[NASA-CASE-LAR-13257-1] c 25 N84-32447
- Protective helmet assembly  
[NASA-CASE-MSC-21842-1] c 54 N93-17088

## COMBUSTION CHAMBERS

- Rocket chamber leak test fixture  
[NASA-CASE-XFR-09479] c 14 N69-27503
- Rocket propellant injector Patent  
[NASA-CASE-XLE-00103] c 28 N70-33241
- Formed metal ribbon wrap Patent  
[NASA-CASE-XLE-00164] c 15 N70-36411
- Injector-valve device Patent  
[NASA-CASE-XLE-00303] c 15 N70-36535
- Ignition system for monopropellant combustion devices Patent  
[NASA-CASE-XNP-00249] c 28 N70-38249
- Method of making a regeneratively cooled combustion chamber Patent  
[NASA-CASE-XLE-00150] c 28 N70-41818
- Control of transverse instability in rocket combustors Patent  
[NASA-CASE-XLE-04603] c 33 N71-21507
- Combustion chamber Patent  
[NASA-CASE-XLE-04857] c 28 N71-23968
- Rocket engine injector Patent  
[NASA-CASE-XLE-03157] c 28 N71-24736
- Coaxial injector for reaction motors  
[NASA-CASE-NPO-11095] c 15 N72-25455
- Swirl can primary combustor  
[NASA-CASE-LEW-11326-1] c 23 N73-30665
- Method of electroforming a rocket chamber  
[NASA-CASE-LEW-11118-1] c 20 N74-32919
- Controlled separation combustor --- airflow distribution in gas turbine engines  
[NASA-CASE-LEW-11593-1] c 20 N76-14190
- Fuel combustor  
[NASA-CASE-LEW-12137-1] c 25 N78-10224
- Direct heating surface combustor  
[NASA-CASE-LEW-11877-1] c 34 N78-27357
- Combustor --- low nitrogen oxide formation  
[NASA-CASE-NPO-13958-1] c 25 N79-11151
- Heat exchanger --- rocket combustion chambers and cooling systems  
[NASA-CASE-LEW-12252-1] c 34 N79-13288
- General purpose rocket furnace  
[NASA-CASE-MFS-23460-1] c 12 N79-26075
- Reduction of nitric oxide emissions from a combustor  
[NASA-CASE-ARC-10814-2] c 07 N80-26298
- Fluidized bed coal combustion reactor  
[NASA-CASE-NPO-14273-1] c 25 N82-11144
- Micronized coal burner facility  
[NASA-CASE-LEW-13426-1] c 25 N84-16276
- Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c 37 N84-22958
- Combustor liner construction  
[NASA-CASE-LEW-14035-1] c 07 N84-24577
- A system for controlling the oxygen content of a gas produced by combustion  
[NASA-CASE-LAR-13257-1] c 25 N84-32447

Diesel engine catalytic combustor system --- aircraft engines

- [NASA-CASE-LEW-12995-1] c 37 N84-33808
- Flow modifying device  
[NASA-CASE-LEW-13562-2] c 07 N85-35195
- Low loss injector for liquid propellant rocket engines  
[NASA-CASE-MFS-25989-1] c 20 N87-14420
- Steam cooled rich-burn combustor liner  
[NASA-CASE-LEW-13609-1] c 25 N90-11824
- High-pressure promoted combustion chamber  
[NASA-CASE-MSC-21470-1] c 09 N91-21157
- Method of injecting fluid propellants into a rocket combustion chamber  
[NASA-CASE-LEW-14846-2] c 20 N91-26200
- Method of fabricating a rocket engine combustion chamber  
[NASA-CASE-MFS-28569-1] c 27 N93-30565

## COMBUSTION CONTROL

- Burning rate control of solid propellants Patent  
[NASA-CASE-XLE-03494] c 27 N71-21819

## COMBUSTION EFFICIENCY

- Rocket engine injector Patent  
[NASA-CASE-XLE-00111] c 28 N70-38199
- Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c 37 N84-22958

## COMBUSTION PHYSICS

- Solid propellant rocket motor  
[NASA-CASE-NPO-11559] c 28 N73-24784
- Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c 37 N79-11405

## COMBUSTION PRODUCTS

- Separation nut Patent  
[NASA-CASE-XGS-01971] c 15 N71-15922
- Combustion products generating and metering device  
[NASA-CASE-GSC-11095-1] c 14 N72-10375
- System for minimizing internal combustion engine pollution emission  
[NASA-CASE-NPO-13402-1] c 37 N76-18457
- Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c 44 N78-31527
- Combustor --- low nitrogen oxide formation  
[NASA-CASE-NPO-13958-1] c 25 N79-11151
- A system for controlling the oxygen content of a gas produced by combustion  
[NASA-CASE-LAR-13257-1] c 25 N84-32447
- Device for quickly sensing the amount of O<sub>2</sub> in a combustion product gas  
[NASA-CASE-LAR-13816-1] c 35 N90-22025

## COMBUSTION STABILITY

- Control of transverse instability in rocket combustors Patent  
[NASA-CASE-XLE-04603] c 33 N71-21507
- Low loss injector for liquid propellant rocket engines  
[NASA-CASE-MFS-25989-1] c 20 N87-14420

## COMET TAILS

- Ion mass spectrometer  
[NASA-CASE-NPO-15423-1] c 35 N84-28016

## COMFORT

- Ride quality meter  
[NASA-CASE-LAR-12882-1] c 35 N84-12445

## COMMAND AND CONTROL

- Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c 32 N77-20289
- Common data buffer system --- communication with computational equipment utilized in spacecraft operations  
[NASA-CASE-KSC-11048-1] c 62 N81-24779

## COMMAND MODULES

- Low onset rate energy absorber  
[NASA-CASE-MSC-12279] c 15 N72-17450

## COMMUNICATING

- Communications link for computers  
[NASA-CASE-NPO-11161] c 08 N72-25207

## COMMUNICATION

- Correlation function apparatus Patent  
[NASA-CASE-XNP-00746] c 07 N71-21476
- System for improving signal-to-noise ratio of a communication signal  
[NASA-CASE-MSC-12259-2] c 07 N72-33146

## COMMUNICATION CABLES

- Method of making a molded connector Patent  
[NASA-CASE-XMF-03498] c 15 N71-15986
- Process for making RF shielded cable connector assemblies and the products formed thereby  
[NASA-CASE-GSC-11215-1] c 09 N73-28083
- Fiber distributed feedback laser  
[NASA-CASE-NPO-13531-1] c 36 N76-24553
- High-speed data link for moderate distances and noisy environments  
[NASA-CASE-NPO-14152-1] c 32 N80-18252
- High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c 15 N82-24272
- Rotatable electric cable connecting system  
[NASA-CASE-GSC-12899-1] c 33 N86-20669

## COMMUNICATION EQUIPMENT

- Elimination of frequency shift in a multiplex communication system Patent  
[NASA-CASE-XNP-01306] c 07 N71-20814
- Decoder system Patent  
[NASA-CASE-NPO-10118] c 07 N71-24741
- Data-aided carrier tracking loops  
[NASA-CASE-NPO-11282] c 10 N73-16205
- Doppler compensation by shifting transmitted object frequency within limits  
[NASA-CASE-GSC-10087-4] c 07 N73-20174
- Differential phase shift keyed communication system  
[NASA-CASE-MSC-14065-1] c 32 N74-26654
- Doppler-corrected differential detection system  
[NASA-CASE-NPO-16987-1-CU] c 32 N91-25316

## COMMUNICATION NETWORKS

- Fault tolerant hypercube computer system architecture  
[NASA-CASE-NPO-16859-1-CU] c 60 N90-21527
- Distributed computing system with dual independent communications paths between computers and employing split tokens  
[NASA-CASE-NPO-17185-1-CU] c 62 N91-14772

## COMMUNICATION SATELLITES

- Passive communication satellite Patent  
[NASA-CASE-XLA-00210] c 30 N70-40309
- Apparatus providing a directive field pattern and attitude sensing of a spin stabilized satellite Patent  
[NASA-CASE-XGS-02607] c 31 N71-23009
- Deep space monitor communication satellite system Patent  
[NASA-CASE-XAC-06029-1] c 31 N71-24813
- Satellite communication system Patent  
[NASA-CASE-XNP-02389] c 07 N71-28900
- Satellite aided vehicle avoidance system  
[NASA-CASE-ERC-10419-1] c 03 N75-30132
- Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c 32 N78-15323

## COMMUTATION

- High speed low level electrical stepping switch Patent  
[NASA-CASE-XAC-00060] c 09 N70-39915
- Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c 33 N81-19393

## COMMUTATORS

- Scanning aspect sensor employing an apertured disc and a commutator  
[NASA-CASE-XGS-08266] c 14 N69-27432
- Current steering commutator  
[NASA-CASE-NPO-10743] c 08 N72-21199

## COMPARATOR CIRCUITS

- Digital frequency discriminator Patent  
[NASA-CASE-MFS-14322] c 08 N71-18692
- Pulsed differential comparator circuit Patent  
[NASA-CASE-XLE-03804] c 10 N71-19471
- Multi-cell battery protection system  
[NASA-CASE-LEW-12039-1] c 44 N78-14625
- Window comparator  
[NASA-CASE-FRC-10090-1] c 33 N78-18308

## COMPARATORS

- Fluid flow meter with comparator reference means Patent  
[NASA-CASE-XGS-01331] c 14 N71-22996
- Comparator for the comparison of two binary numbers Patent  
[NASA-CASE-XNP-04819] c 08 N71-23295
- High stability buffered phase comparator  
[NASA-CASE-GSC-12645-1] c 33 N84-16454
- Neighborhood comparison operator  
[NASA-CASE-NPO-16464-1CU] c 60 N86-24224
- Comparator with noise suppression  
[NASA-CASE-LAR-13151-1] c 33 N87-21235
- Dual physiological rate measurement instrument  
[NASA-CASE-MSC-20078-3] c 52 N91-14709

## COMPARTMENTS

- Double face sealing device  
[NASA-CASE-MFS-28521-1] c 37 N91-26542
- Protein crystal growth tray assembly  
[NASA-CASE-MFS-28507-1] c 76 N92-34171

## COMPATIBILITY

- Imide/arylene ether copolymers  
[NASA-CASE-LAR-14159-1-CU] c 27 N92-31792

## COMPENSATORS

- Star image motion compensator  
[NASA-CASE-LAR-10523-1] c 14 N72-22444
- Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c 31 N79-17029
- Apparatus for and method of compensating dynamic unbalance  
[NASA-CASE-GSC-12550-1] c 37 N84-28082
- Compensation for primary reflector wavefront error  
[NASA-CASE-NPO-16869-1CU] c 74 N86-33138
- Doppler shift compensation system for laser transmitters and receivers  
[NASA-CASE-GSC-13194-1] c 36 N93-18287

## SUBJECT INDEX

- Three-parameter tunable Tilt-Integral-Derivative (TID) controller  
[NASA-CASE-NPO-18492-1-CU] c 63 N93-29176
- COMPLEX COMPOUNDS**  
Synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c 23 N82-16174
- COMPLEX SYSTEMS**  
Feedback controlled optics with wavefront compensation  
[NASA-CASE-NPO-18194-1-CU] c 74 N91-32924
- COMPONENT RELIABILITY**  
Acoustic guide for noise-transmission testing of aircraft  
[NASA-CASE-LAR-13111-1-CU] c 71 N87-21652  
Dual cathode system for electron beam instruments  
[NASA-CASE-NPO-16878-1-CU] c 35 N90-20351
- COMPOSITE MATERIALS**  
Reinforced metallic composites Patent  
[NASA-CASE-XLE-02428] c 17 N70-33288  
Method of making fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-00231] c 17 N70-38198  
Reinforced metallic composites Patent  
[NASA-CASE-XLE-00228] c 17 N70-38490  
Unfired-ceramic flame-resistant insulation and method of making the same Patent  
[NASA-CASE-XMF-01030] c 18 N70-41583  
Process of casting heavy slips Patent  
[NASA-CASE-XLE-00106] c 15 N71-16076  
Lightweight refractory insulation and method of preparing the same Patent  
[NASA-CASE-XMF-05279] c 18 N71-16124  
Flexible composite membrane Patent  
[NASA-CASE-XNP-08837] c 18 N71-16210  
Low temperature flexure fatigue cryostat Patent  
[NASA-CASE-XMF-02964] c 14 N71-17659  
Method for producing fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-03925] c 18 N71-22894  
Solar cell matrix  
[NASA-CASE-NPO-11190] c 03 N71-34044  
Method of forming shapes from planar sheets of thermosetting materials  
[NASA-CASE-NPO-11036] c 15 N72-24522  
Method of making fiber composites  
[NASA-CASE-LEW-10424-2-2] c 18 N72-25539  
Thermal compensating structural member  
[NASA-CASE-MFS-20433] c 15 N72-28496  
Bearing material --- composite material with low friction surface for rolling or sliding contact  
[NASA-CASE-LEW-11930-1] c 24 N76-22309  
Fluid seal for rotating shafts  
[NASA-CASE-LEW-11676-1] c 37 N76-22541  
Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MS-14331-1] c 27 N76-24405  
Method of growing composites of the type exhibiting the Soret effect --- improved structure of eutectic alloy crystals  
[NASA-CASE-MFS-22926-1] c 24 N77-27187  
Hybrid composite laminate structures  
[NASA-CASE-LEW-12118-1] c 24 N77-27188  
Honeycomb-laminate composite structure  
[NASA-CASE-ARC-10913-1] c 24 N78-15180  
High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c 27 N78-19302  
Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c 20 N78-24275  
Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-1] c 28 N78-24365  
Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications  
[NASA-CASE-LEW-11930-4] c 24 N79-17916  
Composite seal for turbomachinery --- backings for turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c 37 N79-18318  
Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
[NASA-CASE-LAR-12099-1] c 27 N80-16158  
Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MFS-23626-1] c 24 N80-26388  
Method of making bearing material  
[NASA-CASE-LEW-11930-3] c 24 N80-33482  
Tackifier for addition polyimides containing monoethylphthalate  
[NASA-CASE-LAR-12642-1] c 27 N81-29229
- Elastomer coated filler and composites thereof comprising at least 60% by weight of a hydrated filler and an elastomer containing an acid substituent  
[NASA-CASE-NPO-14857-1] c 27 N83-19900  
Piezoelectric composite materials  
[NASA-CASE-LEW-12582-1] c 76 N83-34796  
Pre-stressed thermal protection systems  
[NASA-CASE-MS-20254-1] c 16 N84-22601  
Diamondlike flake composites  
[NASA-CASE-LEW-13837-1] c 24 N84-22695  
Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-3] c 27 N85-21350  
Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-4] c 27 N85-21351  
Process for improving moisture resistance of epoxy resins by addition of chromium ions  
[NASA-CASE-LAR-13226-1] c 27 N85-34282  
Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-1] c 24 N86-19380  
Carbide-fluoride-silver self-lubricating composite  
[NASA-CASE-LEW-14196-2] c 37 N87-25585  
Cryogenic regenerator including saran-carbon heat conduction matrix  
[NASA-CASE-NPO-17291-1-CU] c 34 N88-23946  
High temperature insulation barrier composite  
[NASA-CASE-MFS-29241-1] c 24 N90-23480  
Heat transfer device and method of making the same  
[NASA-CASE-LEW-14162-1] c 34 N91-13668  
Graphite fluoride fiber polymer composite material  
[NASA-CASE-LEW-14472-1] c 24 N91-15320  
Preparing composite materials from matrices of processable aromatic polyimide thermoplastic blends  
[NASA-CASE-LAR-14107-1] c 24 N91-25200  
Process for application of powder particles to filamentary materials  
[NASA-CASE-LAR-14231-1] c 24 N92-10070  
Metallic threaded composite fastener  
[NASA-CASE-MS-21580-1] c 37 N92-21726  
Core design for use with precision composite reflectors  
[NASA-CASE-NPO-17858-1-CU] c 24 N93-14700  
Rapid detection and quantification of features such as damage or flaws in composite and metallic structures  
[NASA-CASE-LAR-14850-1-CU] c 38 N93-17048  
Numerical control fabrication technique for dynamic composite models  
[NASA-CASE-LAR-14004-1] c 63 N93-19024  
Multiple layer dielectrics, hot film sensors, and methods of producing same  
[NASA-CASE-LAR-14591-1] c 35 N93-19493  
Heat transfer device  
[NASA-CASE-LEW-14162-4] c 24 N93-20568  
Diamond composite films for protective coatings on metals and method of formation  
[NASA-CASE-NPO-18501-1-CU] c 27 N93-28426  
Semiconductor cooling apparatus  
[NASA-CASE-LEW-14162-3] c 24 N93-29614  
Oxidation resistant overlay coatings for low expansion substrates  
[NASA-CASE-LEW-15154-2] c 27 N93-31300
- COMPOSITE PROPELLANTS**  
Ammonium perchlorate composite propellant containing an organic transitional metal chelate catalytic additive Patent  
[NASA-CASE-LAR-10173-1] c 27 N71-14090  
Silicone containing solid propellant  
[NASA-CASE-NPO-14477-1] c 28 N80-28536  
Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c 28 N81-15119
- COMPOSITE STRUCTURES**  
Inflatable honeycomb Patent  
[NASA-CASE-XLA-00204] c 32 N70-36536  
Composite powerplant and shroud therefor Patent  
[NASA-CASE-XLA-01043] c 28 N71-10780  
Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c 24 N75-30260  
Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c 24 N77-19170  
Composite sandwich lattice structure  
[NASA-CASE-LAR-11898-1] c 24 N78-10214  
Method of making a composite sandwich lattice structure  
[NASA-CASE-LAR-11898-2] c 24 N78-17149  
Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
[NASA-CASE-ARC-11040-2] c 24 N78-27184  
Aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-3] c 44 N80-16452
- Lightweight structural columns --- space erectable trusses  
[NASA-CASE-LAR-12095-1] c 31 N81-25258  
Optimized bolted joint  
[NASA-CASE-LAR-13250-1] c 37 N86-27630  
Light weight fire resistant graphite composites  
[US-PATENT-4,598,007] c 24 N86-28131  
Ceramic honeycomb structures and the method thereof  
[NASA-CASE-ARC-11652-1] c 27 N87-23737  
Composite piston  
[NASA-CASE-LAR-13435-1] c 37 N88-23981  
Seamless metal-clad fiber-reinforced organic matrix composite structures and process for their manufacture  
[NASA-CASE-LAR-13562-1] c 24 N90-25196  
Method of inserting predesigned disbond areas into composite laminates  
[NASA-CASE-LAR-13225-1] c 24 N90-25197  
Process for HIP canning of composites  
[NASA-CASE-LEW-14990-1-CU] c 24 N91-17145  
Process for the manufacture of seamless metal-clad fiber-reinforced organic matrix composite structures  
[NASA-CASE-LAR-13562-2] c 24 N91-25199  
Glove attachment  
[NASA-CASE-MS-21632-1] c 54 N92-34210  
Reusable cryogenic liquid rocket propellant tank  
[NASA-CASE-LAR-14172-1] c 20 N93-31295
- COMPOSITION (PROPERTY)**  
Moving particle composition analyzer  
[NASA-CASE-GSC-11889-1] c 35 N76-16393
- COMPRESSED AIR**  
Valve actuator Patent  
[NASA-CASE-XHQ-01208] c 15 N70-35409
- COMPRESSIBILITY**  
Nozzle extraction process and handmeter for measuring handle  
[NASA-CASE-LAR-12147-1] c 31 N79-11246  
Compression pylon  
[NASA-CASE-LAR-13777-1] c 05 N90-20078  
Natural flow wing  
[NASA-CASE-LAR-14281-1] c 02 N92-28729
- COMPRESSIBLE FLUIDS**  
Apparatus having coaxial capacitor structure for measuring fluid density Patent  
[NASA-CASE-XLE-00143] c 14 N70-36618  
Apparatus for tensile testing Patent  
[NASA-CASE-XKS-06250] c 14 N71-15600
- COMPRESSING**  
Refrigeration apparatus Patent  
[NASA-CASE-XNP-08877] c 15 N71-23025  
Method for compression molding of thermosetting plastics utilizing a temperature gradient across the plastic to cure the article  
[NASA-CASE-LAR-10489-1] c 31 N74-18124  
Dynamic range compression/expansion of light beams by photorefractive crystals  
[NASA-CASE-NPO-17140-1-CU] c 74 N89-14077  
Mechanical end joint system for connecting structural column elements  
[NASA-CASE-LAR-14465-1] c 37 N91-14614  
Method of fabricating composite structures  
[NASA-CASE-MFS-28390-1] c 24 N91-15333  
Preloaded latching device  
[NASA-CASE-MS-21730-1] c 37 N93-13417  
Polyimides with improved compression moldability  
[NASA-CASE-LAR-14457-1] c 27 N93-25997  
Dual arm generalized compliant motion with shared control  
[NASA-CASE-NPO-18738-1-CU] c 37 N93-28954
- COMPRESSION LOADS**  
Pressure transducer  
[NASA-CASE-NPO-10832] c 14 N72-21405  
Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c 44 N74-33379  
Locking redundant link  
[NASA-CASE-LAR-11900-1] c 37 N79-14382  
Fixture for environmental exposure of structural materials under compression load  
[NASA-CASE-LAR-12602-1] c 39 N83-32081  
Deployable M-braced truss structure  
[NASA-CASE-LAR-13081-1] c 37 N86-32737  
Metallic threaded composite fastener  
[NASA-CASE-MS-21580-1] c 37 N92-21726  
Natural flow wing  
[NASA-CASE-LAR-14281-1] c 02 N92-28729  
Apparatus for elevated temperature compression or tension testing of specimens  
[NASA-CASE-LAR-14775-1] c 39 N92-30099
- COMPRESSION RATIO**  
Automatic compression adjusting mechanism for internal combustion engines  
[NASA-CASE-MS-18807-1] c 37 N83-36483
- COMPRESSION TESTS**  
Compression test assembly  
[NASA-CASE-LAR-10440-1] c 14 N73-32323

## COMPRESSIVE STRENGTH

- Anti-buckling fatigue test assembly --- for subjecting metal specimen to tensile and compressive loads at constant temperature  
[NASA-CASE-LAR-10426-1] c 09 N74-19528  
Compression test apparatus  
[NASA-CASE-MSC-18723-1] c 35 N83-21312  
Bearing-bypass material system test  
[NASA-CASE-LAR-13458-1] c 35 N88-23967  
Apparatus for elevated temperature compression or tension testing of specimens  
[NASA-CASE-LAR-14775-1] c 39 N92-30099

### COMPRESSIVE STRENGTH

- Truss-core corrugation for compressive loads  
[NASA-CASE-LAR-13438-1] c 31 N89-12786  
Sandwiched structural panel having a bi-directional core structure  
[NASA-CASE-MFS-28796-1] c 24 N93-19022

### COMPRESSOR BLADES

- Welding blades to rotors  
[NASA-CASE-LEW-10533-1] c 15 N73-28515  
Control means for a gas turbine engine  
[NASA-CASE-LEW-14586-1] c 07 N83-31603

### COMPRESSOR ROTORS

- Active clearance control system for a turbomachine  
[NASA-CASE-LEW-12938-1] c 07 N82-32366

### COMPRESSORS

- Thermal pump-compressor for space use Patent  
[NASA-CASE-XLA-00377] c 33 N71-17610  
Self-energized plasma compressor  
[NASA-CASE-MFS-22145-2] c 75 N76-17951  
Gas compression apparatus  
[NASA-CASE-MSC-14757-1] c 35 N78-10428  
Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c 37 N80-26658  
Cycling Joule Thomson refrigerator  
[NASA-CASE-NPO-15251-1] c 31 N83-31897  
Magnetically actuated compressor  
[NASA-CASE-GSC-12799-1] c 31 N85-21404  
Oxygen chemisorption cryogenic refrigerator  
[NASA-CASE-NPO-16734-1-CU] c 31 N88-14223  
Method of reducing drag in aerodynamic systems  
[NASA-CASE-LEW-14791-1] c 02 N92-34243  
Cooled spool piston compressor  
[NASA-CASE-MSC-22020-1] c 37 N93-19331

### COMPUTATION

- Apparatus for computing square roots Patent  
[NASA-CASE-XGS-04768] c 08 N71-19437  
Ruler for making navigational computations  
[NASA-CASE-XNP-01458] c 04 N78-17031

### COMPUTATIONAL FLUID DYNAMICS

- Aerodynamic design optimization using sensitivity analysis and computational fluid dynamics  
[NASA-CASE-LAR-14815-1-CU] c 34 N92-29830

### COMPUTATIONAL GRIDS

- Two dimensional vernier  
[NASA-CASE-MSC-21700-1] c 35 N92-22039

### COMPUTER AIDED MAPPING

- Programmable remapper for image processing  
[NASA-CASE-MSC-21350-1] c 60 N92-16563

### COMPUTER ANIMATION

- Generation of animation sequences of three dimensional models  
[NASA-CASE-MSC-21379-1-SB] c 61 N90-27340

### COMPUTER ASSISTED INSTRUCTION

- System and method for a general purpose architecture for intelligent computer-aided training  
[NASA-CASE-MSC-21381-1] c 63 N91-13944

### COMPUTER COMPONENTS

- Counter and shift register Patent  
[NASA-CASE-XNP-01753] c 08 N71-22897  
Binary to binary coded decimal converter  
[NASA-CASE-GSC-12044-1] c 60 N78-17691  
Computer circuit card puller  
[NASA-CASE-FRC-11042-1] c 60 N82-24839  
Control means for a solid state crossbar switch  
[NASA-CASE-NPO-15066-1] c 33 N82-29538  
Neighborhood comparison operator  
[NASA-CASE-NPO-16464-1-CU] c 60 N86-24224  
Real time pipelined system for forming the sum of products in the processing of video data  
[NASA-CASE-NPO-16462-1-CU] c 60 N88-24169

### COMPUTER DESIGN

- Two-dimensional radiant energy array computers and computing devices  
[NASA-CASE-GSC-11839-1] c 60 N77-14751  
Massively parallel processor computer  
[NASA-CASE-GSC-12223-1] c 60 N83-25378  
Distributed multiport memory architecture  
[NASA-CASE-NPO-15342-1] c 60 N83-32342  
Automatic multi-banking of memory for microprocessors  
[NASA-CASE-NPO-15295-1] c 60 N85-21992

### COMPUTER GRAPHICS

- System for quantizing graphic displays  
[NASA-CASE-NPO-10745] c 08 N72-22164

Generation of animation sequences of three dimensional models

- [NASA-CASE-MSC-21379-1-SB] c 61 N90-27340  
Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13854-1-CU] c 04 N91-31120  
Composite video and graphics display for multiple camera viewing system in robotics and teleoperation  
[NASA-CASE-NPO-17836-1-CU] c 32 N92-10126  
Composite video and graphics display for camera viewing systems in robotics and teleoperation  
[NASA-CASE-NPO-17836-1-CU] c 32 N93-18284

### COMPUTER INFORMATION SECURITY

- Computer access security code system  
[NASA-CASE-NPO-17525-1-CU] c 60 N90-25583

### COMPUTER NETWORKS

- High-speed data link for moderate distances and noisy environments  
[NASA-CASE-NPO-14152-1] c 32 N80-18252  
Common data buffer system --- communication with computational equipment utilized in spacecraft operations  
[NASA-CASE-KSC-11048-1] c 62 N81-24779  
Multicomputer communication system  
[NASA-CASE-NPO-15433-1] c 32 N85-21428  
Distributed computing system with dual independent communications paths between computers and employing split tokens  
[NASA-CASE-NPO-17185-1-CU] c 62 N91-14772  
Dynamic resource allocation scheme for distributed heterogeneous computer systems  
[NASA-CASE-NPO-17197-1-CU] c 62 N91-25693  
Network of dedicated processors for finding lowest-cost map path  
[NASA-CASE-NPO-17716-1-CU] c 62 N92-15620  
Cascaded VLSI neural network architecture for on-line learning  
[NASA-CASE-NPO-18645-1-CU] c 63 N92-34240

### COMPUTER PROGRAMMING

- Minimal logic block encoder Patent  
[NASA-CASE-NPO-10595] c 10 N71-25917  
Priority interrupt system --- comprised of four registers  
[NASA-CASE-NPO-13067-1] c 60 N76-18800  
Neural-network dedicated processor for solving competitive assignment problems  
[NASA-CASE-NPO-17781-1-CU] c 60 N92-17884  
Analog hardware for delta-backpropagation neural networks  
[NASA-CASE-NPO-17564-1-CU] c 32 N92-22033  
System for simultaneously loading program to master computer memory devices and corresponding slave computer memory devices  
[NASA-CASE-MSC-21387-1] c 61 N93-18855  
Neural-network dedicated processor for solving competitive assignment problems  
[NASA-CASE-NPO-17781-1-CU] c 60 N93-20116

### COMPUTER PROGRAMS

- Self-testing and repairing computer Patent  
[NASA-CASE-NPO-10567] c 08 N71-24633  
Program for computer aided reliability estimation  
[NASA-CASE-NPO-13086-1] c 15 N73-12495  
Numerical computer peripheral interactive device with manual controls  
[NASA-CASE-NPO-11497] c 08 N73-25206  
Local area network with fault-checking, priorities, and redundant backup  
[NASA-CASE-NPO-16949-1-CU] c 62 N90-19776  
Programmable remapper for image processing  
[NASA-CASE-MSC-21350-1] c 60 N92-16563  
Encyclopedia of software components  
[NASA-CASE-NPO-18435-1-CU] c 61 N92-30543

### COMPUTER STORAGE DEVICES

- Magnetic matrix memory system Patent  
[NASA-CASE-XMF-05835] c 08 N71-12504  
Binary sequence detector Patent  
[NASA-CASE-XNP-05415] c 08 N71-12505  
Pulse-type magnetic core memory element circuit with blocking oscillator feedback Patent  
[NASA-CASE-XGS-03303] c 08 N71-18595  
Drive circuit utilizing two cores Patent  
[NASA-CASE-XNP-01318] c 10 N71-23033  
Programmable telemetry system Patent  
[NASA-CASE-GSC-10131-1] c 07 N71-24624  
Serial digital decoder Patent  
[NASA-CASE-NPO-10150] c 08 N71-24650  
Digital memory in which the driving of each word location is controlled by a switch core Patent  
[NASA-CASE-XNP-01466] c 10 N71-26434  
Redundant memory organization Patent  
[NASA-CASE-GSC-10564] c 10 N71-29135  
Semiconductor-ferroelectric memory device  
[NASA-CASE-ERC-10307] c 08 N72-21198  
Shared memory for a fault-tolerant computer  
[NASA-CASE-NPO-13139-1] c 60 N76-21914  
Distributed multiport memory architecture  
[NASA-CASE-NPO-15342-1] c 60 N83-32342

## SUBJECT INDEX

Method of and apparatus for generating an interstitial point in a data stream having an even number of data points

- [NASA-CASE-MFS-25319-1] c 60 N85-33701  
Asymmetric soft-error resistant memory  
[NASA-CASE-NPO-17394-1-CU] c 60 N91-31810  
Integrated, non-volatile, high-speed analog random access memory  
[NASA-CASE-NPO-17998-1-CU] c 60 N92-12438  
Disk memory device  
[NASA-CASE-GSC-13196-1] c 60 N92-29132  
Storage control system  
[NASA-CASE-LAR-14651-1] c 82 N92-30386  
High speed magneto-resistive random access memory  
[NASA-CASE-NPO-17954-1-CU] c 60 N93-14704  
Acceleration recorder and playback module  
[NASA-CASE-MSC-22008-1] c 35 N93-17077

### COMPUTER SYSTEMS DESIGN

- Adaptive voting computer system  
[NASA-CASE-MSC-13932-1] c 62 N74-14920  
Computer interface system  
[NASA-CASE-NPO-13428-1] c 60 N77-12721  
Local area network with fault-checking, priorities, and redundant backup  
[NASA-CASE-NPO-16949-1-CU] c 62 N90-19776  
Adaptive data acquisition multiplexing system and method  
[NASA-CASE-MSC-21170-1] c 17 N91-14371  
Distributed computing system with dual independent communications paths between computers and employing split tokens  
[NASA-CASE-NPO-17185-1-CU] c 62 N91-14772  
Method and apparatus for positioning a robotic end effector  
[NASA-CASE-MSC-21476-1] c 37 N91-21542  
Highly parallel computer architecture for robotic computation  
[NASA-CASE-NPO-17632-1-CU] c 60 N91-32805  
Neural-network dedicated processor for solving competitive assignment problems  
[NASA-CASE-NPO-17781-1-CU] c 60 N92-17884  
Neural-network dedicated processor for solving competitive assignment problems  
[NASA-CASE-NPO-17781-1-CU] c 60 N93-20116

### COMPUTER SYSTEMS PERFORMANCE

- Neural network training by integration of adjoint systems of equations forward in time  
[NASA-CASE-NPO-18586-1-CU] c 63 N93-17276

### COMPUTER TECHNIQUES

- Automated system for identifying traces of organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c 25 N76-18245  
Apparatus for determining thermophysical properties of test specimens  
[NASA-CASE-LAR-11883-1] c 09 N77-27131  
Computerized system for translating a torch head  
[NASA-CASE-MFS-23620-1] c 37 N79-10421  
Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c 34 N81-26402  
Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333  
Auto covariance computer  
[NASA-CASE-LAR-12968-1] c 60 N86-21154  
System and method for a general purpose architecture for intelligent computer-aided training  
[NASA-CASE-MSC-21381-1] c 63 N91-13944  
Remote object configuration/orientation determination  
[NASA-CASE-NPO-17436-1-CU] c 35 N91-15512

### COMPUTER VISION

- Optically controlled welding system  
[NASA-CASE-MFS-29291-1] c 37 N89-12868  
Method and apparatus for predicting the direction of movement in machine vision  
[NASA-CASE-NPO-17552-1-CU] c 54 N92-29129  
Operator-tailored adjustable control station with movable monitors and cameras for viewing systems in robotics and teleoperations  
[NASA-CASE-NPO-17837-1-CU] c 74 N93-17273  
Near real-time stereo vision system  
[NASA-CASE-NPO-18593-1-CU] c 74 N93-18276

### COMPUTERIZED SIMULATION

- Integrated time shared instrumentation display Patent  
[NASA-CASE-XLA-01952] c 08 N71-12507  
Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c 35 N78-28411  
Simulator method and apparatus for practicing the mating of an observer-controlled object with a target  
[NASA-CASE-MFS-23052-2] c 74 N79-13855  
Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333  
Real-time simulation clock  
[NASA-CASE-LAR-14056-1] c 35 N90-23713

## SUBJECT INDEX

Discrete event simulation tool for analysis of qualitative models of continuous processing systems  
[NASA-CASE-MSC-21465-1] c 61 N91-14741  
Method and apparatus for predicting the direction of movement in machine vision  
[NASA-CASE-NPO-17552-1-CU] c 54 N92-29129  
Special purpose parallel computer architecture for real-time control and simulation in robotic applications  
[NASA-CASE-NPO-17629-1-CU] c 60 N93-29608

## COMPUTERS

Telemetry word forming unit  
[NASA-CASE-XNP-09225] c 09 N69-24333  
Data compression processor Patent  
[NASA-CASE-NPO-10068] c 08 N71-19288  
Communications link for computers  
[NASA-CASE-NPO-11161] c 08 N72-25207  
Digital interface for bi-directional communication between a computer and a peripheral device  
[NASA-CASE-MSC-20258-1] c 60 N84-28492  
Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629  
Auto covariance computer  
[NASA-CASE-LAR-12968-1] c 60 N86-21154  
System for simultaneously loading program to master computer memory devices and corresponding slave computer memory devices  
[NASA-CASE-MSC-21387-1] c 61 N93-18855  
Self-checking on-line testable static RAM  
[NASA-CASE-NPO-17939-1-CU] c 60 N93-22032

## CONCAVITY

Concave grating spectrometer Patent  
[NASA-CASE-XGS-01036] c 14 N70-40003

## CONCENTRATORS

Device for directionally controlling electromagnetic radiation Patent  
[NASA-CASE-XLE-01716] c 09 N70-40234  
Thermostatically controlled non-tracking type solar energy concentrator  
[NASA-CASE-NPO-13497-1] c 44 N76-14602  
Three-dimensional tracking solar energy concentrator and method for making same  
[NASA-CASE-NPO-13736-1] c 44 N77-32583  
Non-tracking solar energy collector system  
[NASA-CASE-NPO-13817-1] c 44 N79-11471  
Solar cell module  
[NASA-CASE-NPO-14467-1] c 44 N79-31753  
Solar concentrator  
[NASA-CASE-MFS-23727-1] c 44 N80-14473  
Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c 44 N81-17518  
Nebulization reflux concentrator  
[NASA-CASE-LAR-13254-1-CU] c 35 N86-29174

## CONCENTRIC CYLINDERS

Flow resistivity instrument  
[NASA-CASE-LAR-13053-1] c 43 N83-29783

## CONCENTRIC SPHERES

Method and apparatus for producing concentric hollow spheres --- inertial confinement fusion targets  
[NASA-CASE-NPO-14596-1] c 31 N81-33319  
Method and apparatus for producing gas-filled hollow spheres --- target pellets for inertial confinement fusion  
[NASA-CASE-NPO-14596-3] c 31 N83-31896

## CONCURRENT PROCESSING

Distributed computing system with dual independent communications paths between computers and employing split tokens  
[NASA-CASE-NPO-17185-1-CU] c 62 N91-14772

## CONDENSATES

Apparatus for testing polymeric materials Patent  
[NASA-CASE-XNP-09699] c 06 N71-24607  
Condensate removal device for heat exchanger  
[NASA-CASE-MSC-14143-1] c 77 N75-20139  
Method of evaporation  
[NASA-CASE-NPO-15609-2] c 25 N88-23846

## CONDENSERS (LIQUEFIERS)

Condenser - Separator  
[NASA-CASE-XLA-08645] c 15 N69-21465  
Condensate removal device for heat exchanger  
[NASA-CASE-MSC-14143-1] c 77 N75-20139

## CONDENSING

Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c 27 N79-22300  
Polybenzimidazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14643-1] c 27 N92-29953

## CONDUCTING FLUIDS

Multiducted electromagnetic pump Patent  
[NASA-CASE-NPO-10755] c 15 N71-27084  
Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
[NASA-CASE-MFS-19193-1] c 37 N75-19686

## CONDUCTING POLYMERS

Silicon containing electroconductive polymers and structures made therefrom  
[NASA-CASE-NPO-17826-1-CU] c 27 N92-16121  
Method of continuously determining crack length  
[NASA-CASE-LAR-14480-1-CU] c 39 N93-29612

## CONDUCTION ELECTRONS

Alternating gradient photodetector  
[NASA-CASE-NPO-17235-1-CU] c 35 N90-21358

## CONDUCTIVE HEAT TRANSFER

Enthalpy and stagnation temperature determination of a high temperature laminar flow gas stream Patent  
[NASA-CASE-XLE-00266] c 14 N70-34156  
Space suit heat exchanger Patent  
[NASA-CASE-XMS-09571] c 05 N71-19439  
Compact pulsed laser having improved heat conductance  
[NASA-CASE-NPO-13147-1] c 36 N77-25502  
Automatic thermal switch  
[NASA-CASE-GSC-12415-1] c 33 N82-24419  
Acoustic transducer apparatus with reduced thermal conduction  
[NASA-CASE-NPO-17620-1-CU] c 71 N91-14808  
Coupling device with improved thermal interface  
[NASA-CASE-GSC-13251-1] c 37 N92-29120

## CONDUCTIVITY

Integrated circuit reliability testing  
[NASA-CASE-NPO-17393-1-CU] c 33 N89-29679

## CONDUCTORS

Extensible cable support Patent  
[NASA-CASE-XMF-07587] c 15 N71-18701  
Method for making conductors for ferrite arrays --- from pre-formed metal conductors  
[NASA-CASE-LAR-10994-1] c 24 N75-13032  
Electrorepulsive actuator  
[NASA-CASE-NPO-17684-1-CU] c 33 N92-22042

## CONES

Conically shaped cavity radiometer with a dual purpose cone winding Patent  
[NASA-CASE-XNP-09701] c 14 N71-26475

## CONFIGURATION MANAGEMENT

Reconfigurable work station for a video display unit and keyboard  
[NASA-CASE-MFS-26009-1-SB] c 54 N88-24163  
Method and apparatus for configuration control of redundant robots  
[NASA-CASE-NPO-17801-1-CU] c 37 N91-21544  
Obstacle avoidance for redundant robots using configuration control  
[NASA-CASE-NPO-17852-1-CU] c 63 N92-33019  
New kinematic functions for redundancy resolution using configuration control  
[NASA-CASE-NPO-18608-1-CU] c 63 N93-17275

## CONFINEMENT

Observation window for a gas confining chamber  
[NASA-CASE-NPO-10890] c 11 N73-12265

## CONICAL BODIES

Conical valve plug Patent  
[NASA-CASE-XLE-00715] c 15 N70-34859  
Conical reflector antenna  
[NASA-CASE-NPO-10303] c 07 N72-22127  
Multiple reflection conical microwave antenna  
[NASA-CASE-NPO-11661] c 07 N73-14130  
Almond test body --- for microwave anechoic chambers  
[NASA-CASE-LAR-13747-1-CU] c 32 N89-28672

## CONICAL FLOW

Natural flow wing  
[NASA-CASE-LAR-14281-1] c 02 N92-28729

## CONICAL SCANNING

Conical scan tracking system employing a large antenna  
[NASA-CASE-NPO-14009-1] c 32 N79-13214

## CONICAL SHELLS

Device for determining the accuracy of the flare on a flared tube  
[NASA-CASE-XKS-03495] c 14 N69-39785  
Foldable solar concentrator Patent  
[NASA-CASE-XLA-04622] c 03 N70-41580  
Apparatus for machining geometric cones Patent  
[NASA-CASE-XMS-04292] c 15 N71-22722

## CONJUGATES

Phase conjugation method and apparatus for an active retrodirective antenna array  
[NASA-CASE-NPO-13641-1] c 32 N79-24210

## CONNECTORS

Connector strips-positive, negative and T tabs  
[NASA-CASE-XGS-01395] c 03 N69-21539  
Quick release connector Patent  
[NASA-CASE-XLA-01141] c 15 N71-13789  
Flared tube strainer  
[NASA-CASE-XLA-05056] c 15 N72-11389  
Process for making RF shielded cable connector assemblies and the products formed thereby  
[NASA-CASE-GSC-11215-1] c 09 N73-28083

## CONTACT POTENTIALS

Low heat leak connector for cryogenic system  
[NASA-CASE-XLE-02367-1] c 31 N79-21225  
Clamp-mount device  
[NASA-CASE-MFS-25510-1] c 37 N84-16560  
Apparatus for releasably connecting first and second objects in predetermined space relationship  
[NASA-CASE-MSC-18969-1] c 18 N84-22605  
Connection system --- insuring against loss of a tool component without using multiple tethers  
[NASA-CASE-MSC-20319-1] c 37 N85-21649  
Toggle release  
[NASA-CASE-MSC-21354-1] c 37 N88-24969  
Collet lock joint for space station truss  
[NASA-CASE-MSC-21207-1] c 37 N88-29180  
Vortex motion phase separator for zero gravity liquid transfer  
[NASA-CASE-KSC-11387-1] c 29 N90-20236  
Quick connect coupling  
[NASA-CASE-MSC-21539-1] c 37 N91-14610  
System for connecting fluid couplings  
[NASA-CASE-MFS-26042-1-SB] c 37 N91-14613  
Mechanized fluid connector and assembly tool system with ball detents  
[NASA-CASE-MSC-21434-1] c 37 N92-10197  
Method and apparatus for releasably connecting first and second objects  
[NASA-CASE-MSC-21517-1] c 31 N92-16161  
Robot-friendly connector --- space truss structures  
[NASA-CASE-MSC-21864-1] c 37 N92-23544  
Connection space reduction mechanism  
[NASA-CASE-GSC-13220-1] c 37 N92-29140  
Combined load test apparatus for flat panels  
[NASA-CASE-LAR-14698-1] c 39 N92-30028  
Fastening apparatus having shape memory alloy actuator  
[NASA-CASE-MSC-21935-1] c 37 N93-13423  
Work attachment mechanism/work attachment fixture  
[NASA-CASE-GSC-13430-1] c 37 N93-14712  
Slip joint connector  
[NASA-CASE-MFS-28659-1] c 37 N93-17080  
Robot-friendly connector --- space truss structures  
[NASA-CASE-MSC-21864-1] c 37 N93-20117  
Quick connect fastener  
[NASA-CASE-MFS-28833-1] c 37 N93-29846

**CONSCIOUSNESS**  
EEG sleep analyzer and method of operation Patent  
[NASA-CASE-MSC-13282-1] c 05 N71-24729

**CONSISTENCY**  
Constant-output atomizer --- Inhalation therapy and aerosol research  
[NASA-CASE-MFS-25631-1] c 34 N84-12406

**CONSOLES**  
Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c 32 N79-23310

**CONSOLIDATION**  
Preparing composite materials from matrices of processable aromatic polyimide thermoplastic blends  
[NASA-CASE-LAR-14107-1] c 24 N91-25200

**CONSTANTS**  
Spring operated accelerator and constant force spring mechanism therefor  
[NASA-CASE-ARC-10898-1] c 35 N77-18417

**CONSTRAINTS**  
Passive caging mechanism Patent  
[NASA-CASE-GSC-10306-1] c 15 N71-24694  
Cable restraint  
[NASA-CASE-LAR-10129-1] c 15 N73-25512  
Restraint system for ergometer  
[NASA-CASE-MFS-21046-1] c 14 N73-27377  
Reefing system  
[NASA-CASE-LAR-10129-2] c 37 N74-20063  
Restraining mechanism  
[NASA-CASE-MSC-13054] c 54 N78-17677  
Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c 52 N81-25662  
End effector with astronaut foot restraint  
[NASA-CASE-MSC-21721-1] c 54 N92-16559

**CONSTRUCTIONS**  
Gas arc constriction for plasma arc welding  
[NASA-CASE-MFS-28844-1] c 37 N93-31292

**CONSTRUCTION**  
Glove attachment  
[NASA-CASE-MSC-21632-1] c 54 N92-34210  
Counter-balanced, multiple cable construction crane  
[NASA-CASE-LAR-14565-1-CU] c 37 N92-34212

**CONSTRUCTION MATERIALS**  
Foldable construction block  
[NASA-CASE-MSC-12233-1] c 15 N72-25454  
Foldable construction block  
[NASA-CASE-MSC-12233-2] c 32 N73-13921  
Structural panels  
[NASA-CASE-ARC-11429-2-CU] c 27 N87-22845

**CONTACT POTENTIALS**  
Ionospheric battery Patent  
[NASA-CASE-XGS-01593] c 03 N70-35408

## CONTAINERLESS MELTS

- Method of crystallization --- in gravity-free environments  
 [NASA-CASE-MFS-23001-1] c 76 N77-32919  
 Gas levitator having fixed levitation node for containerless processing  
 [NASA-CASE-MFS-25509-1] c 35 N83-24828  
 Method and apparatus for supercooling and solidifying substances  
 [NASA-CASE-MFS-25242-1] c 35 N83-29650  
 Apparatus for production of ultrapure amorphous metals utilizing acoustic cooling  
 [NASA-CASE-NPO-15658-1] c 26 N86-32551  
 Quasi-containerless glass formation method and apparatus  
 [NASA-CASE-MFS-28090-1] c 27 N87-21111  
 Apparatus and method for quiescent containerless processing of high temperature metals and alloys in low gravity  
 [NASA-CASE-MFS-28087-1] c 35 N87-23944  
 Sample levitation and melt in microgravity  
 [NASA-CASE-NPO-17022-1-CU] c 29 N87-25489

## CONTAINERS

- Fluid containers and resealable septum therefor Patent  
 [NASA-CASE-NPO-10123] c 15 N71-24835  
 Method for detecting leaks in hermetically sealed containers Patent  
 [NASA-CASE-ERC-10045] c 15 N71-24910  
 Apparatus for detecting the amount of material in a resonant cavity container Patent  
 [NASA-CASE-XNP-02500] c 18 N71-27397  
 Sharps container  
 [NASA-CASE-MSC-21776-1] c 31 N92-33612

## CONTAINMENT

- Hemispherical latching apparatus  
 [NASA-CASE-MFS-25837-1] c 18 N85-29991

## CONTAMINANTS

- Apparatus for purging systems handling toxic, corrosive, noxious and other fluids Patent  
 [NASA-CASE-XMS-01905] c 12 N71-21089  
 Method and apparatus for mapping the distribution of chemical elements in an extended medium  
 [NASA-CASE-GSC-12808-1] c 25 N85-21279  
 Ballast system for maintaining constant pressure in a glove box  
 [NASA-CASE-NPO-17786-1-CU] c 35 N90-17104  
 Method of making contamination-free ceramic bodies  
 [NASA-CASE-LEW-14984-1] c 27 N92-16122  
 Fluid separator  
 [NASA-CASE-MFS-28658-1] c 34 N93-17039

## CONTAMINATION

- Spectral method for monitoring atmospheric contamination of inert-gas welding shields Patent  
 [NASA-CASE-XMF-02039] c 15 N71-15871  
 Separation nut Patent  
 [NASA-CASE-XGS-01971] c 15 N71-15922  
 Gas liquefaction and dispensing apparatus Patent  
 [NASA-CASE-NPO-10070] c 15 N71-27372  
 Bacterial contamination monitor  
 [NASA-CASE-GSC-10879-1] c 14 N72-25413  
 Biocontamination and particulate detection system  
 [NASA-CASE-NPO-13953-1] c 35 N79-28527  
 Biofilm monitoring coupon system and method of use  
 [NASA-CASE-MSC-21585-1] c 51 N91-31755  
 High velocity gas particulate sampling system  
 [NASA-CASE-MSC-21729-1] c 34 N92-16241  
 Swept wing attachment line contamination fence  
 [NASA-CASE-LAR-13400-1] c 02 N93-22015

## CONTINUOUS RADIATION

- CW ultrasonic bolt tensioning monitor  
 [NASA-CASE-LAR-12016-1] c 39 N78-15512  
 Pseudo continuous wave instrument --- ultrasonics  
 [NASA-CASE-LAR-12260-1] c 35 N79-10390  
 Low-frequency radio navigation system  
 [NASA-CASE-NPO-15264-1] c 04 N84-27713

## CONTINUOUS WAVE LASERS

- High power laser apparatus and system  
 [NASA-CASE-XLE-2529-2] c 36 N75-27364  
 Continuous plasma laser --- method and apparatus for producing intense, coherent, monochromatic light from low temperature plasma  
 [NASA-CASE-XNP-04167-3] c 36 N77-19416  
 Stark effect spectrophotometer for continuous absorption spectra monitoring --- a technique for gas analysis  
 [NASA-CASE-NPO-15102-1] c 25 N81-25159  
 Coherently pulsed laser source  
 [NASA-CASE-NPO-15111-1] c 36 N82-29589  
 Spectrophotometer stabilized laser with line center offset frequency control  
 [NASA-CASE-NPO-15516-1] c 36 N84-22943  
 Tunable CW diode-pumped Tm,Ho:YLF4 laser operating at or near room temperature  
 [NASA-CASE-NPO-18611-1-CU] c 36 N93-30415

## CONTINUOUS WAVE RADAR

- Phase-locked loop with sideband rejecting properties Patent  
 [NASA-CASE-XNP-02723] c 07 N70-41680  
 FM/CW radar system  
 [NASA-CASE-MFS-22234-1] c 32 N79-10264  
 Method and apparatus for measuring distance  
 [NASA-CASE-MSC-20912-1] c 32 N88-26568

## CONTINUUM FLOW

- Energy efficient continuous flow ash lockhopper  
 [NASA-CASE-NPO-16985-1-CU] c 31 N91-15423

## CONTOUR SENSORS

- Antenna surface contour control system  
 [NASA-CASE-LAR-13798-1] c 32 N89-25363

## CONTOURS

- Contour surveying system Patent  
 [NASA-CASE-XLA-08646] c 14 N71-17586  
 Contourograph system for monitoring electrocardiograms  
 [NASA-CASE-MSC-13407-1] c 10 N72-20225  
 Variable contour securing system  
 [NASA-CASE-MSC-16270-1] c 37 N78-27423  
 Device for measuring the contour of a surface  
 [NASA-CASE-LAR-11869-1] c 74 N78-27904  
 Contour detector and data acquisition system for the left ventricular outline  
 [NASA-CASE-ARC-10985-1] c 52 N79-10724  
 Contour measurement system  
 [NASA-CASE-MFS-23726-1] c 43 N79-26439  
 Cork-resin ablative insulation for complex surfaces and method for applying the same  
 [NASA-CASE-MFS-23626-1] c 24 N80-26388  
 Surface conforming thermal/pressure seal --- tail assemblies of space shuttle orbiters  
 [NASA-CASE-MSC-18422-1] c 37 N82-16408  
 Method and apparatus for contour mapping using synthetic aperture radar  
 [NASA-CASE-NPO-15939-1] c 43 N86-19711

## CONTROL

- Dual latching solenoid valve Patent  
 [NASA-CASE-XMS-05890] c 09 N71-23191  
 Apparatus for testing a pressure responsive instrument Patent  
 [NASA-CASE-XMF-04134] c 14 N71-23755  
 Failure detection and control means for improved drift performance of a gimbal platform system  
 [NASA-CASE-MFS-23551-1] c 04 N76-26175  
 Power factor control system for ac induction motors  
 [NASA-CASE-MFS-23988-1] c 33 N81-27395  
 Control means for a solid state crossbar switch  
 [NASA-CASE-NPO-15066-1] c 33 N82-29538  
 Television camera video level control system  
 [NASA-CASE-MSC-18578-1] c 32 N85-21427  
 Method and apparatus for detection and control of preloading in a Q-switched laser  
 [NASA-CASE-LAR-14790-1] c 36 N93-19373

## CONTROL BOARDS

- Pressure monitoring with a plurality of ionization gauges controlled at a central location Patent  
 [NASA-CASE-XLE-00787] c 14 N71-21090

## CONTROL DATA (COMPUTERS)

- Computer interface system  
 [NASA-CASE-NPO-13428-1] c 60 N77-12721

## CONTROL EQUIPMENT

- Stepping motor control circuit Patent  
 [NASA-CASE-GSC-10366-1] c 10 N71-18772  
 Drift compensation circuit for analog to digital converter Patent  
 [NASA-CASE-XNP-04780] c 08 N71-19687  
 Attitude controls for VTOL aircraft Patent  
 [NASA-CASE-XAC-08972] c 02 N71-20570  
 Control device Patent  
 [NASA-CASE-XAC-10019] c 15 N71-23809  
 Controlled release device Patent  
 [NASA-CASE-XKS-03338] c 15 N71-24043  
 Dual polarity full wave dc motor drive Patent  
 [NASA-CASE-XNP-07477] c 09 N71-26092  
 Digital memory in which the driving of each word location is controlled by a switch core Patent  
 [NASA-CASE-XNP-01466] c 10 N71-26434  
 Fluid jet amplifier Patent  
 [NASA-CASE-XLE-09341] c 12 N71-28741  
 System for controlling the operation of a variable signal device  
 [NASA-CASE-NPO-11064] c 07 N72-11150  
 Solid state remote circuit selector switch  
 [NASA-CASE-LEW-10387] c 09 N72-22201  
 Synchronous orbit battery cyclor  
 [NASA-CASE-GSC-11211-1] c 03 N72-25020  
 Infinite range electronics gain control circuit  
 [NASA-CASE-GSC-10786-1] c 10 N72-28241  
 Interferometric rotation sensor  
 [NASA-CASE-ARC-10278-1] c 14 N73-25463  
 Digital controller for a Baum folding machine --- providing automatic counting and machine shutoff  
 [NASA-CASE-LAR-10688-1] c 37 N74-21056

- Flow control valve --- for high temperature fluids  
 [NASA-CASE-NPO-11951-1] c 37 N74-21065  
 Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
 [NASA-CASE-MSC-14245-1] c 18 N75-27041  
 Anthropomorphic master/slave manipulator system  
 [NASA-CASE-ARC-10756-1] c 54 N77-32721  
 Power factor control system for AC induction motors  
 [NASA-CASE-MFS-23280-1] c 33 N78-10376  
 Variable cycle gas turbine engines  
 [NASA-CASE-LEW-12916-1] c 37 N78-17384  
 Control for nuclear thermionic power source  
 [NASA-CASE-NPO-13114-2] c 73 N78-28913  
 Illumination control apparatus for compensating solar light  
 [NASA-CASE-KSC-11010-1] c 74 N79-12890  
 Dual acting slit control mechanism  
 [NASA-CASE-LAR-11370-1] c 35 N80-28686  
 Pneumatic inflatable end effector  
 [NASA-CASE-MFS-23696-1] c 54 N81-26718  
 Means for controlling aerodynamically induced twist  
 [NASA-CASE-LAR-12175-1] c 05 N82-28279  
 Electronic system for high power load control --- solar arrays  
 [NASA-CASE-NPO-15358-1] c 33 N83-27126  
 Pulsed thyristor trigger control circuit  
 [NASA-CASE-MFS-25616-1] c 33 N84-16455  
 Magnetic spin reduction system for free spinning objects  
 [NASA-CASE-MFS-25966-1] c 16 N86-26352  
 Apparatus and method of capturing an orbiting spacecraft  
 [NASA-CASE-MSC-20979-1] c 37 N87-22985  
 Controlled sample orientation and rotation in an acoustic levitator  
 [NASA-CASE-NPO-17086-1-CU] c 35 N89-14422  
 Active control of boundary layer transition and turbulence  
 [NASA-CASE-LAR-13532-1] c 34 N91-14562  
 Rotatable non-circular forebody flow controller  
 [NASA-CASE-LAR-14212-1-CU] c 05 N91-31140  
 User friendly joystick  
 [NASA-CASE-GSC-13187-1] c 33 N92-29153  
 Control and augmentation of passive porosity through transpiration control  
 [NASA-CASE-LAR-14682-1] c 34 N92-30387
- CONTROL ROCKETS**  
 Decomposition unit Patent  
 [NASA-CASE-XMS-00583] c 28 N70-38504
- CONTROL RODS**  
 Null device for hand controller Patent  
 [NASA-CASE-XLA-01808] c 15 N71-20740
- CONTROL SIMULATION**  
 Helmet weight simulator  
 [NASA-CASE-LAR-12320-1] c 54 N81-27806
- CONTROL STABILITY**  
 Apparatus for sensor failure detection and correction in a gas turbine engine control system  
 [NASA-CASE-LEW-12907-2] c 07 N81-19115  
 Apparatus for damping operator induced oscillations of a controlled system --- flight control  
 [NASA-CASE-FRC-11041-1] c 33 N82-18493  
 Controlled sample orientation and rotation in an acoustic levitator  
 [NASA-CASE-NPO-17086-1-CU] c 35 N89-14422
- CONTROL STICKS**  
 User friendly joystick  
 [NASA-CASE-GSC-13187-1] c 33 N92-29153
- CONTROL SURFACES**  
 Conical valve plug Patent  
 [NASA-CASE-XLE-00715] c 15 N70-34859  
 Attitude control for spacecraft Patent  
 [NASA-CASE-XNP-02982] c 31 N70-41855  
 Vortex-lift roll-control device  
 [NASA-CASE-LAR-11868-2] c 08 N79-14108  
 Aerodynamic side-force alleviator means  
 [NASA-CASE-LAR-12326-1] c 02 N81-14968  
 Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures  
 [NASA-CASE-MSC-18134-1] c 37 N81-15363  
 Control surface actuator  
 [NASA-CASE-LAR-12852-1] c 05 N89-11738  
 Rotatable non-circular forebody flow controller  
 [NASA-CASE-LAR-14212-1-CU] c 05 N91-31140  
 Underwing compression vortex attenuation device  
 [NASA-CASE-LAR-14744-1] c 02 N93-19053  
 Swept wing attachment line contamination fence  
 [NASA-CASE-LAR-13400-1] c 02 N93-22015
- CONTROL SYSTEMS DESIGN**  
 Reactant pressure differential control for fuel cell gases  
 [NASA-CASE-MSC-20127-2] c 37 N85-34403  
 Brushless DC motor control system responsive to control signals generated by a computer or the like  
 [NASA-CASE-NPO-16420-1] c 33 N86-20681

- ARC length control for plasma welding  
[NASA-CASE-MSC-20900-1] c 37 N88-30131
- Spacecraft component heater control system  
[NASA-CASE-MFS-28327-1] c 18 N89-28556
- Robust high-performance control for robotic manipulators  
[NASA-CASE-NPO-17785-1-CU] c 37 N89-28846
- Docking mechanism for spacecraft  
[NASA-CASE-MSC-21386-1] c 18 N90-20126
- Balanced bridge feedback control system  
[NASA-CASE-NPO-17430-1-CU] c 33 N90-21951
- Long period pseudo random number sequence generator  
[NASA-CASE-NPO-17241-1-CU] c 33 N90-23636
- System and method for a general purpose architecture for intelligent computer-aided training  
[NASA-CASE-MSC-21381-1] c 63 N91-13944
- Electro-optical spin measurement system  
[NASA-CASE-LAR-13629-1] c 09 N91-14356
- Combined air and water pollution control system  
[NASA-CASE-NST-00007-1] c 45 N91-14662
- Permanent magnet flux-biased magnetic actuator with flux feedback  
[NASA-CASE-LAR-13785-1] c 70 N91-21824
- Control circuitry using electronic emulation of a synchro signal for accurate control of position and rate of rotation for shafts  
[NASA-CASE-MFS-28458-1] c 33 N91-26459
- Rotatable non-circular forebody flow controller  
[NASA-CASE-LAR-14212-1-CU] c 05 N91-31140
- A universal computer control system for motors  
[NASA-CASE-NPO-17134-1-CU] c 33 N91-31528
- Reconfigurable, fuzzy cell  
[NASA-CASE-MSC-21613-1] c 61 N92-10331
- High level language-based robotic control system  
[NASA-CASE-NPO-17918-2-CU] c 63 N92-17895
- Passive control of pressure loads using porosity  
[NASA-CASE-LAR-14547-1] c 34 N92-17909
- Storage control system  
[NASA-CASE-LAR-14651-1] c 82 N92-30386
- Method and circuit for controlling the evolution time interval of a laser output pulse  
[NASA-CASE-LAR-13772-1] c 36 N92-31788
- Hazardous materials emergency response mobile robot  
[NASA-CASE-NPO-18690-1-CU] c 37 N92-34205
- Measurand transient signal suppressor  
[NASA-CASE-MSC-22027-1] c 63 N93-17056
- Operator-tailored adjustable control station with movable monitors and cameras for viewing systems in robotics and teleoperations  
[NASA-CASE-NPO-17837-1-CU] c 74 N93-17273
- Three-parameter tunable Tilt-Integral-Derivative (TID) controller  
[NASA-CASE-NPO-18492-1-CU] c 63 N93-29176
- CONTROL THEORY**
- Robust high-performance control for robotic manipulators  
[NASA-CASE-NPO-17785-1-CU] c 37 N89-28846
- Method and apparatus for configuration control of redundant robots  
[NASA-CASE-NPO-17801-1-CU] c 37 N91-21544
- Terminal slider control of nonlinear robotic systems  
[NASA-CASE-NPO-18584-1-CU] c 37 N93-11177
- CONTROL UNITS (COMPUTERS)**
- Self-testing and repairing computer Patent  
[NASA-CASE-NPO-10567] c 08 N71-24633
- CONTROL VALVES**
- Electromechanical actuator  
[NASA-CASE-XNP-05975] c 15 N69-23185
- Full flow with shut off and selective drainage control valve Patent application  
[NASA-CASE-ERC-10208] c 15 N70-10867
- Conical valve plug Patent  
[NASA-CASE-XLE-00715] c 15 N70-34859
- Control valve and co-axial variable injector Patent  
[NASA-CASE-XNP-09702] c 15 N71-17654
- Electrohydrodynamic control valve Patent  
[NASA-CASE-NPO-10416] c 12 N71-27332
- Force-balanced, throttle valve Patent  
[NASA-CASE-NPO-10808] c 15 N71-27432
- Dual stage check valve  
[NASA-CASE-MSC-13587-1] c 15 N73-30459
- Airflow control system for supersonic inlets  
[NASA-CASE-LEW-11188-1] c 02 N74-20646
- Ultrasonically bonded valve assembly  
[NASA-CASE-NPO-13360-1] c 37 N75-25185
- Pressure modulating valve  
[NASA-CASE-MSC-14905-1] c 37 N77-28487
- Fluid valve assembly  
[NASA-CASE-MSC-12731-1] c 37 N78-25426
- Flow diverter valve and flow diversion method  
[NASA-CASE-HQN-00573-1] c 37 N79-33468
- Quartz ball valve  
[NASA-CASE-NPO-14473-1] c 37 N80-23654
- Pressure control valve --- inflating flexible bladders  
[NASA-CASE-ARC-11251-1] c 37 N81-17433
- Electrical servo actuator bracket --- fuel control valves on jet engines  
[NASA-CASE-FRC-11044-1] c 37 N81-33483
- Control means for a gas turbine engine  
[NASA-CASE-LEW-14586-1] c 07 N83-31603
- Slow opening valve --- valve design for shuttle portable oxygen system  
[NASA-CASE-MSC-20112-1] c 37 N85-20338
- Remotely controllable mixing system  
[NASA-CASE-MFS-28153-1] c 31 N86-32589
- Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N87-21332
- Monogroove cold plate  
[NASA-CASE-MSC-20946-1] c 34 N87-28867
- Low-noise nozzle valve  
[NASA-CASE-MFS-28383-1] c 34 N91-14563
- High-temperature, high-pressure oxygen metering valve  
[NASA-CASE-MSC-21823-1] c 37 N93-14843
- Valve lock  
[NASA-CASE-MFS-29764-1] c 37 N93-19049
- Magnetically operated check valve  
[NASA-CASE-MSC-22046-1] c 37 N93-28501
- CONTROLLED ATMOSPHERES**
- Electrical connector Patent Application  
[NASA-CASE-MFS-14741] c 09 N70-20737
- High voltage pulse generator Patent  
[NASA-CASE-MSC-12178-1] c 09 N71-13518
- Exposure system for animals Patent  
[NASA-CASE-XAC-05333] c 11 N71-22875
- Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612
- CONTROLLERS**
- Three axis controller Patent  
[NASA-CASE-XFR-00181] c 21 N70-33279
- Two-axis controller Patent  
[NASA-CASE-XFR-04104] c 03 N70-42073
- Controllers Patent  
[NASA-CASE-XMS-07487] c 15 N71-23255
- Solid state controller three axes controller  
[NASA-CASE-MSC-12394-1] c 08 N74-10942
- Wide power range microwave feedback controller  
[NASA-CASE-GSC-12146-1] c 33 N78-32340
- Active nutation controller  
[NASA-CASE-GSC-12273-1] c 35 N80-21719
- Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c 37 N81-17432
- Controller for computer control of brushless dc motors --- automobile engines  
[NASA-CASE-NPO-13970-1] c 33 N81-20352
- Motor power factor controller with a reduced voltage starter  
[NASA-CASE-MFS-25586-1] c 33 N82-11360
- Phase detector for three-phase power factor controller  
[NASA-CASE-MFS-25854-1] c 33 N84-27975
- Three-phase power factor controller with induced EMF sensing  
[NASA-CASE-MFS-25852-1] c 33 N84-33661
- Thumb-actuated two-axis controller  
[NASA-CASE-ARC-11372-1] c 08 N86-27288
- Reconfigurable work station for a video display unit and keyboard  
[NASA-CASE-MFS-26009-1-SB] c 54 N88-24163
- Nanosequencer digital logic controller  
[NASA-CASE-NPO-16116-2] c 60 N88-29310
- Fluidic momentum controller  
[NASA-CASE-MSC-20906-2] c 35 N89-15379
- Robust high-performance control for robotic manipulators  
[NASA-CASE-NPO-17785-1-CU] c 37 N89-28846
- Generation of animation sequences of three dimensional models  
[NASA-CASE-MSC-21379-1-SB] c 61 N90-27340
- Solder dross removal apparatus  
[NASA-CASE-MFS-28406-1] c 37 N91-13729
- Method of injecting fluid propellants into a rocket combustion chamber  
[NASA-CASE-LEW-14846-2] c 20 N91-26200
- A universal computer control system for motors  
[NASA-CASE-NPO-17134-1-CU] c 33 N91-31528
- Synchronized computational architecture for generalized bilateral control of robot arms  
[NASA-CASE-NPO-17401-1-CU] c 63 N91-31885
- Teleoperator control system  
[NASA-CASE-NPO-18116-1-CU] c 37 N91-32509
- A generalized compliant motion primitive  
[NASA-CASE-NPO-18134-1-CU] c 37 N91-32510
- Control system for ruling blazed, aberration corrected diffraction gratings  
[NASA-CASE-GSC-13240-1] c 35 N92-10186
- Reconfigurable fuzzy cell  
[NASA-CASE-MSC-21613-1] c 61 N92-10331
- Apparatus for precision focussing and positioning of a beam waist on a target  
[NASA-CASE-ARC-11916-1-SB] c 74 N92-16811
- Closed-loop motor control using high-speed fiber optics  
[NASA-CASE-MSC-21806-1] c 74 N92-17863
- Controlling flexible robot arms using a high speed dynamics process  
[NASA-CASE-NPO-18499-1-CU] c 37 N92-24042
- Controlling under-actuated robot arms using a high speed dynamics process  
[NASA-CASE-NPO-18498-1-CU] c 37 N92-24043
- Closed-loop autonomous docking system  
[NASA-CASE-MFS-28421-1] c 18 N92-28750
- Method for advanced material characterization by laser induced eddy current imaging  
[NASA-CASE-GSC-13386-1] c 38 N92-29154
- Programmable hyperspectral image mapper with on-array processing  
[NASA-CASE-NPO-17794-1-CU] c 74 N92-30104
- Phase-stepping fiber-optic projected fringe system for surface topography measurements  
[NASA-CASE-LEW-14996-1] c 74 N93-11058
- Control system and method for prosthetic devices  
[NASA-CASE-MSC-21941-1] c 54 N93-17087
- Gas storage and recovery system  
[NASA-CASE-MSC-22091-1] c 31 N93-28136
- Three-parameter tunable Tilt-Integral-Derivative (TID) controller  
[NASA-CASE-NPO-18492-1-CU] c 63 N93-29176
- CONVECTION**
- Method and apparatus for minimizing convection during crystal growth from solution  
[NASA-CASE-NPO-15811-1] c 76 N84-12968
- High temperature insulation barrier composite  
[NASA-CASE-MFS-29241-1] c 24 N90-23480
- Crystal growth in a microgravity environment  
[NASA-CASE-MFS-28473-1] c 76 N93-14707
- CONVECTIVE FLOW**
- Geysering inhibitor for vertical cryogenic transfer pipe  
[NASA-CASE-KSC-10615] c 15 N73-12486
- Method and apparatus for convection control of metallic halide vapor density in a metallic halide laser  
[NASA-CASE-NPO-15021-1] c 36 N83-10417
- Acoustic convective system  
[NASA-CASE-NPO-17278-1-CU] c 31 N90-21215
- CONVECTIVE HEAT TRANSFER**
- Thin film gauge --- for measuring convective heat transfer rates along test surfaces in wind tunnels  
[NASA-CASE-NPO-10617-1] c 35 N74-22095
- Acoustic convective system  
[NASA-CASE-NPO-17278-1-CU] c 31 N90-21215
- CONVERGENCE**
- Shock wave convergence apparatus  
[NASA-CASE-MFS-20890] c 14 N72-22439
- Dual cathode system for electron beam instruments  
[NASA-CASE-NPO-16878-1-CU] c 35 N90-20351
- Convergent strand array liquid pumping system  
[NASA-CASE-NPO-17301-1-CU] c 31 N90-23587
- Stereoscopic camera and viewing systems with undistorted depth presentation and reduced or eliminated erroneous acceleration and deceleration perceptions, or with perceptions produced or enhanced for special effects  
[NASA-CASE-NPO-18028-1-CU] c 74 N92-16809
- CONVERGENT NOZZLES**
- Nozzle extraction process and handmeter for measuring handle  
[NASA-CASE-LAR-12147-1] c 31 N79-11246
- CONVERGENT-DIVERGENT NOZZLES**
- Gimballed, partially submerged rocket nozzle Patent  
[NASA-CASE-XMF-01544] c 28 N70-34162
- Combustion chamber Patent  
[NASA-CASE-XLE-04857] c 28 N71-23968
- Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c 07 N80-32392
- Wind tunnel supplementary Mach number minimum section insert  
[NASA-CASE-LAR-12532-1] c 09 N82-11088
- Nozzle fabrication technique  
[NASA-CASE-MSC-21299-1] c 20 N88-24684
- CONVERSION**
- Technique for measuring gas conversion factors  
[NASA-CASE-LAR-13220-1] c 34 N86-12547
- CONVERTERS**
- Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c 35 N76-16391
- CONVEYITY**
- Wide acceptance angle, high concentration ratio, optical collector  
[NASA-CASE-MFS-28295-1] c 74 N91-13999
- CONVEYORS**
- System and method for refurbishing and processing parachutes --- monorial conveyor system  
[NASA-CASE-KSC-11042-2] c 02 N81-26073



## CONVOLUTION INTEGRALS

- Method for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-1] c 09 N82-29330  
Static continuous electrophoresis device  
[NASA-CASE-MFS-25306-1] c 25 N83-13187  
Acoustic system for material transport  
[NASA-CASE-NPO-15453-1] c 71 N83-32515  
Shuttle car loading system  
[NASA-CASE-NPO-15949-1] c 85 N85-34722

### CONVOLUTION INTEGRALS

- Real time pipelined system for forming the sum of products in the processing of video data  
[NASA-CASE-NPO-16462-1-CU] c 60 N88-24169

### COOLANTS

- Jet pump-drive system for heat removal  
[NASA-CASE-NPO-16494-1-CU] c 34 N85-29182  
Cooling apparatus and couplings therefor  
[NASA-CASE-ARC-11921-1] c 34 N92-11286  
Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-2] c 34 N92-30024

### COOLERS

- Flexible thermal apparatus for mounting of thermoelectric cooler  
[NASA-CASE-NPO-17806-1-CU] c 31 N91-27385  
Ultra-high temperature stability Joule-Thomson cooler with capability to accommodate pressure variations  
[NASA-CASE-NPO-18184-1-CU] c 35 N92-29156

### COOLING

- Microwave power receiving antenna Patent  
[NASA-CASE-MFS-20333] c 09 N71-13486  
Voltage regulator with plural parallel power source sections Patent  
[NASA-CASE-GSC-10891-1] c 10 N71-26626  
Laser coolant and ultraviolet filter  
[NASA-CASE-MFS-20180] c 16 N72-12440  
Compact pulsed laser having improved heat conductance  
[NASA-CASE-NPO-13147-1] c 36 N77-25502  
Heating and cooling system --- for fatigue test specimens  
[NASA-CASE-LAR-12393-1] c 34 N83-34221  
Tip cap for a rotor blade  
[NASA-CASE-LEW-13654-1] c 07 N84-22560  
Combustor liner construction  
[NASA-CASE-LEW-14035-1] c 07 N84-24577  
Air modulation apparatus  
[NASA-CASE-LEW-13524-1] c 07 N84-33410  
Heat pipe cooled probe  
[NASA-CASE-LAR-12588-1] c 34 N85-21568  
Thermocouple for heating and cooling of memory metal actuators  
[NASA-CASE-NPO-17068-1-CU] c 35 N88-29151  
Surface tension confined liquid cryogen cooler  
[NASA-CASE-GSC-13112-1] c 31 N89-29578  
Steam cooled rich-burn combustor liner  
[NASA-CASE-LEW-13609-1] c 25 N90-11824  
High temperature electric arc furnace and method  
[NASA-CASE-MFS-28281-1] c 09 N90-23415  
Crystal growth in a microgravity environment  
[NASA-CASE-MFS-28473-1] c 76 N93-14707  
Semiconductor cooling apparatus  
[NASA-CASE-LEW-14162-3] c 24 N93-29614

### COOLING SYSTEMS

- Automatic thermal switch Patent  
[NASA-CASE-XNP-03796] c 23 N71-15467  
Differential temperature transducer Patent  
[NASA-CASE-XAC-00812] c 14 N71-15598  
Power system with heat pipe liquid coolant lines Patent  
[NASA-CASE-MFS-14114-2] c 09 N71-24807  
Cryogenic cooling system Patent  
[NASA-CASE-NPO-10467] c 23 N71-26654  
Self-adjusting multisegment, deployable, natural circulation radiator Patent  
[NASA-CASE-XHQ-03673] c 33 N71-29046  
Heat conductive resiliently compressible structure for space electronics package modules Patent  
[NASA-CASE-MS-12389] c 33 N71-29052  
Method and device for cooling Patent  
[NASA-CASE-HQN-00938] c 33 N71-29053  
Liquid spray cooling method Patent  
[NASA-CASE-XLE-00027] c 33 N71-29152  
Radial heat flux transformer  
[NASA-CASE-NPO-10828] c 33 N72-17948  
Light shield and cooling apparatus --- high intensity ultraviolet lamp  
[NASA-CASE-LAR-10089-1] c 34 N74-23066  
Refrigerated coaxial coupling --- for microwave equipment  
[NASA-CASE-NPO-13504-1] c 33 N75-30430  
Rocket chamber and method of making  
[NASA-CASE-LEW-11118-2] c 20 N76-14191  
Tubular sublimatory evaporator heat sink  
[NASA-CASE-ARC-10912-1] c 34 N77-19353  
Arc control in compact arc lamps  
[NASA-CASE-NPO-10870-1] c 33 N77-22386

- Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c 07 N77-23106  
Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c 37 N78-10467  
Closed loop spray cooling apparatus --- for particle accelerator targets  
[NASA-CASE-LEW-11981-1] c 31 N78-17237  
Multistation refrigeration system  
[NASA-CASE-NPO-13839-1] c 31 N78-25256  
Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c 54 N78-32721  
Heat exchanger --- rocket combustion chambers and cooling systems  
[NASA-CASE-LEW-12252-1] c 34 N79-13288  
Closed loop spray cooling apparatus  
[NASA-CASE-LEW-11981-2] c 34 N79-20336  
Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c 45 N80-14579  
Heat exchanger and method of making  
[NASA-CASE-LEW-12441-3] c 44 N81-24519  
Cooling system for high speed aircraft  
[NASA-CASE-LAR-12406-1] c 05 N81-26114  
Waveguide cooling system  
[NASA-CASE-NPO-15401-1] c 32 N83-27085  
Cooling by conversion of para to ortho-hydrogen  
[NASA-CASE-GSC-12770-1] c 25 N83-29324  
Radiative cooler --- spacecraft radiators  
[NASA-CASE-NPO-15465-1] c 34 N84-22903  
Combustor liner construction  
[NASA-CASE-LEW-14035-1] c 07 N84-24577  
High thermal power density heat transfer apparatus providing electrical isolation at high temperature using heat pipes  
[NASA-CASE-LEW-12950-2] c 34 N85-29179  
Jet pump-drive system for heat removal  
[NASA-CASE-NPO-16494-1-CU] c 34 N85-29182  
Precision manipulator heating and cooling apparatus for use in UHV systems with sample transfer capability  
[NASA-CASE-LAR-13040-1] c 37 N85-29286  
Vortex generating flow passage design for increased film cooling effectiveness  
[NASA-CASE-LEW-14039-1] c 34 N85-33433  
Monogroove cold plate  
[NASA-CASE-MS-20946-1] c 34 N87-28867  
Capillary heat transport and fluid management device  
[NASA-CASE-MFS-28217-1] c 34 N89-14392  
Cooling apparatus and couplings therefor  
[NASA-CASE-ARC-11921-1] c 34 N92-11286

### COORDINATES

- Mechanical coordinate converter Patent  
[NASA-CASE-XNP-00614] c 14 N70-36907  
Lightning tracking system  
[NASA-CASE-KSC-10729-1] c 09 N73-32110  
Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c 04 N77-19056  
Remote object configuration/orientation determination  
[NASA-CASE-NPO-17436-1-CU] c 35 N91-15512  
Method and apparatus for configuration control of redundant robots  
[NASA-CASE-NPO-17801-1-CU] c 37 N91-21544

### COPOLYMERIZATION

- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-1] c 27 N84-27885  
Chemical control of nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-2] c 25 N85-28982  
Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
[NASA-CASE-ARC-11429-1-CU] c 27 N86-20560  
Process for curing bismaleimide resins  
[NASA-CASE-ARC-11429-4CU] c 27 N87-15304  
Polyether-polyester graft copolymer  
[NASA-CASE-LAR-13447-1] c 27 N88-18725  
Bis (4-(3,4-dimethylene-pyrrolidyl)-phenyl) methane  
[NASA-CASE-LAR-13965-2-CU] c 23 N91-14418

### COPOLYMERS

- Method of producing alternating ether siloxane copolymers Patent  
[NASA-CASE-XMF-02584] c 06 N71-20905  
Dicyanoacetylene polymers Patent  
[NASA-CASE-XNP-03250] c 06 N71-23500  
Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MS-14903-3] c 27 N80-24438  
Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
[NASA-CASE-NPO-13530-1] c 25 N81-17187  
Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-3] c 27 N85-21350  
Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-4] c 27 N85-21351

## SUBJECT INDEX

- Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c 33 N85-29144  
Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-1] c 24 N86-19380  
Poly(carbonate-mide) polymer  
[NASA-CASE-LAR-13292-1] c 27 N86-24841  
Polyarylene ethers with improved properties  
[NASA-CASE-LAR-13555-1] c 23 N86-32526  
Polyether-polyester graft copolymer  
[NASA-CASE-LAR-13447-1] c 27 N88-18725  
Copolyimide with a combination of flexibilizing groups  
[NASA-CASE-LAR-13821-1] c 27 N90-16950  
Silicon containing electroconductive polymers and structures made therefrom  
[NASA-CASE-NPO-17826-1-CU] c 27 N92-16121  
Imide/arylene ether copolymers  
[NASA-CASE-LAR-14159-1-CU] c 27 N92-31792

### COPPER

- Method for etching copper Patent  
[NASA-CASE-XGS-06306] c 17 N71-16044  
Method of plating copper on aluminum Patent  
[NASA-CASE-XLA-08966-1] c 17 N71-25903  
Brazing alloy composition  
[NASA-CASE-XMF-06053] c 26 N75-27126  
Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c 44 N79-11469  
Metal (2,4,4',4'-phthalocyanine tetraamines as curing agents for epoxy resins  
[NASA-CASE-ARC-11424-1] c 27 N85-34281

### COPPER ALLOYS

- Zirconium modified nickel-copper alloy  
[NASA-CASE-LEW-12245-1] c 26 N77-20201  
Thin film strain transducer  
[NASA-CASE-WLP-10055-1] c 35 N84-28015  
Aluminum alloy  
[NASA-CASE-LAR-13924-1-CU] c 26 N89-28621  
Method of forming low cost, formable High T(subc) superconducting wire  
[NASA-CASE-LEW-14676-2] c 76 N90-17454  
Low cost, formable, high T(sub c) superconducting wire  
[NASA-CASE-LEW-14676-1] c 33 N91-31529  
Method of fabricating a rocket engine combustion chamber  
[NASA-CASE-MFS-28569-1] c 27 N93-30565

### COPPER CHLORIDES

- Copper chloride cathode for a secondary battery  
[NASA-CASE-NPO-17640-1-CU] c 33 N91-14538

### COPPER COMPOUNDS

- Simple method of making photovoltaic junctions Patent  
[NASA-CASE-XNP-01960] c 09 N71-23027  
Laser coolant and ultraviolet filter  
[NASA-CASE-MFS-20180] c 16 N72-12440  
Brazing alloy  
[NASA-CASE-XNP-03878] c 26 N75-27127

### COPPER FLUORIDES

- Preparation of high purity copper fluoride  
[NASA-CASE-LEW-10794-1] c 06 N72-17093

### COPPER OXIDES

- Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587  
An improved SNS superconducting junction with weak link barrier and method of producing  
[NASA-CASE-NPO-18552-1-CU] c 33 N92-24246

### CORDAGE

- Method of forming a root cord restrained convolute section  
[NASA-CASE-MS-12398] c 05 N72-20098

### CORE STORAGE

- Semiconductor-ferroelectric memory device  
[NASA-CASE-ERC-10307] c 08 N72-21198

### CORES

- Method of making rolling element bearings  
[NASA-CASE-LEW-11087-2] c 37 N74-15128  
Electromagnetic transducer recording head having a laminated core section and tapered gap  
[NASA-CASE-NPO-10711-1] c 35 N77-21392  
Superplastically formed diffusion bonded metallic structure  
[NASA-CASE-FRC-11026-1] c 24 N82-24296  
Low power consumption current transducer  
[NASA-CASE-NPO-16888-1-CU] c 33 N89-29681  
Core design for use with precision composite reflectors  
[NASA-CASE-NPO-17858-1-CU] c 24 N93-14700

### CORIOLIS EFFECT

- Process for selectively recovering algae and protozoa  
[NASA-CASE-MFS-26124-1-NPO] c 51 N93-29174



**CORK (MATERIALS)**

Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MFS-23626-1] c 24 N80-26388

**CORRECTION**

Doppler frequency spread correction device for multiplex transmissions  
[NASA-CASE-XGS-02749] c 07 N69-39978  
Alignment positioning mechanism  
[NASA-CASE-MSC-21502-1] c 37 N91-21543

**CORRELATION**

Clutter free synthetic aperture radar correlator  
[NASA-CASE-NPO-14035-1] c 32 N83-19968

**CORRELATION DETECTION**

Correlation type phase detector --- with time correlation integrator for frequency multiplexed signals  
[NASA-CASE-GSC-11744-1] c 33 N75-26243  
Interferometric locating system  
[NASA-CASE-NPO-14173-1] c 04 N80-32359

**CORRELATORS**

Millimeter wave radiometer for radio astronomy Patent  
[NASA-CASE-XNP-09832] c 30 N71-23723  
Digital demodulator-correlator  
[NASA-CASE-NPO-13982-1] c 32 N79-14267  
Baseband signal combiner for large aperture antenna array  
[NASA-CASE-NPO-14641-1] c 32 N81-29308  
Serial data correlator/code translator  
[NASA-CASE-KSC-11025-1] c 32 N83-13323  
Synchronous demodulator  
[NASA-CASE-GSC-13179-1] c 33 N91-26438

**CORROSION**

Method of neutralizing the corrosive surface of amine-cured epoxy resins  
[NASA-CASE-GSC-12686-1] c 27 N83-34039

**CORROSION PREVENTION**

Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00284] c 15 N71-16075  
Method of inhibiting stress corrosion cracks in titanium alloys Patent  
[NASA-CASE-NPO-10271] c 17 N71-16393  
Controlled glass bead peening Patent  
[NASA-CASE-XLA-07390] c 15 N71-18616  
Corrosion resistant beryllium Patent  
[NASA-CASE-LEW-10327] c 17 N71-33408  
Prevention of hydrogen embrittlement of high strength steel by hydrazine compositions --- by adding potassium hydroxide to hydrazine  
[NASA-CASE-NPO-12122-1] c 24 N76-14203  
Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c 45 N80-14579  
Method of protecting a surface with a silicon-slurry/aluminide coating --- coatings for gas turbine engine blades and vanes  
[NASA-CASE-LEW-13343-1] c 27 N82-28441  
Heat pipes containing alkali metal working fluid  
[NASA-CASE-LEW-12253-1] c 74 N83-19596  
Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N86-32550  
Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N87-23736

**CORROSION RESISTANCE**

High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-00726] c 17 N71-15644  
Solder flux which leaves corrosion-resistant coating Patent  
[NASA-CASE-XNP-03459-2] c 18 N71-15688  
High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-02991] c 17 N71-16025  
Soldering with solder flux which leaves corrosion resistant coating Patent  
[NASA-CASE-XNP-03459] c 15 N71-21078  
Method of making bearing material  
[NASA-CASE-LEW-11930-3] c 24 N80-33482  
Corrosion resistant thermal barrier coating --- protecting gas turbines and other engine parts  
[NASA-CASE-LEW-13088-1] c 26 N81-25188  
Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c 37 N81-25371  
Covering solid, film cooled surfaces with a duplex thermal barrier coating  
[NASA-CASE-LEW-13450-1] c 31 N83-35177  
Carbon granule probe microphone for leak detection --- recovery boilers  
[NASA-CASE-NPO-16027-1] c 35 N85-21597  
Corrosion resistant coating  
[NASA-CASE-NPO-15928-1] c 26 N85-29005  
Castable hot corrosion resistant alloy  
[NASA-CASE-LEW-14134-2] c 26 N89-14303

**CORRUGATED PLATES**

Superplastically formed diffusion bonded metallic structure  
[NASA-CASE-FRC-11026-1] c 24 N82-24296

Truss-core corrugation for compressive loads  
[NASA-CASE-LAR-13438-1] c 31 N89-12786

**CORRUGATING**

Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c 32 N80-29539  
Superplastically formed diffusion bonded metallic structure  
[NASA-CASE-FRC-11026-1] c 24 N82-24296  
Curved cap corrugated sheet  
[NASA-CASE-LAR-12884-1] c 18 N84-33450

**COSINE SERIES**

Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-10503-1] c 09 N72-21248  
Function generator for synthesizing complex vibration mode patterns  
[NASA-CASE-LAR-10310-1] c 10 N73-20253

**COSMIC DUST**

Cosmic dust sensor  
[NASA-CASE-GSC-10503-1] c 14 N72-20381  
Cosmic dust or other similar outer space particles impact location detector  
[NASA-CASE-GSC-11291-1] c 25 N72-33696  
Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c 35 N75-27331  
Cosmic dust analyzer  
[NASA-CASE-MSC-13802-2] c 35 N76-15431  
Method and apparatus for determining time, direction, and composition of impacting space particles  
[NASA-CASE-LAR-13392-1-CU] c 19 N91-14412

**COST ANALYSIS**

Low cost solar energy collection system  
[NASA-CASE-NPO-13579-1] c 44 N78-17460  
Backward assembly planning with DFA analysis  
[NASA-CASE-NPO-18817-1-CU] c 31 N93-12202

**COST EFFECTIVENESS**

Glass heating panels and method for preparing the same from architectural reflective glass  
[NASA-CASE-NPO-15753-1] c 27 N84-33589  
Assured crew return vehicle  
[NASA-CASE-MSC-21536-1] c 18 N92-21999

**COST REDUCTION**

Mechanical end joint system for connecting structural column elements  
[NASA-CASE-LAR-14465-1] c 37 N91-14614

**COUCHES**

Shock absorbing support and restraint means Patent  
[NASA-CASE-XMS-01240] c 05 N70-35152  
Energy absorbing structure Patent Application  
[NASA-CASE-MSC-12279-1] c 15 N70-35679  
Articulated multiple couch assembly Patent  
[NASA-CASE-MSC-11253] c 05 N71-12343  
Collapsible Apollo couch  
[NASA-CASE-MSC-13140] c 05 N72-11085

**COULOMETERS**

Electrochemical coulometer and method of forming same Patent  
[NASA-CASE-XGS-05434] c 03 N71-20491  
Coulometer and third electrode battery charging circuit Patent  
[NASA-CASE-GSC-10487-1] c 03 N71-24719  
State-of-charge coulometer  
[NASA-CASE-NPO-15759-1] c 35 N85-21596

**COUNTERBALANCES**

Load positioning system with gravity compensation  
[NASA-CASE-ARC-11525-1] c 37 N86-27629

**COUNTERS**

Counter Patent  
[NASA-CASE-XNP-06234] c 10 N71-27137  
Electronic strain-level counter  
[NASA-CASE-LAR-10756-1] c 32 N73-26910  
Electrochemical detection device --- for use in microbiology  
[NASA-CASE-LAR-11922-1] c 25 N79-24073  
Redundant operation of counter modules  
[NASA-CASE-NPO-14162-1] c 60 N81-15706  
Film advance indicator  
[NASA-CASE-LAR-12474-1] c 35 N82-26628  
Apparatus and process for microbial detection and enumeration  
[NASA-CASE-LAR-12709-1] c 35 N82-28604  
Apparatus for using a time interval counter to measure frequency stability  
[NASA-CASE-NPO-17325-1-CU] c 32 N90-17005  
VLSI binary updown counter  
[NASA-CASE-NPO-17205-1-CU] c 60 N90-21525  
Real-time data compression of broadcast video signals  
[NASA-CASE-LEW-14945-2] c 32 N92-10128

**COUNTING CIRCUITS**

Scanning aspect sensor employing an apertured disc and a commutator  
[NASA-CASE-XGS-08266] c 14 N69-27432  
Ring counter  
[NASA-CASE-XGS-03095] c 09 N69-27463  
Relay binary circuit Patent  
[NASA-CASE-XMF-00421] c 09 N70-34502

Reversible ring counter employing cascaded single SCR stages Patent

[NASA-CASE-XGS-01473] c 09 N71-10673  
Meteoroid sensing apparatus having a coincidence network connected to a pair of capacitors Patent  
[NASA-CASE-XLE-01246] c 14 N71-10797  
Magnetic counter Patent  
[NASA-CASE-XNP-08836] c 09 N71-12515  
Synchronous counter Patent  
[NASA-CASE-XGS-02440] c 08 N71-19432  
Digital cardiachometer system Patent  
[NASA-CASE-XMS-02399] c 05 N71-22896  
Counter and shift register Patent  
[NASA-CASE-XNP-01753] c 08 N71-22897  
Noninterruptible digital counting system Patent  
[NASA-CASE-XNP-09759] c 08 N71-24891  
Frequency measurement by coincidence detection with standard frequency  
[NASA-CASE-MSC-14649-1] c 33 N76-16331  
Redundant operation of counter modules  
[NASA-CASE-NPO-14162-1] c 60 N81-15706

**COUPLERS**

High reliability robot friendly ORU interface  
[NASA-CASE-GSC-13360-1] c 37 N92-23377  
Shaft mount for data coupler system  
[NASA-CASE-LAR-13805-1] c 37 N92-30097

**COUPLES**

Two fault tolerant toggle-hook release  
[NASA-CASE-MSC-21671-1] c 37 N91-32498

**COUPLING**

Coupling for linear shaped charge Patent  
[NASA-CASE-XLA-00189] c 33 N70-36846  
Expandable support means  
[NASA-CASE-NPO-11059] c 15 N72-17454  
Coupled cavity traveling wave tube with velocity tapering  
[NASA-CASE-LEW-12296-1] c 33 N82-26568  
Electrical power generating system  
[NASA-CASE-MFS-25302-1] c 33 N83-28319  
Coupling an induction motor type generator to ac power lines --- making windmill generators compatible with public power lines  
[NASA-CASE-MFS-25302-2] c 33 N84-33660  
Magnetic drive coupling  
[NASA-CASE-MSC-21171-1] c 37 N88-23973  
Optical pressure sealing coupling apparatus  
[NASA-CASE-MFS-29348-1] c 74 N89-25689

**COUPLING CIRCUITS**

Flipflop interrogator and bi-polar current driver Patent  
[NASA-CASE-XGS-03058] c 10 N71-19547  
Antenna array at focal plane of reflector with coupling network for beam switching Patent  
[NASA-CASE-GSC-10220-1] c 07 N71-27233  
Phase modulator Patent  
[NASA-CASE-MSC-13201-1] c 07 N71-28429  
Signal path series step biased multidevice high efficiency amplifier Patent  
[NASA-CASE-GSC-10668-1] c 07 N71-28430  
Automatic quadrature control and measuring system --- using optical coupling circuitry  
[NASA-CASE-MFS-21660-1] c 35 N74-21017  
Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-3] c 33 N75-19520  
Non-contacting power transfer device  
[NASA-CASE-GSC-12595-1] c 33 N82-24422

**COUPLINGS**

Coupling device  
[NASA-CASE-XMS-07846-1] c 09 N69-21927  
Tubular coupling having frangible connecting means  
[NASA-CASE-XLA-02854] c 15 N69-27490  
Quick release separation mechanism Patent  
[NASA-CASE-XLA-01441] c 15 N70-41679  
Indexed keyed connection Patent  
[NASA-CASE-XMS-02532] c 15 N70-41808  
Quick attach and release fluid coupling assembly Patent  
[NASA-CASE-XKS-01985] c 15 N71-10782  
Ratchet mechanism Patent  
[NASA-CASE-MFS-12805] c 15 N71-17805  
Split nut separation system Patent  
[NASA-CASE-XNP-06914] c 15 N71-21489  
Duct coupling for single-handed operation Patent  
[NASA-CASE-MFS-20395] c 15 N71-24903  
Isolation coupling arrangement for a torque measuring system  
[NASA-CASE-XLA-04897] c 15 N72-22482  
Refrigerated coaxial coupling --- for microwave equipment  
[NASA-CASE-NPO-13504-1] c 33 N75-30430  
Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c 35 N77-27366  
Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c 52 N79-26772  
Coupling device for moving vehicles  
[NASA-CASE-GSC-12322-1] c 37 N80-14398

- Device for coupling a first vehicle to a second vehicle  
[NASA-CASE-GSC-12429-1] c 37 N81-14320
- Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c 51 N81-14605
- Reusable captive blind fastener  
[NASA-CASE-MSC-18742-1] c 37 N82-26673
- Apparatus for releasably connecting first and second objects in predetermined space relationship  
[NASA-CASE-MSC-18969-1] c 18 N84-22605
- Connection system --- insuring against loss of a tool component without using multiple tethers  
[NASA-CASE-MSC-20319-1] c 37 N85-21649
- Non-backdrivable free wheeling coupling  
[NASA-CASE-MSC-20475-1] c 37 N87-17037
- Tube coupling device  
[NASA-CASE-MFS-25964-2] c 37 N87-22977
- Preloaded space structural coupling joints  
[NASA-CASE-LAR-13489-1] c 18 N87-27713
- Docking system for spacecraft  
[NASA-CASE-MSC-21327-1] c 18 N90-11798
- Docking mechanism for spacecraft  
[NASA-CASE-MSC-21386-1] c 18 N90-20126
- Quick connect coupling  
[NASA-CASE-MSC-21539-1] c 37 N91-14610
- System for connecting fluid couplings  
[NASA-CASE-MFS-26042-1-SB] c 37 N91-14613
- Two fault tolerant toggle-hook release  
[NASA-CASE-MSC-21671-1] c 37 N91-32498
- Cooling apparatus and couplings therefor  
[NASA-CASE-ARC-11921-1] c 34 N92-11286
- Method for non-destructive estimation of waveguide directional coupler dimensions  
[NASA-CASE-NPO-18454-1-CU] c 33 N92-17865
- Coupling device with improved thermal interface  
[NASA-CASE-GSC-13251-1] c 37 N92-29120
- Connection space reduction mechanism  
[NASA-CASE-GSC-13220-1] c 37 N92-29140
- Work attachment mechanism/work attachment fixture  
[NASA-CASE-GSC-13430-1] c 37 N93-14712
- Quick connect fastener  
[NASA-CASE-MFS-28833-1] c 37 N93-29846
- COVARIANCE**
- Auto covariance computer  
[NASA-CASE-LAR-12968-1] c 60 N86-21154
- COVERINGS**
- Apparatus for ejection of an instrument cover  
[NASA-CASE-XMF-04132] c 15 N69-27502
- Fire blocking systems for aircraft seat cushions  
[NASA-CASE-ARC-11423-1] c 03 N84-33394
- Hatch cover  
[NASA-CASE-MSC-21356-1] c 18 N90-19278
- COWLING**
- Thrust reverser for a long duct fan engine --- for turbofan engines  
[NASA-CASE-LEW-13199-1] c 07 N82-26293
- CRACK GEOMETRY**
- High speed thin plate fatigue crack monitor  
[NASA-CASE-LAR-14816-1-SB] c 39 N93-19329
- Method of continuously determining crack length  
[NASA-CASE-LAR-14480-1-CU] c 39 N93-29612
- CRACK OPENING DISPLACEMENT**
- Ultrasonic method and apparatus for determining crack opening load  
[NASA-CASE-LAR-13889-1] c 39 N88-30160
- CRACK PROPAGATION**
- Fatigue testing apparatus  
[NASA-CASE-LEW-14124-1] c 35 N90-23712
- High speed thin plate fatigue crack monitor  
[NASA-CASE-LAR-14816-1-SB] c 39 N93-19329
- CRACKING (FRACTURING)**
- Method of inhibiting stress corrosion cracks in titanium alloys Patent  
[NASA-CASE-NPO-10271] c 17 N71-16393
- TV fatigue crack monitoring system  
[NASA-CASE-LAR-11490-1] c 39 N78-16387
- CRACKS**
- Method of repairing hidden leaks in tubes  
[NASA-CASE-MFS-19796-1] c 37 N86-32736
- Method of continuously determining crack length  
[NASA-CASE-LAR-14480-1-CU] c 39 N93-29612
- CRANES**
- Space spider crane  
[NASA-CASE-LAR-13411-1-SB] c 18 N88-23828
- Counter-balanced, multiple cable construction crane  
[NASA-CASE-LAR-14565-1-CU] c 37 N92-34212
- CRASH LANDING**
- Aircraft-mounted crash-activated transmitter device  
[NASA-CASE-MFS-16609-3] c 03 N76-32140
- CREEP RUPTURE STRENGTH**
- Nickel-base alloy containing Mo-W-Al-Cr-Ta-Zr-C-Nb-B Patent  
[NASA-CASE-XLE-02082] c 17 N71-16026
- Heat treatment for superalloy  
[NASA-CASE-LEW-14262-1] c 26 N87-28647

**CREEP STRENGTH**

- High temperature creep and oxidation resistant chromium silicide matrix alloy containing molybdenum  
[NASA-CASE-LEW-15697-1] c 26 N93-29172

**CREEP TESTS**

- Tensile testing apparatus  
[NASA-CASE-LAR-13243-1] c 35 N85-34375

**CRITICAL EXPERIMENTS**

- Gas liquefaction and dispensing apparatus Patent  
[NASA-CASE-NPO-10070] c 15 N71-27372

**CRITICAL TEMPERATURE**

- Stable superconducting magnet --- high current levels below critical temperature  
[NASA-CASE-XMF-05373-1] c 33 N79-21264

**CROSS CORRELATION**

- Cross correlation anomaly detection system  
[NASA-CASE-NPO-13283] c 38 N78-17395
- Method and apparatus for calibrating the ionosphere and application to surveillance of geophysical events  
[NASA-CASE-NPO-15430-1] c 46 N85-21846
- Optoelectronic associative memory  
[NASA-CASE-NPO-18278-1-CU] c 74 N91-32925

**CROSS FLOW**

- Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c 02 N81-14968
- Wingtip vortex propeller  
[NASA-CASE-LAR-13019-1] c 07 N85-35194
- Crossflow vorticity sensor  
[NASA-CASE-LAR-13436-1-CU] c 02 N88-23759
- Passive laminar flow control of crossflow vorticity  
[NASA-CASE-LAR-13563-1] c 34 N91-23410
- Method of measuring cross-flow vortices by use of an array of hot-film sensors  
[NASA-CASE-LAR-14824-1-SB] c 34 N93-26000

**CROSS POLARIZATION**

- Adaptive polarization separation  
[NASA-CASE-LAR-12196-1] c 33 N81-26358

**CROSSED FIELDS**

- Plasma accelerator Patent  
[NASA-CASE-XLA-00675] c 25 N70-33267
- Energy conversion apparatus Patent  
[NASA-CASE-XLE-00212] c 03 N70-34134
- Crossed-field MHD plasma generator/accelerator Patent  
[NASA-CASE-XLA-03374] c 25 N71-15562

**CROSSLINKING**

- Trifunctional alcohol  
[NASA-CASE-NPO-10714] c 06 N69-31244
- Trimerization of aromatic nitriles  
[NASA-CASE-LEW-12053-1] c 27 N78-15276
- Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c 27 N78-31232
- In situ self cross-linking of polyvinyl alcohol battery separators  
[NASA-CASE-LEW-12972-1] c 44 N79-25481
- Catalytic trimerization of aromatic nitriles and triaryl-s-triazine ring cross-linked high temperature resistant polymers and copolymers made thereby  
[NASA-CASE-LEW-12053-2] c 27 N79-28307
- Method of cross-linking polyvinyl alcohol and other water soluble resins  
[NASA-CASE-LEW-13103-1] c 27 N80-32516
- Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c 27 N81-17259
- The 1,2,4-oxadiazole elastomers --- heat resistant polymers  
[NASA-CASE-ARC-11253-1] c 27 N81-17262
- In-situ cross linking of polyvinyl alcohol --- application to battery separator films  
[NASA-CASE-LEW-13135-2] c 27 N81-24257
- Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13101-2] c 23 N81-29160
- Polyvinyl alcohol cross-linked with two aldehydes  
[NASA-CASE-LEW-13504-1] c 25 N83-13188
- Elastomer coated filler and composites thereof comprising at least 60% by weight of a hydrated filler and an elastomer containing an acid substituent  
[NASA-CASE-NPO-14857-1] c 27 N83-19900
- Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-2] c 27 N83-29392
- Mixed polyvalent-monovalent metal coating for carbon-graphite fibers  
[NASA-CASE-NPO-14987-1] c 24 N83-33950
- Polyphenylquinoxalines containing pendant phenylethynyl and ethynyl groups --- for thermoplastic resins  
[NASA-CASE-LAR-12838-1] c 27 N83-34040
- Process for preparing perfluorotriazine elastomers and precursors thereof  
[NASA-CASE-ARC-11402-1] c 27 N84-22744

- Ethynyl and substituted ethynyl-terminated polysulfones  
[NASA-CASE-LAR-12931-1] c 27 N84-22747
- Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-1] c 27 N85-20123
- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-5] c 27 N85-21352
- Chemical control of nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-2] c 25 N85-28982
- Laminate comprising fibers embedded in cured amine terminated bis-imide  
[NASA-CASE-ARC-11421-3] c 24 N86-25416
- Process for crosslinking and extending conjugated diene-containing polymers  
[NASA-CASE-LAR-13452-1] c 27 N87-22848
- Semi-2-interpenetrating networks of high temperature systems  
[NASA-CASE-LAR-13450-1] c 27 N87-28657
- Polyether-polyester graft copolymer  
[NASA-CASE-LAR-13447-1] c 27 N88-18725
- Process for crosslinking methylene-containing aromatic polymers with ionizing radiation  
[NASA-CASE-LAR-13448-1] c 27 N90-21198
- A tough performance simultaneous semi-interpenetrating polymer network  
[NASA-CASE-LAR-14339-1] c 27 N90-26955
- Tissue simulating gel for medical research  
[NASA-CASE-LAR-14036-1] c 27 N91-13562
- Methyl substituted polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-14351-1] c 27 N92-33015
- Semi-interpenetrating polymer network for tougher and more microcracking resistant high temperature polymers  
[NASA-CASE-LAR-13925-2] c 27 N93-11059
- A tough high performance composite matrix  
[NASA-CASE-LAR-14338-1] c 24 N93-13416
- Crosslinked polyimides prepared from N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14774-1] c 27 N93-19388
- Ion exchange polymers and method for making  
[NASA-CASE-LEW-15576-1] c 27 N93-31316
- CROSSTALK**
- Integrated filter and detector array for spectral imaging  
[NASA-CASE-NPO-18317-1-CU] c 74 N93-13419
- CRUCIBLES**
- Evaporant holder  
[NASA-CASE-XLA-03105] c 15 N69-27483
- CRUCIFORM WINGS**
- Solar powered aircraft  
[NASA-CASE-LAR-12615-1] c 05 N84-12154
- CRUDE OIL**
- Decontamination of petroleum products Patent  
[NASA-CASE-XNP-03835] c 06 N71-23499
- Crude oil desulfurization  
[NASA-CASE-NPO-14542-1] c 25 N82-23282
- CRUSTAL FRACTURES**
- System for real-time crustal deformation monitoring  
[NASA-CASE-NPO-14124-1] c 46 N80-14603
- CRYOGENIC COOLING**
- Support assembly for cryogenically coolable low-noise choke waveguide  
[NASA-CASE-NPO-14253-1] c 32 N80-32605
- Low cost cryostat  
[NASA-CASE-NPO-14513-1] c 35 N81-14287
- Stirling cycle cryogenic cooler  
[US-PATENT-4,389,849] c 44 N83-28574
- Oxygen chemisorption cryogenic refrigerator  
[NASA-CASE-NPO-16734-1-CU] c 31 N88-14223
- Krypton based adsorption type cryogenic refrigerator  
[NASA-CASE-NPO-17334-1-CU] c 31 N88-23917
- Cryogenic regenerator including saran-carbon heat conduction matrix  
[NASA-CASE-NPO-17291-1-CU] c 34 N88-23946
- Multicomponent gas sorption Joule-Thomson refrigeration  
[NASA-CASE-NPO-17569-1-CU] c 31 N92-15203
- Ultra-high temperature stability Joule-Thomson cooler with capability to accommodate pressure variations  
[NASA-CASE-NPO-18184-1-CU] c 35 N92-29156
- Three-stage sorption type cryogenic refrigeration systems and methods employing heat regeneration  
[NASA-CASE-NPO-18366-1-CU] c 31 N93-13422
- CRYOGENIC EQUIPMENT**
- Refrigeration apparatus  
[NASA-CASE-NPO-10309] c 15 N69-23190
- Piping arrangement through a double chamber structure  
[NASA-CASE-XNP-08882] c 15 N69-39935
- Method and apparatus for cryogenic wire stripping Patent  
[NASA-CASE-MFS-10340] c 15 N71-17628
- Dual solid cryogenics for spacecraft refrigeration Patent  
[NASA-CASE-GSC-10188-1] c 23 N71-24725

Valving device for automatic refilling in cryogenic liquid systems  
[NASA-CASE-NPO-11177] c 15 N72-17453

Dual stage check valve  
[NASA-CASE-MSC-13587-1] c 15 N73-30459

Heat operated cryogenic electrical generator  
[NASA-CASE-NPO-13303-1] c 20 N75-24837

Cryostat system for temperatures on the order of 2 deg K or less  
[NASA-CASE-NPO-13459-1] c 31 N77-10229

Device for tensioning test specimens within an hermetically sealed chamber  
[NASA-CASE-MFS-23281-1] c 35 N77-22450

Multistation refrigeration system  
[NASA-CASE-NPO-13839-1] c 31 N78-25256

System for and method of freezing biological tissue  
[NASA-CASE-GSC-12173-1] c 51 N79-10694

Shock isolator for operating a diode laser on a closed-cycle refrigerator  
[NASA-CASE-GSC-12297-1] c 37 N79-28549

Low temperature latching solenoid  
[NASA-CASE-MSC-18106-1] c 33 N82-11357

Resilient seal ring assembly with spring means applying force to wedge member --- cryogenic applications  
[NASA-CASE-MFS-25678-1] c 37 N84-11497

Magnetically actuated compressor  
[NASA-CASE-GSC-12799-1] c 31 N85-21404

Propulsion apparatus and method using boil-off gas from a cryogenic liquid  
[NASA-CASE-MFS-25946-1] c 20 N86-26368

Low temperature storage container for transporting perishables to space station  
[NASA-CASE-MFS-28248-1] c 31 N88-24817

Two stage sorption type cryogenic refrigerator including heat regeneration system  
[NASA-CASE-NPO-17630-1-CU] c 31 N89-29577

Surface tension confined liquid cryogen cooler  
[NASA-CASE-GSC-13112-1] c 31 N89-29578

**CRYOGENIC FLUID STORAGE**  
Apparatus for transferring cryogenic liquids Patent  
[NASA-CASE-XLE-00345] c 15 N70-38020

Cryogenic storage system Patent  
[NASA-CASE-XMS-04390] c 31 N70-41871

Techniques for insulating cryogenic fuel containers Patent  
[NASA-CASE-XLA-01967] c 31 N70-42015

Method of making a filament-wound container Patent  
[NASA-CASE-XLE-03803-2] c 15 N71-17651

Cryogenic insulation system Patent  
[NASA-CASE-XLE-04222] c 23 N71-22881

Panelized high performance multilayer insulation Patent  
[NASA-CASE-MFS-14023] c 33 N71-25351

Cryogenic thermal insulation Patent  
[NASA-CASE-XMF-05046] c 33 N71-28892

Zero gravity shadow shield aligner  
[NASA-CASE-KSC-10622-1] c 31 N72-21893

Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c 35 N74-15093

Low heat leak connector for cryogenic system  
[NASA-CASE-XLE-02367-1] c 31 N79-21225

Cryogenic container compound suspension strap  
[NASA-CASE-ARC-11157-1] c 37 N80-18393

Cryogenic insulation strength and bond tester  
[NASA-CASE-MFS-25910-1] c 39 N86-20841

Cryogenic insulation system  
[NASA-CASE-LAR-13506-1] c 27 N89-12741

**CRYOGENIC FLUIDS**  
Cryogenic apparatus for measuring the intensity of magnetic fields  
[NASA-CASE-XAC-02407] c 14 N69-27423

Venting vapor apparatus Patent  
[NASA-CASE-XLE-00288] c 15 N70-34247

Conical valve plug Patent  
[NASA-CASE-XLE-00715] c 15 N70-34859

Fluid coupling Patent  
[NASA-CASE-XLE-00397] c 15 N70-36492

Densitometer Patent  
[NASA-CASE-XLE-00688] c 14 N70-41330

Cryogenic connector for vacuum use Patent  
[NASA-CASE-XGS-02441] c 15 N70-41629

Liquid flow sight assembly Patent  
[NASA-CASE-XLE-02998] c 14 N70-42074

Automatic thermal switch Patent  
[NASA-CASE-XNP-03796] c 23 N71-15467

Zero gravity separator Patent  
[NASA-CASE-XLE-00586] c 15 N71-15968

Apparatus for measuring thermal conductivity Patent  
[NASA-CASE-XGS-01052] c 14 N71-15992

Process of forming particles in a cryogenic path Patent  
[NASA-CASE-NPO-10250] c 23 N71-16212

Superconducting alternator Patent  
[NASA-CASE-XLE-02823] c 09 N71-23443

Flow angle sensor and read out system Patent  
[NASA-CASE-XLE-04503] c 14 N71-24864

Geysering inhibitor for vertical cryogenic transfer pipe  
[NASA-CASE-KSC-10615] c 15 N73-12486

Magnetocaloric pump --- for cryogenic fluids  
[NASA-CASE-LEW-11672-1] c 37 N74-27904

Cryogenic liquid sensor  
[NASA-CASE-NPO-10619-1] c 35 N77-21393

Quick-disconnect inflatable seal assembly  
[NASA-CASE-KSC-11368-1] c 37 N89-13786

**CRYOGENIC GYROSCOPES**  
Cryogenic gyroscope housing --- with annular disks for gas spin-up  
[NASA-CASE-MFS-21136-1] c 35 N74-18323

**CRYOGENIC MAGNETS**  
Superconducting alternator  
[NASA-CASE-XLE-02824] c 03 N69-39890

**CRYOGENIC ROCKET PROPELLANTS**  
Quick attach and release fluid coupling assembly Patent  
[NASA-CASE-XKS-01985] c 15 N71-10782

Hot wire liquid level detector for cryogenic fluids Patent  
[NASA-CASE-XLE-00454] c 23 N71-17802

Automatic pump Patent  
[NASA-CASE-XNP-04731] c 15 N71-24042

**CRYOGENIC STORAGE**  
Insulation system Patent  
[NASA-CASE-XLE-02647] c 18 N71-23658

Filament wound container Patent  
[NASA-CASE-XLE-03803] c 15 N71-23816

**CRYOGENIC TEMPERATURE**  
Low noise cryogenic dielectric resonator oscillator  
[NASA-CASE-NPO-17157-1-CU] c 33 N88-26596

**CRYOGENIC WIND TUNNELS**  
Continuous self-locking spiral wound seal --- for maintaining pressure between chambers in cryogenic wind tunnels  
[NASA-CASE-LAR-12315-1] c 37 N82-24490

Miniature remote dead weight calibrator  
[NASA-CASE-LAR-13564-1] c 35 N87-25558

Method of forming a multiple layer dielectric and a hot film sensor therewith  
[NASA-CASE-LAR-13678-1] c 76 N90-24168

**CRYOGENICS**  
Low temperature aluminum alloy Patent  
[NASA-CASE-XMF-02786] c 17 N71-20743

Cryogenic cooling system Patent  
[NASA-CASE-NPO-10467] c 23 N71-26654

Germanium coated microbridge and method  
[NASA-CASE-MFS-23274-1] c 33 N78-13320

Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c 36 N80-18372

High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c 26 N80-32484

Multispectral scanner optical system  
[NASA-CASE-MSC-18255-1] c 74 N80-33210

Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics  
[NASA-CASE-NPO-10424-1] c 27 N81-24258

Cryogenic anti-friction bearing with inner race  
[NASA-CASE-MFS-28384-1] c 37 N90-27112

Pressure transducer and system for cryogenic environments  
[NASA-CASE-LAR-14579-1] c 35 N92-29097

Cryogenic shutter  
[NASA-CASE-GSC-13189-2] c 37 N92-29151

**CRYOLITE**  
Ultraviolet filter  
[NASA-CASE-XNP-02340] c 23 N69-24332

**CRYOSTATS**  
Low temperature flexure fatigue cryostat Patent  
[NASA-CASE-XMF-02964] c 14 N71-17659

Horizontal cryostat for fatigue testing Patent  
[NASA-CASE-XMF-10968] c 14 N71-24234

Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c 35 N74-15093

Cryostat system for temperatures on the order of 2 deg K or less  
[NASA-CASE-NPO-13459-1] c 31 N77-10229

Low cost cryostat  
[NASA-CASE-NPO-14513-1] c 35 N81-14287

Ultra-high temperature stability Joule-Thomson cooler with capability to accommodate pressure variations  
[NASA-CASE-NPO-18184-1-CU] c 35 N92-29156

**CRYOTRAPPING**  
Atomic hydrogen storage --- cryotrapping and magnetic field strength  
[NASA-CASE-LEW-12081-2] c 28 N80-20402

**CRYSTAL DEFECTS**  
Method of controlling defect orientation in silicon crystal ribbon growth  
[NASA-CASE-NPO-13918-1] c 76 N79-11920

Method for growing low defect, high purity crystalline layers utilizing lateral overgrowth of a patterned mask  
[NASA-CASE-NPO-15813-2] c 76 N87-15882

**CRYSTAL FILTERS**  
Infrared tunable laser  
[NASA-CASE-ARC-10463-1] c 09 N73-32111

Partial polarizer filter  
[NASA-CASE-GSC-12225-1] c 74 N79-14891

**CRYSTAL GROWTH**  
Apparatus for producing high purity silicon carbide crystals Patent  
[NASA-CASE-XLA-02057] c 26 N70-40015

Method of producing crystalline materials  
[NASA-CASE-NPO-10440] c 15 N72-21466

Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c 25 N75-26043

Process for fabricating SiC semiconductor devices  
[NASA-CASE-LEW-12094-1] c 76 N76-25049

Method of crystallization --- in gravity-free environments  
[NASA-CASE-MFS-23001-1] c 76 N77-32919

Pressure transducer --- using a monomeric charge transfer complex sensor  
[NASA-CASE-NPO-11150] c 35 N78-17359

Method of controlling defect orientation in silicon crystal ribbon growth  
[NASA-CASE-NPO-13918-1] c 76 N79-11920

Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c 76 N79-23798

Method of mitigating titanium impurities effects in p-type silicon material for solar cells  
[NASA-CASE-NPO-14635-1] c 44 N80-24741

Means for growing ribbon crystals without subjecting the crystals to thermal shock-induced strains  
[NASA-CASE-NPO-14298-1] c 76 N80-32244

Method of growing a ribbon crystal particularly suited for facilitating automated control of ribbon width  
[NASA-CASE-NPO-14295-1] c 76 N80-32245

Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c 33 N81-19389

Ampoule sealing apparatus and process --- for housing a semiconductor growth charge under vacuum  
[NASA-CASE-LAR-12847-1] c 33 N83-16633

Controlled in situ etch-back  
[NASA-CASE-NPO-15625-1] c 76 N83-20789

Method and apparatus for supercooling and solidifying substances  
[NASA-CASE-MFS-25242-1] c 35 N83-29650

Method and apparatus for minimizing convection during crystal growth from solution  
[NASA-CASE-NPO-15811-1] c 76 N84-12968

Process and apparatus for growing a crystal ribbon  
[NASA-CASE-NPO-15629-1] c 76 N84-35113

Method for growth of crystals by pressure reduction of supercritical or subcritical solution  
[NASA-CASE-NPO-15772-1] c 76 N85-29800

Low defect, high purity crystalline layers grown by selective deposition  
[NASA-CASE-NPO-15813-1] c 76 N85-30922

Planar oscillatory stirring apparatus  
[NASA-CASE-MFS-26002-1-CU] c 35 N86-26598

Method for growing low defect, high purity crystalline layers utilizing lateral overgrowth of a patterned mask  
[NASA-CASE-NPO-15813-2] c 76 N87-15882

Total immersion crystal growth  
[NASA-CASE-NPO-15800-2] c 76 N87-23286

Apparatus and procedure to detect a liquid-solid interface during crystal growth in a bridgman furnace  
[NASA-CASE-LAR-13597-1-CU] c 25 N87-23713

Liquid encapsulated crystal growth  
[NASA-CASE-NPO-16808-1-CU] c 76 N87-25868

Procedure to prepare transparent silica gels  
[NASA-CASE-LAR-13476-1-CU] c 76 N87-29360

Method for investigating the formation of crystals in a transparent material  
[NASA-CASE-MFS-26008-1-CU] c 76 N88-14835

Method and apparatus for growing crystals  
[NASA-CASE-MFS-28137-1] c 76 N88-24544

Liquid encapsulated float zone process and apparatus  
[NASA-CASE-MFS-28144-1] c 76 N88-24545

Human serum albumin crystals and method of preparation  
[NASA-CASE-MFS-28234-1] c 52 N90-20616

Apparatus for mixing solutions in low gravity environments  
[NASA-CASE-MFS-26047-1] c 29 N90-21209

Hanging drop crystal growth apparatus and method  
[NASA-CASE-MFS-28206-1-SB] c 76 N90-23242

High temperature electric arc furnace and method  
[NASA-CASE-MFS-28281-1] c 09 N90-23415

Crystal growth apparatus  
[NASA-CASE-MFS-28182-1] c 76 N90-24169

MBE growth technology for high quality strained III-V layers  
[NASA-CASE-NPO-17723-1-CU] c 76 N90-26685

- Hanging drop crystal growth apparatus  
[NASA-CASE-MFS-26061-1] c 76 N91-16815  
Process for the controlled growth of single-crystal films of silicon carbide polytypes on silicon carbide wafers  
[NASA-CASE-LEW-15222-1] c 76 N91-26966  
Device for mechanically stabilizing web ribbon buttons during growth initiation  
[NASA-CASE-NPO-17074-2-CU] c 76 N92-21499  
Growth of III-V films by control of MBE growth front stoichiometry  
[NASA-CASE-NPO-17724-1-CU] c 76 N92-22035  
Macromolecular crystal growing system  
[NASA-CASE-MFS-26088-1-CU] c 76 N92-25398  
Crystal growth in a microgravity environment  
[NASA-CASE-MFS-28473-1] c 76 N93-14707  
Process for the controlled growth of single-crystal films of silicon carbide polytypes on silicon carbide wafers  
[NASA-CASE-LEW-15222-3] c 76 N93-17413

## CRYSTAL LATTICES

- Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction  
[NASA-CASE-MFS-23315-1] c 76 N78-24950  
Crystal cleaving machine  
[NASA-CASE-GSC-12584-1] c 37 N82-32730  
MBE growth technology for high quality strained III-V layers  
[NASA-CASE-NPO-17723-1-CU] c 76 N90-26685  
Growth of III-V films by control of MBE growth front stoichiometry  
[NASA-CASE-NPO-17724-1-CU] c 76 N92-22035

## CRYSTAL OPTICS

- Optical crystal temperature gauge with fiber optic connections  
[NASA-CASE-MSC-18627-1] c 74 N82-30071

## CRYSTAL OSCILLATORS

- Microbalance including crystal oscillators for measuring contaminants in a gas system Patent  
[NASA-CASE-NPO-10144] c 14 N71-17701  
Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c 33 N80-23559  
Automatic oscillator frequency control system  
[NASA-CASE-GSC-12804-1] c 33 N86-20668  
Real-time dynamic holographic image storage device  
[NASA-CASE-LAR-13989-1] c 35 N91-13694

## CRYSTAL RECTIFIERS

- Turn on transient limiter Patent  
[NASA-CASE-GSC-10413] c 10 N71-26531

## CRYSTAL STRUCTURE

- Method of growing composites of the type exhibiting the Soret effect --- improved structure of eutectic alloy crystals  
[NASA-CASE-MFS-22926-1] c 24 N77-27187  
Fabrication of nanometer single crystal metallic CoSi<sub>2</sub> structures on Si  
[NASA-CASE-NPO-17736-2-CU] c 24 N92-18561

## CRYSTALLINITY

- Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
[NASA-CASE-LAR-12099-1] c 27 N80-16158  
Method for growing low defect, high purity crystalline layers utilizing lateral overgrowth of a patterned mask  
[NASA-CASE-NPO-15813-2] c 76 N87-15882  
Process for developing crystallinity in linear aromatic polyimides  
[NASA-CASE-LAR-13732-1] c 27 N87-25474  
Processing for maximizing the level of crystallinity in linear aromatic polyimides  
[NASA-CASE-LAR-14481-1] c 25 N92-16043

## CRYSTALLIZATION

- Method of crystallization --- in gravity-free environments  
[NASA-CASE-MFS-23001-1] c 76 N77-32919  
Total immersion crystal growth  
[NASA-CASE-NPO-15800-2] c 76 N87-23286  
Novel polyimide compositions based on 4,4': Isophthaloyldiphthalic anhydride (IDPA)  
[NASA-CASE-LAR-14194-1] c 24 N90-15148  
Apparatus for mixing solutions in low gravity environments  
[NASA-CASE-MFS-26047-1] c 29 N90-21209  
Fabrication of nanometer single crystal metallic CoSi<sub>2</sub> structures on Si  
[NASA-CASE-NPO-17736-2-CU] c 24 N92-18561  
Method and apparatus for controlling protein crystallization  
[NASA-CASE-MFS-28688-1] c 76 N93-17043

## CRYSTALS

- Brushless direct current tachometer Patent  
[NASA-CASE-MFS-20385] c 09 N71-24904  
Method and apparatus for slicing crystals  
[NASA-CASE-GSC-12291-1] c 76 N80-18951  
Crystal cleaving machine  
[NASA-CASE-GSC-12584-1] c 37 N82-32730  
Workpiece positioning vise  
[NASA-CASE-GSC-12762-1] c 37 N84-28083

Dynamic range compression/expansion of light beams by photorefractive crystals

- [NASA-CASE-NPO-17140-1-CU] c 74 N89-14077  
Method of preparing radially homogeneous mercury cadmium telluride crystals  
[NASA-CASE-MFS-25786-2] c 76 N90-20896  
Reflection oscillators employing series resonant crystals  
[NASA-CASE-GSC-13173-1] c 33 N90-23635  
Hanging drop crystal growth apparatus  
[NASA-CASE-MFS-26061-1] c 76 N91-16815  
Method and apparatus for second-rank tensor generation  
[NASA-CASE-NPO-17512-1-CU] c 74 N91-26918  
Macromolecular crystal growing system  
[NASA-CASE-MFS-26088-1-CU] c 76 N92-25398  
Crystal growth in a microgravity environment  
[NASA-CASE-MFS-28473-1] c 76 N93-14707  
Tunable CW diode-pumped Tm,Ho:YLiF<sub>4</sub> laser operating at or near room temperature  
[NASA-CASE-NPO-18611-1-CU] c 36 N93-30415

## CUBIC LATTICES

- Stabilized lanthanum sulphur compounds --- thermoelectric materials  
[NASA-CASE-NPO-16135-1] c 25 N83-24572

## CUES

- Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c 54 N81-27806

## CUFFS

- Logic-controlled occlusive cuff system  
[NASA-CASE-MSC-14836-1] c 52 N82-11770  
Prosthetic occlusive device for an internal passageway  
[NASA-CASE-MFS-25740-1] c 52 N84-11744  
Bar-holding prosthetic limb  
[NASA-CASE-MFS-28481-1] c 54 N93-14870

## CULTURE TECHNIQUES

- Variable angle tube holder  
[NASA-CASE-LAR-10507-1] c 11 N72-25284  
Automatic inoculating apparatus --- includes movable carriage, drive motor, and swabbing motor  
[NASA-CASE-LAR-11074-1] c 51 N75-13502  
Automatic microbial transfer device  
[NASA-CASE-LAR-11354-1] c 35 N75-27330  
Electrochemical detection device --- for use in microbiology  
[NASA-CASE-LAR-11922-1] c 25 N79-24073  
Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c 51 N81-28698  
Enhancement of in vitro guayule propagation  
[NASA-CASE-NPO-15213-1] c 51 N83-17045  
Method for detecting coliform organisms  
[NASA-CASE-ARC-11322-1] c 51 N83-28849  
Production of butanol by fermentation in the presence of cocultures of clostridium  
[NASA-CASE-NPO-16203-1] c 23 N85-35227  
Bio-reactor chamber  
[NASA-CASE-MSC-20929-1] c 51 N91-14703  
Rotating bio-reactor cell culture apparatus  
[NASA-CASE-MSC-21293-1] c 51 N91-21700  
Spiral vane bioreactor  
[NASA-CASE-MSC-21361-1] c 51 N91-21701  
Horizontally rotated cell culture system with a coaxial tubular oxygenator  
[NASA-CASE-MSC-21294-1] c 51 N91-30667  
Hollow fiber clinostat for simulating microgravity in cell culture  
[NASA-CASE-MFS-28370-1] c 35 N92-31790  
Three-dimensional co-culture process  
[NASA-CASE-MSC-21560-1] c 51 N92-34229  
Three-dimensional cell to tissue assembly process  
[NASA-CASE-MSC-21559-1] c 51 N92-34231  
High aspect reactor vessel and method of use  
[NASA-CASE-MSC-21662-1] c 51 N92-34232  
Method for culturing mammalian cells in a perfused bioreactor  
[NASA-CASE-MSC-21293-2] c 51 N93-10109  
Method for culturing mammalian cells in a horizontally rotated bioreactor  
[NASA-CASE-MSC-21294-2] c 51 N93-10110  
High density cell culture system  
[NASA-CASE-MSC-22060-1] c 51 N93-19037

## CURIE TEMPERATURE

- Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
[NASA-CASE-NPO-11336-1] c 76 N79-16678

## CURING

- Reaction cured glass and glass coatings  
[NASA-CASE-ARC-11051-1] c 27 N78-32260  
Ambient cure polyimide foams --- thermal resistant foams  
[NASA-CASE-ARC-11170-1] c 27 N79-11215  
Curing agent for polyepoxides and epoxy resins and composites cured therewith --- preventing carbon fiber release  
[NASA-CASE-LEW-13226-1] c 27 N81-17260

- Method of neutralizing the corrosive surface of amine-cured epoxy resins  
[NASA-CASE-GSC-12686-1] c 27 N83-34039  
Fluoroether modified epoxy composites  
[NASA-CASE-ARC-11418-1] c 24 N84-11213  
Method and technique for installing light-weight, fragile, high-temperature fiber insulation  
[NASA-CASE-MSC-16934-3] c 24 N84-16262  
Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-1] c 27 N84-27885  
Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-3] c 27 N85-21350  
Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-4] c 27 N85-21351  
Chemical control of nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-2] c 25 N85-28982  
Metal (2,4,4',4'') phthalocyanine tetraamines as curing agents for epoxy resins  
[NASA-CASE-ARC-11424-1] c 27 N85-34281  
Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-1] c 24 N86-19380  
High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1SB] c 24 N86-21590  
Ethynyl and substituted ethynyl-terminated polysulfones  
[NASA-CASE-LAR-12931-2] c 27 N86-21675  
Process for curing bismaleimide resins  
[NASA-CASE-ARC-11429-4CU] c 27 N87-15304  
Cellular thermosetting fluoropolymers and process for making them  
[NASA-CASE-GSC-13008-1] c 27 N88-23894  
Method of controlling a resin curing process --- for fiber reinforced composites  
[NASA-CASE-MSC-21169-1] c 27 N89-29539  
Noninvasive method and apparatus for monitoring the cure of polymeric materials  
[NASA-CASE-LAR-13465-1] c 27 N90-23544  
Tough, high performance, addition-type thermoplastic polymers  
[NASA-CASE-LAR-14346-1] c 27 N92-22044  
Flush mounting of thin film sensors  
[NASA-CASE-LAR-14446-1] c 31 N92-33020  
Core design for use with precision composite reflectors  
[NASA-CASE-NPO-17858-1-CU] c 24 N93-14700  
Process for applying a superconductive powder to a wide variety of substrates  
[NASA-CASE-LAR-14729-1-CU] c 33 N93-19051  
Process for bonding elastomers to metals  
[NASA-CASE-LAR-13645-1] c 27 N93-25995

## CURRENT AMPLIFIERS

- Multi-channel temperature measurement amplification system --- solar heating systems  
[NASA-CASE-MFS-23775-1] c 44 N82-16474  
Tuned analog network  
[NASA-CASE-GSC-12650-1] c 33 N84-14421  
A dc to dc converter  
[NASA-CASE-MFS-25430-1] c 33 N84-16453  
Differential current source  
[NASA-CASE-GSC-13280-1] c 33 N91-27479

## CURRENT DENSITY

- Solid state switch  
[NASA-CASE-XNP-09228] c 09 N69-27500  
Method and apparatus for sputtering utilizing an apertured electrode and a pulsed substrate bias  
[NASA-CASE-LEW-10920-1] c 17 N73-24569  
Stable superconducting magnet --- high current levels below critical temperature  
[NASA-CASE-XMF-05373-1] c 33 N79-21264  
Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c 44 N81-29524

## CURRENT DISTRIBUTION

- Connector - Electrical  
[NASA-CASE-XLA-01288] c 09 N69-21470  
Electrostatic ion rocket engine Patent  
[NASA-CASE-XLE-02066] c 28 N71-15661  
Reversible current control apparatus Patent  
[NASA-CASE-XLA-09371] c 10 N71-18724  
Polarity sensitive circuit Patent  
[NASA-CASE-XNP-00952] c 10 N71-23271  
Load insensitive electrical device --- power converters for supplying direct current at one voltage from a source at another voltage  
[NASA-CASE-XER-11046-2] c 33 N74-22864

## CURRENT REGULATORS

- Apparatus for ballasting high frequency transistors  
[NASA-CASE-XGS-05003] c 09 N69-24318

## SUBJECT INDEX

Baseline stabilization system for ionization detector Patent  
[NASA-CASE-XNP-03128] c 10 N70-41991

Magnetic core current steering commutator Patent  
[NASA-CASE-NPO-10201] c 08 N71-18694

Increasing efficiency of switching type regulator circuits Patent  
[NASA-CASE-XMS-09352] c 09 N71-23316

Saturation current protection apparatus for saturable core transformers Patent  
[NASA-CASE-ERC-10075] c 09 N71-24800

Drive circuit for minimizing power consumption in inductive load Patent  
[NASA-CASE-NPO-10716] c 09 N71-24892

Turn on transient limiter Patent  
[NASA-CASE-GSC-10413] c 10 N71-26531

Current regulating voltage divider  
[NASA-CASE-MFS-20935] c 09 N71-34212

Ripple indicator  
[NASA-CASE-KSC-10162] c 09 N72-11225

Inrush current limiter  
[NASA-CASE-GSC-11789-1] c 33 N77-14333

Circuit for automatic load sharing in parallel converter modules  
[NASA-CASE-NPO-14056-1] c 33 N79-24257

Three phase power factor controller  
[NASA-CASE-MFS-25535-1] c 33 N81-12330

Motor power factor controller with a reduced voltage starter  
[NASA-CASE-MFS-25586-1] c 33 N82-11360

Electronic system for high power load control --- solar arrays  
[NASA-CASE-NPO-15358-1] c 33 N83-27126

Differential current source  
[NASA-CASE-GSC-13280-1] c 33 N91-27479

**CURVATURE**

Spin forming tubular elbows Patent  
[NASA-CASE-XMF-01083] c 15 N71-22723

Two degree inverted flexure  
[NASA-CASE-ARC-10345-1] c 15 N73-12488

Cylindrical surface profile and diameter measuring tool and method  
[NASA-CASE-MFS-28287-1] c 35 N88-23959

**CURVE FITTING**

Voltage-current characteristic simulator Patent  
[NASA-CASE-XMS-01554] c 10 N71-10578

**CURVED PANELS**

Method and apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917] c 15 N71-15597

Radio frequency shielded enclosure Patent  
[NASA-CASE-XMF-09422] c 07 N71-19436

Roll-up solar array Patent  
[NASA-CASE-NPO-10188] c 03 N71-20273

Apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917-2] c 15 N71-24836

Variable contour securing system  
[NASA-CASE-MS-16270-1] c 37 N78-27423

**CUSHIONS**

Seat cushion to provide realistic acceleration cues to aircraft simulator pilot  
[NASA-CASE-LAR-12149-2] c 09 N79-31228

Fire blocking systems for aircraft seat cushions  
[NASA-CASE-ARC-11423-1] c 03 N84-33394

**CUTTERS**

Aligning and positioning device Patent  
[NASA-CASE-XMS-04178] c 15 N71-22798

Weld preparation machine Patent  
[NASA-CASE-XKS-07953] c 15 N71-26134

Microcircuit negative cutter  
[NASA-CASE-XLA-09843] c 15 N72-27485

Insert facing tool --- manually operated cutting tool for forming studs in honeycomb material  
[NASA-CASE-MFS-21485-1] c 37 N74-25968

Grinding arrangement for ball nose milling cutters  
[NASA-CASE-LAR-10450-1] c 37 N74-27905

Ophthalmic liquifaction pump  
[NASA-CASE-LEW-12051-1] c 52 N75-33640

Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c 43 N79-25443

System for slicing silicon wafers  
[NASA-CASE-NPO-14406-1] c 37 N80-29703

Open ended tubing cutters  
[NASA-CASE-MS-18538-1] c 37 N82-26672

Tubing and cable cutting tool  
[NASA-CASE-LAR-12786-1] c 37 N84-28085

Cutting head for ultrasonic lithotripsy  
[NASA-CASE-GSC-12944-1] c 52 N86-19885

**CUTTING**

Ellipsograph for pantograph Patent  
[NASA-CASE-XLA-03102] c 14 N71-21079

Precision alignment apparatus for cutting a workpiece  
[NASA-CASE-LAR-11858-1] c 37 N77-14478

Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c 01 N83-35992

Tubing and cable cutting tool  
[NASA-CASE-LAR-12786-1] c 37 N84-28085

Power saw  
[NASA-CASE-MS-21469-1] c 37 N91-31655

Nozzle fabrication technique  
[NASA-CASE-MS-21299-2] c 37 N91-32508

Core design for use with precision composite reflectors  
[NASA-CASE-NPO-17858-1-CU] c 24 N93-14700

**CYANATES**

Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c 25 N80-16116

**CYCLES**

Pneumatic system for controlling and actuating pneumatic cyclic devices  
[NASA-CASE-XMS-04843] c 03 N69-21469

Feedback shift register with states decomposed into cycles of equal length  
[NASA-CASE-NPO-11082] c 08 N72-22167

**CYCLIC ACCELERATORS**

Cyclical bi-directional rotary actuator  
[NASA-CASE-GSC-11883-1] c 37 N77-19458

**CYCLIC COMPOUNDS**

Carboranyl cyclophosphazenes and their polymers --- thermal insulation  
[NASA-CASE-ARC-11176-1] c 27 N82-18389

Maleimido substituted aromatic cyclophosphazenes  
[NASA-CASE-ARC-11428-1] c 23 N86-19376

Aminophenoxycyclophosphazene cured epoxy resins and the composites, laminates, adhesives and structures thereof  
[NASA-CASE-ARC-11548-1] c 27 N87-25469

Aromatic cyclophosphazenes  
[NASA-CASE-ARC-11428-3] c 23 N88-24692

**CYCLIC HYDROCARBONS**

Intumescent composition, foamed product prepared therewith, and process for making same  
[NASA-CASE-ARC-10304-1] c 18 N73-26572

Synthesis of 2,4,8,10-tetroxaspiro5,5undecane  
[NASA-CASE-ARC-11243-2] c 23 N85-33187

**CYCLIC LOADS**

Automatic fatigue test temperature programmer Patent  
[NASA-CASE-XLA-02059] c 33 N71-24276

Low cycle fatigue testing machine  
[NASA-CASE-LAR-10270-1] c 32 N72-25877

Material fatigue testing system  
[NASA-CASE-MFS-20673] c 14 N73-20476

Fatigue testing a plurality of test specimens and method  
[NASA-CASE-MFS-28118-1] c 39 N87-25601

**CYCLOTRON RADIATION**

Targets for producing high purity I-123  
[NASA-CASE-LEW-10518-3] c 25 N78-27226

**CYCLOTRON RESONANCE**

Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c 72 N80-27163

**CYCLOTRON RESONANCE DEVICES**

Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c 72 N80-27163

Gyrotron transmitting tube  
[NASA-CASE-LEW-13429-1] c 33 N83-31952

**CYLINDRICAL ANTENNAS**

Variable beamwidth antenna --- with multiple beam, variable feed system  
[NASA-CASE-GSC-11862-1] c 32 N76-18295

**CYLINDRICAL BODIES**

Apparatus for scanning the surface of a cylindrical body  
[NASA-CASE-NPO-11861-1] c 36 N74-20009

Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c 02 N81-14968

Alignment and assembly tool for very large diameter cylinders  
[NASA-CASE-MFS-28001-2] c 37 N88-14360

Cylindrical surface profile and diameter measuring tool and method  
[NASA-CASE-MFS-28287-1] c 35 N88-23959

Thermal compensating mount  
[NASA-CASE-LAR-14207-1] c 35 N91-14590

Saddle clamp assembly  
[NASA-CASE-MFS-28701-1] c 37 N93-17057

**CYLINDRICAL CHAMBERS**

Modified spiral wound retaining ring  
[NASA-CASE-LAR-12361-1] c 37 N83-19091

**CYLINDRICAL SHELLS**

Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797

**CYSTS**

Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c 52 N79-14751

## DATA COMPRESSION

**CYTOLOGY**

Spiral vane bioreactor  
[NASA-CASE-MS-21361-1] c 51 N91-21701

**CZOCCHRALSKI METHOD**

Electromigration process for the purification of molten silicon during crystal growth  
[NASA-CASE-NPO-14831-1] c 76 N82-30105

**D**

**DAMAGE**

Method of repairing surface damage to porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MS-18736-1] c 24 N83-13172

High temperature, flexible, fiber-preform seal  
[NASA-CASE-LEW-15085-1] c 37 N92-22043

Rapid detection and quantification of features such as damage or flaws in composite and metallic structures  
[NASA-CASE-LAR-14850-1-CU] c 38 N93-17048

Pressure wall patch  
[NASA-CASE-MFS-28724-1] c 18 N93-17061

**DAMAGE ASSESSMENT**

Smart accelerometer --- vibration damage detection  
[NASA-CASE-MS-21951-1] c 35 N92-23545

**DAMPERS (VALVES)**

Dual clearance squeeze film damper  
[NASA-CASE-LEW-13506-1] c 37 N85-33490

**DAMPING**

Dynamic precession damper for spin stabilized vehicles Patent  
[NASA-CASE-XLA-01989] c 21 N70-34295

Slosh suppressing device and method Patent  
[NASA-CASE-XMF-00658] c 12 N70-38997

Attitude control and damping system for spacecraft Patent  
[NASA-CASE-XLA-02551] c 21 N71-21708

Passive caging mechanism Patent  
[NASA-CASE-GSC-10306-1] c 15 N71-24694

Nutation damper  
[NASA-CASE-GSC-11205-1] c 15 N73-25513

Parasitic suppressing circuit  
[NASA-CASE-ERC-10403-1] c 10 N73-26228

Apparatus for disintegrating kidney stones  
[NASA-CASE-GSC-12652-1] c 52 N84-34913

Arrangement for damping the resonance in a laser diode  
[NASA-CASE-NPO-15980-1] c 36 N85-30305

Damping seal for turbomachinery  
[NASA-CASE-MFS-25842-2] c 37 N86-20788

Composite passive damping struts for large precision structures  
[NASA-CASE-NPO-17914-1-CU] c 39 N91-13767

Turbomachinery rotor support with damping  
[NASA-CASE-MFS-28345-1] c 37 N91-14608

Check valve with poppet damping mechanism  
[NASA-CASE-MS-21903-1] c 37 N92-30101

Composite passive damping struts for large precision structures  
[NASA-CASE-NPO-17914-1-CU] c 39 N93-24596

**DATA ACQUISITION**

Analog-to-digital conversion system Patent  
[NASA-CASE-XAC-00404] c 08 N70-40125

Position location and data collection system and method Patent  
[NASA-CASE-GSC-10083-1] c 30 N71-16090

Analog signal integration and reconstruction system Patent  
[NASA-CASE-NPO-10344] c 10 N71-26544

Data transfer system Patent  
[NASA-CASE-NPO-12107] c 08 N71-27255

Simultaneous acquisition of tracking data from two stations  
[NASA-CASE-NPO-13292-1] c 32 N75-15854

Contour detector and data acquisition system for the left ventricular outline  
[NASA-CASE-ARC-10985-1] c 52 N79-10724

Adaptive data acquisition multiplexing system and method  
[NASA-CASE-MS-21170-1] c 17 N91-14371

Storage control system  
[NASA-CASE-LAR-14651-1] c 82 N92-30386

System for memorizing maximum values  
[NASA-CASE-MS-21922-1] c 35 N93-14841

Flow rate logging seepage meter  
[NASA-CASE-LAR-14835-1] c 35 N93-19328

**DATA COLLECTION PLATFORMS**

Remote platform power conserving system  
[NASA-CASE-GSC-11182-1] c 15 N75-13007

**DATA COMPRESSION**

Data compression system with a minimum time delay unit Patent  
[NASA-CASE-XNP-08832] c 08 N71-12506

Data compression processor Patent  
[NASA-CASE-NPO-10068] c 08 N71-19288

## DATA CONVERTERS

- Wide range data compression system Patent  
[NASA-CASE-XGS-02612] c 08 N71-19435  
Method and apparatus for data compression by a decreasing slope threshold test  
[NASA-CASE-NPO-10769] c 08 N72-11171  
Data compression system  
[NASA-CASE-NPO-11243] c 07 N72-20154  
Gated compressor, distortionless signal limiter  
[NASA-CASE-NPO-11820-1] c 32 N74-19788  
Space communication system for compressed data with a concatenated Reed-Solomon-Viterbi coding channel  
[NASA-CASE-NPO-13545-1] c 32 N77-12240  
Sampling video compression system  
[NASA-CASE-ARC-10984-1] c 32 N77-24328  
Pipeline synthetic aperture radar data compression utilizing systolic binary tree-searched architecture for vector quantization  
[NASA-CASE-NPO-17941-1-CU] c 32 N91-13595  
Real-time data compression of broadcast video signals  
[NASA-CASE-LEW-14945-1] c 32 N91-13598  
Digital data registration and differencing compression system  
[NASA-CASE-SSC-00010-1] c 82 N91-23976  
Real-time data compression of broadcast video signals  
[NASA-CASE-LEW-14945-2] c 32 N92-10128  
Digital data registration and differencing compression system  
[NASA-CASE-SSC-00010-2] c 82 N92-23550  
Picture data compression coder using subband/transform coding with a Lempel-Ziv-based coder  
[NASA-CASE-LEW-15700-1] c 82 N93-28130

### DATA CONVERTERS

- Logarithmic converter Patent  
[NASA-CASE-XLA-00471] c 08 N70-34778  
Mechanical coordinate converter Patent  
[NASA-CASE-XNP-00614] c 14 N70-36907  
Analog Signal to Discrete Time Interval Converter (ASDTIC)  
[NASA-CASE-ERC-10048] c 09 N72-25251  
High speed direct binary to binary coded decimal converter and scaler  
[NASA-CASE-KSC-10595] c 08 N73-12176  
Image data rate converter having a drum with a fixed head and a rotatable head  
[NASA-CASE-NPO-11659-1] c 35 N74-11283  
Electronic analog divider  
[NASA-CASE-LEW-11881-1] c 33 N77-17354  
Digital demodulator  
[NASA-CASE-LAR-12659-1] c 33 N82-26570

### DATA CORRELATION

- Instrument for determining coincidence and elapse time between independent sources of random sequential events  
[NASA-CASE-LAR-12531-1] c 35 N83-29651  
Auto covariance computer  
[NASA-CASE-LAR-12968-1] c 60 N86-21154

### DATA LINKS

- Multichannel telemetry system  
[NASA-CASE-NPO-11572] c 07 N73-16121  
Automated attendance accounting system  
[NASA-CASE-NPO-11456] c 08 N73-26176  
Multi-computer multiple data path hardware exchange system  
[NASA-CASE-NPO-13422-1] c 60 N76-14818  
Apparatus for simulating optical transmission links  
[NASA-CASE-GSC-11877-1] c 74 N76-18913  
Distributed computing system with dual independent communications paths between computers and employing split tokens  
[NASA-CASE-NPO-17185-1-CU] c 62 N91-14772  
A universal computer control system for motors  
[NASA-CASE-NPO-17134-1-CU] c 33 N91-31528  
Fault-tolerant fiber optic backbone  
[NASA-CASE-LAR-14785-1] c 74 N93-19052

### DATA MANAGEMENT

- Selective data segment monitoring system --- using shift registers  
[NASA-CASE-ARC-10899-1] c 60 N77-19760

### DATA PROCESSING

- Energy management system for glider type vehicle Patent  
[NASA-CASE-XFR-00756] c 02 N71-13421  
Minimal logic block encoder Patent  
[NASA-CASE-NPO-10595] c 10 N71-25917  
Data transfer system Patent  
[NASA-CASE-NPO-12107] c 08 N71-27255  
Transient augmentation circuit for pulse amplifiers Patent  
[NASA-CASE-XNP-01068] c 10 N71-28739  
Pseudonoise (PN) synchronization of data system with derivation of clock frequency from received signal for clocking receiver PN generator  
[NASA-CASE-XNP-03623] c 09 N73-28084

- Image data rate converter having a drum with a fixed head and a rotatable head  
[NASA-CASE-NPO-11659-1] c 35 N74-11283  
Charge-coupled device data processor for an airborne imaging radar system  
[NASA-CASE-NPO-13587-1] c 32 N77-32342  
Interactive color display for multispectral imagery using correlation clustering  
[NASA-CASE-MSC-16253-1] c 32 N79-20297  
High-speed multiplexing of keyboard data inputs  
[NASA-CASE-NPO-14554-1] c 60 N81-27814  
Real-time garbage collection for list processing  
[NASA-CASE-MSC-20964-1] c 60 N87-14863  
Processing circuit with asymmetry corrector and convolutional encoder for digital data  
[NASA-CASE-MSC-20187-1] c 33 N87-25531  
Laser Doppler velocimeter multiplexer interface for simultaneous measured events  
[NASA-CASE-ARC-11536-1] c 33 N89-14384  
Real-time simulation clock  
[NASA-CASE-LAR-14056-1] c 35 N90-23713  
Digital data registration and differencing compression system  
[NASA-CASE-SSC-00010-2] c 82 N92-23550

### DATA PROCESSING EQUIPMENT

- Data processor having multiple sections activated at different times by selective power coupling to the sections Patent  
[NASA-CASE-XGS-04767] c 08 N71-12494  
Demodulation system Patent  
[NASA-CASE-XAC-04030] c 10 N71-19472  
Rate augmented digital to analog converter Patent  
[NASA-CASE-XLA-07828] c 08 N71-27057  
Variable digital processor including a register for shifting and rotating bits in either direction Patent  
[NASA-CASE-GSC-10186] c 08 N71-33110  
Flexible computer accessed telemetry  
[NASA-CASE-NPO-11358] c 07 N72-25172  
Versatile arithmetic unit for high speed sequential decoder  
[NASA-CASE-NPO-11371] c 08 N73-12177  
Data processor with conditionally supplied clock signals  
[NASA-CASE-GSC-10975-1] c 08 N73-13187  
Automated attendance accounting system  
[NASA-CASE-NPO-11456] c 08 N73-26176  
Space communication system for compressed data with a concatenated Reed-Solomon-Viterbi coding channel  
[NASA-CASE-NPO-13545-1] c 32 N77-12240  
High-speed multiplexing of keyboard data inputs  
[NASA-CASE-NPO-14554-1] c 60 N81-27814  
Digital interface for bi-directional communication between a computer and a peripheral device  
[NASA-CASE-MSC-20258-1] c 60 N84-28492  
Neighborhood comparison operator  
[NASA-CASE-NPO-16464-1CU] c 60 N86-24224  
Real time pipelined system for forming the sum of products in the processing of video data  
[NASA-CASE-NPO-16462-1-CU] c 60 N88-24169

### DATA RECORDERS

- Data compressor Patent  
[NASA-CASE-XNP-04067] c 08 N71-22707  
Recorder using selective noise filter  
[NASA-CASE-ERC-10112] c 07 N72-21119  
Recorder/processor apparatus --- for optical data processing  
[NASA-CASE-GSC-11553-1] c 35 N74-15831

### DATA RECORDING

- System for recording and reproducing pulse code modulated data Patent  
[NASA-CASE-XGS-01021] c 08 N71-21042  
Data compressor Patent  
[NASA-CASE-XNP-04067] c 08 N71-22707  
Incremental tape recorder and data rate converter Patent  
[NASA-CASE-XNP-02778] c 08 N71-22710  
Transient video signal recording with expanded playback Patent  
[NASA-CASE-ARC-10003-1] c 09 N71-25866  
On-film optical recording of camera lens settings  
[NASA-CASE-MSC-12363-1] c 14 N73-26431  
Image data rate converter having a drum with a fixed head and a rotatable head  
[NASA-CASE-NPO-11659-1] c 35 N74-11283  
Holography utilizing surface plasmon resonances  
[NASA-CASE-MFS-22040-1] c 35 N74-26946

### DATA REDUCTION

- Data compression system  
[NASA-CASE-XNP-09785] c 08 N69-21928  
Method and system for respiration analysis Patent  
[NASA-CASE-XFR-08403] c 05 N71-11202  
Data compression system with a minimum time delay unit Patent  
[NASA-CASE-XNP-08832] c 08 N71-12506  
Data compression processor Patent  
[NASA-CASE-NPO-10068] c 08 N71-19288

## SUBJECT INDEX

- Wide range data compression system Patent  
[NASA-CASE-XGS-02612] c 08 N71-19435  
Data compressor Patent  
[NASA-CASE-XNP-04067] c 08 N71-22707  
Method and apparatus for data compression by a decreasing slope threshold test  
[NASA-CASE-NPO-10769] c 08 N72-11171  
Data compression system  
[NASA-CASE-NPO-11243] c 07 N72-20154  
Digital slope threshold data compressor  
[NASA-CASE-NPO-11630] c 08 N72-33172  
Data volume reduction for imaging radar polarimetry  
[NASA-CASE-NPO-17184-1-CU] c 32 N88-26541

### DATA RETRIEVAL

- Magnetic matrix memory system Patent  
[NASA-CASE-XMF-05835] c 08 N71-12504  
Asynchronous, multiplexing, single line transmission and recovery data system --- for satellite use  
[NASA-CASE-NPO-13321-1] c 32 N75-26195

### DATA SAMPLING

- Reduced bandwidth video communication system utilizing sampling techniques Patent  
[NASA-CASE-XNP-02791] c 07 N71-23026  
Signal processing apparatus for multiplex transmission Patent  
[NASA-CASE-NPO-10388] c 07 N71-24622  
Television signal processing system Patent  
[NASA-CASE-NPO-10140] c 07 N71-24742  
Method and apparatus for data compression by a decreasing slope threshold test  
[NASA-CASE-NPO-10769] c 08 N72-11171  
Sampling video compression system  
[NASA-CASE-ARC-10984-1] c 32 N77-24328  
CCD correlated quadruple sampling processor  
[NASA-CASE-NPO-14426-1] c 33 N81-27396

### DATA SMOOTHING

- Variable time constant smoothing circuit Patent  
[NASA-CASE-XGS-01983] c 10 N70-41964  
Smoothing filter for digital to analog conversion  
[NASA-CASE-FRC-11025-1] c 33 N82-24417

### DATA STORAGE

- Data handling system based on source significance, storage availability and data received from the source Patent Application  
[NASA-CASE-XNP-04162-1] c 08 N70-34675  
Magnetic matrix memory system Patent  
[NASA-CASE-XMF-05835] c 08 N71-12504  
Tape guidance system and apparatus for the provision thereof Patent  
[NASA-CASE-XNP-09453] c 08 N71-19420  
Event recorder Patent  
[NASA-CASE-XLA-01832] c 14 N71-21006  
System for recording and reproducing pulse code modulated data Patent  
[NASA-CASE-XGS-01021] c 08 N71-21042  
Incremental tape recorder and data rate converter Patent  
[NASA-CASE-XNP-02778] c 08 N71-22710  
Multiple hologram recording and readout system Patent  
[NASA-CASE-ERC-10151] c 16 N71-29131  
Dual purpose momentum wheels for spacecraft with magnetic recording  
[NASA-CASE-NPO-11481] c 21 N73-13644  
Data storage, image tube type  
[NASA-CASE-MSC-14053-1] c 60 N74-12888  
Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c 33 N79-10337  
Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-1-NP] c 52 N90-21519  
Analog hardware for learning neural networks  
[NASA-CASE-NPO-17664-1-CU] c 62 N91-32852  
Disk memory device  
[NASA-CASE-GSC-13196-1] c 60 N92-29132  
Nonvolatile programmable neural network synaptic array  
[NASA-CASE-NPO-18578-1-CU] c 33 N92-30086  
Storage control system  
[NASA-CASE-LAR-14651-1] c 82 N92-30386  
System for memorizing maximum values  
[NASA-CASE-MSC-21922-1] c 35 N93-14841
- DATA STRUCTURES**  
Real-time garbage collection for list processing  
[NASA-CASE-MSC-20964-1] c 60 N87-14863
- DATA SYSTEMS**  
Data handling system based on source significance, storage availability and data received from the source Patent Application  
[NASA-CASE-XNP-04162-1] c 08 N70-34675  
Rate augmented digital to analog converter Patent  
[NASA-CASE-XLA-07828] c 08 N71-27057  
Method and apparatus for decoding compatible convolutional codes  
[NASA-CASE-MSC-14070-1] c 32 N74-32598



Shaft mount for data coupler system  
[NASA-CASE-LAR-13805-1] c 37 N92-30097

**DATA TRANSFER (COMPUTERS)**  
Data transfer system Patent  
[NASA-CASE-NPO-12107] c 08 N71-27255  
Printer port interface  
[NASA-CASE-LAR-13950-1] c 60 N92-30541

**DATA TRANSMISSION**  
Telemetry word forming unit  
[NASA-CASE-XNP-09225] c 09 N69-24333  
Phase-shift data transmission system having a pseudo-noise SYNC code modulated with the data in a single channel Patent  
[NASA-CASE-XNP-00911] c 08 N70-41961  
Data compression system with a minimum time delay unit Patent  
[NASA-CASE-XNP-08832] c 08 N71-12506  
Data compression processor Patent  
[NASA-CASE-NPO-10068] c 08 N71-19288  
Wide range data compression system Patent  
[NASA-CASE-XGS-02612] c 08 N71-19435  
Phase quadrature-plural channel data transmission system Patent  
[NASA-CASE-XAC-06302] c 08 N71-19763  
Reduced bandwidth video communication system utilizing sampling techniques Patent  
[NASA-CASE-XNP-02791] c 07 N71-23026  
Frequency shift keying apparatus Patent  
[NASA-CASE-XGS-01537] c 07 N71-23405  
Decoder system Patent  
[NASA-CASE-NPO-10118] c 07 N71-24741  
Data compression system  
[NASA-CASE-NPO-11243] c 07 N72-20154  
Multichannel telemetry system  
[NASA-CASE-NPO-11572] c 07 N73-16121  
Automated attendance accounting system  
[NASA-CASE-NPO-11456] c 08 N73-26176  
System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c 33 N75-19519  
Sampling video compression system  
[NASA-CASE-ARC-10984-1] c 32 N77-24328  
Pseudo noise code and data transmission method and apparatus  
[NASA-CASE-GSC-12017-1] c 32 N77-30308  
Multi-channel rotating optical interface for data transmission  
[NASA-CASE-NPO-14066-1] c 74 N79-34011  
System for a displaying at a remote station data generated at a central station and for powering the remote station from the central station  
[NASA-CASE-GSC-12411-1] c 33 N81-14221  
Digital interface for bi-directional communication between a computer and a peripheral device  
[NASA-CASE-MS-20258-1] c 60 N84-28492  
Single frequency multitransmitter telemetry  
[NASA-CASE-LAR-13006-1] c 17 N87-16863  
VLSI single-chip (255,223) Reed-Solomon encoder with interleaver  
[NASA-CASE-NPO-17280-1-CU] c 17 N90-21061  
Dual frequency optical carrier technique for transmission of reference frequencies in dispersive media  
[NASA-CASE-NPO-18007-1-CU] c 74 N92-11791  
Shaft mount for data coupler system  
[NASA-CASE-LAR-13805-1] c 37 N92-30097  
Printer port interface  
[NASA-CASE-LAR-13950-1] c 60 N92-30541

**DAWSONITE**  
Synthesis of dawsonites --- for use in fire extinguishing operations  
[NASA-CASE-ARC-11326-1] c 25 N83-33977

**DEACTIVATION**  
Magnetostrictive roller drive motor  
[NASA-CASE-GSC-13369-1] c 33 N92-15331

**DEBRIS**  
Counter pumping debris excluder and separator --- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c 07 N78-25090  
Hypervelocity impact shield  
[NASA-CASE-MS-21420-1] c 18 N92-15114

**DECAY RATES**  
Solar sensor having coarse and fine sensing with matched preirradiated cells and method of selecting cells Patent  
[NASA-CASE-XLA-01584] c 14 N71-23269

**DECELERATION**  
Assembly for recovering a capsule Patent  
[NASA-CASE-XMF-00641] c 31 N70-36410  
Discrete local altitude sensing device Patent  
[NASA-CASE-XMS-03792] c 14 N70-41812  
Hot air balloon deceleration and recovery system Patent  
[NASA-CASE-XLA-06824-2] c 02 N71-11037  
Zero gravity apparatus Patent  
[NASA-CASE-XMF-06515] c 14 N71-23227

## DECIMALS

High speed direct binary to binary coded decimal converter and scaler  
[NASA-CASE-KSC-10595] c 08 N73-12176

## DECISION MAKING

Method and apparatus for decoding compatible convolutional codes  
[NASA-CASE-MS-14070-1] c 32 N74-32598  
Method for Viterbi decoding of large constraint length convolutional codes  
[NASA-CASE-NPO-17310-1-CU] c 17 N88-28946  
Multiple symbol differential detection  
[NASA-CASE-NPO-17896-1-CU] c 32 N91-27439  
A space-time neural network for processing both spatial and temporal data  
[NASA-CASE-MS-21874-1] c 63 N92-30314  
Backward assembly planning with DFA analysis  
[NASA-CASE-NPO-18817-1-CU] c 31 N93-12202  
Hidden Markov models for fault detection in dynamic systems  
[NASA-CASE-NPO-18982-1-CU] c 38 N93-30413

## DECODERS

Serial digital decoder Patent  
[NASA-CASE-NPO-10150] c 08 N71-24650  
BCD to decimal decoder Patent  
[NASA-CASE-KSC-06167] c 08 N71-24890  
Encoder/decoder system for a rapidly synchronizable binary code Patent  
[NASA-CASE-NPO-10342] c 10 N71-33407  
Compact-bi-phase pulse coded modulation decoder  
[NASA-CASE-KSC-10834-1] c 33 N76-14371  
Low distortion receiver for bi-level baseband PCM waveforms  
[NASA-CASE-MS-14557-1] c 32 N76-16249  
Three phase full wave dc motor decoder  
[NASA-CASE-GSC-11824-1] c 33 N77-26386  
Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c 33 N81-26359  
Reed-Solomon decoder  
[NASA-CASE-NPO-15982-1] c 60 N87-21591  
Miniaturization of flight deflection measurement system  
[NASA-CASE-LAR-13628-1] c 35 N90-23707  
VLSI architecture for a Reed-Solomon decoder  
[NASA-CASE-NPO-17897-1-CU] c 33 N92-33011

## DECODING

Decoder system Patent  
[NASA-CASE-NPO-10118] c 07 N71-24741  
Versatile arithmetic unit for high speed sequential decoder  
[NASA-CASE-NPO-11371] c 08 N73-12177  
Method and apparatus for decoding compatible convolutional codes  
[NASA-CASE-MS-14070-1] c 32 N74-32598  
Differential pulse code modulation  
[NASA-CASE-MS-12506-1] c 32 N77-12239  
Method for Viterbi decoding of large constraint length convolutional codes  
[NASA-CASE-NPO-17310-1-CU] c 17 N88-28946

## DECOMMUTATORS

Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c 33 N81-26359  
Memory-based parallel data output controller  
[NASA-CASE-GSC-12447-2] c 60 N84-28491

## DECOMPOSITION

Backward assembly planning with DFA analysis  
[NASA-CASE-NPO-18817-1-CU] c 31 N93-12202  
Extended task space control for robotic manipulators  
[NASA-CASE-NPO-18902-1-CU] c 37 N93-28129

## DECONTAMINATION

Decontamination of petroleum products Patent  
[NASA-CASE-XNP-03835] c 06 N71-23499  
Helium refrigerator and method for decontaminating the refrigerator  
[NASA-CASE-NPO-10634] c 23 N72-25619  
Plasma cleaning device --- designed for high vacuum environments  
[NASA-CASE-MFS-22906-1] c 75 N78-27913

## DECOUPLING

Two fault tolerant toggle-hook release  
[NASA-CASE-MS-21671-1] c 37 N91-32498

## DEEP SPACE NETWORK

Low phase noise digital frequency divider  
[NASA-CASE-NPO-11569] c 10 N73-26229

## DEFECTS

Hybrid holographic non-destructive test system  
[NASA-CASE-MFS-23114-1] c 38 N78-32447  
Method and apparatus for thermographically and quantitatively analyzing a structure for disbands and/or inclusions  
[NASA-CASE-LAR-14559-1] c 38 N92-29829  
Method and apparatus for evaluating multilayer objects for imperfections  
[NASA-CASE-LAR-14581-1-SB] c 38 N93-12204

Rapid detection and quantification of features such as damage or flaws in composite and metallic structures  
[NASA-CASE-LAR-14850-1-CU] c 38 N93-17048

## DEFLECTION

Biopropellant injector  
[NASA-CASE-XNP-09461] c 28 N72-23809  
Noncontacting method for measuring angular deflection  
[NASA-CASE-LAR-12178-1] c 74 N80-21138  
Miniaturization of flight deflection measurement system  
[NASA-CASE-LAR-13628-1] c 35 N90-23707  
Method and apparatus for deflection measurements using eddy current effects  
[NASA-CASE-GSC-13506-1] c 35 N93-26103

## DEFLECTORS

Inlet deflector for jet engines Patent  
[NASA-CASE-XLE-00388] c 28 N70-34788  
Aircraft wheel spray drag alleviator Patent  
[NASA-CASE-XLA-01583] c 02 N70-36825  
Ion beam deflector Patent  
[NASA-CASE-LEW-10689-1] c 28 N71-26173  
Exhaust flow deflector --- for ducted gas flow  
[NASA-CASE-LAR-11570-1] c 34 N76-18364  
Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c 31 N81-19343  
Quantum well, beam deflecting surface emitting lasers  
[NASA-CASE-NPO-18243-1-CU] c 36 N93-13418

## DEFOCUSING

Retrodiffractive modulator Patent  
[NASA-CASE-GSC-10062] c 14 N71-15605

## DEFORMATION

Arbitrarily shaped model survey system Patent  
[NASA-CASE-LAR-10098] c 32 N71-26681  
Low cycle fatigue testing machine  
[NASA-CASE-LAR-10270-1] c 32 N72-25877  
Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c 37 N77-32500  
Cantilever clamp fitting  
[NASA-CASE-MFS-28328-1] c 37 N91-13731  
Probe insertion apparatus with inflatable seal  
[NASA-CASE-LEW-14965-1] c 37 N91-13732

## DEGASSING

Degassifying and mixing apparatus for liquids --- potable water for spacecraft  
[NASA-CASE-MS-18936-1] c 35 N83-29652

## DEGREES OF FREEDOM

Training vehicle for controlling attitude Patent  
[NASA-CASE-XMS-02977] c 11 N71-10746  
Dynamic vibration absorber Patent  
[NASA-CASE-LAR-10083-1] c 15 N71-27006  
Kinesthetic control simulator --- for pilot training  
[NASA-CASE-LAR-10276-1] c 09 N75-15662  
Synchronized computational architecture for generalized bilateral control of robot arms  
[NASA-CASE-NPO-17401-1-CU] c 63 N91-31885  
Configuration control of seven-degree-of-freedom arms  
[NASA-CASE-NPO-18607-1-CU] c 37 N92-23553  
User friendly joystick  
[NASA-CASE-GSC-13187-1] c 33 N92-29153

## DEHUMIDIFICATION

Condenser - Separator  
[NASA-CASE-XLA-08645] c 15 N69-21465

## DEHYDRATED FOOD

Modification of the physical properties of freeze-dried rice  
[NASA-CASE-MS-13540-1] c 05 N72-33096

## DEHYDRATION

Process for developing crystallinity in linear aromatic polyimides  
[NASA-CASE-LAR-13732-1] c 27 N87-25474

## DEICERS

Piezoelectric deicing device  
[NASA-CASE-LEW-13773-2] c 33 N86-20671  
Electro-expulsive separation system  
[NASA-CASE-ARC-11613-1] c 33 N87-28833

## DEIONIZATION

Process for making a noble metal on tin oxide catalyst  
[NASA-CASE-LAR-13741-1-SB] c 25 N90-20180

## DELAMINATING

Delamination test apparatus and method  
[NASA-CASE-LAR-13985-1] c 24 N91-14430  
A process for preparing an assembly of an article and a soluble polyimide which resists dimensional change, delamination, and debonding when exposed to changes in temperature  
[NASA-CASE-LAR-14763-1] c 27 N92-12121  
Method and apparatus for evaluating multilayer objects for imperfections  
[NASA-CASE-LAR-14581-1-SB] c 38 N93-12204

## DELAY CIRCUITS

Pulsed differential comparator circuit Patent  
[NASA-CASE-XLE-03804] c 10 N71-19471



Control apparatus for applying pulses of selectively predetermined duration to a sequence of loads Patent [NASA-CASE-XGS-04224] c 10 N71-26418  
 Telemetry synchronizer [NASA-CASE-GSC-11868-1] c 17 N76-22245  
 Sweep group delay measurement [NASA-CASE-NPO-13909-1] c 33 N78-25319  
 Pseudonoise code tracking loop [NASA-CASE-MS-C-18035-1] c 32 N81-15179  
 Long period pseudo random number sequence generator [NASA-CASE-NPO-17241-1-CU] c 33 N90-23636  
 Vibration analyzer [NASA-CASE-MS-C-21408-1] c 37 N91-14607

# DELAY LINES

A solid state acoustic variable time delay line Patent [NASA-CASE-ERC-10032] c 10 N71-25900

# DELTA MODULATION

Multifunction audio digitizer --- producing direct delta and pulse code modulation [NASA-CASE-MS-C-13855-1] c 35 N74-17885

# DELTA WINGS

Variable-geometry winged reentry vehicle Patent [NASA-CASE-XLA-00241] c 31 N70-37986  
 A two-stage earth-to-orbit transport with translating oblique wings for booster recovery [NASA-CASE-LAR-14156-1] c 16 N90-16781  
 Natural flow wing [NASA-CASE-LAR-14281-1] c 02 N92-28729

# DEMAGNETIZATION

Tumbler system to provide random motion [NASA-CASE-XGS-02437] c 15 N69-21472

# DEMULATION

Phase quadrature-plural channel data transmission system Patent [NASA-CASE-XAC-06302] c 08 N71-19763  
 Facsimile video remodulation network [NASA-CASE-GSC-10185-1] c 07 N72-12081  
 Quadrature demodulation [NASA-CASE-GSC-12137-1] c 33 N78-32338  
 Navigation system and method [NASA-CASE-GSC-12508-1] c 04 N84-22546  
 Phase ambiguity resolution for offset QPSK modulation systems [NASA-CASE-NPO-17853-1-CU] c 32 N91-25318  
 Digital carrier demodulator employing components working beyond normal limits [NASA-CASE-NPO-17628-1-CU] c 32 N92-21712

# DEMULATORS

Telemetry word forming unit [NASA-CASE-XNP-09225] c 09 N69-24333  
 Frequency shift keyed demodulator Patent [NASA-CASE-XGS-02889] c 07 N71-11282  
 Bi-carrier demodulator with modulation Patent [NASA-CASE-XMF-01160] c 07 N71-11298  
 Demodulation system Patent [NASA-CASE-XAC-04030] c 10 N71-19472  
 Laser calibrator Patent [NASA-CASE-XLA-03410] c 16 N71-25914  
 Frequency modulation demodulator threshold extension device Patent [NASA-CASE-MS-C-12165-1] c 07 N71-33696  
 Full wave modulator-demodulator amplifier apparatus --- for generating rectified output signal [NASA-CASE-FRC-10072-1] c 33 N74-14939  
 Unbalanced quadrature demodulator [NASA-CASE-MS-C-14840-1] c 32 N77-24331  
 Digital demodulator-correlator [NASA-CASE-NPO-13982-1] c 32 N79-14267  
 Self-calibrating threshold detector [NASA-CASE-MS-C-16370-1] c 35 N81-19427  
 Digital demodulator [NASA-CASE-LAR-12659-1] c 33 N82-26570  
 Digitized synchronous demodulator [NASA-CASE-GSC-13237-1] c 33 N91-14550  
 Synchronous demodulator [NASA-CASE-GSC-13179-1] c 33 N91-26438

# DEMDRITIC CRYSTALS

Method of increasing minority carrier lifetime in silicon web or the like [NASA-CASE-NPO-15530-1] c 76 N83-35888

# DENSIFICATION

Densification of porous refractory substrates --- space shuttle orbiter tiles [NASA-CASE-MS-C-18737-1] c 24 N83-13171

# DENSITOMETERS

Apparatus having coaxial capacitor structure for measuring fluid density Patent [NASA-CASE-XLE-00143] c 14 N70-36618  
 Densitometer Patent [NASA-CASE-XLE-00688] c 14 N70-41330  
 Ultrasonic bone densitometer [NASA-CASE-MFS-20994-1] c 35 N75-12271

# DENSITY (MASS/VOLUME)

Non-toxic invert analog glass compositions of high modulus [NASA-CASE-HQN-10328-2] c 27 N82-29454  
 Method and apparatus for minimizing convection during crystal growth from solution [NASA-CASE-NPO-15811-1] c 76 N84-12968

# DENSITY DISTRIBUTION

Apparatus for increasing ion engine beam density Patent [NASA-CASE-XLE-00519] c 28 N70-41576  
 Method and apparatus for compensating reflection losses in a path length modulated absorption-absorption trace gas detector --- for determining density of gas [NASA-CASE-ARC-10631-1] c 74 N76-20958

# DENSITY MEASUREMENT

Apparatus having coaxial capacitor structure for measuring fluid density Patent [NASA-CASE-XLE-00143] c 14 N70-36618  
 Densitometer Patent [NASA-CASE-XLE-00688] c 14 N70-41330  
 Determining particle density using known material Hugoniot curves [NASA-CASE-LAR-11059-1] c 76 N75-12810  
 Selective image area control of X-ray film exposure density [NASA-CASE-NPO-13808-1] c 35 N78-15461  
 Geodetic distance measuring apparatus [NASA-CASE-GSC-12609-2] c 36 N83-29681  
 Device for determining frost depth and density [NASA-CASE-MFS-25754-1] c 35 N84-28018  
 Acoustic device and method for measuring gas densities [NASA-CASE-NPO-18155-1-CU] c 71 N93-13421

# DENTISTRY

Process for the preparation of brushite crystals [NASA-CASE-ERC-10338] c 04 N72-33072  
 Acoustic tooth cleaner [NASA-CASE-LAR-12471-1] c 52 N82-29862

# DEOXIDIZING

Isotope exchange in oxide-containing catalyst [NASA-CASE-LAR-13542-2-SB] c 25 N90-20154

# DEOXYGENATION

Electrocatalyst for oxygen reduction [NASA-CASE-HQN-10537-1] c 06 N72-10138

# DEPLOYMENT

Minimech self-deploying boom mechanism [NASA-CASE-GSC-10566-1] c 15 N72-18477  
 Deployable solar cell array [NASA-CASE-NPO-10883] c 31 N72-22874  
 Antenna deployment mechanism for use with a spacecraft --- extensible and retractable telescopic antenna mast [NASA-CASE-GSC-12331-1] c 18 N80-14183  
 High acceleration cable deployment system [NASA-CASE-ARC-11256-1] c 15 N82-24272  
 Sequentially deployable maneuverable tetrahedral beam [NASA-CASE-LAR-13098-1] c 31 N86-19479  
 Joint for deployable structures [NASA-CASE-NPO-16038-1] c 37 N86-19605  
 Latching mechanism for deployable/re-stowable columns useful in satellite construction [NASA-CASE-LAR-13169-1] c 37 N86-25791  
 Payload deployment method and system [NASA-CASE-MS-C-21330-1] c 16 N88-24660  
 Selectable towline spin chute system [NASA-CASE-LAR-14322-1] c 02 N91-27139  
 Load limiting energy absorbing lightweight debris catcher [NASA-CASE-MS-C-21562-1] c 16 N92-16007  
 Self-deploying photovoltaic power system [NASA-CASE-LEW-15308-1] c 44 N92-24057

# DEPOSITION

Means and methods of depositing thin films on substrates Patent [NASA-CASE-XNP-00595] c 15 N70-34967  
 Monitoring deposition of films [NASA-CASE-MFS-20675] c 26 N73-26751  
 Production of pure metals [NASA-CASE-LEW-10906-1] c 25 N74-30502  
 Diamondlike flake composites [NASA-CASE-LEW-13837-1] c 24 N84-22695  
 Deposition of diamondlike carbon films [NASA-CASE-LEW-14080-1] c 31 N85-20153  
 Liquid crystal light valve structures [NASA-CASE-MS-C-20036-1] c 76 N85-33826  
 Method of coating a substrate with a rapidly solidified metal [NASA-CASE-GSC-12880-1] c 26 N86-32550  
 A method of making a single layer multi-color luminescent display [NASA-CASE-LAR-14811-1] c 33 N92-30389  
 Integrated filter and detector array for spectral imaging [NASA-CASE-NPO-18317-1-CU] c 74 N93-13419

Method of forming a multiple layer dielectric and a hot film sensor therewith [NASA-CASE-LAR-13678-3] c 35 N93-14714  
 A method of making a single layer multi-color luminescent display [NASA-CASE-LAR-14811-1] c 33 N93-20119

# DEPOSITS

Apparatus and method to keep the walls of a free-space reactor free from deposits of solid materials [NASA-CASE-NPO-15851-1] c 37 N85-21652

# DEPTH

Television monitor field shifter and an opto-electronic method for obtaining a stereo image of optimal depth resolution and reduced depth distortion on a single screen [NASA-CASE-NPO-17249-1-CU] c 32 N89-28676  
 Stereoscopic camera and viewing systems with undistorted depth presentation and reduced or eliminated erroneous acceleration and deceleration perceptions, or with perceptions produced or enhanced for special effects [NASA-CASE-NPO-18028-1-CU] c 74 N92-16809

# DEPTH MEASUREMENT

Device for determining frost depth and density [NASA-CASE-MFS-25754-1] c 35 N84-28018  
 Mining volume measurement system [NASA-CASE-LAR-13519-1] c 35 N88-23963  
 Ultrasonic depth gauge for liquids under high pressure [NASA-CASE-LAR-13300-1-CU] c 35 N89-14407  
 Adjustable depth gage [NASA-CASE-LEW-14880-1] c 35 N92-21723

# DESCENT

Emergency descent device [NASA-CASE-MFS-23074-1] c 54 N77-21844

# DESIGN ANALYSIS

Airfoil shape for flight at subsonic speeds --- design analysis and aerodynamic characteristics of the GAW-1 airfoil [NASA-CASE-LAR-10585-1] c 02 N76-22154  
 Snap-in compressible biomedical electrode [NASA-CASE-MS-C-14623-1] c 52 N77-28717  
 Aerodynamic design optimization using sensitivity analysis and computational fluid dynamics [NASA-CASE-LAR-14815-1-CU] c 34 N92-29830

# DESORPTION

Multicomponent gas sorption Joule-Thomson refrigeration [NASA-CASE-NPO-17569-1-CU] c 31 N92-15203

# DESTRUCTIVE TESTS

Aeroelastic instability stoppers for wind tunnel models [NASA-CASE-LAR-12458-1] c 44 N83-21503  
 Delamination test apparatus and method [NASA-CASE-LAR-13985-1] c 24 N91-14430

# DESULFURIZING

Coal desulfurization process [NASA-CASE-NPO-13937-1] c 44 N78-31527  
 Continuous coal processing method [NASA-CASE-NPO-13758-2] c 31 N81-15154  
 Coal desulfurization --- using iron pentacarbonyl [NASA-CASE-NPO-14272-1] c 25 N81-33246  
 Crude oil desulfurization [NASA-CASE-NPO-14542-1] c 25 N82-23282  
 Coal desulfurization by aqueous chlorination [NASA-CASE-NPO-14902-1] c 25 N82-29371  
 Hydrodesulfurization of chlorinated coal [NASA-CASE-NPO-15304-1] c 25 N83-31743  
 Fluidized bed desulfurization [NASA-CASE-NPO-15924-1] c 25 N85-35253  
 Regenerative Cu/La zeolite supported desulfurizing sorbents [NASA-CASE-NPO-17480-1-CU] c 25 N92-10073

# DETECTION

Heated element fluid flow sensor Patent [NASA-CASE-MS-C-12084-1] c 12 N71-17569  
 Leak detector Patent [NASA-CASE-LAR-10323-1] c 12 N71-17573  
 Metallic intrusion detector system [NASA-CASE-ARC-10265-1] c 10 N72-28240  
 Cosmic dust or other similar outer space particles impact location detector [NASA-CASE-GSC-11291-1] c 25 N72-33696  
 Bacteria detection instrument and method [NASA-CASE-GSC-11533-1] c 14 N73-13435  
 Short range laser obstacle detector --- for surface vehicles using laser diode array [NASA-CASE-NPO-11856-1] c 36 N74-15145  
 Vacuum leak detector [NASA-CASE-LAR-11237-1] c 35 N75-19612  
 Photoelectric detection system --- manufacturing automation [NASA-CASE-MFS-23776-1] c 33 N82-28545  
 Apparatus and process for microbial detection and enumeration [NASA-CASE-LAR-12709-1] c 35 N82-28604  
 Focal plane array optical proximity sensor [NASA-CASE-NPO-15155-1] c 74 N85-22139

- Dual differential interferometer  
[NASA-CASE-LAR-12966-1] c 35 N85-30282
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373
- Modulated voltage metastable ionization detector  
[NASA-CASE-ARC-11503-1] c 35 N85-34374
- Spillage detector for liquid chromatography systems  
[NASA-CASE-MSC-20206-1] c 25 N86-27431
- Dynamic range compression/expansion of light beams by photorefractive crystals  
[NASA-CASE-NPO-17140-1-CU] c 74 N89-14077
- Tailorable infrared sensing device with strain layer superlattice structure  
[NASA-CASE-NPO-16617-2-CU] c 35 N90-17118
- Device for quickly sensing the amount of O<sub>2</sub> in a combustion product gas  
[NASA-CASE-LAR-13816-1] c 35 N90-22025
- Method and apparatus for determining return stroke polarity of distant lightning  
[NASA-CASE-MFS-26102-1-CU] c 47 N91-15661
- Dynamic tester for rotor seals and bearings  
[NASA-CASE-MFS-28493-1] c 09 N91-25155
- Dual diaphragm tank with telltale drain  
[NASA-CASE-MSC-21703-1] c 31 N91-25305
- Accelerometer method and apparatus for integral display and control functions  
[NASA-CASE-MSC-21961-1] c 35 N92-29952
- Rapid detection and quantification of features such as damage or flaws in composite and metallic structures  
[NASA-CASE-LAR-14850-1-CU] c 38 N93-17048
- Discrete optical fiber strain sensor  
[NASA-CASE-LAR-14810-1-SB] c 35 N93-19492
- Pseudomonas screening assay  
[NASA-CASE-NPO-17653-1-CU] c 51 N93-25994
- Valve malfunction detection apparatus  
[NASA-CASE-MFS-29904-1] c 35 N93-29503
- DETECTORS**
- Pressurized cell micrometeoroid detector Patent  
[NASA-CASE-XLA-00936] c 14 N71-14996
- Detector panels-micrometeoroid impact Patent  
[NASA-CASE-XLA-05906] c 31 N71-16221
- Pulse activated polarographic hydrogen detector Patent  
[NASA-CASE-XMF-06531] c 14 N71-17575
- Light position locating system Patent  
[NASA-CASE-XNP-01059] c 23 N71-21821
- Method for detecting leaks in hermetically sealed containers Patent  
[NASA-CASE-ERC-10045] c 15 N71-24910
- Precipitation detector Patent  
[NASA-CASE-XLA-02619] c 10 N71-26334
- Hydrogen fire blink detector  
[NASA-CASE-MFS-15063] c 14 N72-25412
- Combustion detector  
[NASA-CASE-LAR-10739-1] c 14 N73-16484
- Multiple pass reimaging optical system  
[NASA-CASE-ARC-10194-1] c 23 N73-20741
- Meteoroid detector  
[NASA-CASE-LAR-10483-1] c 14 N73-32327
- Deployable pressurized cell structure for a micrometeoroid detector  
[NASA-CASE-LAR-10295-1] c 35 N74-21062
- Modulated hydrogen ion flame detector  
[NASA-CASE-ARC-10322-1] c 35 N76-18403
- Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c 43 N79-31706
- Means and method for calibrating a photon detector utilizing electron-photon coincidence  
[NASA-CASE-NPO-15644-1] c 35 N84-33767
- DETERGENTS**
- Anti-fog composition --- for prevention of fogging on surfaces such as space helmet visors and windshields  
[NASA-CASE-MSC-13530-2] c 23 N75-14834
- Self-contained, single-use hose and tubing cleaning module  
[NASA-CASE-MSC-20857-1] c 37 N87-17035
- DETONATION**
- Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c 28 N74-27425
- Timing control system  
[NASA-CASE-NPO-16882-1-CU] c 33 N88-24863
- Permanent wire splicing by an explosive joining process  
[NASA-CASE-LAR-13825-1] c 31 N92-16162
- Performance of blasting caps  
[NASA-CASE-LAR-13832-1] c 28 N93-18274
- DETONATION WAVES**
- Continuous detonation reaction engine Patent  
[NASA-CASE-XMF-06926] c 28 N71-22983
- DETONATORS**
- Performance of blasting caps  
[NASA-CASE-LAR-13832-1] c 28 N93-18274
- DEUTERIUM**
- Analysis of hydrogen-deuterium mixtures  
[NASA-CASE-NPO-11322] c 06 N72-25146
- Deuterium pass through target --- neutron emitting target  
[NASA-CASE-LEW-11866-1] c 72 N76-15860
- DEW POINT**
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373
- Wet atmospheric generation apparatus  
[NASA-CASE-MFS-28177-1] c 35 N91-21496
- DIAGNOSIS**
- Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c 52 N79-14751
- Medical diagnosis system and method with multispectral imaging --- depth of burns and optical density of the skin  
[NASA-CASE-NPO-14402-1] c 52 N81-27783
- Method and apparatus for characterizing reflected ultrasonic pulses  
[NASA-CASE-LAR-13966-1] c 71 N91-27914
- Portable dynamic fundus instrument  
[NASA-CASE-MSC-21675-1] c 52 N92-28755
- DIAGRAMS**
- Phototransistor  
[NASA-CASE-MFS-20407] c 09 N73-19235
- DIALYSIS**
- Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NPO-14101-1] c 52 N80-14687
- DIAMAGNETISM**
- Electromagnetic Meissner effect launcher  
[NASA-CASE-MFS-28323-1] c 14 N92-15081
- DIAMETERS**
- Cylindrical surface profile and diameter measuring tool and method  
[NASA-CASE-MFS-28287-1] c 35 N88-23959
- DIAMINES**
- Elastomeric silazane polymers and process for preparing the same Patent  
[NASA-CASE-XMF-04133] c 06 N71-20717
- Aromatic diamine-aromatic dialdehyde high molecular weight Schiff base polymers prepared in a monofunctional Schiff base Patent  
[NASA-CASE-XMF-03074] c 06 N71-24740
- Siloxane containing epoxide compounds  
[NASA-CASE-MFS-13994-2] c 06 N72-25148
- Preparation of polyimides from mixtures of monomeric diamines and esters of polycarboxylic acids  
[NASA-CASE-LEW-11325-1] c 06 N73-27980
- Mixed diamines for lower melting addition polyimide preparation and utilization  
[NASA-CASE-LAR-12054-1] c 27 N79-33316
- Method for preparing addition type polyimide prepreps  
[NASA-CASE-LAR-12054-2] c 27 N81-14078
- Amine terminated bisaspartamide polymer  
[NASA-CASE-ARC-11421-2] c 27 N86-31726
- Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-31727
- Polyenamines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-1-CU] c 27 N87-22847
- Fire and heat resistant laminating resins based on maleimido and citraconimido substituted 1-(diorgano oxyphosphonyl) methyl -2,4- and -2,6- diaminobenzenes  
[NASA-CASE-ARC-11533-3] c 27 N87-24564
- Polyenamines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-2-CU] c 23 N89-12667
- Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14162-1] c 27 N90-15259
- Copolyimide with a combination of flexibilizing groups  
[NASA-CASE-LAR-13821-1] c 27 N90-16950
- Acetylene terminated aspartimides and resins therefrom  
[NASA-CASE-LAR-14188-1] c 27 N90-23545
- Vinyl capped addition polyimides  
[NASA-CASE-LEW-15027-1] c 27 N91-13566
- N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14188-2] c 23 N91-14419
- Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-4] c 23 N91-25185
- Addition polyimides with enhanced processability  
[NASA-CASE-LEW-15043-1] c 27 N91-32230
- A process for preparing 1,3-diamino-5-pentafluorosulfanylbenzene and polymers therefrom  
[NASA-CASE-LAR-14773-1-CU] c 27 N92-10105
- A process for preparing an assembly of an article and a polyimide which resists dimensional change, delamination, and debonding when exposed to changes in temperature  
[NASA-CASE-LAR-14538-1] c 27 N92-11201
- Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-6] c 23 N92-17882
- Vinyl capped addition polyimides  
[NASA-CASE-LEW-15027-2] c 27 N92-24053
- Polyimides with carbonyl and ether connecting groups between the aromatic rings  
[NASA-CASE-LAR-14001-1] c 27 N92-33008
- Substituted 1,1,1-triaryl 2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-7] c 23 N93-17412
- Polyimides prepared from 3,5-diamino benzo trifluoride  
[NASA-CASE-LAR-14206-1] c 27 N93-29083
- Diphenylmethane-containing dianhydride and polyimides prepared therefrom  
[NASA-CASE-LAR-14487-1] c 27 N93-29085
- Process to prepare 1,3-diamino-5-pentafluorosulfanylbenzene  
[NASA-CASE-LAR-14773-2-CU] c 25 N93-29506
- DIAMOND FILMS**
- Diamond composite films for protective coatings on metals and method of formation  
[NASA-CASE-NPO-18501-1-CU] c 27 N93-28426
- DIAMONDS**
- Apparatus for making diamonds  
[NASA-CASE-MFS-20698] c 15 N72-20446
- Process for making diamonds  
[NASA-CASE-MFS-20698-2] c 15 N73-19457
- Diamondlike flakes  
[NASA-CASE-LEW-13837-2] c 24 N85-21267
- DIAPHRAGMS (MECHANICS)**
- Measuring device Patent  
[NASA-CASE-XMS-01546] c 14 N70-40233
- Reinforcing means for diaphragms Patent  
[NASA-CASE-XNP-01962] c 32 N70-41370
- Self-sealing, unbonded, rocket motor nozzle closure Patent  
[NASA-CASE-XLA-02651] c 28 N70-41967
- Means for controlling rupture of shock tube diaphragms Patent  
[NASA-CASE-XAC-00731] c 11 N71-15960
- Fast opening diaphragm Patent  
[NASA-CASE-XLA-03660] c 15 N71-21060
- Inertia diaphragm pressure transducer Patent  
[NASA-CASE-XAC-02981] c 14 N71-21072
- Convoluting device for forming convolutions and the like Patent  
[NASA-CASE-XNP-05297] c 15 N71-23811
- Differential pressure control  
[NASA-CASE-MFS-14216] c 14 N73-13418
- Fluid flow meter for measuring the rate of fluid flow in a conduit  
[NASA-CASE-MFS-28030-1] c 35 N86-25752
- Method of making a flexible diaphragm  
[NASA-CASE-MSC-20797-1] c 37 N87-23981
- Flexible diaphragm-extreme temperature usage  
[NASA-CASE-MSC-20797-2] c 35 N91-21494
- Dual diaphragm tank with telltale drain  
[NASA-CASE-MSC-21703-1] c 31 N91-25305
- Bladder operated robotic joint  
[NASA-CASE-MFS-28682-1] c 27 N92-29831
- Valve malfunction detection apparatus  
[NASA-CASE-MFS-29904-1] c 35 N93-29503
- DIATOMIC GASES**
- Diatomic infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c 36 N75-31426
- DICHROISM**
- Dichroic plate --- as bandpass filters  
[NASA-CASE-NPO-13506-1] c 35 N76-15435
- Microwave dichroic plate  
[NASA-CASE-GSC-12171-1] c 33 N79-28416
- DICKE RADIOMETERS**
- Distributed-switch Dicke radiometers  
[NASA-CASE-GSC-12219-1] c 35 N80-18359
- DIDYMIUM**
- Didymium hydrate additive to nickel hydroxide electrodes Patent  
[NASA-CASE-XGS-03505] c 03 N71-10608
- DIELECTRIC PROPERTIES**
- Capacitive tank gaging apparatus being independent of liquid distribution  
[NASA-CASE-MFS-21629] c 14 N72-22442
- Fine particulate capture device  
[NASA-CASE-LEW-11583-1] c 35 N79-17192
- Low noise cryogenic dielectric resonator oscillator  
[NASA-CASE-NPO-17157-1-CU] c 33 N88-26596
- DIELECTRICS**
- Method for producing a solar cell having an integral protective covering  
[NASA-CASE-XGS-04531] c 03 N69-24267
- Temperature sensitive capacitor device  
[NASA-CASE-XNP-09750] c 14 N69-39937
- Space vehicle electrical system Patent  
[NASA-CASE-XMF-00517] c 03 N70-34157
- Nose cone mounted heat resistant antenna Patent  
[NASA-CASE-XMS-04312] c 07 N71-22984
- Broadband microwave waveguide window Patent  
[NASA-CASE-XNP-08880] c 09 N71-24808

- Laser machining apparatus Patent  
[NASA-CASE-HON-10541-2] c 15 N71-27135
- Quasi-optical microwave component Patent  
[NASA-CASE-ERC-10011] c 07 N71-29065
- Method of manufacturing semiconductor devices using refractory dielectrics  
[NASA-CASE-XER-08476-1] c 26 N72-17820
- Screened circuit capacitors  
[NASA-CASE-LAR-10294-1] c 26 N72-28762
- Low loss dichroic plate  
[NASA-CASE-NPO-13171-1] c 32 N74-11000
- Electrostatic measurement system --- for contact-electrifying a dielectric  
[NASA-CASE-MFS-22129-1] c 33 N75-18477
- Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NPO-13443-1] c 76 N76-20994
- Preparation of dielectric coating of variable dielectric constant by plasma polymerization  
[NASA-CASE-ARC-10892-2] c 27 N79-14214
- Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c 36 N80-18372
- Method and apparatus for making an optical element having a dielectric film  
[NASA-CASE-ARC-11611-1] c 74 N87-28416
- Microwave field effect transistor  
[NASA-CASE-GSC-12442-2] c 33 N90-20282
- Method of forming a multiple layer dielectric and a hot film sensor therewith  
[NASA-CASE-LAR-13678-1] c 76 N90-24168
- Aromatic polyimides containing a dimethylsilane-linked dianhydride  
[NASA-CASE-LAR-14198-1] c 27 N90-26956
- Poly 1, 2, 4-triazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14440-1] c 23 N92-10066
- Method of forming a multiple layer dielectric and a hot film sensor therewith  
[NASA-CASE-LAR-13678-3] c 35 N93-14714
- Poly(1,2,4-triazole) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14440-1] c 23 N93-18283
- Multiple layer dielectrics, hot film sensors, and methods of producing same  
[NASA-CASE-LAR-14591-1] c 35 N93-19493

# DIELS-ALDER REACTIONS

- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-6] c 25 N85-30039
- Process for crosslinking and extending conjugated diene-containing polymers  
[NASA-CASE-LAR-13452-1] c 27 N87-22848
- Bis(4-(3,4-dimethylenepyrrolidyl)-phenyl) methane  
[NASA-CASE-LAR-13965-1-CU] c 23 N90-21118
- Bis (4-(3,4-dimethylenepyrrolidyl)-phenyl) methane  
[NASA-CASE-LAR-13965-2-CU] c 23 N91-14418

# DIENES

- Process for crosslinking and extending conjugated diene-containing polymers  
[NASA-CASE-LAR-13452-1] c 27 N87-22848

# DIES

- Convoluting device for forming convolutions and the like Patent  
[NASA-CASE-XNP-05297] c 15 N71-23811
- Extrusion die for refractory metals Patent  
[NASA-CASE-XLE-06773] c 15 N71-23817
- Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c 37 N84-12491
- Ultrasonic angle beam standard reflector --- ultrasonic nondestructive inspection  
[NASA-CASE-LAR-13153-1] c 71 N86-21276
- Pultrusion die assembly  
[NASA-CASE-LAR-13719-1] c 37 N89-12867
- Continuous fiber thermoplastic prepreg  
[NASA-CASE-LAR-14459-1] c 24 N91-15334
- Continuous fiber thermoplastic prepreg  
[NASA-CASE-LAR-14459-1] c 24 N93-24597

# DIESEL ENGINES

- Apparatus and method for destructive removal of particles contained in flowing fluid  
[NASA-CASE-NPO-15426-1] c 35 N84-17555
- Diesel engine catalytic combustor system --- aircraft engines  
[NASA-CASE-LEW-12995-1] c 37 N84-33808

# DIESEL FUELS

- Regenerative Cu/La zeolite supported desulfurizing sorbents  
[NASA-CASE-NPO-17480-1-CU] c 25 N92-10073

# DIETS

- Reduction of blood serum cholesterol  
[NASA-CASE-NPO-12119-1] c 52 N75-15270

# DIFFERENCE EQUATIONS

- Digital data registration and differencing compression system  
[NASA-CASE-SSC-00010-1] c 82 N91-23976

# DIFFERENCES

- Retinally stabilized differential resolution television display  
[NASA-CASE-NPO-15432-1] c 32 N85-29117

# DIFFERENTIAL AMPLIFIERS

- Temperature compensated solid state differential amplifier Patent  
[NASA-CASE-XAC-00435] c 09 N70-35440
- Stepping motor control circuit Patent  
[NASA-CASE-GSC-10366-1] c 10 N71-18772
- Multi-channel temperature measurement amplification system --- solar heating systems  
[NASA-CASE-MFS-23775-1] c 44 N82-16474
- Amplifier for measuring low-level signals in the presence of high common mode voltage  
[NASA-CASE-MFS-25868-1] c 33 N86-20670
- Synchronous demodulator  
[NASA-CASE-GSC-13179-1] c 33 N91-26438

# DIFFERENTIAL INTERFEROMETRY

- Gravimeter Patent  
[NASA-CASE-XMF-05844] c 14 N71-17587

# DIFFERENTIAL PRESSURE

- Relief valve  
[NASA-CASE-XMS-05894-1] c 15 N69-21924
- Apparatus for ejection of an instrument cover  
[NASA-CASE-XMF-04132] c 15 N69-27502
- Differential sound level meter  
[NASA-CASE-LAR-12106-1] c 71 N78-14867
- Differential optoacoustic absorption detector  
[NASA-CASE-NPO-13759-1] c 74 N78-17867
- System for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations  
[NASA-CASE-FRC-11024-1] c 02 N80-28300

# DIFFERENTIAL PULSE CODE MODULATION

- Real-time data compression of broadcast video signals  
[NASA-CASE-LEW-14945-1] c 32 N91-13598
- Real-time data compression of broadcast video signals  
[NASA-CASE-LEW-14945-2] c 32 N92-10128

# DIFFERENTIATORS

- Window comparator  
[NASA-CASE-FRC-10090-1] c 33 N78-18308

# DIFFRACTION

- Optical mirror apparatus Patent  
[NASA-CASE-ERC-10001] c 23 N71-24868

# DIFFRACTION PATTERNS

- Fringe counter for interferometers Patent  
[NASA-CASE-LAR-10204] c 14 N71-27215
- Radiation sensitive area detection device and method  
[NASA-CASE-MFS-28563-1] c 35 N91-25388
- Three dimensional moire pattern alignment  
[NASA-CASE-MSC-21416-1] c 74 N91-32922
- Dynamic aperture fringe discriminator  
[NASA-CASE-NPO-18478-1-CU] c 74 N92-30084

# DIFFRACTOMETERS

- Dual purpose optical instrument capable of simultaneously acting as spectrometer and diffractometer  
[NASA-CASE-XNP-05231] c 14 N73-28491

# DIFFUSE RADIATION

- Transmitting and reflecting diffuser --- using ultraviolet grade fused silica coatings  
[NASA-CASE-LAR-10385-3] c 74 N78-15879

# DIFFUSERS

- Application of semiconductor diffusants to solar cells by screen printing  
[NASA-CASE-LEW-12775-1] c 44 N79-11468
- Diffuser/ejector system for a very high vacuum environment  
[NASA-CASE-MFS-25791-1] c 09 N84-27749

# DIFFUSION

- A method for selective gold diffusion of monolithic silicon devices and/or circuits Patent application  
[NASA-CASE-ERC-10072] c 09 N70-11148
- Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-10337] c 15 N71-24046
- Transmitting and reflecting diffuser --- for ultraviolet light  
[NASA-CASE-LAR-10385-2] c 70 N74-13436
- Polymer/riblet combination for hydrodynamic skin friction reduction  
[NASA-CASE-LAR-14271-1-CU] c 27 N91-13558
- Atmospheric pressure flow reactor: Gas phase chemical kinetics under tropospheric conditions without wall effects  
[NASA-CASE-MSC-21384-1] c 34 N92-16243
- Multi-layer light-weight protective coating and method for application  
[NASA-CASE-LAR-14448-1] c 27 N93-11912
- DIFFUSION LENGTH  
Alternating gradient photodetector  
[NASA-CASE-NPO-17235-1-CU] c 35 N90-21358

# DIFFUSION PUMPS

- Trap for preventing diffusion pump backstreaming  
[NASA-CASE-GSC-10518-1] c 15 N72-22489
- Programmable physiological infusion  
[NASA-CASE-ARC-10447-1] c 52 N74-22771

# DIFFUSION WELDING

- Thermal compression bonding of interconnectors  
[NASA-CASE-GSC-10303] c 15 N72-22487
- Bonding of reinforced Teflon to metals  
[NASA-CASE-MFS-20482] c 15 N72-22492
- Enhanced diffusion welding  
[NASA-CASE-LEW-11388-1] c 15 N73-32358
- Method of fluxless brazing and diffusion bonding of aluminum containing components  
[NASA-CASE-MSC-14435-1] c 37 N76-18455
- Superplastically formed diffusion bonded metallic structure  
[NASA-CASE-FRC-11026-1] c 24 N82-24296

# DIFFUSIVITY

- Diffusely reflecting paints including polytetrafluoroethylene and method of manufacture  
[NASA-CASE-GSC-12883-1] c 27 N85-29044

# DIGITAL COMMAND SYSTEMS

- Digitally controlled frequency synthesizer Patent  
[NASA-CASE-XGS-02317] c 09 N71-23525
- System for maintaining a motor at a predetermined speed utilizing digital feedback means Patent  
[NASA-CASE-XMF-06892] c 09 N71-24805
- Digital filter for reducing sampling jitter in digital control systems Patent  
[NASA-CASE-NPO-11088] c 08 N71-29034

# DIGITAL COMPUTERS

- Disk pack clearing table Patent Application  
[NASA-CASE-LAR-10590-1] c 15 N70-26819
- Binary number sorter Patent  
[NASA-CASE-NPO-10112] c 08 N71-12502
- Binary sequence detector Patent  
[NASA-CASE-XNP-05415] c 08 N71-12505
- Electronic checkout system for space vehicles Patent  
[NASA-CASE-XKS-08012-2] c 31 N71-15566
- Error correcting method and apparatus Patent  
[NASA-CASE-XNP-02748] c 08 N71-22749
- Serial digital decoder Patent  
[NASA-CASE-NPO-10150] c 08 N71-24650
- Digital memory sense amplifying means Patent  
[NASA-CASE-XNP-01012] c 08 N71-28925
- Redundant memory organization Patent  
[NASA-CASE-GSC-10564] c 10 N71-29135
- High speed direct binary to binary coded decimal converter and scaler  
[NASA-CASE-KSC-10595] c 08 N73-12176
- Fault tolerant clock apparatus utilizing a controlled minority of clock elements  
[NASA-CASE-MSC-12531-1] c 35 N75-30504
- Two-dimensional radiant energy array computers and computing devices  
[NASA-CASE-GSC-11839-1] c 60 N77-14751
- Memory device for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-2] c 60 N78-10709
- Environmental fog/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c 09 N82-24212
- Multicomputer communication system  
[NASA-CASE-NPO-15433-1] c 32 N85-21428
- Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333

# DIGITAL DATA

- Phase-shift data transmission system having a pseudo-noise SYNC code modulated with the data in a single channel Patent  
[NASA-CASE-XNP-00911] c 08 N70-41961
- Tape guidance system and apparatus for the provision thereof Patent  
[NASA-CASE-XNP-09453] c 08 N71-19420
- Digital telemetry system Patent  
[NASA-CASE-XGS-01812] c 07 N71-23001
- Transient augmentation circuit for pulse amplifiers Patent  
[NASA-CASE-XNP-01068] c 10 N71-28739
- Transition tracking bit synchronization system  
[NASA-CASE-NPO-10844] c 07 N72-20140
- Digital control and information system  
[NASA-CASE-NPO-11016] c 08 N72-31226
- Digital plus analog output encoder  
[NASA-CASE-GSC-12115-1] c 62 N76-31946
- Digital data reformatter/deserializer  
[NASA-CASE-NPO-13676-1] c 60 N79-20751
- Heads up display  
[NASA-CASE-LAR-12630-1] c 06 N84-27733
- Memory-based parallel data output controller  
[NASA-CASE-GSC-12447-2] c 60 N84-28491
- Trellis coded modulation for transmission over fading mobile satellite channel  
[NASA-CASE-NPO-16904-2-CU] c 32 N91-14523

Digital data registration and differencing compression system  
[NASA-CASE-SSC-00010-1] c 82 N91-23976

Digital data registration and differencing compression system  
[NASA-CASE-SSC-00010-2] c 82 N92-23550

Storage control system  
[NASA-CASE-LAR-14651-1] c 82 N92-30386

Method and apparatus for filtering visual documents  
[NASA-CASE-MSC-22093-1] c 82 N93-22017

**DIGITAL ELECTRONICS**

Control circuitry using electronic emulation of a synchro signal for accurate control of position and rate of rotation for shafts  
[NASA-CASE-MFS-28458-1] c 33 N91-26459

**DIGITAL FILTERS**

Signal detection and tracking apparatus Patent  
[NASA-CASE-XGS-03502] c 10 N71-20852

Digital filter for reducing sampling jitter in digital control systems Patent  
[NASA-CASE-NPO-11088] c 08 N71-29034

Counting digital filters  
[NASA-CASE-NPO-11821-1] c 08 N73-26175

Filtering device --- removing electromagnetic noise from voice communication signals  
[NASA-CASE-MFS-22729-1] c 32 N76-21366

Frequency domain laser velocimeter signal processor  
[NASA-CASE-LAR-13552-1-CU] c 33 N89-14385

Digital carrier demodulator employing components working beyond normal limits  
[NASA-CASE-NPO-17628-1-CU] c 32 N92-21712

A space-time neural network for processing both spatial and temporal data  
[NASA-CASE-MSC-21874-1] c 63 N92-30314

**DIGITAL INTEGRATORS**

Digital automatic gain amplifier  
[NASA-CASE-KSC-11008-1] c 33 N79-22373

**DIGITAL RADAR SYSTEMS**

Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c 32 N82-12297

**DIGITAL SPACECRAFT TELEVISION**

Digital television camera control system Patent  
[NASA-CASE-XNP-01472] c 14 N70-41807

**DIGITAL SYSTEMS**

Light sensitive digital aspect sensor Patent  
[NASA-CASE-XGS-00359] c 14 N70-34158

Full binary adder Patent  
[NASA-CASE-XGS-00689] c 08 N70-34787

Digital telemetry system Patent  
[NASA-CASE-XGS-01812] c 07 N71-23001

Drive circuit utilizing two cores Patent  
[NASA-CASE-XNP-01318] c 10 N71-23033

Noninterruptible digital counting system Patent  
[NASA-CASE-XNP-09759] c 08 N71-24891

Digital memory in which the driving of each word location is controlled by a switch core Patent  
[NASA-CASE-XNP-01466] c 10 N71-26434

Digital quasi-exponential function generator  
[NASA-CASE-NPO-11130] c 08 N72-20176

Digital function generator  
[NASA-CASE-NPO-11104] c 08 N72-22165

Digital video display system using cathode ray tube  
[NASA-CASE-NPO-11342] c 09 N72-25248

Digital slope threshold data compressor  
[NASA-CASE-NPO-11630] c 08 N72-33172

Data processor with conditionally supplied clock signals  
[NASA-CASE-GSC-10975-1] c 08 N73-13187

Low phase noise digital frequency divider  
[NASA-CASE-NPO-11569] c 10 N73-26229

Pseudonoise (PN) synchronization of data system with derivation of clock frequency from received signal for clocking receiver PN generator  
[NASA-CASE-XNP-03623] c 09 N73-28084

Digital second-order phase-locked loop  
[NASA-CASE-NPO-11905-1] c 33 N74-12887

Digital controller for a Baum folding machine --- providing automatic counting and machine shutoff  
[NASA-CASE-LAR-10688-1] c 37 N74-21056

Digital transmitter for data bus communications system  
[NASA-CASE-MSC-14558-1] c 32 N75-21486

Automatic character skew and spacing checking network --- of digital tape drive systems  
[NASA-CASE-GSC-11925-1] c 33 N76-18353

Anti-multipath digital signal detector  
[NASA-CASE-LAR-11827-1] c 32 N77-10392

Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c 32 N77-20289

Open loop digital frequency multiplier  
[NASA-CASE-MSC-12709-1] c 33 N77-24375

Bit error rate measurement above and below bit rate tracking threshold  
[NASA-CASE-MSC-12743-1] c 32 N79-10263

Apparatus and method for stabilized phase detection for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c 33 N79-11313

Digital demodulator-correlator  
[NASA-CASE-NPO-13982-1] c 32 N79-14267

Memory-based frame synchronizer --- for digital communication systems  
[NASA-CASE-GSC-12430-1] c 60 N82-16747

Digital demodulator  
[NASA-CASE-LAR-12659-1] c 33 N82-26570

Random digital encryption secure communication system  
[NASA-CASE-MSC-16462-1] c 32 N82-31583

Error correction method and apparatus for electronic timepieces  
[NASA-CASE-LAR-12654-1] c 33 N83-36357

Digital control of diode laser for atmospheric spectroscopy  
[NASA-CASE-NPO-16000-1] c 36 N85-29264

Antimultipath communication by injecting tone into null in signal spectrum  
[NASA-CASE-NPO-16414-1-CU] c 32 N87-25511

Digital phase-lock loop having an estimator and predictor of error  
[NASA-CASE-NPO-17196-1-CU] c 32 N88-29076

Digitized synchronous demodulator  
[NASA-CASE-GSC-13237-1] c 33 N91-14550

Reconfigurable fuzzy cell  
[NASA-CASE-MSC-21613-1] c 61 N92-10331

Digital parallel processor array for optimum path planning  
[NASA-CASE-NPO-18727-1-CU] c 62 N93-28427

**DIGITAL TECHNIQUES**

Digital frequency discriminator Patent  
[NASA-CASE-MFS-14322] c 08 N71-18692

Exclusive-Or digital logic module Patent  
[NASA-CASE-XLA-07732] c 08 N71-18751

Horizon sensor with a plurality of fixedly positioned radiation compensated radiation sensitive detectors Patent  
[NASA-CASE-XNP-06957] c 14 N71-21088

Digital cardiachometer system Patent  
[NASA-CASE-XMS-02399] c 05 N71-22896

Digital synchronizer Patent  
[NASA-CASE-NPO-10851] c 07 N71-24613

Fringe counter for interferometers Patent  
[NASA-CASE-LAR-10204] c 14 N71-27215

Rate data encoder  
[NASA-CASE-LAR-10128-1] c 08 N73-20217

Digital communication system  
[NASA-CASE-MSC-13912-1] c 32 N74-30524

Digital phase-locked loop  
[NASA-CASE-GSC-11623-1] c 33 N75-25040

Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c 33 N81-17349

Random digital encryption secure communication system  
[NASA-CASE-MSC-16462-1] c 32 N82-31583

Pipelined digital SAR azimuth correlator using hybrid FFT-transversal filter  
[NASA-CASE-NPO-15519-1] c 32 N84-34651

Brushless DC motor control system responsive to control signals generated by a computer or the like  
[NASA-CASE-NPO-16420-1] c 33 N86-20681

Nanosequence digital logic controller  
[NASA-CASE-NPO-16116-2] c 60 N88-29310

Phase ambiguity resolution for offset QPSK modulation systems  
[NASA-CASE-NPO-17853-1-CU] c 32 N91-25318

Digital carrier demodulator employing components working beyond normal limits  
[NASA-CASE-NPO-17628-1-CU] c 32 N92-21712

Method and apparatus for filtering visual documents  
[NASA-CASE-MSC-22093-1] c 82 N93-22017

**DIGITAL TO ANALOG CONVERTERS**

Rate augmented digital to analog converter Patent  
[NASA-CASE-XLA-07828] c 08 N71-27057

Buffered analog converter  
[NASA-CASE-KSC-10397] c 08 N72-25206

Digital to analog conversion apparatus  
[NASA-CASE-MSC-12458-1] c 08 N73-32081

Smoothing filter for digital to analog conversion  
[NASA-CASE-FRC-11025-1] c 33 N82-24417

Memory-based parallel data output controller  
[NASA-CASE-GSC-12447-2] c 60 N84-28491

Method and apparatus for operating on compacted PCM voice data  
[NASA-CASE-KSC-11285-1] c 32 N86-27513

**DIGITAL TRANSDUCERS**

Digital to analog conversion apparatus  
[NASA-CASE-MSC-12458-1] c 08 N73-32081

Angle detector  
[NASA-CASE-ARC-11036-1] c 35 N78-32395

**DIISOCYANATES**

Polyurethanes of fluorine containing polycarbonates  
[NASA-CASE-MFS-10512] c 06 N73-30099

Polyurethanes from fluoroalkyl propyleneglycol polyethers  
[NASA-CASE-MFS-10506] c 06 N73-30100

Fluorine containing polyurethane  
[NASA-CASE-MFS-10509] c 06 N73-30103

**DILUENTS**

Phenylethynyl endcapping reagents and reactive diluents  
[NASA-CASE-LAR-14796-1] c 25 N93-31459

**DILUTION**

Preparation of dilute magnetic semiconductor films by metalorganic chemical vapor deposition  
[NASA-CASE-NPO-17399-1-CU] c 76 N89-14120

**DIMENSIONAL MEASUREMENT**

Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c 52 N82-22875

Method for non-destructive estimation of waveguide directional coupler dimensions  
[NASA-CASE-NPO-18454-1-CU] c 33 N93-18285

Method of continuously determining crack length  
[NASA-CASE-LAR-14480-1-CU] c 39 N93-29612

**DIMENSIONAL STABILITY**

A process for preparing an assembly of an article and a soluble polyimide which resists dimensional change, delamination, and debonding when exposed to changes in temperature  
[NASA-CASE-LAR-14763-1] c 27 N92-12121

**DIMENSIONS**

Projection system for display of parallax and perspective  
[NASA-CASE-MFS-23194-1] c 35 N78-17357

**DIODES**

Diode and protection fuse unit Patent  
[NASA-CASE-XKS-03381] c 09 N71-22796

Protection of serially connected solar cells against open circuits by the use of shunting diode Patent  
[NASA-CASE-XLE-04535] c 03 N71-23354

Shielded cathode mode bulk effect devices  
[NASA-CASE-ERC-10119] c 26 N72-21701

Fast response low power drain logic circuits  
[NASA-CASE-GSC-10878-1] c 10 N72-22236

Method and apparatus for detecting surface ions on silicon diodes and transistors  
[NASA-CASE-ERC-10325] c 15 N72-25457

Temperature compensated light source using a light emitting diode  
[NASA-CASE-ARC-10467-1] c 09 N73-14214

Wide temperature range electronic device with lead attachment  
[NASA-CASE-ERC-10224-2] c 09 N73-27150

High isolation RF signal selection switches  
[NASA-CASE-NPO-13081-1] c 33 N74-22814

Logarithmic circuit with wide dynamic range  
[NASA-CASE-GSC-12145-1] c 33 N78-32339

Regulated high efficiency, lightweight capacitor-diode multiplier dc to dc converter  
[NASA-CASE-LEW-12791-1] c 33 N78-32341

Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c 31 N79-17029

Digital control of diode laser for atmospheric spectroscopy  
[NASA-CASE-NPO-16000-1] c 36 N85-29264

Arrangement for damping the resonance in a laser diode  
[NASA-CASE-NPO-15980-1] c 36 N85-30305

**DIPHENYL COMPOUNDS**

Poly(carbonate-mide) polymer  
[NASA-CASE-LAR-13292-1] c 27 N86-24841

Amine terminated bisaspartimide polymer  
[NASA-CASE-NPO-11421-2] c 27 N86-31726

Aminophenoxycyclophosphazene cured epoxy resins and the composites, laminates, adhesives and structures thereof  
[NASA-CASE-ARC-11548-1] c 27 N87-25469

Polybenzoxazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14606-1-CU] c 23 N93-23077

**DIPOLE ANTENNAS**

Circularly polarized antenna  
[NASA-CASE-ERC-10214] c 09 N72-31235

Cavity-backed, micro-strip dipole antenna array  
[NASA-CASE-MSC-18606-1] c 32 N82-11336

**DIPPING**

Solder dross removal apparatus  
[NASA-CASE-MFS-28406-1] c 37 N91-13729

**DIRECT CURRENT**

Regulated dc to dc converter  
[NASA-CASE-XGS-03429] c 03 N69-21330

Bus voltage compensation circuit for controlling direct current motor  
[NASA-CASE-XMS-04215-1] c 09 N69-39987

Thermionic diode switch Patent  
[NASA-CASE-NPO-10404] c 03 N71-12255

## DIRECT LIFT CONTROLS

- A dc-coupled noninverting one-shot Patent  
[NASA-CASE-XNP-09450] c 10 N71-18723
- Stepping motor control circuit Patent  
[NASA-CASE-GSC-10366-1] c 10 N71-18772
- Frequency control network for a current feedback oscillator Patent  
[NASA-CASE-GSC-10041-1] c 10 N71-19418
- Self-repeating plasma generator having communicating annular and linear arc discharge passages Patent  
[NASA-CASE-XLA-03103] c 25 N71-21693
- Positive dc to positive dc converter Patent  
[NASA-CASE-XMF-14301] c 09 N71-23188
- Positive dc to negative dc converter Patent  
[NASA-CASE-XMF-08217] c 03 N71-23239
- Blood pressure measuring system for separating and separately recording dc signal and an ac signal Patent  
[NASA-CASE-XMS-06061] c 05 N71-23317
- Radio frequency coaxial high pass filter Patent  
[NASA-CASE-XGS-01418] c 09 N71-23573
- Brushless direct current tachometer Patent  
[NASA-CASE-MFS-20385] c 09 N71-24904
- Inverter with means for base current shaping for sweeping charge carriers from base region Patent  
[NASA-CASE-XGS-06226] c 10 N71-25950
- Dual polarity full wave dc motor drive Patent  
[NASA-CASE-XNP-07477] c 09 N71-26092
- A dc motor speed control system Patent  
[NASA-CASE-MFS-14610] c 09 N71-28886
- Cyclic switch Patent  
[NASA-CASE-LEW-10155-1] c 09 N71-29035
- Load-insensitive electrical device  
[NASA-CASE-XER-11046] c 09 N72-22203
- A dc to ac to dc converter having transistor synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c 09 N72-25253
- Electric motive machine including magnetic bearing  
[NASA-CASE-XGS-07805] c 15 N72-33476
- Powerplexer  
[NASA-CASE-MSC-12396-1] c 03 N73-31988
- Bio-isolated dc operational amplifier --- for bioelectric measurements  
[NASA-CASE-ARC-10596-1] c 33 N74-21851
- Load insensitive electrical device --- power converters for supplying direct current at one voltage from a source at another voltage  
[NASA-CASE-XER-11046-2] c 33 N74-22864
- Differential pulse code modulation  
[NASA-CASE-MSC-12506-1] c 32 N77-12239
- Three phase full wave dc motor decoder  
[NASA-CASE-GSC-11824-1] c 33 N77-26386
- Time domain phase measuring apparatus  
[NASA-CASE-GSC-12228-1] c 33 N79-10338
- Direct current transformer  
[NASA-CASE-MFS-23659-1] c 33 N79-17133
- Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c 33 N81-19393
- Controller for computer control of brushless dc motors --- automobile engines  
[NASA-CASE-NPO-13970-1] c 33 N81-20352
- Direct current ballast circuit for metal halide lamp  
[NASA-CASE-MSC-18407-1] c 33 N82-24427
- Brushless DC motor control system responsive to control signals generated by a computer or the like  
[NASA-CASE-NPO-16420-1] c 33 N86-20681
- Four quadrant control circuit for a brushless three-phase dc motor  
[NASA-CASE-MFS-28080-1] c 33 N87-21233
- Arcjet power supply and start circuit  
[NASA-CASE-LEW-14374-1] c 09 N88-28939
- Cascaded transformerless DC-DC voltage amplifier with optically isolated switching devices  
[NASA-CASE-NPO-17994-1-CU] c 33 N93-18278
- ### DIRECT LIFT CONTROLS
- Velocity vector control system augmented with direct lift control  
[NASA-CASE-LAR-12268-1] c 08 N81-24106
- ### DIRECT POWER GENERATORS
- Energy conversion apparatus Patent  
[NASA-CASE-XLE-00212] c 03 N70-34134
- Thermal pump-compressor for space use Patent  
[NASA-CASE-XLA-00377] c 33 N71-17610
- Positive dc to negative dc converter Patent  
[NASA-CASE-XMF-08217] c 03 N71-23239
- Unsaturating saturable core transformer Patent  
[NASA-CASE-ERC-10125] c 09 N71-24893
- Load insensitive electrical device --- power converters for supplying direct current at one voltage from a source at another voltage  
[NASA-CASE-XER-11046-2] c 33 N74-22864
- Bidirectional control system for energy flow in solar powered flywheel  
[NASA-CASE-MFS-25978-1] c 44 N87-21410
- ### DIRECTIONAL ANTENNAS
- Mechanical coordinate converter Patent  
[NASA-CASE-XNP-00614] c 14 N70-36907

- Weatherproof helix antenna Patent  
[NASA-CASE-XKS-08485] c 07 N71-19493
- Tracking antenna system Patent  
[NASA-CASE-GSC-10553-1] c 07 N71-19854
- Reversible motion drive system Patent  
[NASA-CASE-NPO-10173] c 15 N71-24696
- Variable beamwidth antenna --- with multiple beam, variable feed system  
[NASA-CASE-GSC-11862-1] c 32 N76-18295
- Suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NPO-14395-1] c 37 N82-21587
- A satellite-tracking millimeter-wave reflector antenna system for mobile satellite-tracking  
[NASA-CASE-NPO-18772-1-CU] c 32 N93-28955
- Planar microstrip YAGI antenna array  
[NASA-CASE-NPO-17873-2-CU] c 32 N93-29507
- ### DIRECTIONAL CONTROL
- Gimbale, partially submerged rocket nozzle Patent  
[NASA-CASE-XMF-01544] c 28 N70-34162
- Omnidirectional wheel  
[NASA-CASE-MFS-21309-1] c 37 N74-18125
- Velocity vector control system augmented with direct lift control  
[NASA-CASE-LAR-12268-1] c 08 N81-24106
- Magnetic heading reference  
[NASA-CASE-LAR-12638-1] c 04 N84-14132
- ### DIRECTIONAL COUPLERS
- Method for non-destructive estimation of waveguide directional coupler dimensions  
[NASA-CASE-NPO-18454-1-CU] c 33 N93-18285
- ### DIRECTIONAL SOLIDIFICATION (CRYSTALS)
- Preparation of monotectic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
[NASA-CASE-MFS-23816-1] c 26 N80-23419
- High gradient directional solidification furnace  
[NASA-CASE-MFS-25963-1] c 35 N86-20750
- Directional solidification of superalloys  
[NASA-CASE-MFS-28314-1] c 26 N91-14462
- ### DIRECTIONAL STABILITY
- Nose gear steering system for vehicle with main skids Patent  
[NASA-CASE-XLA-01804] c 02 N70-34160
- System for imposing directional stability on a rocket-propelled vehicle  
[NASA-CASE-MFS-21311-1] c 20 N76-21275
- ### DIRECTIVITY
- Multiprism collimator  
[NASA-CASE-GSC-12608-1] c 74 N83-10900
- ### DISABILITIES
- Compliant walker  
[NASA-CASE-GSC-13348-2] c 52 N93-14708
- ### DISCONNECT DEVICES
- Gas actuated bolt disconnect Patent  
[NASA-CASE-XLA-00326] c 03 N70-34667
- Umbilical disconnect Patent  
[NASA-CASE-XLA-00711] c 03 N71-12258
- Remote controlled tubular disconnect Patent  
[NASA-CASE-XLA-01396] c 03 N71-12259
- Quick release connector Patent  
[NASA-CASE-XLA-01141] c 15 N71-13789
- Split nut separation system Patent  
[NASA-CASE-XNP-06914] c 15 N71-21489
- Separation simulator Patent  
[NASA-CASE-XKS-04631] c 10 N71-23663
- Duct coupling for single-handed operation Patent  
[NASA-CASE-MFS-20395] c 15 N71-24903
- Breakaway connector  
[NASA-CASE-NPO-11140] c 15 N72-17455
- Torsional disconnect unit  
[NASA-CASE-NPO-10704] c 15 N72-20445
- Frangible link  
[NASA-CASE-MSC-11849-1] c 15 N72-22488
- Quick disconnect coupling  
[NASA-CASE-NPO-11202] c 15 N72-25450
- Quick disconnect filter coupling  
[NASA-CASE-MFS-22323-1] c 37 N76-14463
- Positive isolation disconnect  
[NASA-CASE-MSC-16043-1] c 37 N79-11402
- Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-15429-1] c 18 N84-22609
- Slide release mechanism --- for space shuttle orbiter/external tank connection device  
[NASA-CASE-MSC-20080-1] c 37 N85-30334
- Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-25429-1] c 18 N86-20469
- Self-locking double retention redundant full pin release  
[NASA-CASE-NPO-16233-1] c 37 N86-20801
- Preloadable vector sensitive latch  
[NASA-CASE-MSC-20910-1] c 37 N87-25582
- Toggle release  
[NASA-CASE-MSC-21354-1] c 37 N88-24969

## SUBJECT INDEX

- Quick action clamp  
[NASA-CASE-LEW-14887-1] c 37 N91-27561
- Two fault tolerant toggle-hook release  
[NASA-CASE-MSC-21671-1] c 37 N91-32498
- Fastening apparatus having shape memory alloy actuator  
[NASA-CASE-MSC-21935-1] c 37 N93-13423
- ### DISCONTINUITY
- Strain coupled servo control system Patent  
[NASA-CASE-XLA-08530] c 32 N71-25360
- ### DISCRIMINATORS
- Phase detector assembly Patent  
[NASA-CASE-XMF-00701] c 09 N70-40272
- Difference circuit Patent  
[NASA-CASE-XNP-08274] c 10 N71-13537
- Digital frequency discriminator Patent  
[NASA-CASE-MFS-14322] c 08 N71-18692
- Comparator for the comparison of two binary numbers Patent  
[NASA-CASE-XNP-04819] c 08 N71-23295
- Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-3] c 33 N75-19520
- Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-2] c 33 N75-25041
- Discriminator aided phase lock acquisition for suppressed carrier signals  
[NASA-CASE-NPO-14311-1] c 33 N82-29539
- Dynamic aperture fringe discriminator  
[NASA-CASE-NPO-18478-1-CU] c 74 N92-30084
- ### DISILICIDES
- Method of intercalating large quantities of fibrous structures  
[NASA-CASE-LEW-15077-1] c 24 N92-16025
- Fabrication of nanometer single crystal metallic CoSi<sub>2</sub> structures on Si  
[NASA-CASE-NPO-17736-2-CU] c 24 N92-18561
- ### DISKS
- Hybrid butterfly valve  
[NASA-CASE-SSC-00004-1] c 37 N91-14609
- ### DISPENSERS
- Liquid aerosol dispenser  
[NASA-CASE-MFS-20829] c 12 N72-21310
- Potable water dispenser  
[NASA-CASE-MFS-21115-1] c 54 N74-12779
- Lyophilized spore dispenser  
[NASA-CASE-LAR-10544-1] c 37 N74-13178
- Metering gun for dispensing precisely measured charges of fluid  
[NASA-CASE-MFS-21163-1] c 54 N74-17853
- Automatic fluid dispenser  
[NASA-CASE-ARC-10820-1] c 35 N78-19466
- ### DISPERSING
- Shock tube powder dispersing apparatus Patent  
[NASA-CASE-XLE-04946] c 17 N71-24911
- Powder fed sheared dispersal particle generator  
[NASA-CASE-LAR-12785-1] c 37 N84-16561
- ### DISPERSIONS
- Preparation of alkali metal dispersions  
[NASA-CASE-XNP-08876] c 17 N73-28573
- ### DISPLACEMENT
- Bimetallic fluid displacement apparatus --- for stirring and heating stored gases and liquids  
[NASA-CASE-ARC-10441-1] c 35 N74-15126
- Poly 1, 2, 4-triazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14440-1] c 23 N92-10066
- Pressure vessel flex joint  
[NASA-CASE-MSC-21748-1] c 37 N92-21727
- Helix translation device --- shim for precision displacements  
[NASA-CASE-GSC-13141-1] c 37 N92-23548
- Polymidazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14145-1] c 27 N92-28751
- Poly(1,3,4-oxadiazoles) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14427-1] c 23 N92-29141
- An interferometer having fused optical fibers, and apparatus and method using the interferometer  
[NASA-CASE-LAR-14640-1-CU] c 74 N93-17052
- Polybenzoxazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14606-1-CU] c 23 N93-23077
- ### DISPLACEMENT MEASUREMENT
- Null-type vacuum microbalance Patent  
[NASA-CASE-XAC-00472] c 15 N70-40180
- Self-calibrating displacement transducer Patent  
[NASA-CASE-XLA-00781] c 09 N71-22999
- Angular displacement indicating gas bearing support system Patent  
[NASA-CASE-XLA-09346] c 15 N71-28740
- Apparatus for remote measurement of displacement of marks on a specimen undergoing a tensile test  
[NASA-CASE-NPO-10778] c 14 N72-11364
- Miniature muscle displacement transducer  
[NASA-CASE-NPO-13519-1] c 33 N76-19338

Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c 52 N80-27072

Device for measuring hole elongation in a bolted joint  
[NASA-CASE-LAR-13453-1] c 37 N88-14361

**DISPLAY DEVICES**

Integrated time shared instrumentation display Patent  
[NASA-CASE-XLA-01952] c 08 N71-12507

Energy management system for glider type vehicle Patent  
[NASA-CASE-XFR-00756] c 02 N71-13421

Fluidic-thermochromic display device Patent  
[NASA-CASE-ERC-10031] c 12 N71-18603

Display for binary characters Patent  
[NASA-CASE-XGS-04987] c 08 N71-20571

Optical projector system Patent  
[NASA-CASE-XNP-03853] c 23 N71-21882

Optical monitor panel Patent  
[NASA-CASE-XKS-03509] c 14 N71-23175

BCD to decimal decoder Patent  
[NASA-CASE-XKS-06167] c 08 N71-24890

Noninterruptable digital counting system Patent  
[NASA-CASE-XNP-09759] c 08 N71-24891

Analog signal integration and reconstruction system Patent  
[NASA-CASE-NPO-10344] c 10 N71-26544

Plasma fluidic hybrid display Patent  
[NASA-CASE-ERC-10100] c 09 N71-33519

System for quantizing graphic displays  
[NASA-CASE-NPO-10745] c 08 N72-22164

Digital video display system using cathode ray tube  
[NASA-CASE-NPO-11342] c 09 N72-25248

Scientific experiment flexible mount  
[NASA-CASE-MSC-12372-1] c 31 N72-25842

Display system  
[NASA-CASE-ERC-10350] c 14 N73-20474

Transparent switchboard  
[NASA-CASE-MSC-13746-1] c 10 N73-32143

Recorder/processor apparatus --- for optical data processing  
[NASA-CASE-GSC-11553-1] c 35 N74-15831

Rotating raster generator  
[NASA-CASE-FRC-10071-1] c 32 N74-20813

X-Y alphanumeric character generator for oscilloscopes  
[NASA-CASE-GSC-11582-1] c 33 N75-19517

Binocular device for displaying numerical information in field of view  
[NASA-CASE-LAR-11782-1] c 74 N77-20882

Particle parameter analyzing system --- x-y plotter circuits and display  
[NASA-CASE-XLE-06094] c 33 N78-17293

Projection system for display of parallax and perspective  
[NASA-CASE-MFS-23194-1] c 35 N78-17357

Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c 09 N78-18083

Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c 52 N79-18580

System and method for obtaining wide screen Schlieren photographs  
[NASA-CASE-NPO-14174-1] c 74 N79-20856

Chromatically corrected virtual image visual display --- reducing eye strain in flight simulators  
[NASA-CASE-LAR-12251-1] c 74 N80-27185

System for a displaying at a remote station data generated at a central station and for powering the remote station from the central station  
[NASA-CASE-GSC-12411-1] c 33 N81-14221

System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c 06 N82-16075

Environmental fog/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c 09 N82-24212

Synchronized voltage contrast display analysis system  
[NASA-CASE-NPO-14567-1] c 33 N83-18996

Real-time 3-D X-ray and gamma-ray viewer  
[NASA-CASE-GSC-12640-1] c 74 N84-11920

Retinally stabilized differential resolution television display  
[NASA-CASE-NPO-15432-1] c 32 N85-29117

Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71-NPO-15494-2] c 35 N85-34373

Aircraft liftemeter  
[NASA-CASE-LAR-12518-1] c 06 N86-27280

Simulator scene display evaluation device  
[NASA-CASE-ARC-11504-1] c 09 N86-32447

Large TV display system  
[NASA-CASE-NPO-16932-1CU] c 33 N87-15413

Aircraft control position indicator  
[NASA-CASE-LAR-12984-1] c 06 N87-22678

Flat-panel, full-color, electroluminescent display  
[NASA-CASE-LAR-13407-1] c 33 N87-28831

Braille reading system  
[NASA-CASE-LAR-13306-1] c 82 N87-29372

Method and system for monitoring and displaying engine performance parameters  
[NASA-CASE-LAR-14049-1] c 07 N89-23466

Enhanced single layer multi-color or luminescent display with coactivators  
[NASA-CASE-LAR-14181-1] c 76 N91-21911

Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13854-1CU] c 04 N91-31120

Synchronized computational architecture for generalized bilateral control of robot arms  
[NASA-CASE-NPO-17401-1CU] c 63 N91-31885

Single layer multi-color luminescent display  
[NASA-CASE-LAR-13616-1] c 74 N91-31950

Composite video and graphics display for multiple camera viewing system in robotics and teleoperation  
[NASA-CASE-NPO-17836-1CU] c 32 N92-10126

Single layer multi-color luminescent display and method of making  
[NASA-CASE-LAR-13616-3] c 74 N92-29158

Accelerometer method and apparatus for integral display and control functions  
[NASA-CASE-MSC-21961-1] c 35 N92-29952

Composite video and graphics display for camera viewing systems in robotics and teleoperation  
[NASA-CASE-NPO-17836-1CU] c 32 N93-18284

Virtual reality flight control display with six-degree-of-freedom controller and spherical orientation overlay  
[NASA-CASE-NPO-18733-1CU] c 06 N93-30416

**DISPOSAL**

Sharps container  
[NASA-CASE-MSC-21776-1] c 31 N92-33612

**DISSIPATION**

Voltage regulator with plural parallel power source sections Patent  
[NASA-CASE-GSC-10891-1] c 10 N71-26626

Warm fog dissipation using large volume water sprays  
[NASA-CASE-MFS-25962-1] c 09 N89-25242

Consecutive plate acoustic suppressor apparatus and methods  
[NASA-CASE-LEW-15430-1] c 71 N93-17051

**DISSOCIATION**

Solar hydrogen generator  
[NASA-CASE-LAR-11361-1] c 44 N77-22607

Converting a CO2 atmosphere to a high-purity O2 supply  
[NASA-CASE-LAR-14398-1] c 25 N92-30098

**DISSOLVING**

Zero gravity liquid mixer  
[NASA-CASE-LAR-10195-1] c 15 N73-19458

Slow-release fertilizer  
[NASA-CASE-MSC-21953-1-NP] c 37 N93-17271

**DISTANCE**

Stereoscopic camera and viewing systems with undistorted depth presentation and reduced or eliminated erroneous acceleration and deceleration perceptions, or with perceptions produced or enhanced for special effects  
[NASA-CASE-NPO-18028-1CU] c 74 N92-16809

Auto and hetero-associative memory using a 2-D optical logic gate  
[NASA-CASE-NPO-17997-1CU] c 60 N92-33057

**DISTANCE MEASURING EQUIPMENT**

Binary coded sequential acquisition ranging system  
[NASA-CASE-NPO-11194] c 08 N72-25209

Determining distance to lightning strokes from a single station  
[NASA-CASE-KSC-10698] c 07 N73-20175

Terminal guidance sensor system --- space shuttle coupling to orbiting satellites  
[NASA-CASE-NPO-14521-1] c 37 N81-27519

Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-2] c 36 N83-29681

Rotary target V-block  
[NASA-CASE-LAR-12007-3] c 35 N84-16523

Method and apparatus for measuring distance  
[NASA-CASE-MSC-20912-1] c 32 N88-26568

Adjustable depth gage  
[NASA-CASE-LEW-14880-1] c 35 N92-21723

**DISTILLATION EQUIPMENT**

Compact solar still Patent  
[NASA-CASE-XMS-04533] c 15 N71-23086

Method and apparatus for distillation of liquids Patent  
[NASA-CASE-XNP-08124] c 15 N71-27184

Method for distillation of liquids  
[NASA-CASE-XNP-08124-2] c 06 N73-13129

**DISTRIBUTED AMPLIFIERS**

Cascaded complementary pair broadband transistor amplifiers Patent  
[NASA-CASE-NPO-10003] c 10 N71-26415

**DISTRIBUTED FEEDBACK LASERS**

Multiperiod-grating surface-emitting lasers  
[NASA-CASE-NPO-17763-1CU] c 36 N93-14703

**DISTRIBUTED PROCESSING**

Distributed multipoint memory architecture  
[NASA-CASE-NPO-15342-1] c 60 N83-32342

Real-time simulation clock  
[NASA-CASE-LAR-14056-1] c 35 N90-23713

Method of up-front load balancing for local memory parallel processors  
[NASA-CASE-MSC-21348-1] c 62 N91-14769

Distributed computing system with dual independent communications paths between computers and employing split tokens  
[NASA-CASE-NPO-17185-1CU] c 62 N91-14772

Dynamic resource allocation scheme for distributed heterogeneous computer systems  
[NASA-CASE-NPO-17197-1CU] c 62 N91-25693

A space-time neural network for processing both spatial and temporal data  
[NASA-CASE-MSC-21874-1] c 63 N92-30314

**DISTRIBUTION (PROPERTY)**

Thermionic energy converters  
[NASA-CASE-LEW-12443-1] c 44 N83-32175

**DISTRIBUTORS**

High voltage distributor  
[NASA-CASE-GSC-11849-1] c 33 N76-16332

**DIVERGENT NOZZLES**

Jet exhaust noise suppressor  
[NASA-CASE-LEW-11266-1] c 07 N74-27490

**DIVERTERS**

Flow diverter valve and flow diversion method  
[NASA-CASE-HON-00573-1] c 37 N79-33468

**DIVIDERS**

A synchronous binary array divider  
[NASA-CASE-ERC-10180-1] c 60 N74-20836

**DOCUMENT STORAGE**

File card marker Patent  
[NASA-CASE-XLA-02705] c 08 N71-15908

**DOMES (STRUCTURAL FORMS)**

Airborne tracking sunphotometer apparatus and system  
[NASA-CASE-ARC-11622-1] c 44 N88-14492

**DOORS**

Emergency escape system Patent  
[NASA-CASE-MSC-12086-1] c 05 N71-12345

CAM controlled retractable door latch  
[NASA-CASE-MSC-20304-1] c 37 N82-31690

**DOPED CRYSTALS**

Sub-Kelvin resistance thermometer  
[NASA-CASE-GSC-13406-1] c 35 N92-33614

**DOPES**

Lithium counterdoped silicon solar cell  
[NASA-CASE-LEW-14177-1] c 44 N86-32875

**DOPPLER EFFECT**

Doppler frequency spread correction device for multiplex transmissions  
[NASA-CASE-XGS-02749] c 07 N69-39978

Laser Doppler system for measuring three dimensional vector velocity Patent  
[NASA-CASE-MFS-20386] c 21 N71-19212

Doppler compensation by shifting transmitted object frequency within limits  
[NASA-CASE-GSC-10087-4] c 07 N73-20174

Doppler shift system --- system for measuring velocities of radiating particles  
[NASA-CASE-HON-10740-1] c 72 N74-19310

Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c 32 N80-24510

Servomechanism for Doppler shift compensation in optical correlator for synthetic aperture radar  
[NASA-CASE-NPO-14998-1] c 32 N83-18975

Vibration-free Raman Doppler velocimeter  
[NASA-CASE-LAR-13268-1] c 35 N87-14669

Efficient detection and signal parameter estimation with application to high dynamic GPS receiver  
[NASA-CASE-NPO-17820-1CU] c 04 N91-14321

Doppler-corrected differential detection system  
[NASA-CASE-NPO-16987-1CU] c 32 N91-25316

Edge technique for measurement of laser frequency shifts including the Doppler shift  
[NASA-CASE-GSC-13343-1] c 36 N91-28557

Doppler shift compensation system for laser transmitters and receivers  
[NASA-CASE-GSC-13194-1] c 36 N93-18287

**DOPPLER RADAR**

Cooperative Doppler radar system Patent  
[NASA-CASE-LAR-10403] c 21 N71-11766

Doppler radar having phase modulation of both transmitted and reflected return signals  
[NASA-CASE-MSC-18675-1] c 32 N84-22820

Doppler radar with multiphase modulation of transmitted and reflected signal  
[NASA-CASE-MSC-18808-1] c 32 N90-20280



## DOSIMETERS

- Dosimeter for high levels of absorbed radiation Patent  
[NASA-CASE-XLA-03645] c 14 N71-20430  
Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c 35 N83-21311

## DOWNLINKING

- VLSI single-chip (255,223) Reed-Solomon encoder with interleaver  
[NASA-CASE-NPO-17280-1-CU] c 17 N90-21061

## DRAG CHUTES

- Flexible wing deployment device Patent  
[NASA-CASE-XLA-01220] c 02 N70-41863  
Lightweight, variable solidity knitted parachute fabric --- for aerodynamic decelerators  
[NASA-CASE-LAR-10776-1] c 02 N74-10034  
Extended moment arm anti-spin device  
[NASA-CASE-LAR-12979-1] c 05 N85-21147  
Selectable towline spin chute system  
[NASA-CASE-LAR-14322-1] c 02 N91-27139

## DRAG MEASUREMENT

- Air frame drag balance Patent  
[NASA-CASE-XLA-00113] c 14 N70-33386  
Minimum induced drag airfoil body Patent  
[NASA-CASE-XLA-00755] c 01 N71-13410  
Minimum induced drag airfoil body Patent  
[NASA-CASE-XLA-05828] c 01 N71-13411  
Impact energy absorber Patent  
[NASA-CASE-XLA-01530] c 14 N71-23092  
System for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations  
[NASA-CASE-FRC-11024-1] c 02 N80-28300  
Skin friction measuring device for aircraft  
[NASA-CASE-FRC-11029-1] c 06 N81-17057

## DRAG REDUCTION

- Propeller blade loading control Patent  
[NASA-CASE-XAC-00139] c 02 N70-34856  
Aircraft wheel spray drag alleviator Patent  
[NASA-CASE-XLA-01583] c 02 N70-36825  
Low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c 85 N82-33288  
Wingtip vortex propeller  
[NASA-CASE-LAR-13019-1] c 07 N85-35194  
Combined riblet and lebu drag reduction system  
[NASA-CASE-LAR-13286-1] c 02 N88-14071  
A two-stage earth-to-orbit transport with translating oblique wings for booster recovery  
[NASA-CASE-LAR-14156-1] c 16 N90-16781  
Compression pylon  
[NASA-CASE-LAR-13777-1] c 05 N90-20078  
Passive venting technique for shallow cavities  
[NASA-CASE-LAR-14031-1] c 05 N90-20079  
Polymer/riblet combination for hydrodynamic skin friction reduction  
[NASA-CASE-LAR-14271-1-CU] c 27 N91-13558  
Active control of boundary layer transition and turbulence  
[NASA-CASE-LAR-13532-1] c 34 N91-14562  
Passive laminar flow control of crossflow vorticity  
[NASA-CASE-LAR-13563-1] c 34 N91-23410  
Passive venting technique for shallow cavities  
[NASA-CASE-LAR-13875-1] c 05 N91-27156  
Method of reducing drag in aerodynamic systems  
[NASA-CASE-LEW-14791-1] c 02 N92-34243  
Stall departure resistance enhancer  
[NASA-CASE-LAR-14221-1] c 06 N93-19023

## DRAINAGE

- Dual diaphragm tank with telltale drain  
[NASA-CASE-MSC-21703-1] c 31 N91-25305

## DRIFT (INSTRUMENTATION)

- Amplifier drift tester  
[NASA-CASE-XMS-05562-1] c 09 N69-39986  
Radiation direction detector including means for compensating for photocell aging Patent  
[NASA-CASE-XLA-00183] c 14 N70-40239  
Failure detection and control means for improved drift performance of a gimbaled platform system  
[NASA-CASE-MFS-23551-1] c 04 N76-26175

## DRILL BITS

- Sample collecting impact bit Patent  
[NASA-CASE-XNP-01412] c 15 N70-42034  
Hole cutter --- drill bits and rotating shaft  
[NASA-CASE-MFS-22649-1] c 37 N75-25186  
Retractable tool bit having latch type catch mechanism  
[NASA-CASE-GSC-13359-1] c 37 N92-23378  
Retractable tool bit having slider type catch mechanism  
[NASA-CASE-GSC-13358-1] c 37 N93-14710

## DRILLING

- Method for milling and drilling glass  
[NASA-CASE-GSC-12636-1] c 31 N83-27058  
Method for machining holes in composite materials  
[NASA-CASE-MFS-28044-1] c 31 N87-25491

- Adjustable depth gage  
[NASA-CASE-LEW-14880-1] c 35 N92-21723

## DRILLS

- Rock drill for recovering samples  
[NASA-CASE-XNP-07478] c 14 N69-21923  
Soil penetrometer  
[NASA-CASE-XNP-05530] c 14 N73-32321

## DRIVES

- Transistor drive regulator Patent  
[NASA-CASE-LEW-10233] c 10 N71-27126

## DROP TOWERS

- Method of forming frozen spheres in a force-free drop tower  
[NASA-CASE-NPO-14845-1] c 27 N82-28442  
Sphere forming method and apparatus  
[NASA-CASE-NPO-15070-1] c 31 N83-35176

## DROPS (LIQUIDS)

- Droplet monitoring probe  
[NASA-CASE-NPO-10985] c 14 N73-20478  
Method of evaporation  
[NASA-CASE-NPO-15609-2] c 25 N88-23846  
Hanging drop crystal growth apparatus and method  
[NASA-CASE-MFS-28206-1-SB] c 76 N90-23242  
Crystal growth apparatus  
[NASA-CASE-MFS-28182-1] c 76 N90-24169  
Drop deployment system for crystal growth apparatus  
[NASA-CASE-MFS-28422-1] c 29 N91-17250

## DRUGS

- Automated analysis of oxidative metabolites  
[NASA-CASE-ARC-10469-1] c 25 N75-12086  
Human serum albumin crystals and method of preparation  
[NASA-CASE-MFS-28234-1] c 52 N90-20616

## DRY HEAT

- Pressurized bellows flat contact heat exchanger interface  
[NASA-CASE-MSC-21271-1] c 34 N90-21999

## DRYING

- Drying apparatus for photographic sheet material  
[NASA-CASE-GSC-11074-1] c 14 N73-28489  
Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-1] c 35 N82-25484  
Process for making a noble metal on tin oxide catalyst  
[NASA-CASE-LAR-13741-1-SB] c 25 N90-20180

## DRYING APPARATUS

- Gas purged dry box glove Patent  
[NASA-CASE-XLE-02531] c 05 N71-23080

## DUCTED FANS

- Cam-operated pitch-change apparatus  
[NASA-CASE-LEW-13050-1] c 07 N79-14095

## DUCTILITY

- Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-3] c 37 N82-19540

## DUCTS

- Duct coupling for single-handed operation Patent  
[NASA-CASE-MFS-20395] c 15 N71-24903  
Externally supported internally stabilized flexible duct joint  
[NASA-CASE-MFS-19194-1] c 37 N76-14460  
Apparatus for supplying conditioned air at a substantially constant temperature and humidity  
[NASA-CASE-GSC-12191-1] c 31 N80-32583  
Multi-path peristaltic pump  
[NASA-CASE-MSC-20907-1] c 37 N87-18818  
Vortex motion phase separator for zero gravity liquid transfer  
[NASA-CASE-KSC-11387-1] c 29 N90-20236  
Atmospheric pressure flow reactor: Gas phase chemical kinetics under tropospheric conditions without wall effects  
[NASA-CASE-MSC-21384-1] c 34 N92-16243

## DURABILITY

- Belt for transmitting power from a cogged driving member to a cogged driven member  
[NASA-CASE-GSC-12289-1] c 37 N80-32717  
Composite thermal barrier coating  
[NASA-CASE-LEW-14999-1] c 24 N92-21725

## DUST COLLECTORS

- Disk pack cleaning table Patent Application  
[NASA-CASE-LAR-10590-1] c 15 N70-26819  
Acoustic agglomeration methods and apparatus  
[NASA-CASE-NPO-15466-1] c 71 N85-22104

## DYE LASERS

- Infrared tunable laser  
[NASA-CASE-ARC-10463-1] c 09 N73-32111  
Laser head for simultaneous optical pumping of several dye lasers --- with single flash lamp  
[NASA-CASE-LAR-11341-1] c 36 N75-19655

## DYES

- Dye penetrant for surfaces subsequently contacted by liquid oxygen Patent  
[NASA-CASE-XMF-02221] c 18 N71-27170

- Method for retarding dye fading during archival storage of developed color photographic film --- inert atmosphere

- [NASA-CASE-MFS-23250-1] c 35 N82-11432  
Multi-colored layers for visualizing aerodynamic flow effects  
[NASA-CASE-LAR-13742-1] c 02 N92-21588

## DYNAMIC CHARACTERISTICS

- Dynamic sensor Patent  
[NASA-CASE-XAC-02877] c 14 N70-41681  
Alignment apparatus using a laser having a gravitationally sensitive cavity reflector  
[NASA-CASE-ARC-10444-1] c 16 N73-33397  
Apparatus for and method of compensating dynamic unbalance  
[NASA-CASE-GSC-12550-1] c 37 N84-28082

## DYNAMIC CONTROL

- Motion restraining device  
[NASA-CASE-NPO-13619-1] c 37 N78-16369  
System for controlled acoustic rotation of objects  
[NASA-CASE-NPO-15522-1] c 71 N83-32516  
Dynamic pattern matcher using incomplete data  
[NASA-CASE-MSC-21415-1-SB] c 61 N93-18858

## DYNAMIC LOADS

- Multilegged support system Patent  
[NASA-CASE-XLA-01326] c 11 N71-21481  
Tension measurement device Patent  
[NASA-CASE-XMS-04545] c 15 N71-22878  
Impact monitoring apparatus  
[NASA-CASE-MSC-15626-1] c 14 N72-25411  
Ultrasonic method and apparatus for determining crack opening load  
[NASA-CASE-LAR-13889-1] c 39 N88-30160  
Method and apparatus for detecting laminar flow separation and reattachment  
[NASA-CASE-LAR-13952-2-SB] c 34 N91-31596

## DYNAMIC MODELS

- Robust high-performance control for robotic manipulators  
[NASA-CASE-NPO-17785-1-CU] c 37 N89-28846  
Numerical control fabrication technique for dynamic composite models  
[NASA-CASE-LAR-14004-1] c 63 N93-19024

## DYNAMIC MODULUS OF ELASTICITY

- Apparatus for positioning and loading a test specimen Patent  
[NASA-CASE-XLE-01300] c 15 N70-41993

## DYNAMIC PRESSURE

- Dynamic tester for rotor seals and bearings  
[NASA-CASE-MFS-28493-1] c 09 N91-25155

## DYNAMIC RESPONSE

- Impact simulator Patent  
[NASA-CASE-XLA-00493] c 11 N70-34786  
Instrument for measuring the dynamic behavior of liquids Patent  
[NASA-CASE-XLA-05541] c 12 N71-26387  
Response analyzers for sensors Patent  
[NASA-CASE-MFS-11204] c 14 N71-29134  
Cam-operated pitch-change apparatus  
[NASA-CASE-LEW-13050-1] c 07 N79-14095

## DYNAMIC STRUCTURAL ANALYSIS

- Method and apparatus for measuring the damping characteristics of a structure  
[NASA-CASE-ARC-10154-1] c 14 N72-22440  
Accelerometer method and apparatus for integral display and control functions  
[NASA-CASE-MSC-21961-1] c 35 N92-29952

## DYNAMIC TESTS

- Support apparatus for dynamic testing Patent  
[NASA-CASE-XMF-01772] c 11 N70-41677  
Hydraulic support for dynamic testing Patent  
[NASA-CASE-XMF-03248] c 11 N71-10604

- Dynamic tester for rotor seals and bearings  
[NASA-CASE-MFS-28493-1] c 09 N91-25155

- Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N91-28184

- Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N93-24598

## DYNAMICAL SYSTEMS

- Method of forming dynamic membrane on stainless steel support  
[NASA-CASE-MSC-18172-3] c 31 N88-29052  
Dynamic range compression/expansion of light beams by photorefractive crystals  
[NASA-CASE-NPO-17140-1-CU] c 74 N89-14077

## DYNAMOMETERS

- Thrust dynamometer Patent  
[NASA-CASE-XLE-00702] c 14 N70-40203  
Thrust dynamometer Patent  
[NASA-CASE-XLE-05260] c 14 N71-20429



## E

## EAR

Method and apparatus for continuously monitoring blood oxygenation, blood pressure, pulse rate and the pressure pulse curve utilizing an ear oximeter as transducer Patent  
[NASA-CASE-XAC-05422] c 04 N71-23185

## EARPHONES

Multi-adjustable headband --- for headsets  
[NASA-CASE-KSC-11322-1] c 54 N89-29953

## EARTH ATMOSPHERE

Ablation sensor Patent  
[NASA-CASE-XLA-01791] c 14 N71-22991

## EARTH CRUST

Seismic vibration source  
[NASA-CASE-NPO-14112-1] c 46 N79-22679

## EARTH IONOSPHERE

Ionospheric battery Patent  
[NASA-CASE-XGS-01593] c 03 N70-35408

## EARTH ORBITAL ENVIRONMENTS

Cryogenic shutter  
[NASA-CASE-GSC-13189-2] c 37 N92-29151

## EARTH ORBITS

High temperature furnace for melting materials in space  
[NASA-CASE-MFS-20710] c 11 N72-23215

A method of delivering a vehicle to earth orbit and returning the reusable portion thereof to earth  
[NASA-CASE-MSC-12391] c 30 N73-12884

A two-stage earth-to-orbit transport with translating oblique wings for booster recovery  
[NASA-CASE-LAR-14156-1] c 16 N90-16781

Orbital debris sweeper and method  
[NASA-CASE-MSC-21534-1] c 18 N91-21222

Assured crew return vehicle  
[NASA-CASE-MSC-21536-1] c 18 N92-21999

## ECCENTRICITY

Laser optical disk position encoder with active heads  
[NASA-CASE-GSC-13175-1] c 74 N92-29133

## ECCENTRICS

Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c 37 N81-25370

## ECHELLE GRATINGS

Cooled echelle grating spectrometer --- for space telescope applications  
[NASA-CASE-NPO-14372-1] c 35 N80-26635

## ECHO SOUNDING

Ultrasonic depth gauge for liquids under high pressure  
[NASA-CASE-LAR-13300-1-CU] c 35 N89-14407

## ECHOES

Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c 52 N79-18580

Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c 32 N82-23376

## EDDY CURRENTS

Apparatus and method for inspecting a bearing ball  
[NASA-CASE-MFS-25833-1] c 35 N86-32698

Method for advanced material characterization by laser induced eddy current imaging  
[NASA-CASE-GSC-13386-1] c 38 N92-29154

Method and apparatus for thermographically and quantitatively analyzing a structure for disbands and/or inclusions  
[NASA-CASE-LAR-14559-1] c 38 N92-29829

Method and apparatus for deflection measurements using eddy current effects  
[NASA-CASE-GSC-13506-1] c 35 N93-26103

## EDGES

Method of forming a sharp edge on an optical device  
[NASA-CASE-GSC-12348-1] c 74 N80-24149

## EDITING

Generation of animation sequences of three dimensional models  
[NASA-CASE-MSC-21379-1-SB] c 61 N90-27340

## EDUCATION

Visual accommodation trainer-tester  
[NASA-CASE-ARC-11426-2] c 52 N89-16256

System and method for a general purpose architecture for intelligent computer-aided training  
[NASA-CASE-MSC-21381-1] c 63 N91-13944

## EFFICIENCY

Recovery of radiation damaged solar cells through thermal annealing  
[NASA-CASE-XGS-04047-2] c 03 N72-11062

High efficiency multifrequency feed  
[NASA-CASE-GSC-11909] c 32 N74-20863

## EFFLUENTS

Vortex generator for controlling the dispersion of effluents in a flowing liquid  
[NASA-CASE-LAR-12045-1] c 34 N77-24423

Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points  
[NASA-CASE-MSC-16841-1] c 34 N79-24285

## EGRESS

Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c 01 N83-35992

Emergency egress fixed rocket package  
[NASA-CASE-MSC-21332-1] c 03 N91-15142

## EJECTION

Apparatus for ejection of an instrument cover  
[NASA-CASE-XMF-04132] c 15 N69-27502

## EJECTION SEATS

Device for separating occupant from an ejection seat Patent  
[NASA-CASE-XMS-04625] c 05 N71-20718

## EJECTORS

Ejection unit Patent  
[NASA-CASE-XNP-00676] c 15 N70-38996

Device for separating occupant from an ejection seat Patent  
[NASA-CASE-XMS-04625] c 05 N71-20718

Latch/ejector unit Patent  
[NASA-CASE-XLA-03538] c 15 N71-24897

Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-15429-1] c 18 N84-22609

Diffuser/ejector system for a very high vacuum environment  
[NASA-CASE-MFS-25791-1] c 09 N84-27749

Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-25429-1] c 18 N86-20469

## ELASTIC BODIES

Belleville spring assembly with elastic guides  
[NASA-CASE-XNP-09452] c 15 N69-27504

Means for suppressing or attenuating bending motion of elastic bodies Patent  
[NASA-CASE-XAC-05632] c 32 N71-23971

Device for measuring tensile forces  
[NASA-CASE-MFS-21728-1] c 35 N74-27865

## ELASTIC DEFORMATION

Instrument for measuring torsional creep and recovery Patent  
[NASA-CASE-XLE-01481] c 14 N71-10781

Means for suppressing or attenuating bending motion of elastic bodies Patent  
[NASA-CASE-XAC-05632] c 32 N71-23971

## ELASTIC MEDIA

Miniature vibration isolator Patent  
[NASA-CASE-XLA-01019] c 15 N70-40156

## ELASTIC PROPERTIES

Elastic universal joint Patent  
[NASA-CASE-XNP-00416] c 15 N70-36947

Deformable vehicle wheel Patent  
[NASA-CASE-MFS-20400] c 31 N71-18611

Threadless fastener apparatus Patent  
[NASA-CASE-XFR-05302] c 15 N71-23254

Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-1] c 06 N73-33076

Meter for use in detecting tension in straps having predetermined elastic characteristics  
[NASA-CASE-MFS-22189-1] c 35 N75-19615

## ELASTIC SHEETS

Method for forming plastic materials Patent  
[NASA-CASE-XMS-05516] c 15 N71-17803

## ELASTIC WAVES

System and method for cancelling expansion waves in a wave rotor  
[NASA-CASE-LEW-15218-1] c 34 N93-11172

## ELASTOMERS

Metal valve pintle with encapsulated elastomeric body Patent  
[NASA-CASE-MSC-12116-1] c 15 N71-17648

Extensometer Patent  
[NASA-CASE-XMF-04680] c 15 N71-19489

Elastomeric silazane polymers and process for preparing the same Patent  
[NASA-CASE-XMF-04133] c 06 N71-20717

Bonded elastomeric seal for electrochemical cells Patent  
[NASA-CASE-XGS-02631] c 03 N71-23006

Conductive elastomeric extensometer  
[NASA-CASE-MFS-21049-1] c 52 N74-27864

Vacuum pressure molding technique  
[NASA-CASE-LAR-10073-1] c 37 N76-24575

Method of making hollow elastomeric bodies  
[NASA-CASE-NPO-13535-1] c 37 N76-31524

Process for spinning flame retardant elastomeric compositions --- fabricating synthetic fibers for high oxygen environments  
[NASA-CASE-MSC-14331-3] c 27 N78-32262

Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same  
[NASA-CASE-NPO-13137-1] c 27 N80-32514

Prepolymer dianhydrides  
[NASA-CASE-NPO-13899-1] c 27 N80-32515

Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c 27 N81-15104

Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced

[NASA-CASE-ARC-11248-1] c 27 N81-17259

The 1,2,4-oxadiazole elastomers --- heat resistant polymers  
[NASA-CASE-ARC-11253-1] c 27 N81-17262

Bifunctional monomers having terminal oxime and cyano or amidine groups  
[NASA-CASE-ARC-11253-3] c 27 N81-24256

Circumferential shaft seal  
[NASA-CASE-LEW-12119-2] c 37 N81-26447

Heat sealable, flame and abrasion resistant coated fabric --- clothing and containers for space exploration  
[NASA-CASE-MSC-18382-1] c 27 N82-16238

Preparation of crosslinked 1,2,4-oxadiazole polymer  
[NASA-CASE-ARC-11253-2] c 27 N82-24338

Method of bonding plasticized elastomer to metal and articles produced thereby  
[NASA-CASE-MFS-25181-1] c 27 N82-24340

Elastomer toughened polyimide adhesives  
[NASA-CASE-LAR-12775-1] c 27 N83-28240

Elastomer-modified phosphorus-containing imide resins  
[NASA-CASE-ARC-11400-1] c 27 N84-14322

Process for preparing perfluorotriazine elastomers and precursors thereof  
[NASA-CASE-ARC-11402-1] c 27 N84-22744

Elastomer toughened polyimide adhesives --- bonding metal and composite material structures for aircraft and spacecraft  
[NASA-CASE-LAR-12775-2] c 27 N85-21349

Perfluoro (Imidoylamidine) diamidines  
[NASA-CASE-ARC-11402-3] c 23 N86-21582

Electro-explosive separation system  
[NASA-CASE-ARC-11613-1] c 33 N87-28833

Coaxial cable connector  
[NASA-CASE-NPO-16764-1-CU] c 33 N88-14270

Double face sealing device  
[NASA-CASE-MFS-28521-1] c 37 N91-26542

Device for applying constant pressure to a surface  
[NASA-CASE-GSC-12320-1] c 37 N92-28754

Flexible heating head for induction heating apparatus and method  
[NASA-CASE-LAR-14679-2] c 32 N92-31150

Process for bonding elastomers to metals  
[NASA-CASE-LAR-13645-1] c 27 N93-25995

ELBOW (ANATOMY)

Elbow and knee joint for hard space suits  
[NASA-CASE-ARC-11610-1] c 54 N86-28619

Prosthetic elbow joint  
[NASA-CASE-MFS-28707-1] c 54 N93-30566

## ELECTRIC ARCS

Electric-arc heater Patent  
[NASA-CASE-XLA-00330] c 33 N70-34540

Electric arc welding Patent  
[NASA-CASE-XMF-00392] c 15 N70-34814

Electric arc driven wind tunnel Patent  
[NASA-CASE-XMF-00411] c 11 N70-36913

Electric arc device for heating gases Patent  
[NASA-CASE-XAC-00319] c 25 N70-41628

Electric arc apparatus Patent  
[NASA-CASE-XAC-01677] c 09 N71-20816

Arc electrode of graphite with ball tip Patent  
[NASA-CASE-XLE-04788] c 09 N71-22987

High powered arc electrodes --- producing solar simulator radiation  
[NASA-CASE-LEW-11162-1] c 33 N74-12913

Electric arc light source having undercut recessed anode  
[NASA-CASE-ARC-10266-1] c 33 N75-29318

Welding torch with arc light reflector  
[NASA-CASE-MFS-29134-1] c 74 N87-17493

Welding torch gas cup extension  
[NASA-CASE-MFS-29252-1] c 37 N88-23980

ELECTRIC AUTOMOBILES

Additive for zinc electrodes --- electric automobiles  
[NASA-CASE-LEW-13286-1] c 33 N84-14422

## ELECTRIC BATTERIES

Spacecraft battery seals  
[NASA-CASE-XGS-03864] c 15 N69-24320

Sealed battery gas manifold construction Patent  
[NASA-CASE-XNP-03378] c 03 N71-11051

Method and apparatus for battery charge control Patent  
[NASA-CASE-XGS-05432] c 03 N71-19438

Coulometer and third electrode battery charging circuit Patent  
[NASA-CASE-GSC-10487-1] c 03 N71-24719

Heat activated cell Patent  
[NASA-CASE-LEW-11359] c 03 N71-28579

Synchronous orbit battery cyclor  
[NASA-CASE-GSC-11211-1] c 03 N72-25020

- Storage battery comprising negative plates of a wedge shaped configuration --- for preventing shape change induced malfunctions  
[NASA-CASE-NPO-11806-1] c 44 N74-19693
- Battery testing device --- for testing cells of multiple-cell battery  
[NASA-CASE-MFS-20761-1] c 44 N74-27519
- Rapid activation and checkout device for batteries  
[NASA-CASE-MFS-22749-1] c 44 N76-14601
- Zinc-halide battery with molten electrolyte  
[NASA-CASE-NPO-11961-1] c 44 N76-18643
- Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c 44 N76-27664
- Voltage regulator for battery power source --- using a bipolar transistor  
[NASA-CASE-FRC-10116-1] c 33 N79-23345
- In-situ cross linking of polyvinyl alcohol --- application to battery separator films  
[NASA-CASE-LEW-13135-2] c 27 N81-24257
- State-of-charge coulometer  
[NASA-CASE-NPO-15759-1] c 35 N85-21596
- Organic cathode for a secondary battery  
[NASA-CASE-NPO-17604-1-CU] c 33 N91-14536
- Thermal switch disc for short circuit protection of batteries  
[NASA-CASE-MSC-21428-1] c 33 N91-14537
- Copper chloride cathode for a secondary battery  
[NASA-CASE-NPO-17640-1-CU] c 33 N91-14538
- Metal chloride cathode for a battery  
[NASA-CASE-NPO-17809-1-CU] c 33 N91-27478
- Secondary Li battery incorporating 12-Crown-4 ether  
[NASA-CASE-NPO-17922-1-CU] c 33 N92-28753
- Anode for rechargeable ambient temperature lithium cells  
[NASA-CASE-NPO-18580-1-CU] c 33 N93-17278
- ELECTRIC BRIDGES**
- Pulsed excitation voltage circuit for transducers  
[NASA-CASE-FRC-10036] c 09 N72-22200
- Infinite range electronics gain control circuit  
[NASA-CASE-GSC-10786-1] c 10 N72-28241
- Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-2] c 33 N75-25041
- Germanium coated microbridge and method  
[NASA-CASE-MFS-23274-1] c 33 N78-13320
- Power converter  
[NASA-CASE-FRC-11014-1] c 33 N82-18494
- ELECTRIC CELLS**
- Connector strips-positive, negative and T tabs  
[NASA-CASE-XGS-01395] c 03 N69-21539
- Heat activated cell with alkali anode and alkali salt electrolyte Patent  
[NASA-CASE-LEW-11358] c 03 N71-26084
- Ion-exchange membrane with platinum electrode assembly Patent  
[NASA-CASE-XMS-02063] c 03 N71-29044
- ELECTRIC CHARGE**
- Method and device for determining battery state of charge Patent  
[NASA-CASE-NPO-10194] c 03 N71-20407
- Automatic battery charger Patent  
[NASA-CASE-XNP-04758] c 03 N71-24605
- FET charge sensor and voltage probe  
[NASA-CASE-NPO-16045-1] c 76 N87-13313
- Electrorepulsive actuator  
[NASA-CASE-NPO-17684-1-CU] c 33 N92-22042
- Overcharge and overdischarge protection of ambient temperature secondary lithium cells  
[NASA-CASE-NPO-18343-1-CU] c 33 N93-11456
- ELECTRIC CHOPPERS**
- Monostable multivibrator  
[NASA-CASE-GSC-10082-1] c 10 N72-20221
- Transformer regulated self-stabilizing chopper  
[NASA-CASE-XGS-09186] c 33 N78-17295
- ELECTRIC COILS**
- Broadband choke for antenna structure  
[NASA-CASE-XMS-05303] c 07 N69-27462
- Shaft transducer having dc output proportional to angular velocity  
[NASA-CASE-NPO-15706-1] c 35 N84-28017
- Phase sensitive guidance sensor for wire-following vehicles  
[NASA-CASE-NPO-15341-1] c 35 N84-33769
- ELECTRIC CONDUCTORS**
- Electrode and insulator with shielded dielectric junction  
[NASA-CASE-XLE-03778] c 09 N69-21542
- Solar cell matrix Patent  
[NASA-CASE-NPO-10821] c 03 N71-19545
- Electrical switching device Patent  
[NASA-CASE-NPO-10037] c 09 N71-19610
- Flexible conductive disc electrode Patent  
[NASA-CASE-FRC-10029] c 09 N71-24618
- Electrical insulating layer process  
[NASA-CASE-LEW-10489-1] c 15 N72-25447
- Injector for use in high voltage isolators for liquid feed lines  
[NASA-CASE-NPO-11377] c 15 N73-27406
- Solar cell grid patterns  
[NASA-CASE-NPO-13087-2] c 44 N76-31666
- Velocity measurement system  
[NASA-CASE-MFS-23363-1] c 35 N78-32396
- Shielded conductor cable system  
[NASA-CASE-MSC-12745-1] c 33 N81-27397
- Apparatus for intercalating large quantities of fibrous structures  
[NASA-CASE-LEW-15077-2] c 24 N93-29609
- ELECTRIC CONNECTORS**
- Connector - Electrical  
[NASA-CASE-XLA-01288] c 09 N69-21470
- Test fixture for pellet-like electrical elements  
[NASA-CASE-XNP-06032] c 09 N69-21926
- Coupling device  
[NASA-CASE-XMS-07846-1] c 09 N69-21927
- Electrical feed-through connection for printed circuit boards and printed cable  
[NASA-CASE-XMF-01483] c 14 N69-27431
- Electrical connector pin with wiping action  
[NASA-CASE-XMF-04238] c 09 N69-39734
- Electrical connector Patent Application  
[NASA-CASE-MFS-14741] c 09 N70-20737
- Electrical connector for flat cables Patent  
[NASA-CASE-XMF-00324] c 09 N70-34596
- Printed cable connector Patent  
[NASA-CASE-XMF-00369] c 09 N70-36494
- Printed circuit board with bellows rivet connection Patent  
[NASA-CASE-XNP-05082] c 15 N70-41960
- Method of making a molded connector Patent  
[NASA-CASE-XMF-03498] c 15 N71-15986
- Coaxial cable connector Patent  
[NASA-CASE-XNP-04732] c 09 N71-20851
- Connector internal force gauge Patent  
[NASA-CASE-XNP-03918] c 14 N71-23087
- Protection of serially connected solar cells against open circuits by the use of shunting diode Patent  
[NASA-CASE-XLE-04535] c 03 N71-23354
- Microelectronic module package Patent  
[NASA-CASE-XMS-02182] c 10 N71-28783
- Breakaway connector  
[NASA-CASE-NPO-11140] c 15 N72-17455
- Electrical connector  
[NASA-CASE-NPO-10694] c 09 N72-20200
- Radio frequency filter device  
[NASA-CASE-XLA-02609] c 09 N72-25256
- Use of unilluminated solar cells as shunt diodes for a solar array  
[NASA-CASE-GSC-10344-1] c 03 N72-27053
- Electrical connector  
[NASA-CASE-MFS-20757] c 09 N72-28225
- Device for configuring multiple leads --- method for connecting electric leads to printed circuit board  
[NASA-CASE-MFS-22133-1] c 33 N74-26977
- Connector --- for connecting circuits on different layers of multilayer printed circuit boards  
[NASA-CASE-LAR-11709-1] c 37 N76-27567
- Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c 52 N77-14738
- Magnetic electrical connectors for biomedical percutaneous implants  
[NASA-CASE-KSC-11030-1] c 52 N77-25772
- Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c 33 N81-26359
- Electrical self-aligning connector --- orbital servicer vehicles  
[NASA-CASE-MFS-25211-2] c 33 N84-14423
- Four-terminal electrical testing device --- initiator bridgewire resistance  
[NASA-CASE-MSC-21166-1] c 35 N87-25555
- Coaxial cable connector  
[NASA-CASE-NPO-16764-1-CU] c 33 N88-14270
- Flush mounting of thin film sensors  
[NASA-CASE-LAR-14446-1] c 31 N92-33020
- Separation tool for multipin electrical connectors  
[NASA-CASE-NPO-18786-1-CU] c 37 N93-28131
- Service equipment for use in hostile environments  
[NASA-CASE-LEW-14906-2] c 37 N93-31314
- ELECTRIC CONTACTS**
- Solid state switch  
[NASA-CASE-XNP-09228] c 09 N69-27500
- Deflective rod switch with elastic support and sealing means Patent  
[NASA-CASE-XNP-09808] c 09 N71-12518
- Method of making electrical contact on silicon solar cell and resultant product Patent  
[NASA-CASE-XLE-04787] c 03 N71-20492
- Continuous turning slip ring assembly Patent  
[NASA-CASE-XMF-01049] c 15 N71-23049
- Electrical connector  
[NASA-CASE-MFS-20757] c 09 N72-28225
- Electrostatic measurement system --- for contact-electrifying a dielectric  
[NASA-CASE-MFS-22129-1] c 33 N75-18477
- Process for preparing liquid metal electrical contact device  
[NASA-CASE-LEW-11978-1] c 33 N77-26385
- Non-contacting power transfer device  
[NASA-CASE-GSC-12595-1] c 33 N82-24422
- Solar cell having improved back surface reflector  
[NASA-CASE-LEW-13620-1] c 44 N83-13579
- Screen printed interdigitated back contact solar cell  
[NASA-CASE-LEW-13414-1] c 44 N85-20530
- Cross-contact chain  
[NASA-CASE-NPO-16784-1] c 33 N87-10231
- Substantially oxygen-free contact tube  
[NASA-CASE-LAR-14169-1] c 37 N92-17677
- ELECTRIC CONTROL**
- Increasing efficiency of switching type regulator circuits Patent  
[NASA-CASE-XMS-09352] c 09 N71-23316
- Adjustable indicating device for load position  
[NASA-CASE-MFS-28008-1] c 35 N85-20300
- ELECTRIC CURRENT**
- Didymium hydrate additive to nickel hydroxide electrodes Patent  
[NASA-CASE-XGS-03505] c 03 N71-10608
- Electrical load protection device Patent  
[NASA-CASE-MSC-12135-1] c 09 N71-12526
- Micro current measuring device using plural logarithmic response heated filamentary type diodes Patent  
[NASA-CASE-XNP-00384] c 09 N71-13530
- Connector internal force gauge Patent  
[NASA-CASE-XNP-03918] c 14 N71-23087
- Pulse modulator providing fast rise and fall times Patent  
[NASA-CASE-XMS-04919] c 09 N71-23270
- Polarity sensitive circuit Patent  
[NASA-CASE-XNP-00952] c 10 N71-23271
- Protection of serially connected solar cells against open circuits by the use of shunting diode Patent  
[NASA-CASE-XLE-04535] c 03 N71-23354
- Color television systems using a single gun color cathode ray tube Patent  
[NASA-CASE-ERC-10098] c 09 N71-28618
- Current dependent filter inductance  
[NASA-CASE-ERC-10139] c 09 N72-17154
- High voltage transistor amplifier with constant current load  
[NASA-CASE-NPO-11023] c 09 N72-17155
- Current steering commutator  
[NASA-CASE-NPO-10743] c 08 N72-21199
- Saturation current protection apparatus for saturable core transformers  
[NASA-CASE-ERC-10075-2] c 09 N72-22196
- Thermal to electrical power conversion system with solid-state switches with Seebeck effect compensation  
[NASA-CASE-NPO-11388] c 03 N72-23048
- Load current sensor for a series pulse width modulated power supply  
[NASA-CASE-GSC-10656-1] c 09 N72-25249
- Method and apparatus for limiting field emission current  
[NASA-CASE-ERC-10015-2] c 10 N72-27246
- Deposition apparatus  
[NASA-CASE-LAR-10541-1] c 15 N72-32487
- Lightning current measuring systems  
[NASA-CASE-KSC-10807-1] c 33 N75-26246
- Overload protection system for power inverter  
[NASA-CASE-NPO-13872-1] c 33 N78-10377
- Shunt regulation electrical power system  
[NASA-CASE-GSC-10135] c 33 N78-17296
- Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c 33 N79-10337
- Electroexplosive device  
[NASA-CASE-NPO-13858-1] c 28 N79-11231
- Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c 33 N79-11315
- Lightning current detector  
[NASA-CASE-KSC-11057-1] c 33 N79-14305
- Driver for solar cell I-V characteristic plots  
[NASA-CASE-NPO-14096-1] c 44 N80-18551
- Electrical power generating system --- for windpowered generation  
[NASA-CASE-MFS-24368-3] c 33 N81-22280
- Trace water sensor  
[NASA-CASE-NPO-15722-1] c 35 N85-29212
- Magnetic spin reduction system for free spinning objects  
[NASA-CASE-MFS-25966-1] c 16 N86-26352
- Four quadrant control circuit for a brushless three-phase dc motor  
[NASA-CASE-MFS-28080-1] c 33 N87-21233
- Electro-expulsive separation system  
[NASA-CASE-ARC-11613-1] c 33 N87-28833
- Differential current source  
[NASA-CASE-GSC-13280-1] c 33 N91-27479

## ELECTRIC DISCHARGES

- Electrical discharge apparatus for forming Patent  
[NASA-CASE-XMF-00375] c 15 N70-34249
- High voltage pulse generator Patent  
[NASA-CASE-MSC-12178-1] c 09 N71-13518
- Pulse generating circuit employing switch means on ends of delay line for alternately charging and discharging same Patent  
[NASA-CASE-XNP-00745] c 10 N71-28960
- Rapidly pulsed, high intensity, incoherent light source  
[NASA-CASE-XLE-2529-3] c 33 N74-20859
- Voltage feed through apparatus having reduced partial discharge  
[NASA-CASE-GSC-12347-1] c 33 N80-18286
- Electrostatic discharge test apparatus  
[NASA-CASE-MSC-21094-1] c 35 N88-24941

## ELECTRIC ENERGY STORAGE

- Apparatus for measuring current flow Patent  
[NASA-CASE-XGS-02439] c 14 N71-19431
- Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c 44 N76-27664
- Electrically rechargeable REDOX flow cell  
[NASA-CASE-LEW-12220-1] c 44 N77-14581
- Gels as battery separators for soluble electrode cells  
[NASA-CASE-LEW-12364-1] c 44 N77-22606
- Electrochemical cell for rebalancing REDOX flow system  
[NASA-CASE-LEW-13150-1] c 44 N79-26474
- Toroidal cell and battery --- storage battery for high amp-hour load applications  
[NASA-CASE-LEW-12918-1] c 44 N81-24521
- High energy and high power density ultracapacitors and supercapacitors  
[NASA-CASE-NPO-18568-1-CU] c 33 N93-17274
- Alkali metal carbon dioxide electrochemical system for energy storage and/or conversion of carbon dioxide to oxygen  
[NASA-CASE-LEW-14973-1] c 44 N93-28974

## ELECTRIC EQUIPMENT

- Ac power amplifier Patent Application  
[NASA-CASE-LAR-10218-1] c 09 N70-34559
- Generator for a space power system Patent  
[NASA-CASE-XLE-04250] c 09 N71-20446
- High impedance measuring apparatus Patent  
[NASA-CASE-XMS-08589-1] c 09 N71-20569
- Regulated power supply Patent  
[NASA-CASE-XMS-01991] c 09 N71-21449
- Method for improving the signal-to-noise ratio of the Wheatstone bridge type bolometer Patent  
[NASA-CASE-XLA-02810] c 14 N71-25901
- Buck boost voltage regulation circuit Patent  
[NASA-CASE-GSC-10735-1] c 10 N71-26085
- Electronically resettable fuse Patent  
[NASA-CASE-XGS-11177] c 09 N71-27001
- Voltage regulator Patent  
[NASA-CASE-ERC-10113] c 09 N71-27053
- Digital pulse width selection circuit Patent  
[NASA-CASE-XLA-07788] c 09 N71-29139
- Solar energy powered heliostropes  
[NASA-CASE-GSC-10945-1] c 21 N72-31637
- Temperature compensated light source using a light emitting diode  
[NASA-CASE-ARC-10467-1] c 09 N73-14214
- Hermetically sealed semiconductor  
[NASA-CASE-GSC-10791-1] c 15 N73-14469
- Overvoltage protection network  
[NASA-CASE-ARC-10197-1] c 33 N74-17929
- Sprag solenoid brake --- development and operations of electrically controlled brake  
[NASA-CASE-MFS-21846-1] c 37 N74-26976
- Shock absorbing mount for electrical components  
[NASA-CASE-NPO-13253-1] c 37 N75-18573
- Self-regulating proportionally controlled heating apparatus and technique  
[NASA-CASE-GSC-11752-1] c 77 N75-20140

## ELECTRIC EQUIPMENT TESTS

- Test fixture for pellet-like electrical elements  
[NASA-CASE-XNP-06032] c 09 N69-21926
- Pulse amplitude and width detector Patent  
[NASA-CASE-XMF-06519] c 09 N71-12519
- High power-high voltage waterload Patent  
[NASA-CASE-XNP-05381] c 09 N71-20842

## ELECTRIC FIELD STRENGTH

- Apparatus for field strength measurement of a space vehicle Patent  
[NASA-CASE-XLE-00820] c 14 N71-16014
- Apparatus for measuring electric field strength on the surface of a model vehicle Patent  
[NASA-CASE-XLE-02038] c 09 N71-16086
- Floating two force component measuring device Patent  
[NASA-CASE-XAC-04885] c 14 N71-23790
- Apparatus for determining the deflection of an electron beam impinging on a target Patent  
[NASA-CASE-XMF-06617] c 09 N71-24843

## ELECTRIC FIELDS

- Minimum induced drag airfoil body Patent  
[NASA-CASE-XLA-00755] c 01 N71-13410
- Minimum induced drag airfoil body Patent  
[NASA-CASE-XLA-05828] c 01 N71-13411
- Instrument for measuring potentials on two dimensional electric field plots Patent  
[NASA-CASE-XLA-08493] c 10 N71-19421
- Electron beam instrument for measuring electric fields Patent  
[NASA-CASE-XMF-10289] c 14 N71-23699
- Field ionization electrodes Patent  
[NASA-CASE-ERC-10013] c 09 N71-26678
- Determining distance to lightning strokes from a single station  
[NASA-CASE-KSC-10698] c 07 N73-20175
- Rocket borne instrument to measure electric fields inside electrified clouds  
[NASA-CASE-KSC-10730-1] c 14 N73-32318
- Electric field measuring and display system --- for cloud formations  
[NASA-CASE-KSC-10731-1] c 33 N74-27862
- Lightning discharge identification system  
[NASA-CASE-KSC-11099-1] c 47 N82-24779
- Maser cavity servo-tuning system  
[NASA-CASE-NPO-15890-1-CU] c 33 N85-29143
- Method of measuring field funneling and range straggling in semiconductor charge-collecting junctions  
[NASA-CASE-NPO-16584-1-CU] c 76 N86-25269
- Solidification processing of alloys using an applied electric field  
[NASA-CASE-MFS-26083-1-CU] c 26 N90-26940
- Method and apparatus for determining return stroke polarity of distant lightning  
[NASA-CASE-MFS-26102-1-CU] c 47 N91-15661
- Enhanced single layer multi-color or luminescent display with coactivators  
[NASA-CASE-LAR-14181-1] c 76 N91-21911
- Method and apparatus for determining return stroke polarity of distant lightning  
[NASA-CASE-MFS-26102-2-CU] c 47 N93-10108

## ELECTRIC FILTERS

- Static inverters which sum a plurality of waves Patent  
[NASA-CASE-XMF-00663] c 08 N71-18752
- Remodulator filter Patent  
[NASA-CASE-NPO-10198] c 09 N71-24806
- RC networks and amplifiers employing the same  
[NASA-CASE-XAC-05462-2] c 10 N72-17171
- Multiloop RC active filter apparatus having low parameter sensitivity with low amplifier gain  
[NASA-CASE-ARC-10192] c 09 N72-21245
- Radio frequency filter device  
[NASA-CASE-XLA-02609] c 09 N72-25256
- Filter for third order phase locked loops  
[NASA-CASE-NPO-11941-1] c 10 N73-27171

## ELECTRIC FURNACES

- High gradient directional solidification furnace  
[NASA-CASE-MFS-25963-1] c 35 N86-20750

## ELECTRIC FUSES

- Electrical load protection device Patent  
[NASA-CASE-MSC-12135-1] c 09 N71-12526
- Diode and protection fuse unit Patent  
[NASA-CASE-XKS-03381] c 09 N71-22796
- Fused switch  
[NASA-CASE-XMS-01244-1] c 33 N79-33393

## ELECTRIC GENERATORS

- Regulated dc to dc converter  
[NASA-CASE-XGS-03429] c 03 N69-21330
- Generator for a space power system Patent  
[NASA-CASE-XLE-04250] c 09 N71-20446
- Solid state pulse generator with constant output width, for variable input width, in nanosecond range Patent  
[NASA-CASE-XGS-03427] c 10 N71-23029
- Continuous turning slip ring assembly Patent  
[NASA-CASE-XMF-01049] c 15 N71-23049
- Positive dc to positive dc converter Patent  
[NASA-CASE-XMF-14301] c 09 N71-23188
- High temperature ferromagnetic cobalt-base alloy Patent  
[NASA-CASE-XLE-03629] c 17 N71-23248
- Variable width pulse integrator Patent  
[NASA-CASE-XLA-03356] c 10 N71-23315
- Power system with heat pipe liquid coolant lines Patent  
[NASA-CASE-MFS-14114-2] c 09 N71-24807
- RC rate generator for slow speed measurement Patent  
[NASA-CASE-XMF-02966] c 10 N71-24863
- Pulse width inverter Patent  
[NASA-CASE-MFS-10068] c 10 N71-25139
- Multiple varactor frequency doubler Patent  
[NASA-CASE-XMF-04958-1] c 10 N71-26414
- Failure sensing and protection circuit for converter networks Patent  
[NASA-CASE-GSC-10114-1] c 10 N71-27366

- Power system with heat pipe liquid coolant lines Patent  
[NASA-CASE-MFS-14114] c 33 N71-27862
- Load-insensitive electrical device  
[NASA-CASE-XER-11046] c 09 N72-22203
- Controllable load insensitive power converters  
[NASA-CASE-ERC-10268] c 09 N72-25252
- A dc to ac to dc converter having transistor synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c 09 N72-25253
- Electromagnetic wave energy converter  
[NASA-CASE-GSC-11394-1] c 09 N73-32109
- Heat operated cryogenic electrical generator  
[NASA-CASE-NPO-13303-1] c 20 N75-24837
- Electric power generation system directory from laser power  
[NASA-CASE-NPO-13308-1] c 36 N75-30524
- Smoke generator  
[NASA-CASE-ARC-10905-1] c 37 N77-13418
- Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-11389-1] c 33 N77-26387
- Wind wheel electric power generator  
[NASA-CASE-MFS-23515-1] c 44 N80-21828
- Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c 44 N80-29834
- Electrical power generating system --- for windpowered generation  
[NASA-CASE-MFS-24368-3] c 33 N81-22280
- Linear magnetic motor/generator --- to generate electric energy using magnetic flux for spacecraft power supply  
[NASA-CASE-GSC-12518-1] c 33 N82-24421
- Electrical power generating system  
[NASA-CASE-MFS-25302-1] c 33 N82-28319
- Control system for an induction motor with energy recovery  
[NASA-CASE-MFS-25477-1] c 33 N84-14424
- Solar powered actuator with continuously variable auxiliary power control  
[NASA-CASE-MFS-25637-1] c 44 N85-21769
- Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-2] c 28 N91-14495

## ELECTRIC IGNITION

- Method of making a solid propellant rocket motor Patent  
[NASA-CASE-XLA-04126] c 28 N71-26779

## ELECTRIC MOTOR VEHICLES

- Automotive absorption air conditioner utilizing solar and motor waste heat  
[NASA-CASE-NPO-15183-1] c 44 N82-26776

## ELECTRIC MOTORS

- Bus voltage compensation circuit for controlling direct current motor  
[NASA-CASE-XMS-04215-1] c 09 N69-39987
- Electronic motor control system Patent  
[NASA-CASE-XMF-01129] c 09 N70-38712
- Electronic beam switching commutator Patent  
[NASA-CASE-XGS-01451] c 09 N71-10677
- Regenerative braking system Patent  
[NASA-CASE-XMF-01096] c 10 N71-16030
- Angular position and velocity sensing apparatus Patent  
[NASA-CASE-XGS-05680] c 14 N71-17585
- Reversible current control apparatus Patent  
[NASA-CASE-XLA-09371] c 10 N71-18724
- Stepping motor control circuit Patent  
[NASA-CASE-GSC-10366-1] c 10 N71-18772
- Detenting servomotor Patent  
[NASA-CASE-XNP-06936] c 15 N71-24695
- Transistor servo system including a unique differential amplifier circuit Patent  
[NASA-CASE-XMF-05195] c 10 N71-24861
- Velocity limiting safety system Patent  
[NASA-CASE-XLA-07473] c 15 N71-24895
- Direct current motor with stationary armature and field Patent  
[NASA-CASE-XGS-05290] c 09 N71-25999
- Dual polarity full wave dc motor drive Patent  
[NASA-CASE-XNP-07477] c 09 N71-26092
- Control apparatus for applying pulses of selectively predetermined duration to a sequence of loads Patent  
[NASA-CASE-XGS-04224] c 10 N71-26418
- A dc motor speed control system Patent  
[NASA-CASE-MFS-14610] c 09 N71-28886
- Optimal control system for an electric motor driven vehicle  
[NASA-CASE-NPO-11210] c 11 N72-20244
- Electric motive machine including magnetic bearing  
[NASA-CASE-XGS-07805] c 15 N72-33476
- Redundant speed control for brushless Hall effect motor  
[NASA-CASE-MFS-20207-1] c 09 N73-32107
- Three phase full wave dc motor decoder  
[NASA-CASE-GSC-11824-1] c 33 N77-26386
- Rotary electric device  
[NASA-CASE-GSC-12138-1] c 33 N79-20314

Controller for computer control of brushless dc motors --- automobile engines  
 [NASA-CASE-NPO-13970-1] c 33 N81-20352  
 Linear magnetic motor/generator --- to generate electric energy using magnetic flux for spacecraft power supply  
 [NASA-CASE-GSC-12518-1] c 33 N82-24421  
 Four quadrant control circuit for a brushless three-phase dc motor  
 [NASA-CASE-MFS-28080-1] c 33 N87-21233  
 Reciprocating linear motor  
 [NASA-CASE-GSC-12773-2] c 33 N87-23904  
 Mechanized fluid connector and assembly tool system with ball detents  
 [NASA-CASE-MSC-21434-1] c 37 N92-10197

**ELECTRIC NETWORKS**  
 Condition and condition duration indicator Patent  
 [NASA-CASE-XMF-01097] c 10 N71-16058  
 Solid state pulse generator with constant output width, for variable input width, in nanosecond range Patent  
 [NASA-CASE-XGS-03427] c 10 N71-23029  
 Increasing efficiency of switching type regulator circuits Patent  
 [NASA-CASE-XMS-09352] c 09 N71-23316  
 Broadband frequency discriminator Patent  
 [NASA-CASE-NPO-10096] c 07 N71-24583  
 Test apparatus for locating shorts during assembly of electrical buses  
 [NASA-CASE-ARC-11116-1] c 33 N82-24420

**ELECTRIC POTENTIAL**  
 Method and apparatus for battery charge control Patent  
 [NASA-CASE-XGS-05432] c 03 N71-19438  
 Positive dc to positive dc converter Patent  
 [NASA-CASE-XMF-14301] c 09 N71-23188  
 Variable width pulse integrator Patent  
 [NASA-CASE-XLA-03356] c 10 N71-23315  
 Voltage dropout sensor Patent  
 [NASA-CASE-KSC-100201] c 10 N71-27338  
 Automated equipotential plotter  
 [NASA-CASE-NPO-11134] c 09 N72-21246  
 Pulsed excitation voltage circuit for transducers  
 [NASA-CASE-FRC-10036] c 09 N72-22200  
 Load-insensitive electrical device  
 [NASA-CASE-XER-11046] c 09 N72-22203  
 Continuously variable voltage controlled phase shifter  
 [NASA-CASE-NPO-11129] c 09 N72-33204  
 Photoelectron spectrometer with means for stabilizing sample surface potential  
 [NASA-CASE-NPO-13772-1] c 35 N78-10429  
 Microcomputerized electric field meter diagnostic and calibration system  
 [NASA-CASE-KSC-11035-1] c 35 N78-28411  
 Driver for solar cell I-V characteristic plots  
 [NASA-CASE-NPO-14096-1] c 44 N80-18551  
 Microwave integrated circuit for Josephson voltage standards  
 [NASA-CASE-MFS-23845-1] c 33 N81-17348  
 Synchronized voltage contrast display analysis system  
 [NASA-CASE-NPO-14567-1] c 33 N83-18996  
 Method for detecting coliform organisms  
 [NASA-CASE-ARC-11322-1] c 51 N83-28849  
 Phase detector for three-phase power factor controller  
 [NASA-CASE-MFS-25854-1] c 33 N84-27975  
 Simplified dc to dc converter  
 [NASA-CASE-LEW-13495-1] c 33 N84-33663  
 High voltage power supply  
 [NASA-CASE-GSC-12818-1] c 33 N85-29147  
 Modulated voltage metastable ionization detector  
 [NASA-CASE-ARC-11503-1] c 35 N85-34374  
 Angular measurement system  
 [NASA-CASE-MFS-25825-1] c 31 N86-29055  
 FET charge sensor and voltage probe  
 [NASA-CASE-NPO-16045-1] c 76 N87-13313  
 Electronic precipitator control  
 [NASA-CASE-LAR-13273-2] c 33 N90-20320  
 Alternating gradient photodetector  
 [NASA-CASE-NPO-17235-1-CU] c 35 N90-21358  
 Induction-type metal detector with increased scanning area capability  
 [NASA-CASE-KSC-11386-1] c 35 N90-22023  
 Device for quickly sensing the amount of O<sub>2</sub> in a combustion product gas  
 [NASA-CASE-LAR-13816-1] c 35 N90-22025  
 Noninvasive method and apparatus for monitoring the cure of polymeric materials  
 [NASA-CASE-LAR-13465-1] c 27 N90-23544  
 Dual physiological rate measurement instrument  
 [NASA-CASE-MSC-20078-3] c 52 N91-14709  
 Single element magnetic suspension actuator  
 [NASA-CASE-LAR-13981-1] c 37 N91-21539  
 Differential current source  
 [NASA-CASE-GSC-13280-1] c 33 N91-27479  
 Method and apparatus for frequency spectrum analysis  
 [NASA-CASE-NPO-17759-1-CU] c 32 N92-29124

Driven shielding capacitive proximity sensor  
 [NASA-CASE-GSC-13377-1] c 63 N93-14701  
 High speed magneto-resistive random access memory  
 [NASA-CASE-NPO-17954-1-CU] c 60 N93-14704  
 Two-stage gas measurement system  
 [NASA-CASE-LAR-14791-1] c 35 N93-31297

**ELECTRIC POWER**  
 Switching circuit employing regeneratively connected complementary transistors Patent  
 [NASA-CASE-XNP-02654] c 10 N70-42032  
 High power-high voltage workload Patent  
 [NASA-CASE-XNP-05381] c 09 N71-20842  
 Power factor control system for AC induction motors  
 [NASA-CASE-MFS-23280-1] c 33 N78-10376  
 Shunt regulation electric power system  
 [NASA-CASE-GSC-10135] c 33 N78-17296  
 Electrical power generating system --- for windpowered generation  
 [NASA-CASE-MFS-24368-3] c 33 N81-22280

**ELECTRIC POWER PLANTS**  
 Ocean thermal plant  
 [NASA-CASE-KSC-11034-1] c 44 N78-32542  
 Wind and solar powered turbine  
 [NASA-CASE-NPO-15496-1] c 44 N84-23018

**ELECTRIC POWER SUPPLIES**  
 Current dependent filter inductance  
 [NASA-CASE-ERC-10139] c 09 N72-17154  
 Thermal to electrical power conversion system with solid-state switches with Seebeck effect compensation  
 [NASA-CASE-NPO-11388] c 03 N72-23048  
 Parasitic suppressing circuit  
 [NASA-CASE-ERC-10403-1] c 10 N73-26228  
 Powerplexer  
 [NASA-CASE-MSC-12396-1] c 03 N73-31988  
 Inherent redundancy electric heater  
 [NASA-CASE-MFS-21462-1] c 33 N74-14935  
 Temperature compensated current source  
 [NASA-CASE-MSC-11235] c 33 N78-17294  
 High voltage power supply  
 [NASA-CASE-GSC-12818-1] c 33 N85-29147  
 Arc lamp power supply using a voltage multiplier  
 [NASA-CASE-LAR-13202-1] c 33 N88-23942  
 Magnetically switched power supply system for lasers  
 [NASA-CASE-NPO-16402-2] c 33 N88-24862  
 Self-deploying photovoltaic power system  
 [NASA-CASE-LEW-15308-1] c 44 N92-24057

**ELECTRIC POWER TRANSMISSION**  
 Magnetic power switch Patent  
 [NASA-CASE-NPO-10242] c 09 N71-24803  
 Failure sensing and protection circuit for converter networks Patent  
 [NASA-CASE-GSC-10114-1] c 10 N71-27366  
 Powerplexer  
 [NASA-CASE-MSC-12396-1] c 03 N73-31988  
 Microwave power transmission system wherein level of transmitted power is controlled by reflections from receiver  
 [NASA-CASE-MFS-21470-1] c 44 N74-19870  
 Electrical rotary joint apparatus for large space structures  
 [NASA-CASE-MFS-23981-1] c 07 N83-20944

**ELECTRIC PROPULSION**  
 Electric propulsion engine test chamber Patent  
 [NASA-CASE-XLE-00252] c 11 N70-34844

**ELECTRIC PULSES**  
 Pulse counting circuit which simultaneously indicates the occurrence of the nth pulse Patent  
 [NASA-CASE-XMF-00906] c 09 N70-41655  
 Variable pulse width multiplier Patent  
 [NASA-CASE-XLA-02850] c 09 N71-20447  
 Phonocardiograph transducer Patent  
 [NASA-CASE-XMS-05365] c 14 N71-22993  
 Solid state pulse generator with constant output width, for variable input width, in nanosecond range Patent  
 [NASA-CASE-XGS-03427] c 10 N71-23029  
 Variable width pulse integrator Patent  
 [NASA-CASE-XLA-03356] c 10 N71-23315  
 Pulse rise time and amplitude detector Patent  
 [NASA-CASE-XMF-08804] c 09 N71-24717  
 Counter Patent  
 [NASA-CASE-XNP-06234] c 10 N71-27137  
 Precision rectifier with FET switching means Patent  
 [NASA-CASE-ARC-10101-1] c 09 N71-33109  
 Phase modulating with odd and even finite power series of a modulating signal  
 [NASA-CASE-LAR-11607-1] c 32 N77-14292  
 Telephone multiline signaling using common signal pair  
 [NASA-CASE-KSC-11023-1] c 32 N79-23310  
 Active lamp pulse driver circuit --- optical pumping of laser media  
 [NASA-CASE-GSC-12566-1] c 33 N83-34189

**ELECTRIC RELAYS**  
 Protective circuit of the spark gap type  
 [NASA-CASE-XAC-08981] c 09 N69-39897

Time-division multiplexer Patent  
 [NASA-CASE-XNP-00431] c 09 N70-38998  
 Out of tolerance warning alarm system for plurality of monitored circuits Patent  
 [NASA-CASE-XMS-10984-1] c 10 N71-19417  
 Time division radio relay synchronizing system using different sync code words for in sync and out of sync conditions Patent  
 [NASA-CASE-GSC-10373-1] c 07 N71-19773  
 Circuit breaker utilizing magnetic latching relays Patent  
 [NASA-CASE-MSC-11277] c 09 N71-29008  
 Multi-cell battery protection system  
 [NASA-CASE-LEW-12039-1] c 44 N78-14625  
 Measurand transient signal suppressor  
 [NASA-CASE-MSC-22027-1] c 63 N93-17056

**ELECTRIC ROCKET ENGINES**  
 Electron bombardment ion engine Patent  
 [NASA-CASE-XNP-04124] c 28 N71-21822

**ELECTRIC SPARKS**  
 Method and device for detection of a substance --- determining carbon fiber release in fire situations  
 [NASA-CASE-NPO-14940-1] c 33 N83-31954

**ELECTRIC STIMULI**  
 Tread drum for animals --- having an electrical shock station  
 [NASA-CASE-ARC-10917-1] c 51 N78-27733

**ELECTRIC SWITCHES**  
 Thermionic diode switch Patent  
 [NASA-CASE-NPO-10404] c 03 N71-12255  
 Deflective rod switch with elastic support and sealing means Patent  
 [NASA-CASE-XNP-09808] c 09 N71-12518  
 Electrical switching device Patent  
 [NASA-CASE-NPO-10037] c 09 N71-19610  
 Plural position switch status and operativeness checker Patent  
 [NASA-CASE-XLA-08799] c 10 N71-27272  
 Pulse generating circuit employing switch means on ends of delay line for alternately charging and discharging same Patent  
 [NASA-CASE-XNP-00745] c 10 N71-28960  
 Cyclic switch Patent  
 [NASA-CASE-LEW-10155-1] c 09 N71-29035  
 Telemetry actuated switch  
 [NASA-CASE-ARC-10105] c 09 N72-17153  
 Differential pressure control  
 [NASA-CASE-MFS-14216] c 14 N73-13418  
 Fused switch  
 [NASA-CASE-XMS-01244-1] c 33 N79-33393  
 Pulse switching for high energy lasers  
 [NASA-CASE-NPO-14556-1] c 33 N82-24418  
 Automatic thermal switch --- spacecraft applications  
 [NASA-CASE-GSC-12553-1] c 34 N83-28356  
 Four quadrant control circuit for a brushless three-phase dc motor  
 [NASA-CASE-MFS-28080-1] c 33 N87-21233  
 Measurand transient signal suppressor  
 [NASA-CASE-MSC-22027-1] c 63 N93-17056

**ELECTRIC TERMINALS**  
 Electrical connector pin with wiping action  
 [NASA-CASE-XMF-04238] c 09 N69-39734  
 Electrical connector for flat cables Patent  
 [NASA-CASE-XMF-00324] c 09 N70-34596  
 Tool attachment for spreading loose elements away from work Patent  
 [NASA-CASE-XMF-02107] c 15 N71-10809  
 Electrical spot terminal assembly Patent  
 [NASA-CASE-NPO-10034] c 15 N71-17685  
 Resistance soldering apparatus  
 [NASA-CASE-GSC-10913] c 15 N72-22491  
 Radio frequency filter device  
 [NASA-CASE-XLA-02609] c 09 N72-25256  
 Device for configuring multiple leads --- method for connecting electric leads to printed circuit board  
 [NASA-CASE-MFS-22133-1] c 33 N74-26977

**ELECTRIC WELDING**  
 Electric welding torch Patent  
 [NASA-CASE-XMF-02330] c 15 N71-23798  
 Butt welder for fine gauge tungsten/rhenium thermocouple wire  
 [NASA-CASE-LAR-10103-1] c 15 N73-14468  
 Welding blades to rotors  
 [NASA-CASE-LEW-10533-1] c 15 N73-28515  
 High temperature solder device for flat cables  
 [NASA-CASE-GSC-13344-1] c 26 N92-29094

**ELECTRIC WIRE**  
 Wire grid forming apparatus Patent  
 [NASA-CASE-XLE-00023] c 15 N70-33330  
 Weld control system using thermocouple wire Patent  
 [NASA-CASE-MFS-06074] c 15 N71-20393  
 Ablation sensor Patent  
 [NASA-CASE-XLA-01794] c 33 N71-21586  
 Resistance soldering apparatus  
 [NASA-CASE-GSC-10913] c 15 N72-22491

## SUBJECT INDEX

Lead attachment to high temperature devices  
[NASA-CASE-ERC-10224] c 09 N72-25261  
Means for accommodating large overstrain in lead wires  
... by storing extra length of wire in stretchable loop  
[NASA-CASE-LAR-10168-1] c 33 N74-22865  
Device for configuring multiple leads ... method for  
connecting electric leads to printed circuit board  
[NASA-CASE-MFS-22133-1] c 33 N74-26977  
High current electrical lead ... for thermionic  
converters  
[NASA-CASE-LEW-10950-1] c 33 N74-27683  
Wire stripper  
[NASA-CASE-FRC-10111-1] c 37 N79-10419  
Method and apparatus for preparing multiconductor  
cable with flat conductors  
[NASA-CASE-MFS-10946-1] c 31 N79-21226  
Edge coating of flat wires  
[NASA-CASE-XMF-05757-1] c 31 N79-21227  
Thin wire pointing method  
[NASA-CASE-NPO-15789-1] c 31 N83-19947

**ELECTRICAL ENGINEERING**  
Relay binary circuit Patent  
[NASA-CASE-XMF-00421] c 09 N70-34502  
Vibrating element electrometer with output signal  
magnified over input signal by a function of the mechanical  
Q of the vibrating element Patent  
[NASA-CASE-XAC-02807] c 09 N71-23021

**ELECTRICAL FAULTS**  
Apparatus for overcurrent protection of a push-pull  
amplifier Patent  
[NASA-CASE-MSC-12033-1] c 09 N71-13531  
Failure sensing and protection circuit for converter  
networks Patent  
[NASA-CASE-GSC-10114-1] c 10 N71-27366  
Solar cell assembly test method  
[NASA-CASE-NPO-10401] c 03 N72-20033  
Shared memory for a fault-tolerant computer  
[NASA-CASE-NPO-13139-1] c 60 N76-21914  
Method and apparatus for transfer function simulator  
for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333

**ELECTRICAL IMPEDANCE**  
High voltage transistor circuit Patent  
[NASA-CASE-XNP-06937] c 09 N71-19516  
High impedance measuring apparatus Patent  
[NASA-CASE-XMS-08589-1] c 09 N71-20569  
Multialarm summary alarm Patent  
[NASA-CASE-XLE-03061-1] c 10 N71-24798  
Signal conditioning circuit apparatus ... with constant  
input impedance  
[NASA-CASE-ARC-10348-1] c 33 N75-19518  
Readout electrode assembly for measuring biological  
impedance  
[NASA-CASE-ARC-10816-1] c 35 N76-24525  
Solid-state current transformer  
[NASA-CASE-MFS-22560-1] c 33 N77-14335

**ELECTRICAL INSULATION**  
Solenoid construction Patent  
[NASA-CASE-XNP-01951] c 09 N70-41929  
Method and apparatus for cryogenic wire stripping  
Patent  
[NASA-CASE-MFS-10340] c 15 N71-17628  
Plasma device feed system Patent  
[NASA-CASE-XLE-02902] c 25 N71-21694  
Propellant feed isolator Patent  
[NASA-CASE-LEW-10210-1] c 28 N71-26781  
Electrical insulating layer process  
[NASA-CASE-LEW-10489-1] c 15 N72-25447  
Bio-isolated dc operational amplifier ... for bioelectric  
measurements  
[NASA-CASE-ARC-10596-1] c 33 N74-21851  
Stored charge transistor  
[NASA-CASE-NPO-11156-2] c 33 N75-31331  
Method of making an insulation foil  
[NASA-CASE-LEW-11484-1] c 24 N75-33181  
Gas ion laser construction for electrically isolating the  
pressure gauge thereof  
[NASA-CASE-MFS-22597] c 36 N78-17366  
Wire stripper  
[NASA-CASE-FRC-10111-1] c 37 N79-10419  
Coaxial cable connector  
[NASA-CASE-NPO-16764-1-CU] c 33 N88-14270

**ELECTRICAL MEASUREMENT**  
Device for determining the accuracy of the flare on a  
flared tube  
[NASA-CASE-XKS-03495] c 14 N69-39785  
Bootstrap unloader Patent  
[NASA-CASE-XNP-09768] c 09 N71-12516  
Micro current measuring device using plural logarithmic  
response heated filamentary type diodes Patent  
[NASA-CASE-XNP-00384] c 09 N71-13530  
Apparatus for field strength measurement of a space  
vehicle Patent  
[NASA-CASE-XLE-00820] c 14 N71-16014  
Apparatus for measuring current flow Patent  
[NASA-CASE-XGS-02439] c 14 N71-19431

High voltage divider system Patent  
[NASA-CASE-XLE-02008] c 09 N71-21583  
Ablation sensor Patent  
[NASA-CASE-XLA-01794] c 33 N71-21586  
Hall current measuring apparatus having a series resistor  
for temperature compensation Patent  
[NASA-CASE-XAC-01662] c 14 N71-23037  
Connector internal force gauge Patent  
[NASA-CASE-XNP-03918] c 14 N71-23087  
Automatic signal range selector for metering devices  
Patent  
[NASA-CASE-XMS-06497] c 14 N71-26244  
Lightning current measuring systems  
[NASA-CASE-KSC-10807-1] c 33 N75-26246  
Rapid activation and checkout device for batteries  
[NASA-CASE-MFS-22749-1] c 44 N76-14601  
Electrical conductivity cell and method for fabricating  
the same  
[NASA-CASE-ARC-10810-1] c 33 N76-19339  
Trielectrode capacitive pressure transducer  
[NASA-CASE-ARC-10711-2] c 33 N76-21390  
Readout electrode assembly for measuring biological  
impedance  
[NASA-CASE-ARC-10816-1] c 35 N76-24525  
Apparatus for measuring semiconductor device  
resistance  
[NASA-CASE-NPO-14424-1] c 33 N80-32650  
Lightning discharge identification system  
[NASA-CASE-KSC-11099-1] c 47 N82-24779  
Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c 35 N82-31659  
Four-terminal electrical testing device ... initiator  
bridgewire resistance  
[NASA-CASE-MSC-21166-1] c 35 N87-25555  
Method and apparatus for frequency spectrum  
analysis  
[NASA-CASE-NPO-17759-1-CU] c 32 N92-29124  
Method and apparatus for determining return stroke  
polarity of distant lightning  
[NASA-CASE-MFS-26102-2-CU] c 47 N93-10108  
Constant frequency pulsed phase-locked loop  
measuring device  
[NASA-CASE-LAR-13823-1] c 35 N93-29084

**ELECTRICAL PROPERTIES**  
Drift compensation circuit for analog to digital converter  
Patent  
[NASA-CASE-XNP-04780] c 08 N71-19687  
Electronically resettable fuse Patent  
[NASA-CASE-XGS-11177] c 09 N71-27001  
Voltage regulator Patent  
[NASA-CASE-ERC-10113] c 09 N71-27053  
Radiometric temperature reference Patent  
[NASA-CASE-MSC-13276-1] c 14 N71-27058  
Solar cell matrix  
[NASA-CASE-NPO-11190] c 03 N71-34044  
Storage battery comprising negative plates of a wedge  
shaped configuration ... for preventing shape change  
induced malfunctions  
[NASA-CASE-NPO-11806-1] c 44 N74-19693  
Thermocouple tape ... developed from  
thermoelectrically different metals  
[NASA-CASE-LEW-11072-2] c 35 N76-15434  
Modification of the electrical and optical properties of  
polymers ... ion irradiation to create texture  
[NASA-CASE-LEW-13027-1] c 27 N80-24437  
Silicon containing electroconductive polymers and  
structures made therefrom  
[NASA-CASE-NPO-17826-1-CU] c 27 N92-16121

**ELECTRICAL RESISTANCE**  
Positive contact resistance soldering unit  
[NASA-CASE-KSC-10242] c 15 N72-23497  
RF-source resistance meters  
[NASA-CASE-NPO-11291-1] c 14 N73-30388  
Apparatus for measuring semiconductor device  
resistance  
[NASA-CASE-NPO-14424-1] c 33 N80-32650  
Tensile testing apparatus  
[NASA-CASE-LAR-13243-1] c 35 N85-34375  
Four-terminal electrical testing device ... initiator  
bridgewire resistance  
[NASA-CASE-MSC-21166-1] c 35 N87-25555  
A digitally controlled system for effecting and presenting  
a selected electrical resistance  
[NASA-CASE-MFS-29149-1] c 33 N90-19492

**ELECTRICAL RESISTIVITY**  
GaAs solar detector using manganese as a doping agent  
Patent  
[NASA-CASE-XNP-01328] c 26 N71-18064  
Thermopile vacuum gage tube simulator Patent  
[NASA-CASE-XLA-02758] c 14 N71-18481  
Electrically conductive fluorocarbon polymer  
[NASA-CASE-XLE-06774-2] c 06 N72-25150  
Electrical conductivity cell and method for fabricating  
the same  
[NASA-CASE-ARC-10810-1] c 33 N76-19339

## ELECTROACOUSTIC TRANSDUCERS

Durable antistatic coating for polymethylmethacrylate  
[NASA-CASE-NPO-13867-1] c 27 N78-14164

Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c 33 N79-11315

Lightweight electrically-powered flexible thermal  
laminate ... made of metal and nonconductive yarns  
[NASA-CASE-MSC-12662-1] c 33 N79-12331

Electrically conductive thermal control coatings  
[NASA-CASE-GSC-12207-1] c 24 N79-14156

Electrically conductive palladium containing polyimide  
films  
[NASA-CASE-LAR-12705-1] c 25 N82-26396

Method of making a high voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c 44 N82-29709

Method and device for detection of a substance ...  
determining carbon fiber release in fire situations  
[NASA-CASE-NPO-14940-1] c 33 N83-31954

Piezoelectric composite materials  
[NASA-CASE-LEW-12582-1] c 76 N83-34796

Instrumentation for sensing moisture content of material  
using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373

Light weight polymer matrix composite material  
[NASA-CASE-LEW-14734-1] c 24 N89-23623

Solid state electrical switch employing materials with  
reversible phase transistors  
[NASA-CASE-NPO-17621-1-CU] c 33 N90-17010

Alternating gradient photodetector  
[NASA-CASE-NPO-17235-1-CU] c 35 N90-21358

High temperature electric arc furnace and method  
[NASA-CASE-MFS-28281-1] c 09 N90-23415

Heat transfer device and method of making the same  
[NASA-CASE-LEW-14162-1] c 34 N91-13668

Brominated graphitized carbon fibers  
[NASA-CASE-LEW-14698-2] c 27 N92-10090

Silicon containing electroconductive polymers and  
structures made therefrom  
[NASA-CASE-NPO-17826-1-CU] c 27 N92-16121

High speed magneto-resistive random access memory  
[NASA-CASE-NPO-17954-1-CU] c 60 N93-14704

Method for producing hybrid graphite composite  
[NASA-CASE-LEW-15241-2] c 24 N93-31296

**ELECTRICITY**  
Thermionic converter with current augmented by self  
induced magnetic field Patent  
[NASA-CASE-XLE-01903] c 22 N71-23599

Heat exchanger for electrothermal devices  
[NASA-CASE-LEW-14037-1] c 20 N87-16875

Selective emitters  
[NASA-CASE-LEW-14731-1] c 44 N92-22037

**ELECTRO-OPTICS**  
Electro-optical scanning apparatus Patent Application  
[NASA-CASE-NPO-11106] c 14 N70-34697

Electro-optical alignment control system Patent  
[NASA-CASE-XMF-00908] c 14 N70-40238

Polarimeter for transient measurement Patent  
[NASA-CASE-XNP-08883] c 23 N71-16101

Light direction sensor  
[NASA-CASE-NPO-11201] c 14 N72-27409

Ultrastable calibrated light source  
[NASA-CASE-MSC-12293-1] c 14 N72-27411

Optical conversion method ... for spacecraft television  
[NASA-CASE-MSC-12618-1] c 74 N78-17865

Noncontacting method for measuring angular  
deflection  
[NASA-CASE-LAR-12178-1] c 74 N80-21138

Miniature electrooptical air flow sensor  
[NASA-CASE-LAR-13065-1] c 35 N85-20295

Adjustable mount for electro-optic transducers in an  
evacuated cryogenic system  
[NASA-CASE-LAR-13100-1] c 37 N87-23982

Photorefractor ocular screening system  
[NASA-CASE-MFS-26011-1-SB] c 52 N87-24874

Electro-optical spin measurement system  
[NASA-CASE-LAR-13629-1] c 09 N91-14356

Electro-optic resonant phase modulator  
[NASA-CASE-NPO-18702-1-CU] c 74 N92-23551

Full complex modulation using two one-parameter  
spatial light modulators  
[NASA-CASE-MSC-22255-1] c 74 N93-28135

**ELECTROACOUSTIC TRANSDUCERS**  
Respiration monitor  
[NASA-CASE-FRC-10012] c 14 N72-17329

Material suspension within an acoustically excited  
resonant chamber ... at near weightless conditions  
[NASA-CASE-NPO-13263-1] c 12 N75-24774

CDS solid state phase insensitive ultrasonic transducer  
... annealing dadium sulfide crystals  
[NASA-CASE-LAR-12304-1] c 35 N80-20559

Acoustic transducer apparatus with reduced thermal  
conduction  
[NASA-CASE-NPO-17620-1-CU] c 71 N91-14808

Calibration apparatus for recess mounted pressure  
transducers  
[NASA-CASE-LAR-14724-1] c 35 N92-30030

## ELECTROACOUSTIC WAVES

- Phonocardiogram simulator Patent  
[NASA-CASE-XKS-10804] c 05 N71-24606
- ELECTROCARDIOGRAPHY**  
Phonocardiogram simulator Patent  
[NASA-CASE-XKS-10804] c 05 N71-24606
- Ratemeter  
[NASA-CASE-MFS-20418] c 14 N73-24473
- Insulated electrocardiographic electrodes --- without paste electrolyte  
[NASA-CASE-MS-C-14339-1] c 05 N75-24716
- Pocket ECG electrode  
[NASA-CASE-ARC-11258-1] c 52 N80-33081
- Subcutaneous electrode structure  
[NASA-CASE-ARC-11117-1] c 52 N81-14612
- ELECTROCATALYSTS**  
Electrocatalyst for oxygen reduction  
[NASA-CASE-HON-10537-1] c 06 N72-10138
- Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c 33 N80-20487
- Zirconium carbide as an electrocatalyst for the chromous-chromic redox couple  
[NASA-CASE-LEW-13246-1] c 44 N83-27344
- ELECTROCHEMICAL CELLS**  
Apparatus for measuring swelling characteristics of membranes  
[NASA-CASE-XGS-03865] c 14 N69-21363
- Prevention of pressure build-up in electrochemical cells Patent  
[NASA-CASE-XGS-01419] c 03 N70-41864
- Non-magnetic battery case Patent  
[NASA-CASE-XGS-00886] c 03 N71-11053
- Sealing device for an electrochemical cell Patent  
[NASA-CASE-XGS-02630] c 03 N71-22974
- Sealed electrochemical cell provided with a flexible casing Patent  
[NASA-CASE-XGS-01513] c 03 N71-23336
- Electric battery and method for operating same Patent  
[NASA-CASE-XGS-01674] c 03 N71-29129
- Frangible electrochemical cell  
[NASA-CASE-XGS-10010] c 03 N72-15986
- Porous electrode comprising a bonded stack of pieces of corrugated metal foil  
[NASA-CASE-GSC-11368-1] c 09 N73-32108
- Battery testing device --- for testing cells of multiple-cell battery  
[NASA-CASE-MFS-20761-1] c 44 N74-27519
- Electrical conductivity cell and method for fabricating the same  
[NASA-CASE-ARC-10810-1] c 33 N76-19339
- Multi-cell battery protection system  
[NASA-CASE-LEW-12039-1] c 44 N78-14625
- Method and device for the detection of phenol and related compounds --- in an electrochemical cell  
[NASA-CASE-LEW-12513-1] c 25 N79-22235
- Electrochemical cell for rebalancing REDOX flow system  
[NASA-CASE-LEW-13150-1] c 44 N79-26474
- Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c 33 N80-20487
- Alkaline electrochemical cells and method of making  
[NASA-CASE-GSC-10349-1] c 44 N82-24645
- Method for determining the point of zero zeta potential of semiconductor  
[NASA-CASE-LAR-12893-1] c 76 N85-30923
- Method and apparatus for rebalancing a REDOX flow cell system  
[NASA-CASE-LEW-14127-1] c 33 N86-20680
- Anode for rechargeable ambient temperature lithium cells  
[NASA-CASE-NPO-18580-1-CU] c 33 N93-17278
- Alkali metal carbon dioxide electrochemical system for energy storage and/or conversion of carbon dioxide to oxygen  
[NASA-CASE-LEW-14973-1] c 44 N93-28974
- ELECTROCHEMICAL MACHINING**  
Apparatus for electrolytically tapered or contoured cavities  
[NASA-CASE-XNP-08835-1] c 37 N80-14395
- ELECTROCHEMICAL OXIDATION**  
Method and device for the detection of phenol and related compounds --- in an electrochemical cell  
[NASA-CASE-LEW-12513-1] c 25 N79-22235
- Epitaxial thinning process  
[NASA-CASE-NPO-15786-1] c 76 N84-35112
- ELECTROCHEMISTRY**  
Electrode for biological recording  
[NASA-CASE-XMS-02872] c 05 N69-21925
- Electrochemical detection device --- for use in microbiology  
[NASA-CASE-LAR-11922-1] c 25 N79-24073
- Metal chloride cathode for a battery  
[NASA-CASE-NPO-17809-1-CU] c 33 N91-27478

## ELECTRODE FILM BARRIERS

- Formulated plastic separators for soluble electrode cells --- rubber-ion transport membranes  
[NASA-CASE-LEW-12358-1] c 44 N79-17313

## ELECTRODE MATERIALS

- Overcharge and overdischarge protection of ambient temperature secondary lithium cells  
[NASA-CASE-NPO-18341-1-CU] c 33 N93-11456

## ELECTRODEPOSITION

- Method of electrolytically binding a layer of semiconductors together Patent  
[NASA-CASE-XNP-01959] c 26 N71-23043
- Method of producing crystalline materials  
[NASA-CASE-NPO-10440] c 15 N72-21466
- Electrophoretic sample insertion --- device for uniformly distributing samples in flow path  
[NASA-CASE-MFS-21395-1] c 25 N74-26948
- Multitarget sequential sputtering apparatus  
[NASA-CASE-NPO-13345-1] c 37 N75-19684
- Method and device for the detection of phenol and related compounds --- in an electrochemical cell  
[NASA-CASE-LEW-12513-1] c 25 N79-22235

## ELECTRODES

- Electrode and insulator with shielded dielectric junction  
[NASA-CASE-XLE-03778] c 09 N69-21542
- Electrode for biological recording  
[NASA-CASE-XMS-02872] c 05 N69-21925
- Bonding thermoelectric elements to nonmagnetic refractory metal electrodes  
[NASA-CASE-XGS-04554] c 15 N69-39786
- Ionization vacuum gauge Patent  
[NASA-CASE-XNP-00646] c 14 N70-35666
- Double optic system for ion engine Patent  
[NASA-CASE-XNP-02839] c 28 N70-41922
- Dydium hydrate additive to nickel hydroxide electrodes Patent  
[NASA-CASE-XGS-03505] c 03 N71-10608
- Focussing system for an ion source having apertured electrodes Patent  
[NASA-CASE-XNP-03332] c 09 N71-10618
- Biomedical electrode arrangement Patent  
[NASA-CASE-XFR-10856] c 05 N71-11189
- Electrode construction Patent  
[NASA-CASE-ARC-10043-1] c 05 N71-11193
- Pressed disc type sensing electrodes with ion-screening means Patent  
[NASA-CASE-XMS-04212-1] c 05 N71-12346
- Method of making electrical contact on silicon solar cell and resultant product Patent  
[NASA-CASE-XLE-04787] c 03 N71-20492
- Arc electrode of graphite with ball tip Patent  
[NASA-CASE-XLE-04788] c 09 N71-22987
- Sealing member and combination thereof and method of producing said sealing member Patent  
[NASA-CASE-XMS-01625] c 15 N71-23022
- Automatic recording McLeod gauge Patent  
[NASA-CASE-XLE-03280] c 14 N71-23093
- Flexible conductive disc electrode Patent  
[NASA-CASE-FRC-10029] c 09 N71-24618
- Plated electrodes Patent  
[NASA-CASE-XMS-04213-1] c 09 N71-26002
- Method and apparatus for attaching physiological monitoring electrodes Patent  
[NASA-CASE-XFR-07658-1] c 05 N71-26293
- Field ionization electrodes Patent  
[NASA-CASE-ERC-10013] c 09 N71-26678
- Method of making a perspiration resistant biopotential electrode  
[NASA-CASE-MS-C-90153-2] c 05 N72-25120
- Method of making dry electrodes  
[NASA-CASE-FRC-10029-2] c 05 N72-25121
- Compressible biomedical electrode  
[NASA-CASE-MS-C-13648] c 05 N72-27103
- Method and apparatus for limiting field emission current  
[NASA-CASE-ERC-10015-2] c 10 N72-27246
- Coaxial high density, hypervelocity plasma generator and accelerator with ionizable metal disc  
[NASA-CASE-MFS-20589] c 25 N72-32688
- Ion thruster with a combination keeper electrode and electron baffle  
[NASA-CASE-NPO-11880] c 28 N73-24783
- Wide temperature range electronic device with lead attachment  
[NASA-CASE-ERC-10224-2] c 09 N73-27150
- Porous electrode comprising a bonded stack of pieces of corrugated metal foil  
[NASA-CASE-GSC-11368-1] c 09 N73-32108
- High powered arc electrodes --- producing solar simulator radiation  
[NASA-CASE-LEW-11162-1] c 33 N74-12913
- Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils  
[NASA-CASE-GSC-11367-1] c 44 N74-19692

- Insulated electrocardiographic electrodes --- without paste electrolyte  
[NASA-CASE-MS-C-14339-1] c 05 N75-24716
- Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c 35 N76-24525
- Gels as battery separators for soluble electrode cells  
[NASA-CASE-LEW-12364-1] c 44 N77-22606
- Snap-in compressible biomedical electrode  
[NASA-CASE-MS-C-14623-1] c 52 N77-28717
- Apparatus for electrolytically tapered or contoured cavities  
[NASA-CASE-XNP-08835-1] c 37 N80-14395
- Toroidal cell and battery --- storage battery for high amp-hour load applications  
[NASA-CASE-LEW-12918-1] c 44 N81-24521
- Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c 44 N81-29524
- Method of making formulated plastic separators for soluble electrode cells  
[NASA-CASE-LEW-12358-2] c 25 N82-21268
- Multistage depressed collector for dual mode operation --- for microwave transmitting tubes  
[NASA-CASE-LEW-13282-1] c 33 N82-24415
- Alkaline electrochemical cells and method of making  
[NASA-CASE-GSC-10349-1] c 44 N82-24645
- Thermionic energy converters  
[NASA-CASE-LEW-12443-1] c 44 N83-32175
- Photoelectrochemical electrodes  
[NASA-CASE-NPO-15458-1] c 25 N84-12262
- Electrodes for solid state devices  
[NASA-CASE-NPO-15161-1] c 33 N84-16456
- Method of making a light weight battery plaque  
[NASA-CASE-LEW-13349-1] c 26 N84-22734
- Chromium electrodes for REDOX cells  
[NASA-CASE-LEW-13653-1] c 44 N84-28205
- Ion sputter textured graphite electrode plates  
[NASA-CASE-LEW-12919-2] c 70 N84-28565
- Trace water sensor  
[NASA-CASE-NPO-15722-1] c 35 N85-29212
- Negative electrode catalyst for the iron chromium redox energy storage system  
[NASA-CASE-LEW-14028-1] c 44 N86-19721
- Discharge cell for optogalvanic spectroscopy having orthogonal relationship between the probe laser and discharge axis  
[NASA-CASE-NPO-16271-1] c 35 N86-25753
- Spillage detector for liquid chromatography systems  
[NASA-CASE-MS-C-20206-1] c 25 N86-27431
- Edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-1-CU] c 76 N90-17456
- Microwave field effect transistor  
[NASA-CASE-GSC-12442-2] c 33 N90-20282
- Electrode carrying wire for GTAW welding  
[NASA-CASE-MFS-29491-1] c 31 N90-26168
- Substantially oxygen-free contact tube  
[NASA-CASE-LAR-14169-1] c 37 N92-17677
- Method for producing edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-2-CU] c 76 N92-22040
- High temperature solder device for flat cables  
[NASA-CASE-GSC-13344-1] c 26 N92-29094
- Arc/gas electrode  
[NASA-CASE-MFS-29766-1] c 33 N92-33030
- High energy and high power density ultracapacitors and supercapacitors  
[NASA-CASE-NPO-18568-1-CU] c 33 N93-17274
- Enhanced fatigue and retention in ferroelectric thin film memory capacitors by post-top electrode anneal treatment  
[NASA-CASE-NPO-18551-1-CU] c 33 N93-17277
- ELECTRODIALYSIS**  
Aqueous alkali metal hydroxide insoluble cellulose ether membrane  
[NASA-CASE-XGS-05584-1] c 25 N82-29370
- ELECTROFORMING**  
Method of electroforming a rocket chamber  
[NASA-CASE-LEW-11118-1] c 20 N74-32919
- ELECTROHYDRAULIC FORMING**  
Electrical discharge apparatus for forming Patent  
[NASA-CASE-XMF-00375] c 15 N70-34249
- ELECTROHYDRODYNAMICS**  
Electrohydrodynamic control valve Patent  
[NASA-CASE-NPO-10416] c 12 N71-27332
- ELECTROKINETICS**  
Zeta potential flowmeter Patent  
[NASA-CASE-XNP-06509] c 14 N71-23226
- ELECTROLUMINESCENCE**  
Flat-panel, full-color, electroluminescent display  
[NASA-CASE-LAR-13407-1] c 33 N87-28831
- Enhanced single layer multi-color or luminescent display with coactivators  
[NASA-CASE-LAR-14181-1] c 76 N91-21911



- Single layer multi-color luminescent display  
[NASA-CASE-LAR-13616-1] c 74 N91-31950
- Single layer multi-color luminescent display and method of making  
[NASA-CASE-LAR-13616-3] c 74 N92-29158
- ELECTROLYSIS**  
Passively regulated water electrolysis rocket engine Patent  
[NASA-CASE-XGS-08729] c 28 N71-14044  
Combined electrolysis device and fuel cell and method of operation Patent  
[NASA-CASE-XLE-01645] c 03 N71-20904  
Polymeric electrolytic hygrometer  
[NASA-CASE-NPO-13948-1] c 35 N78-25391  
Static feed water electrolysis subsystem development  
[NASA-CASE-MSC-21577-1-SB] c 25 N91-23271  
Water electrolysis  
[NASA-CASE-MSC-21572-1-SB] c 25 N92-28756  
Method for producing oxygen from lunar materials  
[NASA-CASE-MSC-21759-1] c 25 N93-29617
- ELECTROLYTES**  
Apparatus for measuring swelling characteristics of membranes  
[NASA-CASE-XGS-03865] c 14 N69-21363  
Electrolytically regenerative hydrogen-oxygen fuel cell Patent  
[NASA-CASE-XLE-04526] c 03 N71-11052  
Sealed electrochemical cell provided with a flexible casing Patent  
[NASA-CASE-XGS-01513] c 03 N71-23336  
Compressible biomedical electrode  
[NASA-CASE-MSC-13648] c 05 N72-27103  
Solid electrolyte cell  
[NASA-CASE-NPO-15269-1] c 44 N82-29710  
Chromium electrodes for REDOX cells  
[NASA-CASE-LEW-13653-1] c 44 N84-28205  
Trace water sensor  
[NASA-CASE-NPO-15722-1] c 35 N85-29212  
Thermal power transfer system using applied potential difference to sustain operating pressure difference  
[NASA-CASE-NPO-18034-1-CU] c 44 N92-16457  
Secondary Li battery incorporating 12-Crown-4 ether  
[NASA-CASE-NPO-17922-1-CU] c 33 N92-28753
- ELECTROLYTIC CELLS**  
Method of making emf cell  
[NASA-CASE-LEW-11359-2] c 03 N72-20034  
Electrolytic gas operated actuator  
[NASA-CASE-NPO-11369] c 15 N73-13467  
Electrolytic cell structure  
[NASA-CASE-LAR-11042-1] c 33 N75-27252  
Reconstituted asbestos matrix --- for use in fuel or electrolysis cells  
[NASA-CASE-MSC-12568-1] c 24 N76-14204  
Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c 33 N80-20487  
Cell and method for electrolysis of water and anode  
[NASA-CASE-MSC-16394-1] c 28 N81-24280  
Toroidal cell and battery --- storage battery for high amp-hour load applications  
[NASA-CASE-LEW-12918-1] c 44 N81-24521  
Solid electrolyte cell  
[NASA-CASE-NPO-15269-1] c 44 N82-29710  
State-of-charge coulometer  
[NASA-CASE-NPO-15759-1] c 35 N85-21596  
Water electrolysis  
[NASA-CASE-MSC-21572-1-SB] c 25 N92-28756
- ELECTROMAGNETIC ABSORPTION**  
Multiple pass reimaging optical system  
[NASA-CASE-ARC-10194-1] c 23 N73-20741  
Method and apparatus for background signal reduction in opto-acoustic absorption measurement  
[NASA-CASE-NPO-13683-1] c 35 N77-14411  
Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOO-00428-1] c 32 N79-19186  
Electromagnetic power absorber  
[NASA-CASE-NPO-13830-1] c 32 N80-14281  
Method and apparatus for determining optical absorption and emission characteristics of a crystal or non-crystalline fiber  
[NASA-CASE-LAR-13963-1] c 76 N90-24150
- ELECTROMAGNETIC FIELDS**  
Tumbler system to provide random motion  
[NASA-CASE-XGS-02437] c 15 N69-21472  
Vacuum evaporator with electromagnetic ion steering Patent  
[NASA-CASE-NPO-10331] c 09 N71-26701  
Metallic intrusion detector system  
[NASA-CASE-ARC-10265-1] c 10 N72-28240  
Low power electromagnetic flowmeter providing accurate zero set  
[NASA-CASE-ARC-10362-1] c 14 N73-32326  
Electromagnetic flow rate meter --- for liquid metals  
[NASA-CASE-LEW-10981-1] c 35 N74-21018
- Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c 35 N78-28411
- ELECTROMAGNETIC HAMMERS**  
Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114] c 15 N71-17650  
Magnetomotive metal working device Patent  
[NASA-CASE-XMF-03793] c 15 N71-24833
- ELECTROMAGNETIC INTERFERENCE**  
Sealed cabinetry Patent  
[NASA-CASE-MSC-12168-1] c 09 N71-18600  
Method of treating the surface of a glass member  
[NASA-CASE-GSC-12110-1] c 27 N77-32308  
Method and apparatus for enhancing laser absorption sensitivity  
[NASA-CASE-NPO-16567-1-CU] c 36 N87-28006  
Multiwavelength pyrometer for gray and non-gray surfaces in the presence of interfering radiation  
[NASA-CASE-LEW-15250-1] c 35 N93-17060
- ELECTROMAGNETIC MEASUREMENT**  
Method and apparatus for determining electromagnetic characteristics of large surface area passive reflectors Patent  
[NASA-CASE-XGS-02608] c 07 N70-41678  
Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c 35 N78-28411  
Lighting discharge identification system  
[NASA-CASE-KSC-11099-1] c 47 N82-24779
- ELECTROMAGNETIC NOISE**  
Parametric amplifiers with idler circuit feedback  
[NASA-CASE-LAR-10253-1] c 09 N72-25258  
Audio system with means for reducing noise effects  
[NASA-CASE-NPO-11631] c 10 N73-12244  
Filtering device --- removing electromagnetic noise from voice communication signals  
[NASA-CASE-MFS-22729-1] c 32 N76-21366
- ELECTROMAGNETIC PROPERTIES**  
Measurement apparatus and procedure for the determination of surface emissivities  
[NASA-CASE-LAR-13455-1] c 32 N87-21206
- ELECTROMAGNETIC PROPULSION**  
Hypervelocity gun --- using both electric and chemical energy for projectile propulsion  
[NASA-CASE-XLE-03186-1] c 09 N79-21084
- ELECTROMAGNETIC PULSES**  
Laser pulse detection method and apparatus  
[NASA-CASE-NPO-16030-1] c 36 N84-25037
- ELECTROMAGNETIC PUMPS**  
Multiducted electromagnetic pump Patent  
[NASA-CASE-NPO-10755] c 15 N71-27084  
Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-1] c 34 N92-28752
- ELECTROMAGNETIC RADIATION**  
Inflatable radar reflector unit Patent  
[NASA-CASE-XMS-00893] c 07 N70-40063  
Circulator having quarter wavelength resonant post and parametric amplifier circuits utilizing the same Patent  
[NASA-CASE-XNP-02140] c 09 N71-23097  
Electromagnetic polarization systems and methods Patent  
[NASA-CASE-GSC-10021-1] c 09 N71-24595  
Antenna design for surface wave suppression Patent  
[NASA-CASE-XLA-10772] c 07 N71-28980  
Multiple reflection conical microwave antenna  
[NASA-CASE-NPO-11661] c 07 N73-14130  
Method and apparatus for measuring electromagnetic radiation  
[NASA-CASE-LEW-11159-1] c 14 N73-28488  
Hyperthermia heating apparatus --- cancer therapy  
[NASA-CASE-NPO-14549-2] c 52 N82-33996  
Method and apparatus for measuring distance  
[NASA-CASE-MSC-20912-1] c 32 N88-26568  
Induction-type metal detector with increased scanning area capability  
[NASA-CASE-KSC-11386-1] c 35 N90-22023
- ELECTROMAGNETIC SHIELDING**  
Method of making shielded flat cable Patent  
[NASA-CASE-MFS-13687] c 09 N71-28691  
Wire stripper  
[NASA-CASE-FRC-10111-1] c 37 N79-10419  
Shielded conductor cable system  
[NASA-CASE-MSC-12745-1] c 33 N81-27397  
Process for applying a superconductive powder to a wide variety of substrates  
[NASA-CASE-LAR-14729-1-CU] c 33 N93-19051
- ELECTROMAGNETIC WAVE FILTERS**  
Laser camera and diffraction filter therefore Patent  
[NASA-CASE-NPO-10417] c 16 N71-33410
- ELECTROMAGNETIC WAVE TRANSMISSION**  
Method and apparatus for determining electromagnetic characteristics of large surface area passive reflectors Patent  
[NASA-CASE-XGS-02608] c 07 N70-41678
- Gyrotron transmitting tube  
[NASA-CASE-LEW-13429-1] c 33 N83-31952
- ELECTROMAGNETISM**  
Detentling servomotor Patent  
[NASA-CASE-XNP-06936] c 15 N71-24695  
Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c 37 N83-32067  
Linear magnetic bearings  
[NASA-CASE-GSC-12582-2] c 37 N85-20337
- ELECTROMAGNETS**  
Electromagnetic mirror drive system  
[NASA-CASE-XLA-03724] c 14 N69-27461  
Solenoid construction Patent  
[NASA-CASE-XNP-01951] c 09 N70-41929  
Position sensing device employing misaligned magnetic field generating and detecting apparatus Patent  
[NASA-CASE-XGS-07514] c 23 N71-16099  
Safe-arm initiator Patent  
[NASA-CASE-LAR-10372] c 09 N71-18599  
Magnetic bearing --- for supplying magnetic fluxes  
[NASA-CASE-GSC-11079-1] c 37 N75-18574  
Magnetic spin reduction system for free spinning objects  
[NASA-CASE-MFS-25966-1] c 16 N86-26352  
Payload retention device  
[NASA-CASE-MSC-21906-1] c 37 N92-28727  
Method and apparatus for using magneto-acoustic remanence to determine embrittlement  
[NASA-CASE-LAR-13817-5] c 39 N92-28757  
Magnetic remanence method and apparatus to test materials for embrittlement  
[NASA-CASE-LAR-13817-4] c 39 N92-29101  
Electromagnetic attachment mechanism  
[NASA-CASE-MSC-21463-1] c 37 N92-33018
- ELECTROMECHANICAL DEVICES**  
Electromechanical actuator  
[NASA-CASE-XNP-05975] c 15 N69-23185  
Bimetallic power controlled actuator  
[NASA-CASE-XNP-09776] c 09 N69-39929  
Apparatus for coupling a plurality of ungrounded circuits to a grounded circuit Patent  
[NASA-CASE-XAC-00086] c 09 N70-33182  
Apparatus for controlling the velocity of an electromechanical drive for interferometers and the like Patent  
[NASA-CASE-XGS-03532] c 14 N71-17627  
Mechanical actuator Patent  
[NASA-CASE-XGS-04548] c 15 N71-24045  
Transverse piezoresistance and pinch effect electromechanical transducers Patent  
[NASA-CASE-ERC-10088] c 26 N71-25490  
Electromechanical control actuator system Patent  
[NASA-CASE-ERC-10022] c 15 N71-26635  
Pressure sensitive transducers Patent  
[NASA-CASE-ERC-10087] c 14 N71-27334  
Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-15053-1] c 09 N72-21248  
Ferrolfluid solenoid  
[NASA-CASE-NPO-11738-1] c 09 N73-30185  
Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-11389-1] c 33 N77-26387  
Rotary electric device  
[NASA-CASE-GSC-12138-1] c 33 N79-20314  
Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c 43 N80-14423  
Coal-shale interface detector  
[NASA-CASE-MFS-23720-1] c 43 N80-23711  
Magnetic field control --- electromechanical torquing device  
[NASA-CASE-MFS-23828-1] c 33 N82-26569  
Piezoelectric composite materials  
[NASA-CASE-LEW-12582-1] c 76 N83-34796  
Two-dimensional scanner apparatus --- flaw detector in small flat plates  
[NASA-CASE-MFS-25687-1] c 35 N84-22928  
Memory metal actuator  
[NASA-CASE-NPO-15960-1] c 37 N86-19604  
Electro-expulsive separation system  
[NASA-CASE-ARC-11613-1] c 33 N87-28833
- ELECTROMECHANICS**  
Payload retention device  
[NASA-CASE-MSC-21906-1] c 37 N92-28727
- ELECTROMETERS**  
Vibrating element electrometer with output signal magnified over input signal by a function of the mechanical Q of the vibrating element Patent  
[NASA-CASE-XAC-02807] c 09 N71-23021  
Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c 35 N82-31659
- ELECTROMIGRATION**  
Electromigration process for the purification of molten silicon during crystal growth  
[NASA-CASE-NPO-14831-1] c 76 N82-30105
- ELECTROMOTIVE FORCES**  
Heat activated cell Patent  
[NASA-CASE-LEW-11359] c 03 N71-28579



## ELECTRON ATTACHMENT

Three-phase power factor controller with induced EMF sensing  
[NASA-CASE-MFS-25852-1] c 33 N84-33661

## ELECTRON ATTACHMENT

High resolution threshold photoelectron spectroscopy by electron attachment  
[NASA-CASE-NPO-14078-1] c 72 N80-14877  
Reversal electron attachment ionizer for detection of trace species  
[NASA-CASE-NPO-17596-1-CU] c 35 N89-28795

## ELECTRON BEAM WELDING

Split welding chamber Patent  
[NASA-CASE-LEW-11531] c 15 N71-14932  
Device for preventing high voltage arcing in electron beam welding Patent  
[NASA-CASE-XMF-08522] c 15 N71-19486

## ELECTRON BEAMS

Electronic beam switching commutator Patent  
[NASA-CASE-XGS-01451] c 09 N71-10677  
Method and means for an improved electron beam scanning system Patent  
[NASA-CASE-ERC-10552] c 09 N71-12539  
Electron beam instrument for measuring electric fields Patent  
[NASA-CASE-XMF-10289] c 14 N71-23699  
Apparatus for determining the deflection of an electron beam impinging on a target Patent  
[NASA-CASE-XMF-06617] c 09 N71-24843  
Infrared detectors  
[NASA-CASE-LAR-10728-1] c 14 N73-12445  
Electron beam controller --- using magnetic field to refocus spent electron beam in microwave oscillator tube  
[NASA-CASE-LEW-11617-1] c 33 N74-10195  
Image tube --- deriving electron beam replica of image  
[NASA-CASE-GSC-11602-1] c 33 N74-21850  
Very high intensity light source using a cathode ray tube --- electron beams  
[NASA-CASE-XNP-01296] c 33 N75-27250  
Low energy electron magnetometer using a monoenergetic electron beam  
[NASA-CASE-LAR-12706-1] c 35 N84-12444  
Isotope separation using tuned laser and electron beam  
[NASA-CASE-NPO-16907-1-CU] c 25 N88-24732  
Trochoidal analysis of scattered electrons in a merged electron-ion beam geometry  
[NASA-CASE-NPO-16789-1-CU] c 72 N89-29169  
Dual cathode system for electron beam instruments  
[NASA-CASE-NPO-16878-1-CU] c 35 N90-20351  
Multiple layer dielectrics, hot film sensors, and methods of producing same  
[NASA-CASE-LAR-14591-1] c 35 N93-19493

## ELECTRON BOMBARDMENT

Ion thruster cathode  
[NASA-CASE-XLE-07087] c 06 N69-39889  
Device for measuring electron-beam intensities and for subjecting materials to electron irradiation in an electron microscope  
[NASA-CASE-XGS-01725] c 14 N69-39982  
Electron bombardment ion engine Patent  
[NASA-CASE-XNP-04124] c 28 N71-21822  
Electronic cathode having a brush-like structure and a relatively thick oxide emissive coating Patent  
[NASA-CASE-XLE-04501] c 09 N71-23190  
Single grid accelerator for an ion thruster  
[NASA-CASE-XLE-10453-2] c 28 N73-27699  
Containerless high temperature calorimeter apparatus  
[NASA-CASE-MFS-23923-1] c 35 N81-19426  
Mechanical bonding of metal method  
[NASA-CASE-LEW-12941-1] c 26 N83-10170  
Diamondlike flake composites  
[NASA-CASE-LEW-13837-1] c 24 N84-22695  
Ion sputter textured graphite electrode plates  
[NASA-CASE-LEW-12919-2] c 70 N84-28565  
Apparatus and method for quiescent containerless processing of high temperature metals and alloys in low gravity  
[NASA-CASE-MFS-28087-1] c 35 N87-23944  
Surface modification using low energy ground state ion beams  
[NASA-CASE-NPO-17498-1-CU] c 72 N91-14813

## ELECTRON CAPTURE

Multistage depressed collector for dual mode operation --- for microwave transmitting tubes  
[NASA-CASE-LEW-13282-1] c 33 N82-24415

## ELECTRON DISTRIBUTION

Measurement of plasma temperature and density using radiation absorption  
[NASA-CASE-ARC-10598-1] c 75 N74-30156

## ELECTRON EMISSION

Triode thermionic energy converter  
[NASA-CASE-XLE-01015] c 03 N69-39898  
Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587

## ELECTRON ENERGY

Low energy electron magnetometer using a monoenergetic electron beam  
[NASA-CASE-LAR-12706-1] c 35 N84-12444

## ELECTRON FLUX DENSITY

Device for measuring electron-beam intensities and for subjecting materials to electron irradiation in an electron microscope  
[NASA-CASE-XGS-01725] c 14 N69-39982

## ELECTRON GUNS

Induction heating gun  
[NASA-CASE-LAR-13181-1] c 31 N85-29083  
Generation of intense negative ion beams  
[NASA-CASE-NPO-16061-1-CU] c 72 N87-21660

## ELECTRON IRRADIATION

Ion rocket Patent  
[NASA-CASE-XLE-00376] c 28 N70-37245

## ELECTRON MICROSCOPES

Device for measuring electron-beam intensities and for subjecting materials to electron irradiation in an electron microscope  
[NASA-CASE-XGS-01725] c 14 N69-39982  
Method of forming aperture plate for electron microscope  
[NASA-CASE-ARC-10448-2] c 74 N75-12732  
Electron microscope aperture system  
[NASA-CASE-ARC-10448-3] c 35 N77-14408  
Control system for ruling blazed, aberration corrected diffraction gratings  
[NASA-CASE-GSC-13240-1] c 35 N92-10186

## ELECTRON MICROSCOPY

Synchronized voltage contrast display analysis system  
[NASA-CASE-NPO-14567-1] c 33 N83-18996

## ELECTRON OSCILLATIONS

Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N87-22895

## ELECTRON PHOTON CASCADES

Resistive anode image converter  
[NASA-CASE-HQN-10876-1] c 33 N76-27473

## ELECTRON PLASMA

Method and apparatus for producing a plasma Patent  
[NASA-CASE-XLA-00147] c 25 N70-34661

## ELECTRON SCATTERING

Trochoidal analysis of scattered electrons in a merged electron-ion beam geometry  
[NASA-CASE-NPO-16789-1-CU] c 72 N89-29169

## ELECTRON SOURCES

Electron microscope aperture system  
[NASA-CASE-ARC-10448-3] c 35 N77-14408

## ELECTRON TRANSFER

Process for reducing secondary electron emission Patent  
[NASA-CASE-XNP-09469] c 24 N71-25555  
All-optical photochromic spatial light modulators based on photoinduced electron transfer in rigid matrices  
[NASA-CASE-NPO-17612-1-CU] c 74 N92-16808

## ELECTRON TRANSITIONS

Diatomic infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c 36 N75-31426

## ELECTRON TUBES

Direct radiation cooling of the collector of linear beam tubes  
[NASA-CASE-XNP-09227] c 15 N69-24319  
Radiant heater having formed filaments Patent  
[NASA-CASE-XLE-00387] c 33 N70-34812  
Ion sputter textured graphite --- anode collector plates in electron tube devices  
[NASA-CASE-LEW-12919-1] c 24 N83-10117  
Gyrotron transmitting tube  
[NASA-CASE-LEW-13429-1] c 33 N83-31952

## ELECTRON TUNNELING

Doped Josephson tunneling junction for use in a sensitive IR detector  
[NASA-CASE-NPO-13348-1] c 33 N75-31332  
Inelastic tunnel diodes  
[NASA-CASE-LEW-13833-1] c 33 N85-21492  
Control system for ruling blazed, aberration corrected diffraction gratings  
[NASA-CASE-GSC-13240-1] c 35 N92-10186  
Edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-3-CU] c 76 N92-22041

## ELECTRONIC CONTROL

Monopulse system with an electronic scanner  
[NASA-CASE-XGS-05582] c 07 N69-27460  
Electronic motor control system Patent  
[NASA-CASE-XMF-01129] c 09 N70-38712  
Phase multiplying electronic scanning system Patent  
[NASA-CASE-NPO-10302] c 10 N71-26142  
Ion beam deflector Patent  
[NASA-CASE-LEW-10689-1] c 28 N71-26173  
Peak acceleration limiter for vibrational tester Patent  
[NASA-CASE-NPO-10556] c 14 N71-27185  
Digital control and information system  
[NASA-CASE-NPO-11016] c 08 N72-31226

Electronic system for high power load control --- solar arrays

[NASA-CASE-NPO-15358-1] c 33 N83-27126  
Closed loop electrostatic levitation system  
[NASA-CASE-NPO-15553-1] c 33 N85-29142  
Electronic precipitator control  
[NASA-CASE-LAR-13273-2] c 33 N90-20320  
Solder dross removal apparatus  
[NASA-CASE-MFS-28406-1] c 37 N91-13729

## ELECTRONIC EQUIPMENT

Monopulse system with an electronic scanner  
[NASA-CASE-XGS-05582] c 07 N69-27460  
Pulse activated polarographic hydrogen detector Patent  
[NASA-CASE-XMF-06531] c 14 N71-17575  
Stable amplifier having a stable quiescent point Patent  
[NASA-CASE-XGS-02812] c 09 N71-19466  
Static inverter Patent  
[NASA-CASE-XGS-05289] c 09 N71-19470  
Circulator having quarter wavelength resonant post and parametric amplifier circuits utilizing the same Patent  
[NASA-CASE-XNP-02140] c 09 N71-23097  
Optimum predetection diversity receiving system Patent  
[NASA-CASE-XGS-00740] c 07 N71-23098  
Electronic cathode having a brush-like structure and a relatively thick oxide emissive coating Patent  
[NASA-CASE-XLE-04501] c 09 N71-23190  
Method and apparatus for varying thermal conductivity Patent  
[NASA-CASE-XNP-05524] c 33 N71-24876  
A solid state acoustic variable time delay line Patent  
[NASA-CASE-ERC-10032] c 10 N71-25900  
Automatic signal range selector for metering devices Patent  
[NASA-CASE-XMS-06497] c 14 N71-26244  
Fringe counter for interferometers Patent  
[NASA-CASE-LAR-10204] c 14 N71-27215  
Temperature regulation circuit Patent  
[NASA-CASE-XNP-02792] c 14 N71-28958  
Method and apparatus for data compression by a decreasing slope threshold test  
[NASA-CASE-NPO-10769] c 08 N72-11171  
Universal environment package with sectional component housing  
[NASA-CASE-KSC-10031] c 15 N72-22486  
Lead attachment to high temperature devices  
[NASA-CASE-ERC-10224] c 09 N72-25261  
Method and apparatus for detecting surface ions on silicon diodes and transistors  
[NASA-CASE-ERC-10325] c 15 N72-25457  
Versatile arithmetic unit for high speed sequential decoder  
[NASA-CASE-NPO-11371] c 08 N73-12177  
Data processor with conditionally supplied clock signals  
[NASA-CASE-GSC-10975-1] c 08 N73-13187  
Heat detection and compositions and devices therefor  
[NASA-CASE-NPO-10764-1] c 14 N73-14428  
Phase control circuits using frequency multiplications for phased array antennas  
[NASA-CASE-ERC-10285] c 10 N73-16206  
Junction range finder  
[NASA-CASE-KSC-10108] c 14 N73-25461  
Electronic strain-level counter  
[NASA-CASE-LAR-10756-1] c 32 N73-26910  
Automatic vehicle location system  
[NASA-CASE-NPO-11850-1] c 32 N74-12912  
Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c 35 N75-15014  
Electronic analog divider  
[NASA-CASE-LEW-11881-1] c 33 N77-17354  
Moisture content and gas sampling device  
[NASA-CASE-MSC-18866-1] c 35 N85-29213  
Visual aid for the hearing impaired  
[NASA-CASE-GSC-13027-1-CU] c 35 N91-27522  
Service equipment for use in hostile environments  
[NASA-CASE-LEW-14906-2] c 37 N93-31314

## ELECTRONIC EQUIPMENT TESTS

Analog to digital converter tester Patent  
[NASA-CASE-XLA-06713] c 14 N71-28991  
Signal conditioner test set  
[NASA-CASE-KSC-10750-1] c 35 N75-12270  
Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c 33 N81-26359  
Synchronized voltage contrast display analysis system  
[NASA-CASE-NPO-14567-1] c 33 N83-18996  
Cross-contact chain  
[NASA-CASE-NPO-16784-1] c 33 N87-10231

## ELECTRONIC FILTERS

Self-tuning bandpass filter  
[NASA-CASE-ARC-10264-1] c 09 N73-20231  
Capacitance multiplier and filter synthesizing network  
[NASA-CASE-NPO-11948-1] c 33 N74-32712

## SUBJECT INDEX

- Notch filter  
[NASA-CASE-MFS-23303-1] c 32 N77-18307
- Programmable hyperspectral image mapper with on-array processing  
[NASA-CASE-NPO-17794-1-CU] c 74 N92-30104
- ELECTRONIC MODULES**
- Thermal conductive connection and method of making same Patent  
[NASA-CASE-XMS-02087] c 09 N70-41717
- Solar cell submodule Patent  
[NASA-CASE-XNP-05821] c 03 N71-11056
- Heat conductive resiliently compressible structure for space electronics package modules Patent  
[NASA-CASE-MS-12389] c 33 N71-29052
- Tool for use in lifting pin supported objects  
[NASA-CASE-NPO-13157-1] c 37 N74-32918
- Phase substitution of spare converter for a failed one of parallel phase staggered converters  
[NASA-CASE-NPO-13812-1] c 33 N77-30365
- Method of making encapsulated solar cell modules  
[NASA-CASE-LEW-12185-1] c 44 N78-25528
- Electronically scanned pressure sensor module with in situ calibration capability  
[NASA-CASE-LAR-12230-1] c 35 N79-14347
- Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c 33 N79-24254
- Circuit for automatic load sharing in parallel converter modules  
[NASA-CASE-NPO-14056-1] c 33 N79-24257
- Method and apparatus for fabricating improved solar cell modules  
[NASA-CASE-NPO-14416-1] c 44 N81-14389
- Redundant operation of counter modules  
[NASA-CASE-NPO-14162-1] c 60 N81-15706
- ELECTRONIC PACKAGING**
- Electrical feed-through connection for printed circuit boards and printed cable  
[NASA-CASE-XMF-01483] c 14 N69-27431
- Capacitor and method of making same Patent  
[NASA-CASE-LEW-10364-1] c 09 N71-13522
- Method of evaluating moisture barrier properties of encapsulating materials Patent  
[NASA-CASE-NPO-10051] c 18 N71-24934
- Microelectronic module package Patent  
[NASA-CASE-XMS-02182] c 10 N71-28783
- Frangible electrochemical cell  
[NASA-CASE-XGS-10010] c 03 N72-15986
- Hermetically sealed semiconductor  
[NASA-CASE-GSC-10791-1] c 15 N73-14469
- Circuit board package with wedge shaped covers  
[NASA-CASE-MFS-21919-1] c 10 N73-25243
- Integrated circuit package with lead structure and method of preparing the same  
[NASA-CASE-MFS-21374-1] c 33 N74-12951
- Tool for use in lifting pin supported objects  
[NASA-CASE-NPO-13157-1] c 37 N74-32918
- Chassis unit insert tightening-extract device  
[NASA-CASE-XMS-01077-1] c 37 N79-33467
- Computer circuit card puller  
[NASA-CASE-FRC-11042-1] c 60 N82-24839
- Electronic scanning pressure measuring system and transducer package  
[NASA-CASE-ARC-11361-1] c 35 N84-22934
- Hermetically sealable package for hybrid solid-state electronic devices and the like  
[NASA-CASE-MS-20181-1] c 33 N88-23941
- ELECTRONIC RECORDING SYSTEMS**
- Propellant mass distribution metering apparatus Patent  
[NASA-CASE-NPO-10185] c 10 N71-26339
- ELECTRONIC TRANSDUCERS**
- Fiber optic vibration transducer and analyzer Patent  
[NASA-CASE-XMF-02433] c 14 N71-10616
- Transducer circuit and catheter transducer Patent  
[NASA-CASE-ARC-10132-1] c 09 N71-24597
- Failure sensing and protection circuit for converter networks Patent  
[NASA-CASE-GSC-10114-1] c 10 N71-27366
- Electromagnetic transducer recording head having a laminated core section and tapered gap  
[NASA-CASE-NPO-10711-1] c 35 N77-21392
- Distributed-switch Dicke radiometers  
[NASA-CASE-GSC-12219-1] c 35 N80-18359
- Electronic scanning pressure measuring system and transducer package  
[NASA-CASE-ARC-11361-1] c 35 N84-22934
- ELECTRONS**
- Means and method for calibrating a photon detector utilizing electron-photon coincidence  
[NASA-CASE-NPO-15644-1] c 35 N84-33767
- Ion generator and ion application system  
[NASA-CASE-MFS-28122-1] c 72 N88-24253
- Reversal electron attachment ionizer for detection of trace species  
[NASA-CASE-NPO-17596-1-CU] c 35 N89-28795
- ELECTROPHORESIS**
- Electrophoretic sample insertion --- device for uniformly distributing samples in flow path  
[NASA-CASE-MFS-21395-1] c 25 N74-26948
- Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c 34 N74-27744
- Automatic multiple-sample applicator and electrophoresis apparatus  
[NASA-CASE-ARC-10991-1] c 25 N78-14104
- Portable electrophoresis apparatus using minimum electrolyte  
[NASA-CASE-NPO-13274-1] c 25 N79-10163
- Microelectrophoretic apparatus and process  
[NASA-CASE-ARC-11121-1] c 25 N79-14169
- Electrophoretic fractional elution apparatus employing a rotational seal fraction collector  
[NASA-CASE-MFS-23284-1] c 37 N80-14397
- Method for separating biological cells --- suspended in aqueous polymer systems  
[NASA-CASE-MFS-23883-1] c 51 N80-16715
- Electrophoresis device  
[NASA-CASE-MFS-25426-1] c 25 N83-10126
- Static continuous electrophoresis device  
[NASA-CASE-MFS-25306-1] c 25 N83-13187
- Moving wall, continuous flow electrophoresis apparatus  
[NASA-CASE-MFS-28142-1] c 25 N88-23845
- Controlled method of reducing electrophoretic mobility of various substances  
[NASA-CASE-MFS-26049-1-NP] c 25 N89-28603
- Polymer-coated surfaces to control surface zeta potential  
[NASA-CASE-MFS-26050-1] c 27 N92-25397
- Controlled method of reducing electrophoretic mobility of macromolecules, particles, or cells  
[NASA-CASE-MFS-26049-2-NP] c 25 N92-28728
- ELECTROPHOTOMETERS**
- Method and device for detecting voids in low density material Patent  
[NASA-CASE-MFS-20044] c 14 N71-28993
- ELECTROPHYSIOLOGY**
- Flexible conductive disc electrode Patent  
[NASA-CASE-FRC-10029] c 09 N71-24618
- ELECTROPLATING**
- Method of plating copper on aluminum Patent  
[NASA-CASE-XLA-08966-1] c 17 N71-25903
- Method of making shielded flat cable Patent  
[NASA-CASE-MFS-13687] c 09 N71-28691
- Method and apparatus for sputtering utilizing an apertured electrode and a pulsed substrate bias  
[NASA-CASE-LEW-10920-1] c 17 N73-24569
- Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c 44 N81-29524
- Method of forming oxide coatings --- for solar collector heating panels  
[NASA-CASE-LEW-13132-1] c 27 N83-29388
- ELECTROSTATIC BONDING**
- Thin solar cell and lightweight array  
[NASA-CASE-LEW-14959-1] c 44 N91-27614
- ELECTROSTATIC CHARGE**
- Electrostatic charged particle analyzer having deflection members shaped according to the periodic voltage applied thereto Patent  
[NASA-CASE-XAC-05506-1] c 24 N71-16095
- Electrostatic measurement system --- for contact-electrifying a dielectric  
[NASA-CASE-MFS-22129-1] c 33 N75-18477
- Use of glow discharge in fluidized beds  
[NASA-CASE-ARC-11245-1] c 28 N82-18401
- Lightning discharge protection rod  
[NASA-CASE-LAR-13470-1] c 03 N88-14083
- Hazards protection for space suits and spacecraft  
[NASA-CASE-MS-21366-1] c 54 N90-25498
- ELECTROSTATIC ENGINES**
- Colloid propulsion method and apparatus Patent  
[NASA-CASE-XLE-00817] c 28 N70-33265
- Ion thruster cathode Patent Application  
[NASA-CASE-LEW-10814-1] c 28 N70-35422
- Ion rocket Patent  
[NASA-CASE-XLE-00376] c 28 N70-37245
- Electrostatic ion rocket engine Patent  
[NASA-CASE-XLE-02066] c 28 N71-15661
- Precision tunable resonant microwave cavity  
[NASA-CASE-LEW-13935-1] c 33 N87-21234
- ELECTROSTATIC GENERATORS**
- Electrostatic plasma modulator for space vehicle re-entry communication Patent  
[NASA-CASE-XLA-01400] c 07 N70-41331
- Closed loop electrostatic levitation system  
[NASA-CASE-NPO-15553-1] c 33 N85-29142
- Piezoelectrostatic generator  
[NASA-CASE-MFS-28298-1] c 76 N91-14872
- ELECTROSTATIC PRECIPITATORS**
- Fine particulate capture device  
[NASA-CASE-LEW-11583-1] c 35 N79-17192
- Small conductive particle sensor --- microfiber size determination  
[NASA-CASE-LAR-12552-1] c 35 N82-11431
- ELECTROSTATIC PROBES**
- Apparatus for field strength measurement of a space vehicle Patent  
[NASA-CASE-XLE-00820] c 14 N71-16014
- Liquid-immersible electrostatic ultrasonic transducer  
[NASA-CASE-LAR-12465-1] c 33 N82-26572
- ELECTROSTATIC PROPULSION**
- Electrostatic thruster with improved insulators Patent  
[NASA-CASE-XLE-01902] c 28 N71-10574
- Annular slit colloid thruster Patent  
[NASA-CASE-GSC-10709-1] c 28 N71-25213
- ELECTROSTATIC SHIELDING**
- Ion beam thruster shield  
[NASA-CASE-LEW-12082-1] c 20 N77-10148
- Shielded conductor cable system  
[NASA-CASE-MS-12745-1] c 33 N81-27397
- High voltage isolation transformer  
[NASA-CASE-GSC-12817-1] c 33 N85-29146
- ELECTROSTATICS**
- Controllable high voltage source having fast settling time  
[NASA-CASE-GSC-11844-1] c 33 N75-19522
- Electrostatic discharge test apparatus  
[NASA-CASE-MS-21094-1] c 35 N88-24941
- Electrostatically suspended rotor for angular encoder  
[NASA-CASE-MFS-28294-1] c 31 N91-14508
- Silicon containing electroconductive polymers and structures made therefrom  
[NASA-CASE-NPO-17826-1-CU] c 27 N92-16121
- ELECTROTHERMAL ENGINES**
- Electro-thermal rocket Patent  
[NASA-CASE-XLE-00267] c 28 N70-33356
- Electrothermal rockets having improved heat exchangers Patent  
[NASA-CASE-XLE-01783] c 28 N70-34175
- Heat exchanger for electrothermal devices  
[NASA-CASE-LEW-14037-1] c 20 N87-16875
- ELEVATION**
- Optical tracking mount Patent  
[NASA-CASE-MFS-14017] c 14 N71-26627
- Emergency escape system Patent  
[NASA-CASE-XKS-07814] c 15 N71-27067
- Elevated waterproof access floor system and method of making the same  
[NASA-CASE-ARC-11363-1] c 31 N87-16918
- ELEVATORS (LIFTS)**
- Centrifuge mounted motion simulator Patent  
[NASA-CASE-XAC-00399] c 11 N70-34815
- Cable stabilizer for open shaft cable operated elevators  
[NASA-CASE-KSC-10513] c 15 N72-25453
- Platform stair lift  
[NASA-CASE-MFS-28772-1] c 54 N93-29845
- ELEVONS**
- High speed flight vehicle control Patent  
[NASA-CASE-XLA-08967] c 02 N71-27088
- ELLIPSES**
- Ellipsograph for pantograph Patent  
[NASA-CASE-XLA-03102] c 14 N71-21079
- ELLIPSOIDS**
- Multispectral variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-4] c 89 N92-33012
- ELLIPSOIDOMETERS**
- Remote sensing of vegetation and soil using microwave ellipsometry  
[NASA-CASE-GSC-11976-1] c 43 N78-10529
- ELONGATION**
- Strain gauge measuring techniques Patent  
[NASA-CASE-XGS-04478] c 14 N71-24233
- Amplifying ribbon extensometer  
[NASA-CASE-LAR-11825-1] c 35 N77-22449
- ELUTION**
- Amino acid analysis  
[NASA-CASE-NPO-12130-1] c 25 N75-14844
- Electrophoretic fractional elution apparatus employing a rotational seal fraction collector  
[NASA-CASE-MFS-23284-1] c 37 N80-14397
- EMBEDDED COMPUTER SYSTEMS**
- Cascaded VLSI neural network architecture for on-line learning  
[NASA-CASE-NPO-18645-1-CU] c 63 N92-34240
- Fault-tolerant fiber optic backplane  
[NASA-CASE-LAR-14785-1] c 74 N93-19052
- EMBEDDING**
- Method of forming three-dimensional semiconductor structures  
[NASA-CASE-NPO-17835-1-CU] c 76 N90-27518

## EMBRITTLMENT

- Magneto acoustic emission apparatus for testing materials for embrittlement  
[NASA-CASE-LAR-13817-1] c 26 N90-21170  
Method and apparatus for using magneto-acoustic remanence to determine embrittlement  
[NASA-CASE-LAR-13817-5] c 39 N92-28757  
Magnetic remanence method and apparatus to test materials for embrittlement  
[NASA-CASE-LAR-13817-4] c 39 N92-29101  
Magneto acoustic emission method for testing materials for embrittlement  
[NASA-CASE-LAR-13817-2] c 39 N92-29155
- EMERGENCIES**  
Silent emergency alarm system for schools and the like  
[NASA-CASE-NPO-11307-1] c 10 N73-30205  
Emergency space-suit helmet  
[NASA-CASE-MSC-10954-1] c 54 N78-18761  
Emergency egress fixed rocket package  
[NASA-CASE-MSC-21332-1] c 03 N91-15142  
Selectable towline spin chute system  
[NASA-CASE-LAR-14322-1] c 02 N91-27139  
Emergency locating transmitter  
[NASA-CASE-GSC-12821-2] c 33 N91-31530  
Integrated launch and emergency vehicle system  
[NASA-CASE-LAR-13780-1] c 18 N92-33013  
Hazardous materials emergency response mobile robot  
[NASA-CASE-NPO-18690-1-CU] c 37 N92-34205
- EMERGENCY BREATHING TECHNIQUES**  
Resuscitation apparatus Patent  
[NASA-CASE-XMS-01115] c 05 N70-39922
- EMERGENCY LIFE SUSTAINING SYSTEMS**  
Orbital escape device Patent  
[NASA-CASE-XMS-06162] c 31 N71-28851  
Emergency lunar communications system  
[NASA-CASE-MFS-21042] c 07 N72-25171  
Emergency descent device  
[NASA-CASE-MFS-23074-1] c 54 N77-21844  
Personnel emergency carrier vehicle  
[NASA-CASE-KSC-11282-1] c 85 N87-21755
- EMERGENCY LOCATOR TRANSMITTERS**  
Legislated emergency locating transmitters and emergency position indicating radio beacons  
[NASA-CASE-GSC-12892-1] c 32 N89-14374
- EMISSION SPECTRA**  
Spectral method for monitoring atmospheric contamination of inert-gas welding shields Patent  
[NASA-CASE-XMF-02039] c 15 N71-15871  
Tunable CW diode-pumped Tm, Ho:YLiF<sub>4</sub> laser operating at or near room temperature  
[NASA-CASE-NPO-18611-1-CU] c 36 N93-30415
- EMISSIONIVITY**  
Multiwavelength pyrometer for gray and non-gray surfaces in the presence of interfering radiation  
[NASA-CASE-LEW-15250-1] c 35 N93-17060
- EMITTANCE**  
Process for applying black coating to metals Patent  
[NASA-CASE-XLA-06199] c 15 N71-24875  
Gamma ray collimator  
[NASA-CASE-SSC-00013-1] c 38 N91-32515
- EMITTERS**  
Coaxial inverted geometry transistor having buried emitter  
[NASA-CASE-ARC-10330-1] c 09 N73-32112  
Matching optics for Gaussian beams  
[NASA-CASE-ARC-11892-1-SB] c 74 N92-16810  
Selective emitters  
[NASA-CASE-LEW-14731-1] c 44 N92-22037
- EMULSIONS**  
Apparatus for obtaining isotropic irradiation of a specimen  
[NASA-CASE-MFS-20095] c 24 N72-11595
- ENAMELS**  
Refractory porcelain enamel passive control coating for high temperature alloys  
[NASA-CASE-MFS-22324-1] c 27 N75-27160
- ENCAPSULATING**  
Bacteriostatic conformal coating and methods of application Patent  
[NASA-CASE-GSC-10007] c 18 N71-16046  
Flexible, repairable, pottable material for electrical connectors Patent  
[NASA-CASE-XGS-05180] c 18 N71-25881  
Orifice gross leak tester Patent  
[NASA-CASE-ERC-10150] c 14 N71-28992  
Solar cell matrix  
[NASA-CASE-NPO-11190] c 03 N71-34044  
Method of making encapsulated solar cell modules  
[NASA-CASE-LEW-12185-1] c 44 N78-25528  
Liquid encapsulated crystal growth  
[NASA-CASE-NPO-16808-1-CU] c 76 N87-25868  
Liquid encapsulated float zone process and apparatus  
[NASA-CASE-MFS-28144-1] c 76 N88-24545

- Multi-element spherical shell generation  
[NASA-CASE-NPO-17203-1-CU] c 34 N90-23700  
Method of preforming and assembling superconducting circuit elements  
[NASA-CASE-LAR-14395-1-CU] c 33 N91-28490
- ENCLOSURES**  
Radio frequency shielded enclosure Patent  
[NASA-CASE-XMF-09422] c 07 N71-19436  
Totally confined explosive welding  
[NASA-CASE-LAR-10941-2] c 37 N79-13364  
Moisture content and gas sampling device  
[NASA-CASE-MSC-18866-1] c 35 N85-29213
- END EFFECTORS**  
Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c 54 N81-26718  
Apparatus for adapting an end effector device remotely controlled manipulator arm  
[NASA-CASE-MFS-25949-1] c 37 N86-19603  
Self-locking telescoping manipulator arm  
[NASA-CASE-MFS-25906-1] c 37 N86-20789  
Orbital maneuvering end effectors  
[NASA-CASE-MFS-28161-1] c 37 N87-18817  
Passively activated prehensile digit for a robotic end effector  
[NASA-CASE-NPO-16766-1-CU] c 37 N89-13785  
Gripping device  
[NASA-CASE-MSC-21365-1] c 37 N90-20408  
Spiral lead platen robotic end effector  
[NASA-CASE-LAR-13855-1] c 37 N91-14615  
Multi-fingered robotic hand  
[NASA-CASE-NPO-15959-2] c 37 N91-14616  
Method and apparatus for positioning a robotic end effector  
[NASA-CASE-MSC-21476-1] c 37 N91-21542  
Method and apparatus for configuration control of redundant robots  
[NASA-CASE-NPO-17801-1-CU] c 37 N91-21544  
Method and apparatus for releasably connecting first and second objects  
[NASA-CASE-MSC-21517-1] c 31 N92-16161  
End effector with astronaut foot restraint  
[NASA-CASE-MSC-21721-1] c 54 N92-16559  
Configuration control of seven-degree-of-freedom arms  
[NASA-CASE-NPO-18607-1-CU] c 37 N92-23553  
Double-V block fingers with cruciform recess  
[NASA-CASE-GSC-13356-1] c 37 N92-24243  
Robot serviced space facility  
[NASA-CASE-GSC-13408-1] c 18 N92-24244  
Rolling friction robot fingers  
[NASA-CASE-GSC-13261-1] c 37 N92-29138  
Electromagnetic attachment mechanism  
[NASA-CASE-MSC-21463-1] c 37 N92-33018  
Obstacle avoidance for redundant robots using configuration control  
[NASA-CASE-NPO-17852-1-CU] c 63 N92-33019  
Hazardous materials emergency response mobile robot  
[NASA-CASE-NPO-18690-1-CU] c 37 N92-34205  
Counter-balanced, multiple cable construction crane  
[NASA-CASE-LAR-14565-1-CU] c 37 N92-34212  
Preloaded latching device  
[NASA-CASE-MSC-21730-1] c 37 N93-13417  
Retractable tool bit having slider type catch mechanism  
[NASA-CASE-GSC-13358-1] c 37 N93-14710  
Bar-holding prosthetic limb  
[NASA-CASE-MFS-28481-1] c 54 N93-14870  
New kinematic functions for redundancy resolution using configuration control  
[NASA-CASE-NPO-18608-1-CU] c 63 N93-17275  
Double-V block fingers with cruciform recess  
[NASA-CASE-GSC-13356-2] c 37 N93-17625  
Retractable tool bit having latch type catch mechanism  
[NASA-CASE-GSC-13359-1] c 37 N93-18286  
Split rail gripper assembly and tool driver therefor  
[NASA-CASE-GSC-13370-2] c 37 N93-18288  
Spline screw autochanger  
[NASA-CASE-GSC-13435-1] c 37 N93-29505  
Split rail gripper assembly and tool driver therefor  
[NASA-CASE-GSC-13370-1] c 37 N93-31317
- END PLATES**  
Double swivel toggle release  
[NASA-CASE-MSC-21436-1] c 37 N90-21390
- ENDOSCOPES**  
Borescope with variable angle scope  
[NASA-CASE-MFS-15162] c 14 N72-32452  
Apparatus for endoscopic examination -- analysis of the propulsion system configuration and transmitter  
[NASA-CASE-NPO-14092-1] c 52 N80-16725
- ENDOTHERMIC REACTIONS**  
Ablation sensor  
[NASA-CASE-XLA-01781] c 14 N69-39975

## ENEMY PERSONNEL

- Intruder detection system  
[NASA-CASE-ARC-10097-2] c 07 N73-25160
- ENERGY ABSORPTION**  
Non-reusable kinetic energy absorber Patent  
[NASA-CASE-XLE-00810] c 15 N70-34861  
Energy absorbing structure Patent Application  
[NASA-CASE-MSC-12279-1] c 15 N70-35679  
Apparatus for absorbing and measuring power Patent  
[NASA-CASE-XLE-00720] c 14 N70-40201  
Shock absorber Patent  
[NASA-CASE-XMS-03722] c 15 N71-21530  
Energy absorbing device Patent  
[NASA-CASE-XMF-10040] c 15 N71-22877  
Suspended mass impact damper Patent  
[NASA-CASE-LAR-10193-1] c 15 N71-27146  
Energy absorption device Patent  
[NASA-CASE-XNP-01848] c 15 N71-28959  
Impact energy absorbing system utilizing fracturable material  
[NASA-CASE-NPO-10671] c 15 N72-20443  
Docking structure for spacecraft  
[NASA-CASE-MFS-20863] c 31 N73-26876  
Metal shearing energy absorber  
[NASA-CASE-HQN-10638-1] c 15 N73-30460  
Load limiting energy absorbing lightweight debris catcher  
[NASA-CASE-MSC-21562-1] c 16 N92-16007
- ENERGY BANDS**  
Tailorable infrared sensing device with strain layer superlattice structure  
[NASA-CASE-NPO-16607-1-CU] c 76 N88-14836  
Tailorable infrared sensing device with strain layer superlattice structure  
[NASA-CASE-NPO-16617-2-CU] c 35 N90-17118
- ENERGY CONSERVATION**  
Remote platform power conserving system  
[NASA-CASE-GSC-11182-1] c 15 N75-13007  
Three axis attitude control system  
[NASA-CASE-GSC-12970-1] c 08 N88-23808
- ENERGY CONSUMPTION**  
Supercritical solvent coal extraction  
[NASA-CASE-NPO-15210-1] c 25 N84-22709
- ENERGY CONVERSION**  
Two-fluid magnetohydrodynamic system and method for thermal-electric power conversion Patent  
[NASA-CASE-XNP-00644] c 03 N70-36803  
Device for directionally controlling electromagnetic radiation Patent  
[NASA-CASE-XLE-01716] c 09 N70-40234  
Electromagnetic wave energy converter  
[NASA-CASE-GSC-11394-1] c 09 N73-32109  
Electric power generation system directory from laser power  
[NASA-CASE-NPO-13308-1] c 36 N75-30524  
Mechanical thermal motor  
[NASA-CASE-MFS-23062-1] c 37 N77-12402  
Low to high temperature energy conversion system  
[NASA-CASE-NPO-13510-1] c 44 N77-32581  
Solar energy collection system  
[NASA-CASE-NPO-13810-1] c 44 N77-32582  
Wingtip vortex turbine  
[NASA-CASE-LAR-14116-1] c 05 N91-14345  
Copper chloride cathode for a secondary battery  
[NASA-CASE-NPO-17640-1-CU] c 33 N91-14538  
Selective emitters  
[NASA-CASE-LEW-14731-1] c 44 N92-22037
- ENERGY CONVERSION EFFICIENCY**  
Triode thermionic energy converter  
[NASA-CASE-XLE-01015] c 03 N69-39898  
Energy conversion apparatus Patent  
[NASA-CASE-XLE-00212] c 03 N70-34134  
Electronic amplifier with power supply switching Patent  
[NASA-CASE-XMS-00945] c 09 N71-10798  
Energy storage apparatus  
[NASA-CASE-GSC-12030-1] c 44 N78-24608  
Method of construction of a multi-cell solar array  
[NASA-CASE-MFS-23540-1] c 44 N79-26475  
Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12586-1] c 44 N80-14472  
Efficiency of silicon solar cells containing chromium  
[NASA-CASE-NPO-15179-1] c 44 N82-26777  
Thermionic energy converters  
[NASA-CASE-LEW-12443-1] c 44 N83-32175  
Bidirectional control system for energy flow in solar powered flywheel  
[NASA-CASE-MFS-25978-1] c 44 N87-21410
- ENERGY DISSIPATION**  
Frangible tube energy dissipation Patent  
[NASA-CASE-XLA-00754] c 15 N70-34850  
Wingtip vortex dissipator for aircraft  
[NASA-CASE-LAR-11645-1] c 02 N77-10001  
Motion restraining device  
[NASA-CASE-NPO-13619-1] c 37 N78-16369

## SUBJECT INDEX

## ENVIRONMENTAL CONTROL

High temperature refractory member with radiation emissive overcoat  
[NASA-CASE-NPO-17122-1-CU] c 27 N91-14489

Energy dissipator  
[NASA-CASE-MSC-21555-1] c 37 N93-23075

**ENERGY DISTRIBUTION**  
Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NPO-13443-1] c 76 N76-20994

**ENERGY GAPS (SOLID STATE)**  
High band gap 2-6 and 3-5 tunneling junctions for silicon multijunction solar cells  
[NASA-CASE-NPO-16526-1CU] c 44 N87-17399  
Method and apparatus for measuring minority carrier lifetime in a direct band-gap semiconductor  
[NASA-CASE-NPO-16337-1-CU] c 33 N87-22894  
Field induced gap infrared detector  
[NASA-CASE-NPO-17526-1-CU] c 35 N91-14588  
Molecules with enhanced electronic polarizabilities based on defect-like states in conjugated polymers  
[NASA-CASE-NPO-17633-1-CU] c 27 N91-27372

**ENERGY LEVELS**  
High resolution threshold photoelectron spectroscopy by electron attachment  
[NASA-CASE-NPO-14078-1] c 72 N80-14877  
Low energy electron magnetometer using a monoenergetic electron beam  
[NASA-CASE-LAR-12706-1] c 35 N84-12444

**ENERGY POLICY**  
Solar energy power system  
[NASA-CASE-MFS-21628-2] c 44 N76-23675  
Thermal energy storage system --- operating on superheating of liquids  
[NASA-CASE-MFS-23167-1] c 44 N76-31667  
Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking  
[NASA-CASE-MFS-23267-1] c 35 N77-20401  
Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c 74 N77-28933  
Solar photolysis of water  
[NASA-CASE-NPO-13675-1] c 44 N77-32580  
Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c 44 N78-19599  
Solar pond  
[NASA-CASE-NPO-13581-2] c 44 N78-31525  
Non-tracking solar energy collector system  
[NASA-CASE-NPO-13813-1] c 44 N78-31526  
Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c 44 N78-31527  
Primary reflector for solar energy collection systems  
[NASA-CASE-NPO-13579-4] c 44 N79-14529  
Primary reflector for solar energy collection systems and method of making same  
[NASA-CASE-NPO-13579-3] c 44 N79-24432  
Solar energy collection system  
[NASA-CASE-NPO-13579-2] c 44 N79-24433  
Combined solar collector and energy storage system  
[NASA-CASE-LAR-12205-1] c 44 N80-20810  
Wind wheel electric power generator  
[NASA-CASE-MFS-23515-1] c 44 N80-21828  
Induced junction solar cell and method of fabrication  
[NASA-CASE-NPO-13786-1] c 44 N80-29835  
Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c 44 N81-17518  
Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NPO-14670-1] c 44 N81-19558  
Solar heated fluidized bed gasification system  
[NASA-CASE-NPO-15071-1] c 44 N82-16475  
Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NPO-15767-1] c 23 N84-16255

**ENERGY SOURCES**  
Passive synchronized spike generator with high input impedance and low output impedance and capacitor power supply Patent  
[NASA-CASE-XGS-03632] c 09 N71-23311  
Controllable high voltage source having fast settling time  
[NASA-CASE-GSC-11844-1] c 33 N75-19522

**ENERGY STORAGE**  
Switching mechanism with energy storage means Patent  
[NASA-CASE-XGS-00473] c 03 N70-38713  
Stored charge transistor  
[NASA-CASE-NPO-11156-2] c 33 N75-31331  
Mechanical energy storage device for hip disarticulation  
[NASA-CASE-ARC-10916-1] c 52 N78-10686  
Energy storage apparatus  
[NASA-CASE-GSC-12030-1] c 44 N78-24608  
Rotatable mass for a flywheel  
[NASA-CASE-MFS-23051-1] c 37 N79-10422  
Combined solar collector and energy storage system  
[NASA-CASE-LAR-12205-1] c 44 N80-20810

Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c 28 N81-14103

Negative electrode catalyst for the iron chromium redox energy storage system  
[NASA-CASE-LEW-14028-1] c 44 N86-19721  
Solar thermal energy receiver  
[NASA-CASE-LEW-14949-1] c 44 N92-29143

**ENERGY TECHNOLOGY**  
Solar energy collection system  
[NASA-CASE-NPO-13810-1] c 44 N77-32582  
Method for producing solar energy panels by automation  
[NASA-CASE-LEW-12541-1] c 44 N78-25529  
Hydrogen-fueled engine  
[NASA-CASE-NPO-13763-1] c 44 N78-33526  
Surfactant-assisted liquefaction of particulate carbonaceous substances  
[NASA-CASE-NPO-13904-1] c 25 N79-11152  
Back wall solar cell  
[NASA-CASE-LEW-12236-2] c 44 N79-14528  
Solar cell module assembly jig  
[NASA-CASE-XGS-00829-1] c 44 N79-19447  
Solar energy collection system  
[NASA-CASE-NPO-13579-2] c 44 N79-24433  
Solar concentrator  
[NASA-CASE-MFS-23727-1] c 44 N80-14473  
Method for forming a solar array strip  
[NASA-CASE-NPO-13652-3] c 44 N80-14474

**ENERGY TRANSFER**  
Solar energy absorber  
[NASA-CASE-MFS-22743-1] c 44 N76-22657  
Gas particle radiator  
[NASA-CASE-LEW-14297-1] c 35 N89-12048  
Pulse thermal energy transport/storage system  
[NASA-CASE-LEW-15235-1] c 34 N92-29125  
Solar thermal energy receiver  
[NASA-CASE-LEW-14949-1] c 44 N92-29143  
Multi-heat addition turbine engine  
[NASA-CASE-LEW-15094-1] c 07 N93-22034

**ENGINE ANALYZERS**  
Indicated mean-effective pressure instrument  
[NASA-CASE-LEW-12661-1] c 35 N79-14345

**ENGINE CONTROL**  
Regenerative braking system Patent  
[NASA-CASE-XMF-01096] c 10 N71-16030  
Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c 05 N75-12930  
Power control for hot gas engines  
[NASA-CASE-NPO-14220-1] c 37 N81-14318  
Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c 07 N81-19115  
Control means for a gas turbine engine  
[NASA-CASE-LEW-14586-1] c 07 N83-31603  
Brushless DC motor control system responsive to control signals generated by a computer or the like  
[NASA-CASE-NPO-16420-1] c 33 N86-20681

**ENGINE COOLANTS**  
Injector-valve device Patent  
[NASA-CASE-XLE-00303] c 15 N70-36535  
Injector for bipropellant rocket engines Patent  
[NASA-CASE-XMF-00148] c 28 N70-38710

**ENGINE DESIGN**  
Gas turbine combustion apparatus Patent  
[NASA-CASE-XLE-103477-1] c 28 N71-20330  
Construction and method of arranging a plurality of ion engines to form a cluster Patent  
[NASA-CASE-XNP-02923] c 28 N71-23081  
Space vehicle system  
[NASA-CASE-MSC-12561-1] c 18 N76-17185  
Solid propellant motor  
[NASA-CASE-NPO-11458A] c 20 N78-32179  
Hydrogen-fueled engine  
[NASA-CASE-NPO-13763-1] c 44 N78-33526  
Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c 07 N80-18039  
Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c 37 N80-31790  
Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c 37 N81-17432  
Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c 37 N81-25370  
Solar engine  
[NASA-CASE-LAR-12148-1] c 44 N82-24640

**ENGINE FAILURE**  
System for monitoring the presence of neutrals in a stream of ions Patent  
[NASA-CASE-XNP-02592] c 24 N71-20518  
Airplane automatic control force trimming device for asymmetric engine failures  
[NASA-CASE-LAR-13280-1] c 08 N87-20999

**ENGINE INLETS**  
Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c 07 N74-31270

The engine air intake system  
[NASA-CASE-ARC-10761-1] c 07 N77-18154  
Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c 05 N79-24976

**ENGINE MONITORING INSTRUMENTS**  
System for monitoring the presence of neutrals in a stream of ions Patent  
[NASA-CASE-XNP-02592] c 24 N71-20518  
Method and system for monitoring and displaying engine performance parameters  
[NASA-CASE-LAR-14049-1] c 07 N89-23466

**ENGINE NOISE**  
Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c 07 N74-31270  
Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c 07 N78-17055  
Multiple pure tone elimination strut assembly --- air breathing engines  
[NASA-CASE-FRC-11062-1] c 71 N82-16800  
Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c 07 N83-33884

**ENGINE PARTS**  
Gas turbine engine with convertible accessories  
[NASA-CASE-LEW-12390-1] c 07 N78-17056  
Gas path seal  
[NASA-CASE-NPO-12131-3] c 37 N80-18400  
Method of protecting a surface with a silicon-slurry/aluminate coating --- coatings for gas turbine engine blades and vanes  
[NASA-CASE-LEW-13343-1] c 27 N82-28441  
Thermal stress minimized, two component, turbine shroud seal  
[NASA-CASE-LEW-14212-1] c 37 N88-23978  
Composite piston  
[NASA-CASE-LAR-13435-1] c 37 N88-23981  
High-temperature, flexible, thermal barrier seal  
[NASA-CASE-LEW-14672-1] c 37 N91-27560

**ENGINE STARTERS**  
Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c 33 N80-26599

**ENGINE TESTS**  
Electric propulsion engine test chamber Patent  
[NASA-CASE-XLE-00252] c 11 N70-34844

**ENGINEERING DRAWINGS**  
High-temperature, high-pressure spherical segment valve Patent  
[NASA-CASE-XAC-00074] c 15 N70-34817  
Lifting body Patent Application  
[NASA-CASE-FRC-10063] c 01 N71-12217  
Optical communications system Patent  
[NASA-CASE-XLA-01090] c 07 N71-12389  
Method of making a molded connector Patent  
[NASA-CASE-XMF-03498] c 15 N71-15986

**ENGRAVING**  
Electrostatically suspended rotor for angular encoder  
[NASA-CASE-MFS-28294-1] c 31 N91-14508

**ENTHALPY**  
Enthalpy and stagnation temperature determination of a high temperature laminar flow gas stream Patent  
[NASA-CASE-XLE-00266] c 14 N70-34156

**ENTRAINMENT**  
Water separator  
[NASA-CASE-XMS-01295-1] c 37 N79-21345

**ENUMERATION**  
Apparatus and process for microbial detection and enumeration  
[NASA-CASE-LAR-12709-1] c 35 N82-28604

**ENVIRONMENTAL SIMULATION**  
Skeletal stressing method and apparatus Patent  
[NASA-CASE-ARC-10100-1] c 05 N71-24738  
Locomotion and restraint aid Patent  
[NASA-CASE-ARC-10153] c 05 N71-28619  
Treadmill for space flight  
[NASA-CASE-MSC-21752-1] c 54 N92-17910

**ENVIRONMENTAL SIMULATORS**  
Space simulator Patent  
[NASA-CASE-NPO-10141] c 11 N71-24964

**ENVIRONMENTAL CONTROL**  
Portable environmental control system Patent  
[NASA-CASE-XMS-09632-1] c 05 N71-11203  
Portable superclean air column device Patent  
[NASA-CASE-XMF-03212] c 15 N71-22721  
Thermal control panel Patent  
[NASA-CASE-XLA-07728] c 33 N71-22890  
Dual solid cryogenics for spacecraft refrigeration Patent  
[NASA-CASE-GSC-10188-1] c 23 N71-24725  
Active vibration isolator for flexible bodies Patent  
[NASA-CASE-LAR-10106-1] c 15 N71-27169  
Autoignition test cell Patent  
[NASA-CASE-KSC-10198] c 11 N71-28629  
Universal environment package with sectional component housing  
[NASA-CASE-KSC-10031] c 15 N72-22486

- Air conditioned suit  
[NASA-CASE-LAR-10076-1] c 05 N73-20137
- Dual stage check valve  
[NASA-CASE-MSC-13587-1] c 15 N73-30459
- Space vehicle with artificial gravity and earth-like environment  
[NASA-CASE-LEW-11101-1] c 31 N73-32750
- ENVIRONMENTAL ENGINEERING**  
Thermal control wall panel Patent  
[NASA-CASE-XLA-01243] c 33 N71-22792
- ENVIRONMENTAL MONITORING**  
System for real-time crustal deformation monitoring  
[NASA-CASE-NPO-14124-1] c 46 N80-14603
- Vapor fragrances  
[NASA-CASE-LAR-13680-1] c 35 N87-25561
- ENVIRONMENTAL TESTS**  
Multiple environment materials test chamber having a multiple port X-ray tube for irradiating a plurality of samples Patent  
[NASA-CASE-XMS-02930] c 11 N71-23042
- Hard space suit Patent  
[NASA-CASE-XAC-07043] c 05 N71-23161
- Flammability test chamber Patent  
[NASA-CASE-KSC-10126] c 11 N71-24985
- Multi axes vibration fixtures  
[NASA-CASE-MFS-20242] c 14 N73-19421
- Fixture for environmental exposure of structural materials under compression load  
[NASA-CASE-LAR-12602-1] c 39 N83-32081
- ENVIRONMENTS**  
Hermetically sealed elbow actuator  
[NASA-CASE-MFS-14710] c 09 N72-22195
- ENZYME ACTIVITY**  
Use of the enzyme hexokinase for the reduction of inherent light levels  
[NASA-CASE-XGS-05533] c 04 N69-27487
- Method of detecting and counting bacteria in body fluids  
[NASA-CASE-GSC-11092-2] c 04 N73-27052
- ENZYMES**  
Protein sterilization method of firefly luciferase using reduced pressure and molecular sieves  
[NASA-CASE-GSC-10225-1] c 06 N73-27086
- Apparatus and method for cellulose processing using microwave pretreatment  
[NASA-CASE-MSC-21936-1-SB] c 25 N93-22036
- EPICYCLOIDS**  
Sequencing device utilizing planetary gear set  
[NASA-CASE-MSC-19514-1] c 37 N79-20377
- EPITAXY**  
Method for the preparation of inorganic single crystal and polycrystalline electronic materials  
[NASA-CASE-XLE-02545-1] c 76 N79-21910
- Epitaxial thinning process  
[NASA-CASE-NPO-15786-1] c 76 N84-35112
- Method of making macrocrystalline or single crystal semiconductor material  
[NASA-CASE-NPO-15904-1] c 76 N86-28760
- Floating emitter solar cell  
[NASA-CASE-NPO-16467-1-CU] c 33 N87-23879
- Method of fabricating germanium and gallium arsenide devices  
[NASA-CASE-GSC-13265-1] c 76 N91-14066
- Process for the homoepitaxial growth of single-crystal silicon carbide films on silicon carbide wafers  
[NASA-CASE-LEW-15223-1] c 76 N91-26967
- Epitaxial heterojunctions of oxide semiconductors and metals on high temperature superconductors  
[NASA-CASE-NPO-18483-1-CU] c 76 N93-15151
- EPOXY COMPOUNDS**  
Synthesis of siloxane-containing epoxy polymers Patent  
[NASA-CASE-MFS-13994-1] c 06 N71-11240
- Siloxane containing epoxide compounds  
[NASA-CASE-MFS-13994-2] c 06 N72-25148
- Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c 15 N79-26100
- Antenna grout replacement system  
[NASA-CASE-NPO-15202-1] c 27 N83-34043
- Cellular thermosetting fluorodiepoxide polymers  
[NASA-CASE-GSC-13008-2] c 27 N90-16949
- EPOXY MATRIX COMPOSITES**  
Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-2] c 27 N86-27451
- EPOXY RESINS**  
Non-magnetic battery case Patent  
[NASA-CASE-XGS-00886] c 03 N71-11053
- Sealing device for an electrochemical cell Patent  
[NASA-CASE-XGS-02630] c 03 N71-22974
- Hydroforming techniques using epoxy molds Patent  
[NASA-CASE-XLE-05641-1] c 15 N71-26346
- Pressure sensitive transducers Patent  
[NASA-CASE-ERC-10087] c 14 N71-27334
- Epoxy-aziridine polymer product Patent  
[NASA-CASE-NPO-10701] c 06 N71-28620
- Method of repairing discontinuity in fiberglass structures  
[NASA-CASE-LAR-10416-1] c 24 N74-30001
- Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c 27 N76-16230
- Curing agent for polyepoxides and epoxy resins and composites cured therewith --- preventing carbon fiber release  
[NASA-CASE-LEW-13226-1] c 27 N81-17260
- Method of neutralizing the corrosive surface of amine-cured epoxy resins  
[NASA-CASE-GSC-12686-1] c 27 N83-34039
- Fluoroether modified epoxy composites  
[NASA-CASE-ARC-11418-1] c 24 N84-11213
- Process for improving mechanical properties of epoxy resins by addition of cobalt ions  
[NASA-CASE-LAR-12320-1] c 24 N84-34571
- Metal (2,4,4',4'' phthalocyanine tetraamines as curing agents for epoxy resins  
[NASA-CASE-ARC-11424-1] c 27 N85-34281
- Process for improving moisture resistance of epoxy resins by addition of chromium ions  
[NASA-CASE-LAR-13226-1] c 27 N85-34282
- Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-1] c 24 N86-19380
- Aminophenoxycyclophosphazene cured epoxy resins and the composites, laminates, adhesives and structures thereof  
[NASA-CASE-ARC-11548-1] c 27 N87-25469
- A process for preparing 1,3-diamino-5-pentafluorosulfanylbenzene and polymers therefrom  
[NASA-CASE-LAR-14773-1-CU] c 27 N92-10105
- Process for applying a superconductive powder to a wide variety of substrates  
[NASA-CASE-LAR-14729-1-CU] c 33 N93-19051
- Multiple layer dielectrics, hot film sensors, and methods of producing same  
[NASA-CASE-LAR-14591-1] c 35 N93-19493
- Process to prepare 1,3-diamino-5-pentafluorosulfanylbenzene  
[NASA-CASE-LAR-14773-2-CU] c 25 N93-29506
- EQUATIONS OF MOTION**  
Kinesimetric method and apparatus  
[NASA-CASE-MSC-18929-1] c 39 N83-20280
- EQUIPMENT**  
Bimetallic fluid displacement apparatus --- for stirring and heating stored gases and liquids  
[NASA-CASE-ARC-10441-1] c 35 N74-15126
- Apparatus for supplying conditioned air at a substantially constant temperature and humidity  
[NASA-CASE-GSC-12191-1] c 31 N80-32583
- EQUIPMENT SPECIFICATIONS**  
Differential pressure cell Patent  
[NASA-CASE-XAC-00042] c 14 N70-34816
- High-temperature, high-pressure spherical segment valve Patent  
[NASA-CASE-XAC-00074] c 15 N70-34817
- Optical torque meter Patent  
[NASA-CASE-XLE-00503] c 14 N70-34818
- Magnetically centered liquid column float Patent  
[NASA-CASE-XAC-00030] c 14 N70-34820
- Electric propulsion engine test chamber Patent  
[NASA-CASE-XLE-00252] c 11 N70-34844
- Channel-type shell construction for rocket engines and the like Patent  
[NASA-CASE-XLE-00144] c 28 N70-34860
- Non-reusable kinetic energy absorber Patent  
[NASA-CASE-XLE-00810] c 15 N70-34861
- Slit regulated gas journal bearing Patent  
[NASA-CASE-XNP-00476] c 15 N70-38620
- Optical communications system Patent  
[NASA-CASE-XLA-01090] c 07 N71-12389
- Stretcher Patent  
[NASA-CASE-XMF-06589] c 05 N71-23159
- Rocket thrust throttling system  
[NASA-CASE-LEW-10374-1] c 28 N73-13773
- Process for making diamonds  
[NASA-CASE-MFS-20698-2] c 15 N73-19457
- Anti-buckling fatigue test assembly --- for subjecting metal specimen to tensile and compressive loads at constant temperature  
[NASA-CASE-LAR-10426-1] c 09 N74-19528
- Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c 34 N74-27744
- Thermocouple tape --- developed from thermoelectrically different metals  
[NASA-CASE-LEW-11072-2] c 35 N76-15434
- Field effect transistor and method of construction thereof  
[NASA-CASE-MFS-23312-1] c 33 N78-27326
- Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N82-24072
- Remotely controlled spray gun  
[NASA-CASE-MFS-28110-1] c 37 N87-24689
- Improved method and apparatus for waste collection and storage  
[NASA-CASE-MSC-21025-1] c 31 N87-25495
- Electrostatic discharge test apparatus  
[NASA-CASE-MSC-21094-1] c 35 N88-24941
- EQUIPOTENTIALS**  
Equipotential space suit Patent  
[NASA-CASE-LAR-10007-1] c 05 N71-11195
- Instrument for measuring potentials on two dimensional electric field plots Patent  
[NASA-CASE-XLA-08493] c 10 N71-19421
- ERGOMETERS**  
Restraint system for ergometer  
[NASA-CASE-MFS-21046-1] c 14 N73-27377
- Ergometer  
[NASA-CASE-MFS-21109-1] c 05 N73-27941
- Tilting table for ergometer and for other biomedical devices  
[NASA-CASE-MFS-21010-1] c 05 N73-30078
- Foot pedal operated fluid type exercising device  
[NASA-CASE-MSC-11561-1] c 05 N73-32014
- Ergometer calibrator --- for any ergometer utilizing rotating shaft  
[NASA-CASE-MFS-21045-1] c 35 N75-15932
- EROSION**  
Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c 27 N78-17206
- ERROR ANALYSIS**  
Program for computer aided reliability estimation  
[NASA-CASE-NPO-13086-1] c 15 N73-12495
- Bit error rate measurement above and below bit rate tracking threshold  
[NASA-CASE-MSC-12743-1] c 32 N79-10263
- Digital phase-lock loop having an estimator and predictor of error  
[NASA-CASE-NPO-17196-1-CU] c 32 N88-29076
- Detection of multiple-bit errors from single-ion tracks in integrated circuits  
[NASA-CASE-NPO-18075-1-CU] c 33 N91-13622
- Method of recertifying a loaded bearing member  
[NASA-CASE-LAR-14168-1] c 39 N92-34174
- Self-checking on-line testable static RAM  
[NASA-CASE-NPO-17939-1-CU] c 60 N93-22032
- ERROR CORRECTING CODES**  
Error correction method and apparatus for electronic timepieces  
[NASA-CASE-LAR-12654-1] c 33 N83-36357
- Self-correcting electronically scanned pressure sensor  
[NASA-CASE-LAR-12686-1] c 35 N84-14491
- Reed-Solomon decoder  
[NASA-CASE-NPO-15982-1] c 60 N87-21591
- Processing circuit with asymmetry corrector and convolutional encoder for digital data  
[NASA-CASE-MSC-20187-1] c 33 N87-25531
- Local area network with fault-checking, priorities, and redundant backup  
[NASA-CASE-NPO-16949-1-CU] c 62 N90-19776
- VLSI architecture for a Reed-Solomon decoder  
[NASA-CASE-NPO-17897-1-CU] c 33 N92-33011
- Mappings between codewords of two distinct (N,K) Reed-Solomon codes over GF(2 sup J)  
[NASA-CASE-NPO-18771-1-CU] c 61 N93-11664
- ERROR CORRECTING DEVICES**  
Automatic fault correction system for parallel signal channels Patent  
[NASA-CASE-XNP-03263] c 09 N71-18843
- Elimination of frequency shift in a multiplex communication system Patent  
[NASA-CASE-XNP-01306] c 07 N71-20814
- Error correcting method and apparatus Patent  
[NASA-CASE-XNP-02748] c 08 N71-22749
- Failure detection and control means for improved drift performance of a gimbaled platform system  
[NASA-CASE-MFS-23551-1] c 04 N76-26175
- Guide for a typewriter  
[NASA-CASE-MFS-15218-1] c 37 N77-19457
- ERROR DETECTION CODES**  
Self-testing and repairing computer Patent  
[NASA-CASE-NPO-10567] c 08 N71-24633
- Local area network with fault-checking, priorities, and redundant backup  
[NASA-CASE-NPO-16949-1-CU] c 62 N90-19776
- Hidden Markov models for fault detection in dynamic systems  
[NASA-CASE-NPO-18982-1-CU] c 38 N93-30413
- ERROR SIGNALS**  
Automatic fault correction system for parallel signal channels Patent  
[NASA-CASE-XNP-03263] c 09 N71-18843
- Sampled data controller Patent  
[NASA-CASE-GSC-10554-1] c 08 N71-29033

- Bit error rate measurement above and below bit rate tracking threshold  
[NASA-CASE-MSC-12743-1] c 32 N79-10263
- Triac failure detector  
[NASA-CASE-MFS-25607-1] c 33 N83-34190
- Automated weld torch guidance control system  
[NASA-CASE-MFS-25807-2] c 37 N86-21850
- Comparator with noise suppression  
[NASA-CASE-LAR-13151-1] c 33 N87-21235
- Multistage estimation of received carrier signal parameters under very high dynamic conditions of the receiver  
[NASA-CASE-NPO-17911-1-CU] c 32 N90-27016
- Modified fast frequency acquisition via adaptive least squares algorithm  
[NASA-CASE-NPO-17845-2-CU] c 61 N93-14882
- Self-checking on-line testable static RAM  
[NASA-CASE-NPO-17939-1-CU] c 60 N93-22032
- ERRORS**
- Analog-to-digital converter  
[NASA-CASE-MSC-13110-1] c 08 N72-22163
- Compensation for primary reflector wavefront error  
[NASA-CASE-NPO-16869-1-CU] c 74 N86-33138
- Porous plug for reducing orifice induced pressure error in airfoils  
[NASA-CASE-LAR-13569-1] c 35 N89-12841
- Asymmetric soft-error resistant memory  
[NASA-CASE-NPO-17394-1-CU] c 60 N91-31810
- Feedback controlled optics with wavefront compensation  
[NASA-CASE-NPO-18194-1-CU] c 74 N91-32924
- ESCALATORS**
- Platform stair lift  
[NASA-CASE-MFS-28772-1] c 54 N93-29845
- ESCAPE CAPSULES**
- Aerial capsule emergency separation device Patent  
[NASA-CASE-XLA-00115] c 03 N70-33343
- Emergency escape system Patent  
[NASA-CASE-XKS-02342] c 05 N71-11199
- Emergency earth orbital escape device  
[NASA-CASE-MSC-13281] c 31 N72-18859
- ESCAPE SYSTEMS**
- Emergency escape system Patent  
[NASA-CASE-MSC-12086-1] c 05 N71-12345
- Emergency escape system Patent  
[NASA-CASE-XKS-07814] c 15 N71-27067
- Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c 01 N83-35992
- Assured crew return vehicle  
[NASA-CASE-MSC-21536-1] c 18 N92-21999
- ESCHERICHIA**
- Method for detecting coliform organisms  
[NASA-CASE-ARC-11322-1] c 51 N83-28849
- ESTERS**
- Fluorinated esters of polycarboxylic acids  
[NASA-CASE-MFS-21040-1] c 06 N73-30098
- Addition polyimides with enhanced processability  
[NASA-CASE-LEW-15043-1] c 27 N91-32230
- Vinyl capped addition polyimides  
[NASA-CASE-LEW-15027-2] c 27 N92-24053
- ESTIMATING**
- Digital phase-lock loop having an estimator and predictor of error  
[NASA-CASE-NPO-17196-1-CU] c 32 N88-29076
- Multistage estimation of received carrier signal parameters under very high dynamic conditions of the receiver  
[NASA-CASE-NPO-17911-1-CU] c 32 N90-27016
- Method for non-destructive estimation of waveguide directional coupler dimensions  
[NASA-CASE-NPO-18454-1-CU] c 33 N92-17865
- Modified fast frequency acquisition via adaptive least squares algorithm  
[NASA-CASE-NPO-17845-2-CU] c 61 N93-14882
- ETALONS**
- Tunable CW diode-pumped Tm,Ho:YLiF<sub>4</sub> laser operating at or near room temperature  
[NASA-CASE-NPO-18611-1-CU] c 36 N93-30415
- ETCHING**
- Masking device Patent  
[NASA-CASE-XNP-02092] c 15 N70-42033
- Method for etching copper Patent  
[NASA-CASE-XGS-06306] c 17 N71-16044
- High resolution developing of photosensitive resists Patent  
[NASA-CASE-XGS-04993] c 14 N71-17574
- Etching of aluminum for bonding Patent  
[NASA-CASE-XMF-02303] c 17 N71-23828
- Selective plating of etched circuits without removing previous plating Patent  
[NASA-CASE-XGS-03120] c 15 N71-24047
- Plating nickel on aluminum castings Patent  
[NASA-CASE-XNP-04148] c 17 N71-24830
- Scanning nozzle plating system --- for etching or plating metals on substrates without masking  
[NASA-CASE-NPO-11758-1] c 31 N74-23065
- Method for applying photographic resists to otherwise incompatible substrates  
[NASA-CASE-MSC-18107-1] c 27 N81-25209
- Method of making V-MOS field effect transistors utilizing a two-step anisotropic etching and ion implantation  
[NASA-CASE-GSC-12515-1] c 33 N81-26360
- Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c 37 N82-12441
- Controlled in situ etch-back  
[NASA-CASE-NPO-15625-1] c 76 N83-20789
- Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095
- Ion beam sputter etching  
[NASA-CASE-LEW-13899-1] c 31 N87-21160
- Seamless metal-clad fiber-reinforced organic matrix composite structures and process for their manufacture  
[NASA-CASE-LAR-13562-1] c 24 N90-25196
- Method of fabricating germanium and gallium arsenide devices  
[NASA-CASE-GSC-13265-1] c 76 N91-14066
- Process for the homoepitaxial growth of single-crystal silicon carbide films on silicon carbide wafers  
[NASA-CASE-LEW-15223-1] c 76 N91-26967
- Etching method for photoresists or polymers  
[NASA-CASE-ARC-11873-2] c 25 N91-31258
- Method for anisotropic etching in the manufacture of semiconductor devices  
[NASA-CASE-MSC-21631-1] c 75 N91-32947
- Solid lubricants on pretreated surfaces  
[NASA-CASE-LEW-14474-2] c 27 N92-11186
- Fabrication of nanometer single crystal metallic CoSi<sub>2</sub> structures on Si  
[NASA-CASE-NPO-17736-2-CU] c 24 N92-18561
- Metal etching composition  
[NASA-CASE-MFS-29576-1] c 25 N92-25399
- ETHERS**
- The 1,1,1-triaryl-2,2,2-trifluoroethanes and process for their synthesis  
[NASA-CASE-ARC-11097-1] c 25 N82-24312
- Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-2] c 25 N90-23497
- Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-3] c 23 N91-17141
- Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-4] c 23 N91-25185
- Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-6] c 23 N92-17882
- ETHERS**
- Method of producing alternating ether siloxane copolymers Patent  
[NASA-CASE-XMF-02584] c 06 N71-20905
- Hydroxy terminated perfluoro ethers Patent  
[NASA-CASE-NPO-10768] c 06 N71-27254
- Polyurethane resins from hydroxy terminated perfluoro ethers  
[NASA-CASE-NPO-10768-2] c 06 N72-27144
- Process of treating cellulosic membrane and alkaline with membrane separator  
[NASA-CASE-GSC-10019-1] c 44 N82-24641
- Separator for alkaline electric cells and method of making  
[NASA-CASE-GSC-10017-1] c 44 N82-24643
- Perfluoro (Imidoylamidine) diamidines  
[NASA-CASE-ARC-11402-3] c 23 N86-21582
- Polyarylene ethers with improved properties  
[NASA-CASE-LAR-13555-1] c 23 N86-32526
- Low dielectric fluorinated poly(phenylene ether ketone) film and coating  
[NASA-CASE-LAR-13992-1-CU] c 23 N91-27220
- Ethynyl terminated imidothioethers and resins therefrom  
[NASA-CASE-LAR-13910-2-CU] c 27 N91-31307
- Secondary Li battery incorporating 12-Crown-4 ether  
[NASA-CASE-NPO-17922-1-CU] c 33 N92-28753
- Imide/arylene ether copolymers  
[NASA-CASE-LAR-14159-1-CU] c 27 N92-31792
- Polyimides with carbonyl and ether connecting groups between the aromatic rings  
[NASA-CASE-LAR-14001-1] c 27 N92-33008
- Methyl substituted polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-14351-1] c 27 N92-33015
- Imide/arylene ether copolymers containing phosphine oxide groups  
[NASA-CASE-LAR-14925-1] c 27 N93-20567
- ETHYL COMPOUNDS**
- Precision heat forming of tetrafluoroethylene tubing  
[NASA-CASE-MSC-18430-1] c 37 N82-24491
- Ethynyl and substituted ethynyl-terminated polysulfones  
[NASA-CASE-LAR-12931-1] c 27 N84-22747
- The 5-(4-Ethynylphenoxy) isophthalic chloride  
[NASA-CASE-LAR-13316-2] c 27 N87-14515
- ETHYLENE OXIDE**
- Process for preparing sterile solid propellants Patent  
[NASA-CASE-XNP-01749] c 27 N70-41897
- Processing for producing a sterilized instrument Patent  
[NASA-CASE-XNP-09763] c 14 N71-20461
- System for sterilizing objects --- cleaning space vehicle systems  
[NASA-CASE-KSC-11085-1] c 54 N81-24724
- EUTECTIC ALLOYS**
- Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-1] c 37 N75-15992
- Method of growing composites of the type exhibiting the Soret effect --- improved structure of eutectic alloy crystals  
[NASA-CASE-MFS-22926-1] c 24 N77-27187
- Directionally solidified eutectic gamma plus beta nickel-base superalloys  
[NASA-CASE-LEW-12906-1] c 26 N77-32279
- Directionally solidified eutectic gamma-gamma nickel-base superalloys  
[NASA-CASE-LEW-12905-1] c 26 N78-18183
- Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-3] c 24 N79-25143
- EVACUATING (VACUUM)**
- Method for making a heat insulating and ablative structure  
[NASA-CASE-XMS-01108] c 15 N69-24322
- Evacuation port seal Patent  
[NASA-CASE-XMF-03290] c 15 N71-23256
- Leak detector wherein a probe is monitored with ultraviolet radiation Patent  
[NASA-CASE-ERC-10034] c 15 N71-24896
- Evacuated, displacement compression mold --- of tubular bodies from thermosetting plastics  
[NASA-CASE-LAR-10782-2] c 31 N75-13111
- EVAPORATION**
- Evaporant holder  
[NASA-CASE-XLA-03105] c 15 N69-27483
- Method of evaporation  
[NASA-CASE-NPO-15609-2] c 25 N88-23846
- Convergent strand array liquid pumping system  
[NASA-CASE-NPO-17301-1-CU] c 31 N90-23587
- Method and apparatus for controlling protein crystallization  
[NASA-CASE-MFS-28688-1] c 76 N93-17043
- EVAPORATIVE COOLING**
- Tubular sublimatory evaporator heat sink  
[NASA-CASE-ARC-10912-1] c 34 N77-19353
- Capillary heat transport and fluid management device  
[NASA-CASE-MFS-28217-1] c 34 N89-14392
- EVAPORATORS**
- Evaporant source for vapor deposition Patent  
[NASA-CASE-XMF-06065] c 15 N71-20395
- Deposition apparatus  
[NASA-CASE-LAR-10541-1] c 15 N72-32487
- Thermal control system --- removing waste heat from industrial process spacecraft  
[NASA-CASE-GSC-12771-1] c 34 N84-14461
- Multi-leg heat pipe evaporator  
[NASA-CASE-MSC-20812-1] c 34 N86-27593
- Pulse thermal energy transport/storage system  
[NASA-CASE-LEW-15235-1] c 34 N92-29125
- EVENT HORIZON**
- Synchronous parallel system for emulation and discrete event simulation  
[NASA-CASE-NPO-18414-1-CU] c 62 N92-24045
- EXAMINATION**
- Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction  
[NASA-CASE-MFS-23315-1] c 76 N78-24950
- Method of examining microcircuit patterns  
[NASA-CASE-NPO-16299-1] c 33 N87-14594
- EXCHANGING**
- Procedure to prepare transparent silica gels  
[NASA-CASE-LAR-13476-1-CU] c 76 N87-29360
- EXCITATION**
- Trochoidal analysis of scattered electrons in a merged electron-ion beam geometry  
[NASA-CASE-NPO-16789-1-CU] c 72 N89-29169
- Optical fiber sensor having an active core  
[NASA-CASE-LAR-14607-1SB] c 74 N92-30029
- EXCLUSION**
- Counter pumping debris excluder and separator --- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c 07 N78-25090
- EXHAUST EMISSION**
- Apparatus and method for destructive removal of particles contained in flowing fluid  
[NASA-CASE-NPO-15426-1] c 35 N84-17555



## EXHAUST GASES

### EXHAUST GASES

- Device for suppressing sound and heat produced by high-velocity exhaust jets Patent  
[NASA-CASE-XMF-01813] c 28 N70-41582
- Gas turbine exhaust nozzle --- for noise reduction  
[NASA-CASE-LEW-11569-1] c 07 N74-15453
- Abating exhaust noises in jet engines  
[NASA-CASE-ARC-10712-1] c 07 N74-33218
- Exhaust flow deflector --- for ducted gas flow  
[NASA-CASE-LAR-11570-1] c 34 N76-18364
- Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c 07 N78-25089
- High performance ammonium nitrate propellant  
[NASA-CASE-NPO-14260-1] c 28 N79-28342
- Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c 07 N81-29129
- Rocket engine nozzle attenuator  
[NASA-CASE-MFS-28739-1] c 20 N93-28324

### EXHAUST NOZZLES

- Annular rocket motor and nozzle configuration Patent  
[NASA-CASE-XLE-00078] c 28 N70-33284
- Nozzle Patent  
[NASA-CASE-XLA-00154] c 28 N70-33374
- Penshape exhaust nozzle for supersonic engine Patent  
[NASA-CASE-XLE-00057] c 28 N70-38711
- Ejection unit Patent  
[NASA-CASE-XNP-00676] c 15 N70-38996
- Two dimensional wedge/translating shroud nozzle  
[NASA-CASE-LAR-11919-1] c 07 N78-27121
- Variable area exhaust nozzle  
[NASA-CASE-LEW-12378-1] c 07 N79-14097
- Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c 07 N83-33884
- Apparatus and method for jet noise suppression  
[NASA-CASE-LAR-11903-2] c 71 N84-14873

### EXOTHERMIC REACTIONS

- Ambient cure polyimide foams --- thermal resistant foams  
[NASA-CASE-ARC-11170-1] c 27 N79-11215
- Exothermic furnace module  
[NASA-CASE-MFS-25707-1] c 35 N82-26631
- Thermal control system --- removing waste heat from industrial process spacecraft  
[NASA-CASE-GSC-12771-1] c 34 N84-14461

### EXPANDABLE STRUCTURES

- Connector strips-positive, negative and T tabs  
[NASA-CASE-XGS-01395] c 03 N69-21539
- Reflector space satellite Patent  
[NASA-CASE-XLA-00138] c 31 N70-37981
- Foldable conduit Patent  
[NASA-CASE-XLE-00620] c 32 N70-41579
- Collapsible high gain antenna  
[NASA-CASE-KSC-10392] c 07 N73-26117
- Expandable space frames  
[NASA-CASE-ERC-10365-1] c 31 N73-32749
- Means for accommodating large overstrain in lead wires --- by storing extra length of wire in stretchable loop  
[NASA-CASE-LAR-10168-1] c 33 N74-22865
- Antenna deployment mechanism for use with a spacecraft --- extensible and retractable telescopic antenna mast  
[NASA-CASE-GSC-12331-1] c 18 N80-14183
- Synchronously deployable truss structure  
[NASA-CASE-LAR-13117-1] c 37 N86-25789
- Protective telescoping shield for solar concentrator  
[NASA-CASE-NPO-16236-1] c 44 N86-27706
- Deployable geodesic truss structure  
[NASA-CASE-LAR-13113-1] c 31 N87-25492

### EXPANSION

- Apparatus for measuring swelling characteristics of membranes  
[NASA-CASE-XGS-03865] c 14 N69-21363
- Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c 24 N81-26179
- Dynamic range compression/expansion of light beams by photorefractive crystals  
[NASA-CASE-NPO-17140-1-CU] c 74 N89-14077

### EXPERIMENT DESIGN

- Hydrofoil Patent  
[NASA-CASE-XLA-00229] c 12 N70-33305
- Sealed battery gas manifold construction Patent  
[NASA-CASE-XNP-03378] c 03 N71-11051
- Electrode construction Patent  
[NASA-CASE-ARC-10043-3] c 05 N71-11193
- G conditioning suit Patent  
[NASA-CASE-XLA-02898] c 05 N71-20268
- Hard space suit Patent  
[NASA-CASE-XAC-07043] c 05 N71-23161

### EXPERT SYSTEMS

- General method of pattern classification using the two-domain theory  
[NASA-CASE-MSC-21737-1] c 61 N91-13911

- Discrete event simulation tool for analysis of qualitative models of continuous processing systems  
[NASA-CASE-MSC-21465-1] c 61 N91-14741
- Bilevel shared control for teleoperators  
[NASA-CASE-NPO-17800-1-CU] c 37 N92-22036
- Parallel inferencing method and apparatus for rule-based expert systems  
[NASA-CASE-NPO-18004-1-CU] c 60 N93-29504

### EXPIRED AIR

- Metabolic rate meter and method  
[NASA-CASE-MSC-12239-1] c 52 N79-21750

### EXPLOSIONS

- Combustion detector  
[NASA-CASE-LAR-10739-1] c 14 N73-16484

### EXPLOSIVE DEVICES

- Tubular coupling having frangible connecting means  
[NASA-CASE-XLA-02854] c 15 N69-27490
- Hermetically sealed explosive release mechanism Patent  
[NASA-CASE-XGS-00824] c 15 N71-16078
- Nonmagnetic, explosive actuated indexing device Patent  
[NASA-CASE-XGS-02422] c 15 N71-21529
- Linear explosive comparison  
[NASA-CASE-LAR-10800-1] c 33 N72-27959
- Disconnect unit  
[NASA-CASE-NPO-11330] c 33 N73-26958
- Pressure limiting propellant actuating system  
[NASA-CASE-MSC-18179-1] c 20 N80-18097
- Toggle release  
[NASA-CASE-MSC-21354-1] c 37 N88-24969
- Apparatus and method for explosive bonding to edge of flyer plate  
[NASA-CASE-LAR-14096-1] c 31 N91-31476

### EXPLOSIVE FORMING

- Electrical discharge apparatus for forming Patent  
[NASA-CASE-XMF-00375] c 15 N70-34249

### EXPLOSIVE WELDING

- Totally confined explosive welding --- apparatus to reduce noise level and protect personnel during explosive bonding  
[NASA-CASE-LAR-10941-1] c 37 N74-21057
- Method of making an explosively welded scarf joint  
[NASA-CASE-LAR-11211-1] c 37 N75-12326
- Totally confined explosive welding  
[NASA-CASE-LAR-10941-2] c 37 N79-13364
- Tool and process for miniature explosive joining of tubes  
[NASA-CASE-LAR-13662-1] c 37 N88-14359
- Apparatus and method for explosive bonding to edge of flyer plate  
[NASA-CASE-LAR-14096-1] c 31 N91-31476

### EXPLOSIVES

- Synthesis of superconducting compounds by explosive compaction of powders  
[NASA-CASE-MFS-20861-1] c 18 N73-32437
- Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c 28 N74-27425
- Electroexplosive device  
[NASA-CASE-NPO-13858-1] c 28 N79-11231
- Permanent wire splicing by an explosive joining process  
[NASA-CASE-LAR-13825-1] c 31 N92-16162

### EXPONENTIAL FUNCTIONS

- Digital quasi-exponential function generator  
[NASA-CASE-NPO-11130] c 08 N72-20176

### EXPOSURE

- Exposure interlock for oscilloscope cameras  
[NASA-CASE-LAR-10319-1] c 14 N73-32322
- Selective image area control of X-ray film exposure density  
[NASA-CASE-NPO-13808-1] c 35 N78-15461
- Fixture for environmental exposure of structural materials under compression load  
[NASA-CASE-LAR-12602-1] c 39 N83-32081
- Method and apparatus for maintaining thermal control in plasma conditions  
[NASA-CASE-MFS-28368-1] c 75 N90-10717

### EXPULSION

- Electro-expulsive separation system  
[NASA-CASE-ARC-11613-1] c 33 N87-28833

### EXPULSION BLADDERS

- Expulsion bladder-equipped storage tank structure Patent  
[NASA-CASE-XNP-00612] c 11 N70-38182

### EXTENSIONS

- Extensible cable support Patent  
[NASA-CASE-XMF-07587] c 15 N71-18701

### EXTENSOMETERS

- Extensometer frame  
[NASA-CASE-XLA-10322] c 15 N72-17452
- Conductive elastomeric extensometer  
[NASA-CASE-MFS-21049-1] c 52 N74-27864
- Amplifying ribbon extensometer  
[NASA-CASE-LAR-11825-1] c 35 N77-22449

- Laser extensometer  
[NASA-CASE-MFS-19259-1] c 36 N78-14380

- Tensile testing apparatus  
[NASA-CASE-LAR-13243-1] c 35 N85-34375

### EXTERNAL COMBUSTION ENGINES

- Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c 37 N81-25370

### EXTERNAL STORE SEPARATION

- Slide release mechanism --- for space shuttle orbiter/external tank connection device  
[NASA-CASE-MSC-20080-1] c 37 N85-30334
- Remote pivot decoupler pylon: Wing/store flutter suppressor  
[NASA-CASE-LAR-13173-1] c 05 N87-14314

### EXTERNAL STORES

- Decoupler pylon: wing/store flutter suppressor  
[NASA-CASE-LAR-12468-1] c 08 N82-32373

### EXTERNAL TANKS

- Space Shuttle with rail system and aft thrust structure securing solid rocket boosters to external tank  
[NASA-CASE-MFS-25853-1] c 16 N84-27784
- Slide release mechanism --- for space shuttle orbiter/external tank connection device  
[NASA-CASE-MSC-20080-1] c 37 N85-30334

### EXTRACTION

- Liquid-gas separation system Patent  
[NASA-CASE-XMS-01624] c 15 N70-40062
- Chassis unit insert tightening-extract device  
[NASA-CASE-XMS-01077-1] c 37 N79-33467
- Supercritical solvent coal extraction  
[NASA-CASE-NPO-15210-1] c 25 N84-22709
- General method of pattern classification using the two-domain theory  
[NASA-CASE-MSC-21737-1] c 61 N91-13911
- Separation tool for multipin electrical connectors  
[NASA-CASE-NPO-18786-1-CU] c 37 N93-28131

### EXTRAVEHICULAR ACTIVITY

- Portable environmental control system Patent  
[NASA-CASE-XMS-09632-1] c 05 N71-11203
- Hand-held self-maneuvering unit Patent  
[NASA-CASE-XMS-05304] c 05 N71-12336
- Serpentuator Patent  
[NASA-CASE-XMF-05344] c 31 N71-16345
- Fastener apparatus Patent  
[NASA-CASE-ARC-10140-1] c 15 N71-17653
- Extravehicular tunnel suit system Patent  
[NASA-CASE-MSC-12243-1] c 05 N71-24728
- Life support system  
[NASA-CASE-MSC-12411-1] c 05 N72-20096
- Space suit  
[NASA-CASE-MSC-12609-1] c 05 N73-32012
- Absorbent product and articles made therefrom  
[NASA-CASE-MSC-18223-2] c 54 N84-11758
- Suitport extra-vehicular access facility  
[NASA-CASE-ARC-11635-1] c 18 N90-16860
- Removable hand hold  
[NASA-CASE-LEW-15196-1] c 37 N92-29092
- Extra-vehicular activity translation tool  
[NASA-CASE-MSC-21955-1] c 37 N93-14842

### EXTREME ULTRAVIOLET RADIATION

- Variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-2] c 89 N91-14096

### EXTREMELY LOW RADIO FREQUENCIES

- VHF/UHF parasitic probe antenna Patent  
[NASA-CASE-XKS-09340] c 07 N71-24614

### EXTRUDING

- Extrusion can  
[NASA-CASE-NPO-10812] c 15 N73-13464
- Brazing alloy binder  
[NASA-CASE-XMF-05868] c 26 N75-27125
- Continuous coal processing method  
[NASA-CASE-NPO-13758-2] c 31 N81-15154
- Method of making single crystal fibers  
[NASA-CASE-LEW-14921-1] c 24 N91-13502

### EYE (ANATOMY)

- Sight switch using an infrared source and sensor Patent  
[NASA-CASE-XMF-03934] c 09 N71-22985
- Ophthalmic method and apparatus  
[NASA-CASE-LEW-11669-1] c 05 N73-27062
- Corneal seal device  
[NASA-CASE-LEW-12258-1] c 52 N77-28716
- Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12723-1] c 52 N80-18690
- Chromatically corrected virtual image visual display --- reducing eye strain in flight simulators  
[NASA-CASE-LAR-12251-1] c 74 N80-27185
- Photorefractor ocular screening system  
[NASA-CASE-MFS-26011-1-SB] c 52 N87-24874
- Portable dynamic fundus instrument  
[NASA-CASE-MSC-21675-1] c 52 N92-28755

### EYE DISEASES

- Photorefractor ocular screening system  
[NASA-CASE-MFS-26011-1-SB] c 52 N87-24874



## EYE EXAMINATIONS

- Visual examination apparatus  
[NASA-CASE-ARC-10329-1] c 05 N73-26072
- Multiparameter vision testing apparatus  
[NASA-CASE-MS-C-13601-2] c 54 N75-27759
- Visual examination apparatus  
[US-PATENT-RE-28,921] c 52 N76-30793

## EYEPieces

- Wide angle long eye relief eyepiece Patent  
[NASA-CASE-XMS-06056-1] c 23 N71-24857

## F

## FABRICATION

- Pressure variable capacitor  
[NASA-CASE-XNP-09752] c 14 N69-21541
- Method of making a regeneratively cooled combustion chamber Patent  
[NASA-CASE-XLE-00150] c 28 N70-41818
- Solar cell submodule Patent  
[NASA-CASE-XNP-05821] c 03 N71-11056
- Capacitor and method of making same Patent  
[NASA-CASE-LEW-10364-1] c 09 N71-13522
- Solar panel fabrication Patent  
[NASA-CASE-XNP-03413] c 03 N71-26726
- Method of forming a root cord restrained convolute section  
[NASA-CASE-MS-C-12398] c 05 N72-20098
- Method of removing insulated material from insulated wires  
[NASA-CASE-FRC-10038] c 15 N72-20444
- Thin film temperature sensor and method of making same  
[NASA-CASE-NPO-11775] c 26 N72-28761
- Fabrication of polycrystalline solar cells on low-cost substrates  
[NASA-CASE-GSC-12022-1] c 44 N76-28635
- Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c 74 N77-28933
- Process for spinning flame retardant elastomeric compositions --- fabricating synthetic fibers for high oxygen environments  
[NASA-CASE-MS-C-14331-3] c 27 N78-32262
- Solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-1] c 44 N79-17314
- Method for fabricating solar cells having integrated collector grits  
[NASA-CASE-LEW-12819-2] c 44 N79-18444
- Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c 44 N79-24431
- Method for forming a solar array strip  
[NASA-CASE-NPO-13652-3] c 44 N80-14474
- Induced junction solar cell and method of fabrication  
[NASA-CASE-NPO-13786-1] c 44 N80-29835
- Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NPO-14670-1] c 44 N81-19558
- Heat exchanger and method of making  
[NASA-CASE-LEW-12441-3] c 44 N81-24519
- Photoelectric detection system --- manufacturing automation  
[NASA-CASE-MFS-23776-1] c 33 N82-28545
- Method of Fabricating Schottky Barrier solar cell  
[NASA-CASE-NPO-13689-4] c 44 N82-28780
- Advanced inorganic separators for alkaline batteries  
[NASA-CASE-LEW-13171-1] c 44 N82-29708
- Method of making a high voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c 44 N82-29709
- Advanced inorganic separators for alkaline batteries and method of making the same  
[NASA-CASE-LEW-13171-2] c 44 N83-32176
- Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c 36 N83-35350
- Contactless pellet fabrication  
[NASA-CASE-NPO-15592-1] c 71 N84-16940
- Method of making a light weight battery plaque  
[NASA-CASE-LEW-13349-1] c 26 N84-22734
- High resistance and raised modulus carbon fibers  
[NASA-TM-76884] c 24 N85-25436
- GaAs Schottky barrier photo-responsive device and method of fabrication  
[NASA-CASE-GSC-12816-1] c 76 N86-20150
- Method of fabricating an imaging X-ray spectrometer  
[NASA-CASE-GSC-12956-1] c 35 N87-14671
- Nozzle fabrication technique  
[NASA-CASE-MS-C-21299-1] c 20 N88-24684
- Method for Viterbi decoding of large constraint length convolutional codes  
[NASA-CASE-NPO-17310-1-CU] c 17 N88-28946
- Miniature traveling wave tube and method of making  
[NASA-CASE-LEW-14520-1] c 33 N90-22724
- Multi-element spherical shell generation  
[NASA-CASE-NPO-17203-1-CU] c 34 N90-23700
- Method of fabricating germanium and gallium arsenide devices  
[NASA-CASE-GSC-13265-1] c 76 N91-14066

- Acoustic positioning and orientation prediction  
[NASA-CASE-NPO-17511-1-CU] c 71 N91-14807
- Acoustic transducer apparatus with reduced thermal conduction  
[NASA-CASE-NPO-17620-1-CU] c 71 N91-14808
- Method of fabricating composite structures  
[NASA-CASE-MFS-28390-1] c 24 N91-15333
- Metal chloride cathode for a battery  
[NASA-CASE-NPO-17809-1-CU] c 33 N91-27478
- Nozzle fabrication technique  
[NASA-CASE-MS-C-21299-2] c 37 N91-32508
- Formation of self-aligned guard rings for monolithic Schottky-barrier diode arrays  
[NASA-CASE-NPO-17734-1-CU] c 33 N92-10146
- Method and apparatus for increasing resistance of bipolar buried layer integrated circuit devices to single-event upsets  
[NASA-CASE-NPO-17573-2-CU] c 33 N92-16196
- Method for producing edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-2-CU] c 76 N92-22040
- Hybridization of detector array and integrated circuit for readout  
[NASA-CASE-NPO-18062-1-CU] c 33 N92-30542
- Polyimide molding powder, coating, adhesive, and matrix resin  
[NASA-CASE-LAR-14163-1] c 27 N92-33014
- Alkali metal for ultraviolet band-pass filter  
[NASA-CASE-NPO-18433-1-CU] c 74 N92-34241
- Silicon carbide fiber reinforced strontium aluminosilicate glass-ceramic matrix composite  
[NASA-CASE-LEW-15263-1] c 24 N93-11543
- Numerical control fabrication technique for dynamic composite models  
[NASA-CASE-LAR-14004-1] c 63 N93-19024
- Method and apparatus for three dimensional braiding  
[NASA-CASE-LAR-14047-1] c 31 N93-19038
- Multiple layer dielectrics, hot film sensors, and methods of producing same  
[NASA-CASE-LAR-14591-1] c 35 N93-19493
- Fiber-reinforced monoclinic celsian matrix composite material  
[NASA-CASE-LEW-15269-1] c 24 N93-20040
- Improved ceramic slip casting technique --- application to aircraft model fabrication  
[NASA-CASE-LAR-14471-1] c 27 N93-20041
- Method and apparatus for weaving a woven angle ply fabric  
[NASA-CASE-LAR-14048-1] c 31 N93-29611
- Mold bolt and means for achieving close tolerances between bolts and bolt holes  
[NASA-CASE-MFS-28720-1] c 37 N93-30567

## FABRICS

- Method of forming a root cord restrained convolute section  
[NASA-CASE-MS-C-12398] c 05 N72-20098
- Amplifying ribbon extensometer  
[NASA-CASE-LAR-11825-1] c 35 N77-22449
- Nozzle extraction process and handmeter for measuring handle  
[NASA-CASE-LAR-12147-1] c 31 N79-11246
- Composition and method for making polyimide resin-reinforced fabric  
[NASA-CASE-LEW-12933-1] c 27 N81-19296
- Heat sealable, flame and abrasion resistant coated fabric --- clothing and containers for space exploration  
[NASA-CASE-MS-C-18382-1] c 27 N82-16238
- Adjustable high emittance gap filler --- reentry shielding for space shuttle vehicles  
[NASA-CASE-ARC-11310-1] c 27 N82-24339
- Absorbent product to absorb fluids --- for collection of human wastes  
[NASA-CASE-MS-C-18223-1] c 24 N82-29362
- High temperature silicon carbide impregnated insulating fabrics  
[NASA-CASE-MS-C-18832-1] c 27 N83-18908
- Heat sealable, flame and abrasion resistant coated fabric  
[NASA-CASE-MS-C-18382-2] c 27 N84-14324
- Hot melt adhesive attachment pad  
[NASA-CASE-LAR-12894-1] c 27 N85-20125
- Tapered, tubular polyester fabric  
[NASA-CASE-MS-C-21082-1] c 27 N87-29672
- High temperature insulation barrier composite  
[NASA-CASE-MFS-29241-1] c 24 N90-23480
- Hazards protection for space suits and spacecraft  
[NASA-CASE-MS-C-21366-1] c 54 N90-25498
- Smart tunnel: Docking mechanism  
[NASA-CASE-MS-C-21360-1] c 18 N91-14374
- Composite flexible blanket insulation  
[NASA-CASE-ARC-11907-1-NP] c 24 N91-31236
- Method and apparatus for weaving a woven angle ply fabric  
[NASA-CASE-LAR-14048-1] c 31 N93-29611

## FABRY-PEROT INTERFEROMETERS

- Retrodirective optical system  
[NASA-CASE-XGS-04480] c 16 N69-27491

## FACSIMILE COMMUNICATION

- Facsimile video remodulation network  
[NASA-CASE-GSC-10185-1] c 07 N72-12081
- Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c 35 N75-19613

## FACTORIAL DESIGN

- Space suit pressure stabilizer Patent  
[NASA-CASE-XLA-05332] c 05 N71-11194
- Equipotential space suit Patent  
[NASA-CASE-LAR-10007-1] c 05 N71-11195

## FAIL-SAFE SYSTEMS

- Failsafe multiple transformer circuit configuration  
[NASA-CASE-NPO-11078] c 09 N72-25262
- Latch mechanism  
[NASA-CASE-MS-C-12549-1] c 37 N74-27903
- Safety flywheel --- using flexible materials energy storage  
[NASA-CASE-HQN-10888-1] c 44 N79-14527
- Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c 33 N79-24254
- Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c 07 N81-19115
- Reconfiguring redundancy management  
[NASA-CASE-MS-C-18498-1] c 60 N82-29013

## FAILURE

- Double swivel toggle release  
[NASA-CASE-MS-C-21436-1] c 37 N90-21390

## FAILURE ANALYSIS

- Fatigue failure load indicator  
[NASA-CASE-LAR-12027-1] c 39 N79-22537
- Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333
- Electromagnetic attachment mechanism  
[NASA-CASE-MS-C-21463-1] c 37 N92-33018

## FAILURE MODES

- High speed rolling element bearing  
[NASA-CASE-LEW-10856-1] c 15 N72-22490
- Inverter ratio failure detector  
[NASA-CASE-NPO-13160-1] c 35 N74-18090
- Fatigue testing apparatus  
[NASA-CASE-LEW-14124-1] c 35 N90-23712
- A process for preparing an assembly of an article and a soluble polyimide which resists dimensional change, delamination, and debonding when exposed to changes in temperature  
[NASA-CASE-LAR-14763-1] c 27 N92-12121

## FAIRINGS

- Method and system for ejecting fairing sections from a rocket vehicle  
[NASA-CASE-GSC-10590-1] c 31 N73-14853
- Low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c 85 N82-33288

## FALLING SPHERES

- Gravimeter Patent  
[NASA-CASE-XMF-05844] c 14 N71-17587

## FAR FIELDS

- Method and apparatus for phasing segmented mirror arrays  
[NASA-CASE-NPO-18095-1-CU] c 74 N92-29122

## FAR INFRARED RADIATION

- Collimator of multiple plates with axially aligned identical random arrays of apertures  
[NASA-CASE-MFS-20546-2] c 14 N73-30389
- Method and means for generation of tunable laser sidebands in the far-infrared region  
[NASA-CASE-NPO-16497-1-CU] c 36 N87-25567
- Alternating gradient photodetector  
[NASA-CASE-NPO-17235-1-CU] c 35 N90-21358

## FAR ULTRAVIOLET RADIATION

- Transient heat transfer gauge Patent  
[NASA-CASE-XNP-09802] c 33 N71-15641
- Method and apparatus for producing a thermal atomic oxygen beam  
[NASA-CASE-LEW-15614-1] c 72 N93-19026

## FARADAY EFFECT

- Faraday rotation measurement method and apparatus  
[NASA-CASE-NPO-14839-1] c 35 N82-15381

## FAST FOURIER TRANSFORMATIONS

- Pipelined digital SAR azimuth correlator using hybrid FFT-transversal filter  
[NASA-CASE-NPO-15519-1] c 32 N84-34651

## FASTENERS

- Force measuring instrument Patent  
[NASA-CASE-XMF-00456] c 14 N70-34705
- Life preserver Patent  
[NASA-CASE-XMS-00864] c 05 N70-36493
- All-directional fastener Patent  
[NASA-CASE-XLA-01807] c 15 N71-10799

# FATIGUE (MATERIALS)

# SUBJECT INDEX

- Fastener apparatus Patent  
[NASA-CASE-ARC-10140-1] c 15 N71-17653
- Methods and apparatus employing vibratory energy for wrenching Patent  
[NASA-CASE-MFS-20586] c 15 N71-17686
- Coaxial cable connector Patent  
[NASA-CASE-XNP-04732] c 09 N71-20851
- Latching mechanism Patent  
[NASA-CASE-XMS-03745] c 15 N71-21076
- Central spar and module joint Patent  
[NASA-CASE-XNP-02341] c 15 N71-21531
- Threadless fastener apparatus Patent  
[NASA-CASE-XFR-05302] c 15 N71-23254
- Flexibly connected support and skin Patent  
[NASA-CASE-XLA-01027] c 31 N71-24035
- Quick release hook tape Patent  
[NASA-CASE-XMS-10660-1] c 15 N71-25975
- Helmet latching and attaching ring  
[NASA-CASE-XMS-04670] c 54 N78-17678
- Chassis unit insert tightening-extract device  
[NASA-CASE-XMS-01077-1] c 37 N79-33467
- One-step dual purpose joining technique  
[NASA-CASE-LAR-12595-1] c 33 N82-26571
- Reusable captive blind fastener  
[NASA-CASE-MSC-18742-1] c 37 N82-26673
- Daze fasteners  
[NASA-CASE-LAR-13009-1] c 37 N85-29285
- Mechanical fastener  
[NASA-CASE-LAR-12738-2] c 37 N85-30335
- Daze fasteners  
[NASA-CASE-LAR-13009-2] c 37 N87-22976
- Toggle release  
[NASA-CASE-MSC-21354-1] c 37 N88-24969
- Double swivel toggle release  
[NASA-CASE-MSC-21436-1] c 37 N90-21390
- Overcenter collet space station truss fastener  
[NASA-CASE-MSC-21504-1] c 18 N91-21221
- Two fault tolerant toggle-hook release  
[NASA-CASE-MSC-21671-1] c 37 N91-32498
- J-hook latching device  
[NASA-CASE-GSC-13200-1] c 37 N92-21500
- Metallic threaded composite fastener  
[NASA-CASE-MSC-21580-1] c 37 N92-21726
- Quick-connect fasteners for assembling devices in space  
[NASA-CASE-MSC-21648-1] c 37 N92-24051
- Work attachment mechanism/work attachment fixture  
[NASA-CASE-GSC-13430-1] c 37 N93-14712
- Blind fastening apparatus  
[NASA-CASE-LAR-14542-1] c 37 N93-22384
- Quick connect fastener  
[NASA-CASE-MFS-28833-1] c 37 N93-29846

## FATIGUE (MATERIALS)

- Strain coupled servo control system Patent  
[NASA-CASE-XLA-08530] c 32 N71-25360
- TV fatigue crack monitoring system  
[NASA-CASE-LAR-11490-1] c 39 N78-16387

## FATIGUE LIFE

- Fatigue-resistant shear pin  
[NASA-CASE-XLA-09122] c 15 N69-27505
- Method of improving the reliability of a rolling element system Patent  
[NASA-CASE-XLE-02999] c 15 N71-16052
- High speed rolling element bearing  
[NASA-CASE-LEW-10856-1] c 15 N72-22490
- High speed hybrid bearing comprising a fluid bearing and a rolling bearing connected in series  
[NASA-CASE-LEW-11152-1] c 15 N73-32359
- Machine for use in monitoring fatigue life for a plurality of elastomeric specimens  
[NASA-CASE-NPO-13731-1] c 39 N78-10493

## FATIGUE TESTING MACHINES

- Horizontal cryostat for fatigue testing Patent  
[NASA-CASE-XMF-10968] c 14 N71-24234
- Light shield and infrared reflector for fatigue testing Patent  
[NASA-CASE-XLA-01782] c 14 N71-26136
- Fatigue testing a plurality of test specimens and method  
[NASA-CASE-MFS-28118-1] c 39 N87-25601

## FATIGUE TESTS

- Fatigue testing device Patent  
[NASA-CASE-XLA-02131] c 32 N70-42003
- Fatigue failure load indicator  
[NASA-CASE-LAR-12027-1] c 39 N79-22537
- Heating and cooling system --- for fatigue test specimens  
[NASA-CASE-LAR-12393-1] c 34 N83-34221
- Fatigue testing apparatus  
[NASA-CASE-LEW-14124-1] c 35 N90-23712
- Furnace for tensile/fatigue testing  
[NASA-CASE-LEW-14848-1] c 14 N91-27175

## FATS

- Oil and fat absorbing polymers  
[NASA-CASE-NPO-11609-2] c 27 N77-31308

## FAULT DETECTION

- Hidden Markov models for fault detection in dynamic systems  
[NASA-CASE-NPO-18982-1-CU] c 38 N93-30413

## FAULT TOLERANCE

- Toggle release  
[NASA-CASE-MSC-21354-1] c 37 N88-24969
- Double swivel toggle release  
[NASA-CASE-MSC-21436-1] c 37 N90-21390
- Fault tolerant hypercube computer system architecture  
[NASA-CASE-NPO-16859-1-CU] c 60 N90-21527
- Pipeline synthetic aperture radar data compression utilizing systolic binary tree-searched architecture for vector quantization  
[NASA-CASE-NPO-17941-1-CU] c 32 N91-13595
- Two fault tolerant toggle-hook release  
[NASA-CASE-MSC-21671-1] c 37 N91-32498
- Payload retention device  
[NASA-CASE-MSC-21906-1] c 37 N92-28727
- Fault-tolerant fiber optic backplane  
[NASA-CASE-LAR-14785-1] c 74 N93-19052
- Self-checking on-line testable static RAM  
[NASA-CASE-NPO-17939-1-CU] c 60 N93-22032

## FECES

- Relief container  
[NASA-CASE-XMS-06761] c 05 N69-23192
- Improved method and apparatus for waste collection and storage  
[NASA-CASE-MSC-21025-1] c 31 N87-25495
- Valve for waste collection and storage  
[NASA-CASE-MSC-21025-4] c 54 N91-14723
- Method for waste collection and storage  
[NASA-CASE-MSC-21025-2] c 54 N91-14724

## FEED SYSTEMS

- Plasma device feed system Patent  
[NASA-CASE-XLE-02902] c 25 N71-21694
- Propellant tank pressurization system Patent  
[NASA-CASE-XNP-00650] c 27 N71-28929
- Liquid waste feed system  
[NASA-CASE-LAR-10365-1] c 05 N72-27102
- Pressurized lighting system  
[NASA-CASE-KSC-10644] c 09 N72-27227
- Dual frequency microwave reflex feed  
[NASA-CASE-NPO-13091-1] c 09 N73-12214
- Injector for use in high voltage isolators for liquid feed lines  
[NASA-CASE-NPO-11377] c 15 N73-27406
- Supercharged topping rocket propellant feed system  
[NASA-CASE-XLE-02062-1] c 20 N80-14188
- Method of producing silicon --- gas phase reactor multiple injector liquid feed system  
[NASA-CASE-NPO-14382-1] c 31 N80-18231
- Continuous coal processing method  
[NASA-CASE-NPO-13758-2] c 31 N81-15154
- Constant-output atomizer --- Inhalation therapy and aerosol research  
[NASA-CASE-MFS-25631-1] c 34 N84-12406

## FEEDBACK

- Active RC networks  
[NASA-CASE-ARC-10020] c 10 N72-17172
- Feedback shift register with states decomposed into cycles of equal length  
[NASA-CASE-NPO-11082] c 08 N72-22167
- Inverter oscillator with voltage feedback  
[NASA-CASE-NPO-10760] c 09 N72-25254

## FEEDBACK AMPLIFIERS

- Radiometric temperature reference Patent  
[NASA-CASE-MSC-13276-1] c 14 N71-27058
- Compensating bandwidth switching transients in an amplifier circuit Patent  
[NASA-CASE-XNP-01107] c 10 N71-28659
- Monostable multivibrator with complementary NOR gates Patent  
[NASA-CASE-MSC-13492-1] c 10 N71-28860

## FEEDBACK CIRCUITS

- Low power drain semi-conductor circuit  
[NASA-CASE-XGS-04999] c 09 N69-24317
- Linear three-tap feedback shift register Patent  
[NASA-CASE-NPO-10351] c 08 N71-12503
- Frequency control network for a current feedback oscillator Patent  
[NASA-CASE-GSC-10041-1] c 10 N71-19418
- Feedback integrator with grounded capacitor Patent  
[NASA-CASE-XAC-10607] c 10 N71-23669
- Parametric amplifiers with idler circuit feedback  
[NASA-CASE-LAR-10253-1] c 09 N72-25258
- Pseudonoise sequence generators with three tap linear feedback shift registers  
[NASA-CASE-NPO-11406] c 08 N73-12175
- Logarithmic circuit with wide dynamic range  
[NASA-CASE-GSC-12145-1] c 33 N78-32339
- Automatic level control circuit  
[NASA-CASE-KSC-11170-1] c 33 N83-36356

## FEEDBACK CONTROL

- Nonlinear analog-to-digital converter Patent  
[NASA-CASE-XAC-04031] c 08 N71-18594

- Pulse-type magnetic core memory element circuit with blocking oscillator feedback Patent  
[NASA-CASE-XGS-03303] c 08 N71-18595
- BCD to decimal decoder Patent  
[NASA-CASE-XKS-06167] c 08 N71-24890
- A dc motor speed control system Patent  
[NASA-CASE-MFS-14610] c 09 N71-28886
- Sampled data controller Patent  
[NASA-CASE-GSC-10554-1] c 08 N71-29033
- A dc servosystem including an ac motor Patent  
[NASA-CASE-NPO-10700] c 07 N71-33613
- Suppression of flutter  
[NASA-CASE-LAR-10682-1] c 02 N73-26004
- Regulated dc-to-dc converter for voltage step-up or step-down with input-output isolation  
[NASA-CASE-HQN-10792-1] c 33 N74-11049
- Diffused waveguiding capillary tube with distributed feedback for a gas laser  
[NASA-CASE-NPO-13544-1] c 36 N76-18428
- The dc-to-dc converters employing staggered-phase power switches with two-loop control  
[NASA-CASE-NPO-13512-1] c 33 N77-10428
- System and method for tracking a signal source --- employing feedback control  
[NASA-CASE-HQN-10880-1] c 17 N78-17140
- Closed loop spray cooling apparatus --- for particle accelerator targets  
[NASA-CASE-LEW-11981-1] c 31 N78-17237
- Wide power range microwave feedback controller  
[NASA-CASE-GSC-12146-1] c 33 N78-32340
- Active notch filter network with variable notch depth, width and frequency  
[NASA-CASE-FRC-11055-1] c 33 N80-29583
- Variable speed drive  
[NASA-CASE-GSC-12643-1] c 37 N83-26078
- Tuned analog network  
[NASA-CASE-NPO-12650-1] c 33 N84-14421
- Three phase power factor controller  
[NASA-CASE-MFS-25535-2] c 33 N84-22885
- Three-phase power factor controller with induced EMF sensing  
[NASA-CASE-MFS-25852-1] c 33 N84-33661
- Closed loop electrostatic levitation system  
[NASA-CASE-NPO-15553-1] c 33 N85-29142
- Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333
- Closed loop fiber optic rotation sensor  
[NASA-CASE-NPO-16558-1-CU] c 74 N87-23259
- Balanced bridge feedback control system  
[NASA-CASE-NPO-17430-1-CU] c 33 N90-21951
- Spiral vane bioreactor  
[NASA-CASE-MSC-21361-1] c 51 N91-21701
- Permanent magnet flux-biased magnetic actuator with flux feedback  
[NASA-CASE-LAR-13785-1] c 70 N91-21824
- Feedback controlled optics with wavefront compensation  
[NASA-CASE-NPO-18194-1-CU] c 74 N91-32924
- Thermal power transfer system using applied potential difference to sustain operating pressure difference  
[NASA-CASE-NPO-18034-1-CU] c 44 N92-16457
- Closed-loop motor control using high-speed fiber optics  
[NASA-CASE-MSC-21806-1] c 74 N92-17863
- Closed-loop autonomous docking system  
[NASA-CASE-MFS-28421-1] c 18 N92-28750
- Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-1] c 34 N92-28752
- Superconducting bearings with levitation control configurations  
[NASA-CASE-GSC-13346-1] c 37 N92-29099
- Ultra-high temperature stability Joule-Thomson cooler with capability to accommodate pressure variations  
[NASA-CASE-NPO-18184-1-CU] c 35 N92-29156
- Sample positioning in microgravity  
[NASA-CASE-NPO-18448-1-CU] c 29 N92-30083
- Phase-stepping fiber-optic projected fringe system for surface topography measurements  
[NASA-CASE-LEW-14996-1] c 74 N93-11058
- Terminal slider control of nonlinear robotic systems  
[NASA-CASE-NPO-18584-1-CU] c 37 N93-11177
- Doppler shift compensation system for laser transmitters and receivers  
[NASA-CASE-GSC-13194-1] c 36 N93-18287
- Sample positioning in microgravity  
[NASA-CASE-NPO-18448-1-CU] c 29 N93-24600
- Extended task space control for robotic manipulators  
[NASA-CASE-NPO-18902-1-CU] c 37 N93-28129
- Three-parameter tunable Tilt-Integral-Derivative (TID) controller  
[NASA-CASE-NPO-18492-1-CU] c 63 N93-29176

## FEEDBACK FREQUENCY MODULATION

- Means for communicating through a layer of ionized gases Patent  
[NASA-CASE-XLA-01127] c 07 N70-41372

- Data-aided carrier tracking loops  
[NASA-CASE-NPO-11282] c 10 N73-16205
- Linear phase demodulator including a phase locked loop with auxiliary feedback loop  
[NASA-CASE-GSC-12018-1] c 33 N77-14334
- FEEDERS**
- Automatic real-time pair-feeding system for animals  
[NASA-CASE-ARC-10302-1] c 51 N74-15778
- Static feed water electrolysis subsystem development  
[NASA-CASE-MSC-21577-1-SB] c 25 N91-23271
- Plasma gun with coaxial powder feed and adjustable cathode  
[NASA-CASE-LEW-14901-1] c 75 N91-25875
- Method and apparatus for waste collection and storage  
[NASA-CASE-MSC-21025-3] c 54 N91-26747
- FEEDFORWARD CONTROL**
- Analog hardware for learning neural networks  
[NASA-CASE-NPO-17664-1-CU] c 62 N91-32852
- FEET (ANATOMY)**
- Drop foot corrective device  
[NASA-CASE-LAR-12259-2] c 54 N86-22112
- FELTS**
- Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles  
[NASA-CASE-MSC-12619-2] c 27 N79-12221
- FEMALES**
- Liquid cooled brassiere and method of diagnosing malignant tumors therewith  
[NASA-CASE-ARC-11007-1] c 52 N77-14736
- Urine collection apparatus --- feminine hygiene  
[NASA-CASE-MSC-18381-1] c 52 N81-28740
- FERMENTATION**
- Production of butanol by fermentation in the presence of cocultures of clostridium  
[NASA-CASE-NPO-16203-1] c 23 N85-35227
- FERRITES**
- Magnetic recording head and method of making same  
Patent  
[NASA-CASE-GSC-10097-1] c 08 N71-27210
- Method for making conductors for ferrite memory arrays --- from pre-formed metal conductors  
[NASA-CASE-LAR-10994-1] c 24 N75-13032
- Device for measuring the ferrite content in an austenitic stainless-steel weld  
[NASA-CASE-MFS-22907-1] c 26 N76-18257
- FERROELECTRICITY**
- Enhanced fatigue and retention in ferroelectric thin film memory capacitors by post-top electrode anneal treatment  
[NASA-CASE-NPO-18551-1-CU] c 33 N93-17277
- FERROFLUIDS**
- Linear motion valve  
[NASA-CASE-MSC-20148-1] c 37 N85-29284
- FERROMAGNETIC FILMS**
- High speed magneto-resistive random access memory  
[NASA-CASE-NPO-17954-1-CU] c 60 N93-14704
- FERROMAGNETIC MATERIALS**
- Magnetic heat pumping  
[NASA-CASE-LEW-12508-1] c 34 N78-17335
- Method of characterizing residual stress in ferromagnetic materials using a pulse histogram of acoustic emission signals  
[NASA-CASE-LAR-14239-1] c 26 N93-14705
- FERROMAGNETISM**
- High temperature ferromagnetic cobalt-base alloy  
Patent  
[NASA-CASE-XLE-03629] c 17 N71-23248
- FERTILIZERS**
- Slow-release fertilizer  
[NASA-CASE-MSC-21953-1-NP] c 37 N93-17271
- Active synthetic soil  
[NASA-CASE-MSC-21954-1-NP] c 51 N93-19054
- FETUSES**
- Passive fetal monitoring sensor  
[NASA-CASE-LAR-14088-1-CU] c 35 N92-33016
- FIBER COMPOSITES**
- Fibrous refractory composite insulation --- shielding reusable spacecraft  
[NASA-CASE-ARC-11169-1] c 24 N79-24062
- Composition and method for making polyimide resin-reinforced fabric  
[NASA-CASE-LEW-12933-1] c 27 N81-19296
- Fuselage structure using advanced technology fiber reinforced composites  
[NASA-CASE-LAR-11688-1] c 24 N82-26384
- Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-2] c 27 N83-29392
- Mixed polyvalent-monovalent metal coating for carbon-graphite fibers  
[NASA-CASE-NPO-14987-1] c 24 N83-33950
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-3] c 27 N84-22745
- Method and apparatus for gripping uniaxial fibrous composite materials  
[NASA-CASE-LEW-13758-1] c 24 N84-27829
- Curved cap corrugated sheet  
[NASA-CASE-LAR-12884-1] c 18 N84-33450
- Arc spray fabrication of metal matrix composite monotype  
[NASA-CASE-LEW-13828-1] c 24 N85-30027
- Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-2] c 27 N86-27451
- Light weight fire resistant graphite composites  
[US-PATENT-4,598,007] c 24 N86-28131
- Method of preparing fiber reinforced ceramic material  
[NASA-CASE-LEW-14392-1] c 27 N87-28656
- Pultrusion die assembly  
[NASA-CASE-LAR-13719-1] c 37 N89-12867
- Light weight polymer matrix composite material  
[NASA-CASE-LEW-14734-1] c 24 N89-23623
- Fiber reinforced ceramic material  
[NASA-CASE-LEW-14392-2] c 27 N89-29538
- Method of controlling a resin curing process --- for fiber reinforced composites  
[NASA-CASE-MSC-21169-1] c 27 N89-29539
- Seamless metal-clad fiber-reinforced organic matrix composite structures and process for their manufacture  
[NASA-CASE-LAR-13562-1] c 24 N90-25196
- Process for the manufacture of seamless metal-clad fiber-reinforced organic matrix composite structures  
[NASA-CASE-LAR-13562-2] c 24 N91-25199
- Intercalated hybrid graphite fiber composite  
[NASA-CASE-LEW-15241-1] c 24 N92-17861
- Vinyl capped addition polyimides  
[NASA-CASE-LEW-15027-2] c 27 N92-24053
- Low pressure process for continuous fiber reinforced polyamic acid resin matrix composite laminates  
[NASA-CASE-LAR-14954-1] c 24 N92-34214
- Silicon carbide fiber reinforced strontium aluminosilicate glass-ceramic matrix composite  
[NASA-CASE-LEW-15263-1] c 24 N93-11543
- Method and apparatus for three dimensional braiding  
[NASA-CASE-LAR-14047-1] c 31 N93-19038
- Fiber-reinforced monoclinic celsian matrix composite material  
[NASA-CASE-LEW-15269-1] c 24 N93-20040
- Method and apparatus for weaving a woven angle ply fabric  
[NASA-CASE-LAR-14048-1] c 31 N93-29611
- SiC fiber-reinforced Celsian glass-ceramic matrix composite  
[NASA-CASE-LEW-15264-1] c 24 N93-31293
- Method of producing a ceramic fiber-reinforced glass-ceramic matrix composite  
[NASA-CASE-LEW-15264-2] c 24 N93-31299
- FIBER OPTICS**
- Fiber optic vibration transducer and analyzer Patent  
[NASA-CASE-XMF-02433] c 14 N71-10616
- Fiber distributed feedback laser  
[NASA-CASE-NPO-13531-1] c 36 N76-24553
- Fiber optic multiplex optical transmission system  
[NASA-CASE-KSC-11047-1] c 74 N78-14889
- Low intensity X-ray and gamma-ray imaging device --- fiber optics  
[NASA-CASE-GSC-12263-1] c 74 N79-20857
- Precise RF timing signal distribution to remote stations --- fiber optics  
[NASA-CASE-NPO-14749-1] c 32 N81-14186
- Interleaving device  
[NASA-CASE-GSC-12111-2] c 33 N81-29342
- Optical gyroscope system  
[NASA-CASE-NPO-14258-1] c 35 N81-33448
- Fiber optic transmission line stabilization apparatus and method  
[NASA-CASE-NPO-15036-1] c 74 N82-19029
- Optical crystal temperature gauge with fiber optic connections  
[NASA-CASE-MSC-18627-1] c 74 N82-30071
- Low intensity X-ray and gamma-ray spectrometer  
[NASA-CASE-GSC-12587-1] c 35 N82-32659
- Fiber optic crossbar switch for automatically patching optical signals  
[NASA-CASE-KSC-11104-1] c 74 N83-29032
- Optical fiber tactile sensor  
[NASA-CASE-NPO-15375-1] c 74 N84-11921
- Laser pulse detection method and apparatus  
[NASA-CASE-NPO-16030-1] c 36 N84-25037
- Optical fiber coupling method and apparatus  
[NASA-CASE-NPO-15464-1] c 74 N85-29749
- Closed loop fiber optic rotation sensor  
[NASA-CASE-NPO-16558-1-CU] c 74 N87-23259
- Low-loss, high-isolation, fiber-optic isolator  
[NASA-CASE-NPO-17207-1-CU] c 74 N88-25304
- Optical pressure sealing coupling apparatus  
[NASA-CASE-MFS-29348-1] c 74 N89-25689
- Optical shutter switching matrix  
[NASA-CASE-KSC-11392-1] c 74 N90-22383
- Method and apparatus for determining optical absorption and emission characteristics of a crystal or non-crystalline fiber  
[NASA-CASE-LAR-13963-1] c 76 N90-24150
- Laser velocimeter for near-surface measurements  
[NASA-CASE-ARC-11917-1] c 35 N91-15520
- Fiber optic sensing system  
[NASA-CASE-LEW-14795-1] c 74 N91-21871
- Fiber optic frequency transfer link  
[NASA-CASE-NPO-17703-1-CU] c 74 N91-27957
- Apparatus for precision focussing and positioning of a beam waist on a target  
[NASA-CASE-ARC-11916-1-SB] c 74 N92-16811
- Closed-loop motor control using high-speed fiber optics  
[NASA-CASE-MSC-21806-1] c 74 N92-17863
- Wide field strip-imaging optical system  
[NASA-CASE-NPO-18146-1-CU] c 74 N92-17892
- High temperature fiber optic microphone having a pressure-sensing reflective membrane under tensile stress  
[NASA-CASE-LAR-14402-1-CU] c 74 N92-33017
- Phase-stepping fiber-optic projected fringe system for surface topography measurements  
[NASA-CASE-LEW-14996-1] c 74 N93-11058
- Fault-tolerant fiber optic backplane  
[NASA-CASE-LAR-14785-1] c 74 N93-19052
- Optical fiber strain sensor with improved linearity  
[NASA-CASE-LAR-14857-1-SB] c 74 N93-19374
- Fiber optic microphone having a pressure sensing reflective membrane and a voltage source for calibration purpose  
[NASA-CASE-LAR-14402-2-CU] c 71 N93-24602
- Wavelength-division multiplexed optical integrated circuit with vertical diffraction grating  
[NASA-CASE-NPO-18357-1-CU] c 74 N93-29848
- FIBER ORIENTATION**
- Methods of determining loads and fiber orientations in anisotropic non-crystalline materials using energy flux deviation  
[NASA-CASE-LAR-14399-1] c 39 N93-26102
- FIBER RELEASE**
- Curing agent for polyepoxides and epoxy resins and composites cured therewith --- preventing carbon fiber release  
[NASA-CASE-LEW-13226-1] c 27 N81-17260
- Method and device for detection of a substance --- determining carbon fiber release in fire situations  
[NASA-CASE-NPO-14940-1] c 33 N83-31954
- FIBER STRENGTH**
- High resistance and raised modulus carbon fibers  
[NASA-TM-76884] c 24 N85-25436
- FIBERS**
- Method for fiberizing ceramic materials Patent  
[NASA-CASE-XNP-00597] c 18 N71-23088
- Method and apparatus for fluffing, separating, and cleaning fibers  
[NASA-CASE-LAR-11224-1] c 37 N76-18456
- Composite lamination method  
[NASA-CASE-LAR-12019-1] c 24 N78-17150
- Dual membrane hollow fiber fuel cell and method of operating same  
[NASA-CASE-NPO-13732-1] c 44 N79-10513
- Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c 25 N81-19244
- A method and technique for installing light-weight fragile, high-temperature fiber insulation  
[NASA-CASE-MSC-18934-3] c 24 N82-26387
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-3] c 27 N84-22745
- Graphite fluoride fiber polymer composite material  
[NASA-CASE-LEW-14472-1] c 24 N91-15320
- Method of intercalating large quantities of fibrous structures  
[NASA-CASE-LEW-15077-1] c 24 N92-16025
- High temperature, flexible pressure-actuated, brush seal  
[NASA-CASE-LEW-15086-1] c 37 N92-16318
- Production of mullite fibers  
[NASA-CASE-MFS-28431-1] c 24 N92-17870
- High temperature, flexible, fiber-preform seal  
[NASA-CASE-LEW-15085-1] c 37 N92-22043
- Hollow fiber clinostat for simulating microgravity in cell culture  
[NASA-CASE-MFS-28370-1] c 35 N92-31790
- FIELD COILS**
- Electromagnetic Meissner effect launcher  
[NASA-CASE-MFS-28323-1] c 14 N92-15081
- FIELD EFFECT TRANSISTORS**
- Frequency to analog converter Patent  
[NASA-CASE-XNP-07040] c 08 N71-12500
- Voltage to frequency converter Patent  
[NASA-CASE-GSC-10022-1] c 10 N71-25882
- Broadband video process with very high input impedance  
[NASA-CASE-NPO-10199] c 09 N72-17156

- Data multiplexer using tree switching configuration  
[NASA-CASE-NPO-11333] c 08 N72-22162
- Integrated circuit including field effect transistor and cermet resistor  
[NASA-CASE-GSC-10835-1] c 09 N72-33205
- Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential of field effect device  
[NASA-CASE-GSC-11425-1] c 76 N74-20329
- Stored charge transistor  
[NASA-CASE-NPO-11156-2] c 33 N75-31331
- Field effect transistor and method of construction thereof  
[NASA-CASE-MFS-23312-1] c 33 N78-27326
- Method of making V-MOS field effect transistors utilizing a two-step anisotropic etching and ion implantation  
[NASA-CASE-GSC-12515-1] c 33 N81-26360
- CCD correlated quadruple sampling processor  
[NASA-CASE-NPO-14426-1] c 33 N81-27396
- Electronic system for high power load control --- solar arrays  
[NASA-CASE-NPO-15358-1] c 33 N83-27126
- JFET reflection oscillator  
[NASA-CASE-GSC-12555-1] c 33 N86-19515
- Hybrid power semiconductor  
[NASA-CASE-LEW-13922-1] c 33 N86-20672
- FET charge sensor and voltage probe  
[NASA-CASE-NPO-16045-1] c 76 N87-13313
- Microwave field effect transistor  
[NASA-CASE-GSC-12442-2] c 33 N90-20282
- GaAs-based optoelectronic neurons  
[NASA-CASE-NPO-18497-1-CU] c 63 N92-24245
- GaAs-based optoelectronic neurons  
[NASA-CASE-NPO-18497-1-CU] c 63 N93-24599
- FIELD EMISSION**  
Method and apparatus for limiting field emission current  
[NASA-CASE-ERC-10015-2] c 10 N72-27246
- Apparatus for mounting a field emission cathode  
[NASA-CASE-LEW-14108-1] c 33 N87-28832
- FIELD OF VIEW**  
Scanner --- photography from a spin stabilized synchronous satellite  
[NASA-CASE-GSC-12032-2] c 43 N82-13465
- Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c 74 N85-22139
- EMU helmet mounted display  
[NASA-CASE-MSC-21460-1] c 54 N91-13879
- Variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-2] c 89 N91-14096
- FILAMENT WINDING**  
Tool attachment for spreading loose elements away from work Patent  
[NASA-CASE-XMF-02107] c 15 N71-10809
- Method of making a filament-wound container Patent  
[NASA-CASE-XLE-03803-2] c 15 N71-17651
- Method of fabricating a twisted composite superconductor  
[NASA-CASE-LEW-11015] c 26 N73-32571
- Method of making reinforced composite structure  
[NASA-CASE-LEW-12619-1] c 24 N77-19171
- FILAMENTS**  
Radiant heater having formed filaments Patent  
[NASA-CASE-XLE-00387] c 33 N70-34812
- Twisted multifilament superconductor  
[NASA-CASE-LEW-11726-1] c 26 N73-26752
- Process for application of powder particles to filamentary materials  
[NASA-CASE-LAR-14231-1] c 24 N92-10070
- FILLERS**  
Method for making a heat insulating and ablative structure  
[NASA-CASE-XMS-01108] c 15 N69-24322
- Intumescent-ablator coatings using endothermic fillers  
[NASA-CASE-ARC-11043-1] c 24 N78-27180
- Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics  
[NASA-CASE-NPO-10424-1] c 27 N81-24258
- Polyvinyl alcohol battery separator containing inert filler --- alkaline batteries  
[NASA-CASE-LEW-13556-1] c 44 N81-27615
- Adjustable high emittance gap filler --- reentry shielding for space shuttle vehicles  
[NASA-CASE-ARC-11310-1] c 27 N82-24339
- Multi-element spherical shell generation  
[NASA-CASE-NPO-17203-1-CU] c 34 N90-23700
- Thermally activated retainer means  
[NASA-CASE-MSC-21793-1] c 16 N91-28186
- Welding wire pressure sensor assembly  
[NASA-CASE-MFS-26216-1] c 37 N93-28951
- FILLING**  
Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-1-NP] c 52 N90-21519

**FILM COOLING**

- Multislit film cooled pyrolytic graphite rocket nozzle Patent  
[NASA-CASE-XNP-04389] c 28 N71-20942
- Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c 34 N83-27144
- Covering solid, film cooled surfaces with a duplex thermal barrier coating  
[NASA-CASE-LEW-13450-1] c 31 N83-35177
- Vortex generating flow passage design for increased film cooling effectiveness  
[NASA-CASE-LEW-14039-1] c 34 N85-33433
- FILM THICKNESS**  
Chemical vapor deposition reactor --- providing uniform film thickness  
[NASA-CASE-NPO-13650-1] c 25 N79-28253
- Dual-beam skin friction interferometer  
[NASA-CASE-ARC-11354-1] c 74 N83-21949
- Degassifying and mixing apparatus for liquids --- potable water for spacecraft  
[NASA-CASE-MSC-18936-1] c 35 N83-29652
- Epitaxial thinning process  
[NASA-CASE-NPO-15786-1] c 76 N84-35112

**FILMS**

- Apparatus for obtaining isotropic irradiation of a specimen  
[NASA-CASE-MFS-20095] c 24 N72-11595
- Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NPO-13443-1] c 76 N76-20994
- X ray sensitive area detection device  
[NASA-CASE-MFS-28232-1] c 74 N91-14835

**FILTERS**

- Filter system for control of outgas contamination in vacuum Patent  
[NASA-CASE-MFS-14711] c 15 N71-26185
- Method for removing oxygen impurities from cesium Patent  
[NASA-CASE-XNP-04262-2] c 17 N71-26773
- Centrifugal lyophobic separator  
[NASA-CASE-LAR-10194-1] c 34 N74-30608
- Sample holder support for microscopes  
[NASA-CASE-MFS-28420-1] c 37 N91-21545

**FILTRATION**

- Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c 28 N81-15119
- Method for treating wastewater using microorganisms and vascular aquatic plants  
[NASA-CASE-NSTL-10] c 45 N84-12654
- Acoustic agglomeration methods and apparatus  
[NASA-CASE-NPO-15466-1] c 71 N85-22104
- Infusion extractor  
[NASA-CASE-MSC-20761-1] c 37 N87-15465
- Sample holder support for microscopes  
[NASA-CASE-MFS-28420-1] c 37 N91-21545

**FINGERS**

- Rotationally actuated prosthetic helping hand  
[NASA-CASE-MFS-28426-1] c 54 N91-32795
- Fingered bola body, bola with same, and methods of use  
[NASA-CASE-MSC-21967-1] c 37 N92-30026

**FINS**

- Thrust and direction control apparatus Patent  
[NASA-CASE-XLE-03583] c 31 N71-17629
- Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c 08 N74-30421

**FIRE EXTINGUISHERS**

- Fire extinguishing apparatus having a slidable mass for a penetrator nozzle --- for penetrating aircraft and shuttle orbiter skin  
[NASA-CASE-KSC-11064-1] c 31 N81-14137
- Synthesis of dawsonites --- for use in fire extinguishing operations  
[NASA-CASE-ARC-11326-1] c 25 N83-33977
- Fire extinguishant materials  
[NASA-CASE-ARC-11252-1] c 25 N83-36118

**FIRE PREVENTION**

- Hydrogen fire blink detector  
[NASA-CASE-MFS-15063] c 14 N72-25412
- Method and apparatus for checking fire detectors  
[NASA-CASE-GSC-11600-1] c 35 N74-21019
- Fire resistant polyamide based on 1-(diorganooxyphosphonyl)methyl-2,4- and -2,6diamino benzene  
[NASA-CASE-ARC-11512-2] c 27 N86-32568

**FIREPROOFING**

- Fire resistant coating composition Patent  
[NASA-CASE-GSC-10072] c 18 N71-14014
- Intumescent paint containing nitrile rubber  
[NASA-CASE-ARC-10196-1] c 18 N73-13562
- Intumescent composition, foamed product prepared therewith, and process for making same  
[NASA-CASE-ARC-10304-1] c 18 N73-26572

- Flexible fire retardant polyisocyanate modified neoprene foam --- for thermal protective devices  
[NASA-CASE-ARC-10180-1] c 27 N74-12814
- Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c 27 N76-24405
- Flame retardant spandex type polyurethanes  
[NASA-CASE-MSC-14331-2] c 27 N78-17213
- Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c 15 N79-26100

**FIRES**

- Combustion products generating and metering device  
[NASA-CASE-GSC-11095-1] c 14 N72-10375
- Hydrogen fire detection system with logic circuit to analyze the spectrum of temporal variations of the optical spectrum  
[NASA-CASE-MFS-13130] c 10 N72-17173

**FIRING (IGNITING)**

- Separation nut Patent  
[NASA-CASE-XGS-01971] c 15 N71-15922

**FITTING**

- Cantilever clamp fitting  
[NASA-CASE-MFS-28328-1] c 37 N91-13731
- Quick-connect fasteners for assembling devices in space  
[NASA-CASE-MSC-21648-1] c 37 N92-24051

**FITTINGS**

- Quick release connector Patent  
[NASA-CASE-XLA-01141] c 15 N71-13789
- Flared tube strainer  
[NASA-CASE-XLA-05056] c 15 N72-11389
- Apparatus for adapting an end effector device remotely controlled manipulator arm  
[NASA-CASE-MFS-25949-1] c 37 N86-19603
- Self indexing latch system  
[NASA-CASE-MFS-25956-1] c 37 N87-21333
- Expandable pallet for space station interface attachments  
[NASA-CASE-MSC-21117-1] c 18 N88-28958
- Dual diaphragm tank with telltale drain  
[NASA-CASE-MSC-21703-1] c 31 N91-25305

**FIXED WINGS**

- Supersonic aircraft Patent  
[NASA-CASE-XLA-04451] c 02 N71-12243

**FIXTURES**

- Tool for use in lifting pin supported objects  
[NASA-CASE-NPO-13157-1] c 37 N74-32918
- Apparatus for positioning modular components on a vertical or overhead surface  
[NASA-CASE-LAR-11465-1] c 37 N76-21554
- Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c 26 N80-28492
- Fixture for environmental exposure of structural materials under compression load  
[NASA-CASE-LAR-12602-1] c 39 N83-32081
- Work attachment mechanism/work attachment fixture  
[NASA-CASE-GSC-13430-1] c 37 N93-14712
- Blind fastening apparatus  
[NASA-CASE-LAR-14542-1] c 37 N93-22384

**FLAME PROBES**

- Flame detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c 19 N74-29410

**FLAME RETARDANTS**

- Flame retardant spandex type polyurethanes  
[NASA-CASE-MSC-14331-2] c 27 N78-17213
- Process for spinning flame retardant elastomeric compositions --- fabricating synthetic fibers for high oxygen environments  
[NASA-CASE-MSC-14331-3] c 27 N78-32262
- Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c 25 N80-16116
- Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
[NASA-CASE-LAR-12099-1] c 27 N80-16158
- Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-3] c 27 N80-24438
- Structural wood panels with improved fire resistance  
[NASA-CASE-ARC-11174-1] c 24 N81-13999
- Heat sealable, flame and abrasion resistant coated fabric --- clothing and containers for space exploration  
[NASA-CASE-MSC-18382-1] c 27 N82-16238
- Elastomer coated filler and composites thereof comprising at least 60% by weight of a hydrated filler and an elastomer containing an acid substituent  
[NASA-CASE-NPO-14857-1] c 27 N83-19900
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c 27 N83-31854
- Heat sealable, flame and abrasion resistant coated fabric  
[NASA-CASE-MSC-18382-2] c 27 N84-14324
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-3] c 27 N84-22745

- Fire blocking systems for aircraft seat cushions  
[NASA-CASE-ARC-11423-1] c 03 N84-33394
- Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797
- Polymer of phosphorylmethyl-2,4- and -2,6-diamino benzene and polyfunctional monomer  
[NASA-CASE-ARC-11506-2] c 23 N86-32525
- Fire and heat resistant laminating resins based on maleimido and citraconimido substituted 1-(diorgano oxyphosphonyl) methyl -2,4- and -2,6- diaminobenzenes  
[NASA-CASE-ARC-11533-3] c 27 N87-24564
- The 1-((diorganooxy phosphonyl) methyl)-2,4- and -2,6-diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-2] c 23 N87-28605
- Fire and heat resistant laminating resin based on maleimido and citraconimido substituted 1-(diorganooxyphosphonyl-methyl)-2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-2] c 27 N89-16042
- FLAME SPRAYING**  
Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00302] c 15 N71-16077
- Modified polyurethane foams for fuel-fire Patent  
[NASA-CASE-ARC-10098-1] c 06 N71-24739
- Method of making pressure tight seal for super alloy  
[NASA-CASE-LAR-10170-1] c 37 N74-11301
- Thermal barrier coating system  
[NASA-CASE-LEW-14057-1] c 24 N85-35233
- FLAME TEMPERATURE**  
Direct heating surface combustor  
[NASA-CASE-LEW-11877-1] c 34 N78-27357
- FLAMES**  
Temperature reducing coating for metals subject to flame exposure Patent  
[NASA-CASE-XLE-00035] c 33 N71-29151
- Modulated hydrogen ion flame detector  
[NASA-CASE-ARC-10322-1] c 35 N76-18403
- FLAMMABILITY**  
Flammability test chamber Patent  
[NASA-CASE-KSC-10126] c 11 N71-24985
- Burn rate testing apparatus  
[NASA-CASE-XMS-09690] c 33 N72-25913
- Compound oxidized styrylphosphine --- flame resistant vinyl polymers  
[NASA-CASE-MSC-14903-2] c 27 N80-10358
- Vitra-violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments  
[NASA-CASE-MSC-16074-1] c 27 N80-26446
- Light weight fire resistant graphite composites  
[US-PATENT-4,598,007] c 24 N86-28131
- Fire and heat resistant laminating resins based on maleimido substituted aromatic cyclotriphosphazene polymer  
[NASA-CASE-ARC-11428-2] c 27 N87-16909
- Ignitability test method and apparatus  
[NASA-CASE-LAR-13996-1-SB] c 25 N90-15161
- FLANGES**  
Cassegrain antenna subreflector flange for suppressing ground noise Patent  
[NASA-CASE-XNP-00683] c 09 N70-35425
- Anti-glare improvement for optical imaging systems Patent  
[NASA-CASE-NPO-10337] c 14 N71-15604
- Flanged major modular assembly jig  
[NASA-CASE-MSC-19372-1] c 39 N76-31562
- Robot serviced space facility  
[NASA-CASE-GSC-13408-1] c 18 N92-24244
- Saddle clamp assembly  
[NASA-CASE-MFS-28701-1] c 37 N93-17057
- FLAPS (CONTROL SURFACES)**  
Jet aircraft configuration Patent  
[NASA-CASE-XLA-00087] c 02 N70-33332
- Assembly for recovering a capsule Patent  
[NASA-CASE-XMF-00641] c 31 N70-36410
- Direct lift control system Patent  
[NASA-CASE-LAR-10249-1] c 02 N71-26110
- Reversed cowl flap inlet thrust augmentor --- with adjustable airfoil  
[NASA-CASE-ARC-10754-1] c 07 N75-24736
- FLARED BODIES**  
Flared tube strainer  
[NASA-CASE-XLA-05056] c 15 N72-11389
- FLASH LAMPS**  
Active lamp pulse driver circuit --- optical pumping of laser media  
[NASA-CASE-GSC-12566-1] c 33 N83-34189
- FLAT CONDUCTORS**  
Method of making a molded connector Patent  
[NASA-CASE-XMF-03498] c 15 N71-15986
- Method of making shielded flat cable Patent  
[NASA-CASE-MFS-13687] c 09 N71-28691
- Shielded flat cable  
[NASA-CASE-MFS-13687-2] c 09 N72-22198
- Electrical connector  
[NASA-CASE-MFS-20757] c 09 N72-28225
- Method and apparatus for preparing multiconductor cable with flat conductors  
[NASA-CASE-MFS-10946-1] c 31 N79-21226
- Edge coating of flat wires  
[NASA-CASE-XMF-05757-1] c 31 N79-21227
- FLAT PLATES**  
Reduced gravity liquid configuration simulator  
[NASA-CASE-XLE-02624] c 12 N69-39988
- Apparatus for making diamonds  
[NASA-CASE-MFS-20698] c 15 N72-20446
- Heat transfer device  
[NASA-CASE-MFS-22938-1] c 34 N76-18374
- Flat-plate heat pipe  
[NASA-CASE-GSC-11998-1] c 34 N77-32413
- Solar engine  
[NASA-CASE-LAR-12148-1] c 44 N82-24640
- Two-dimensional scanner apparatus --- flaw detector in small flat plates  
[NASA-CASE-MFS-25687-1] c 35 N84-22928
- FLEXIBILITY**  
Weatherproof helix antenna Patent  
[NASA-CASE-XKS-08485] c 07 N71-19493
- Spherical shield Patent  
[NASA-CASE-XNP-01855] c 15 N71-28937
- Flexible joint for pressurizable garment  
[NASA-CASE-MSC-11072] c 54 N74-32546
- Nozzle extraction process and handmeter for measuring handle  
[NASA-CASE-LAR-12147-1] c 31 N79-11246
- Safety flywheel --- using flexible materials energy storage  
[NASA-CASE-HQN-10888-1] c 44 N79-14527
- Sun shield  
[NASA-CASE-MSC-20162-1] c 37 N87-17036
- Method of making a flexible diaphragm  
[NASA-CASE-MSC-20797-1] c 37 N87-23981
- Space module assembly apparatus with docking alignment flexibility and restraint  
[NASA-CASE-MSC-21211-1] c 18 N89-28553
- Copolyimide with a combination of flexibilizing groups  
[NASA-CASE-LAR-13821-1] c 27 N90-16950
- High temperature flexible seal  
[NASA-CASE-LEW-14695-1] c 37 N90-23751
- Flexible diaphragm-extreme temperature usage  
[NASA-CASE-MSC-20797-2] c 35 N91-21494
- FLEXIBLE BODIES**  
Flexible back-up bar Patent  
[NASA-CASE-XMF-00722] c 15 N70-40204
- Deflective rod switch with elastic support and sealing means Patent  
[NASA-CASE-XNP-09808] c 09 N71-12518
- Flexible composite membrane Patent  
[NASA-CASE-XNP-08837] c 18 N71-16210
- Self supporting space vehicle Patent  
[NASA-CASE-XLA-00117] c 31 N71-17680
- Extravehicular tunnel suit system Patent  
[NASA-CASE-MSC-12243-1] c 05 N71-24728
- Active vibration isolator for flexible bodies Patent  
[NASA-CASE-LAR-10106-1] c 15 N71-27169
- Fluid impervious barrier including liquid metal alloy and method of making same Patent  
[NASA-CASE-XNP-08881] c 17 N71-28747
- Low cycle fatigue testing machine  
[NASA-CASE-LAR-10270-1] c 32 N72-25877
- Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c 08 N74-30421
- Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
[NASA-CASE-MFS-19193-1] c 37 N75-19686
- Strong thin membrane structure --- solar sails  
[NASA-CASE-NPO-14021-2] c 27 N80-16163
- Suspension mechanism and method  
[NASA-CASE-LAR-14142-1] c 37 N90-27116
- Synchronously deployable double fold beam and planar truss structure  
[NASA-CASE-LAR-13490-1] c 18 N91-27199
- High-temperature, flexible, thermal barrier seal  
[NASA-CASE-LEW-14672-1] c 37 N91-27560
- Quick-connect fasteners for assembling devices in space  
[NASA-CASE-MSC-21648-1] c 37 N92-24051
- Flexible heating head for induction heating apparatus and method  
[NASA-CASE-LAR-14679-2] c 32 N92-31150
- Flexible heating head for induction heating apparatus and method  
[NASA-CASE-LAR-14418-1] c 32 N92-31257
- Flexible robotic arm  
[NASA-CASE-GSC-13161-1] c 37 N92-33634
- FLEXIBLE WINGS**  
Aeroflexible structures  
[NASA-CASE-XLA-06095] c 01 N69-39981
- Flexible wing deployment device Patent  
[NASA-CASE-XLA-01220] c 02 N70-41863
- Control for flexible parawing Patent  
[NASA-CASE-XLA-06958] c 02 N71-11038
- FLEXING**  
Two degree inverted flexure  
[NASA-CASE-ARC-10345-1] c 15 N73-12488
- Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c 54 N82-26987
- Unidirectional flexural pivot  
[NASA-CASE-GSC-12622-1] c 37 N84-12492
- FLIGHT**  
Traversing probe Patent  
[NASA-CASE-XFR-02007] c 12 N71-24692
- FLIGHT ALTITUDE**  
Altitude measuring system  
[NASA-CASE-ERC-10412-1] c 09 N73-12211
- Terminal guidance system --- for guiding aircraft into preselected altitude and/or heading at terminal point  
[NASA-CASE-FRC-10049-1] c 04 N74-13420
- Apparatus for measuring an aircraft's speed and height  
[NASA-CASE-LAR-12275-1] c 35 N79-18296
- System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c 06 N82-16075
- CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c 06 N83-10040
- Sidelooking laser altimeter for a flight simulator  
[NASA-CASE-ARC-11312-1] c 36 N83-34304
- System for indicating fuel-efficient aircraft altitude  
[NASA-CASE-NPO-15351-2] c 06 N84-34443
- FLIGHT CLOTHING**  
Absorbent product and articles made therefrom  
[NASA-CASE-MSC-18223-2] c 54 N84-11758
- FLIGHT CONTROL**  
Aircraft instrument Patent  
[NASA-CASE-XLA-00487] c 14 N70-40157
- Two-axis controller Patent  
[NASA-CASE-XFR-04104] c 03 N70-42073
- Mechanically limited, electrically operated hydraulic valve system for aircraft controls Patent  
[NASA-CASE-XAC-00048] c 02 N71-29128
- Numerical computer peripheral interactive device with manual controls  
[NASA-CASE-NPO-11497] c 08 N73-25206
- Solid state controller three axes controller  
[NASA-CASE-MSC-12394-1] c 08 N74-10942
- Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c 05 N75-12930
- Deploy/release system --- model aircraft flight control  
[NASA-CASE-LAR-11575-1] c 02 N76-16014
- Apparatus for damping operator induced oscillations of a controlled system --- flight control  
[NASA-CASE-FRC-11041-1] c 33 N82-18493
- Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c 06 N83-33882
- Aircraft control position indicator  
[NASA-CASE-LAR-12984-1] c 06 N87-22678
- Miniaturization of flight deflection measurement system  
[NASA-CASE-LAR-13628-1] c 35 N90-23707
- Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13854-1-CU] c 04 N91-31120
- Rotatable non-circular forebody flow controller  
[NASA-CASE-LAR-14212-1-CU] c 05 N91-31140
- Virtual reality flight control display with six-degree-of-freedom controller and spherical orientation overlay  
[NASA-CASE-NPO-18733-1-CU] c 06 N93-30416
- FLIGHT CREWS**  
Survival couch Patent  
[NASA-CASE-XLA-00118] c 05 N70-33285
- FLIGHT INSTRUMENTS**  
Heads up display  
[NASA-CASE-LAR-12630-1] c 06 N84-27733
- Aircraft control position indicator  
[NASA-CASE-LAR-12984-1] c 06 N87-22678
- FLIGHT PATHS**  
Improving the geometric fidelity of imaging systems employing sensor arrays  
[NASA-CASE-NPO-17970-1-CU] c 43 N90-26384
- FLIGHT RECORDERS**  
Event recorder Patent  
[NASA-CASE-XLA-01832] c 14 N71-21006
- FLIGHT SAFETY**  
Aerial capsule emergency separation device Patent  
[NASA-CASE-XLA-00115] c 03 N70-33343
- Apparatus for aiding a pilot in avoiding a midair collision between aircraft  
[NASA-CASE-LAR-10717-1] c 21 N73-30641
- FLIGHT SIMULATION**  
Lunar landing flight research vehicle Patent  
[NASA-CASE-XFR-00929] c 31 N70-34966

- Television simulation for aircraft and space flight Patent  
[NASA-CASE-XFR-03107] c 09 N71-19449
- Separation simulator Patent  
[NASA-CASE-XKS-04631] c 10 N71-23663
- Real-time simulation clock  
[NASA-CASE-LAR-14056-1] c 35 N90-23713
- Virtual reality flight control display with six-degree-of-freedom controller and spherical orientation overlay  
[NASA-CASE-NPO-18733-1-CU] c 06 N93-30416
- FLIGHT SIMULATORS**
- Centrifuge mounted motion simulator Patent  
[NASA-CASE-XAC-00399] c 11 N70-34815
- Means for visually indicating flight paths of vehicles between the Earth, Venus, and Mercury Patent  
[NASA-CASE-XNP-00708] c 14 N70-35394
- Wind tunnel test section  
[NASA-CASE-MFS-20509] c 11 N72-17183
- Numerical computer peripheral interactive device with manual controls  
[NASA-CASE-NPO-11497] c 08 N73-25206
- Apparatus for applying simulator g-forces to an arm of an aircraft simulator pilot  
[NASA-CASE-LAR-10550-1] c 09 N74-30597
- Vehicle simulator binocular multiplanar visual display system  
[NASA-CASE-ARC-10808-1] c 09 N76-24280
- Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c 09 N78-18083
- Seat cushion to provide realistic acceleration cues to aircraft simulator pilot  
[NASA-CASE-LAR-12149-2] c 09 N79-31228
- Chromatically corrected virtual image visual display --- reducing eye strain in flight simulators  
[NASA-CASE-LAR-12251-1] c 74 N80-27185
- Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c 54 N81-27806
- Biocentrifuge system capable of exchanging specimen cages while in operational mode  
[NASA-CASE-MFS-23825-1] c 51 N81-32829
- Environmental fog/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c 09 N82-24212
- Sideloading laser altimeter for a flight simulator  
[NASA-CASE-ARC-11312-1] c 36 N83-34304
- Inflight IFR procedures simulator  
[NASA-CASE-KSC-11218-1] c 09 N85-19990
- Simulator scene display evaluation device  
[NASA-CASE-ARC-11504-1] c 09 N86-32447
- FLIGHT TESTS**
- Air frame drag balance Patent  
[NASA-CASE-XLA-00113] c 14 N70-33386
- FLIGHT TRAINING**
- Inflight IFR procedures simulator  
[NASA-CASE-KSC-11218-1] c 09 N85-19990
- FLIGHT VEHICLES**
- Leading edge curvature based on convective heating Patent  
[NASA-CASE-XLA-01486] c 01 N71-23497
- Altitude sensing device  
[NASA-CASE-XMS-01994-1] c 14 N72-17326
- FLIP-FLOPS**
- AC logic flip-flop circuits Patent  
[NASA-CASE-XGS-00823] c 10 N71-15910
- Stepping motor control circuit Patent  
[NASA-CASE-GSC-10366-1] c 10 N71-18772
- Flipflop interrogator and bi-polar current driver Patent  
[NASA-CASE-XGS-03058] c 10 N71-19547
- FLOAT ZONES**
- Floating emitter solar cell  
[NASA-CASE-NPO-16467-1-CU] c 33 N87-23879
- Liquid encapsulated float zone process and apparatus  
[NASA-CASE-MFS-28144-1] c 76 N88-24545
- Device for mechanically stabilizing web ribbon buttons during growth initiation  
[NASA-CASE-NPO-17074-2-CU] c 76 N92-21499
- FLOATING**
- Floating baffle to improve efficiency of liquid transfer from tanks  
[NASA-CASE-KSC-10639] c 15 N73-26472
- Modification of one man life raft  
[NASA-CASE-LAR-10241-1] c 54 N74-14845
- Floating nut retention system  
[NASA-CASE-MSC-16938-1] c 37 N80-23653
- FLOATS**
- Magnetically centered liquid column float Patent  
[NASA-CASE-XAC-00030] c 14 N70-34820
- FLOORS**
- Elevated waterproof access floor system and method of making the same  
[NASA-CASE-ARC-11363-1] c 31 N87-16918
- FLOTATION**
- Rescue litter flotation assembly Patent  
[NASA-CASE-XMS-04170] c 05 N71-22748

**FLOW CHAMBERS**

- Multi-chamber controllable heat pipe  
[NASA-CASE-ARC-10199] c 34 N78-17337
- Jet pump-drive system for heat removal  
[NASA-CASE-NPO-16494-1-CU] c 34 N85-29182
- Moving wall, continuous flow electrophoresis apparatus  
[NASA-CASE-MFS-28142-1] c 25 N88-23845

**FLOW CHARACTERISTICS**

- Polyimide processing additives  
[NASA-CASE-LAR-13669-1] c 27 N92-29157
- Vaporizing particle velocimeter  
[NASA-CASE-LAR-14685-1] c 02 N92-34172

**FLOW DIRECTION INDICATORS**

- Polarity sensitive circuit Patent  
[NASA-CASE-XNP-00952] c 10 N71-23271
- Flow angle sensor and read out system Patent  
[NASA-CASE-XLE-04503] c 14 N71-24864
- Miniature electrooptical air flow sensor  
[NASA-CASE-LAR-13065-1] c 35 N85-20295

**FLOW DISTORTION**

- Moving wall, continuous flow electrophoresis apparatus  
[NASA-CASE-MFS-28142-1] c 25 N88-23845

**FLOW DISTRIBUTION**

- Full flow with shut off and selective drainage control valve Patent application  
[NASA-CASE-ERC-10208] c 15 N70-10867
- Method of obtaining permanent record of surface flow phenomena Patent  
[NASA-CASE-XLA-01353] c 14 N70-41366
- Method of recording a gas flow pattern Patent  
[NASA-CASE-XMF-01779] c 12 N71-20815
- Dual wavelength scanning Doppler velocimeter --- without perturbation of flow fields  
[NASA-CASE-ARC-10637-1] c 35 N75-16783
- Controlled separation combustor --- airflow distribution in gas turbine engines  
[NASA-CASE-LEW-11593-1] c 20 N76-14190
- Static continuous electrophoresis device  
[NASA-CASE-MFS-25306-1] c 25 N83-13187
- Method and apparatus for rebalancing a REDOX flow cell system  
[NASA-CASE-LEW-14127-1] c 33 N86-20680
- Self-compensating solenoid valve  
[NASA-CASE-ARC-11620-1] c 37 N87-25573
- High effectiveness contour matching contact heat exchanger  
[NASA-CASE-MSC-20840-1] c 34 N88-29132
- Low-noise nozzle valve  
[NASA-CASE-MFS-28383-1] c 34 N91-14563
- Method and apparatus for detecting laminar flow separation and reattachment  
[NASA-CASE-LAR-13952-2-SB] c 34 N91-31596
- Natural flow wing  
[NASA-CASE-LAR-14281-1] c 02 N92-28729

**FLOW MEASUREMENT**

- Flow test device  
[NASA-CASE-XMS-04917] c 14 N69-24257
- Nuclear mass flowmeter  
[NASA-CASE-MFS-20485] c 14 N72-11365
- Flow velocity and directional instrument  
[NASA-CASE-LAR-10855-1] c 14 N73-13415
- Flow measuring apparatus  
[NASA-CASE-LEW-12078-1] c 35 N75-30503
- Method for making a hot wire anemometer and product thereof  
[NASA-CASE-ARC-10900-1] c 35 N77-24454
- Fluid velocity measuring device  
[NASA-CASE-LAR-11729-1] c 34 N79-12359
- Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c 34 N81-26402
- Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12720-1] c 44 N83-21504
- Bio-medical flow sensor --- intravenous procedures  
[NASA-CASE-MSC-18761-1] c 52 N83-27577
- Miniature electrooptical air flow sensor  
[NASA-CASE-LAR-13065-1] c 35 N85-20295
- Auto covariance computer  
[NASA-CASE-LAR-12968-1] c 60 N86-21154
- Fluid flow meter for measuring the rate of fluid flow in a conduit  
[NASA-CASE-MFS-28030-1] c 35 N86-25752
- Spinning disk calibration method and apparatus for laser Doppler velocimeter  
[NASA-CASE-ARC-11510-1] c 35 N86-32697
- Vibration-free Raman Doppler velocimeter  
[NASA-CASE-LAR-13268-1] c 35 N87-14669
- Dual mode laser velocimeter  
[NASA-CASE-ARC-11634-1] c 36 N88-14350
- Crossflow vorticity sensor  
[NASA-CASE-LAR-13436-1-CU] c 02 N88-23759
- Method of forming a multiple layer dielectric and a hot film sensor therewith  
[NASA-CASE-LAR-13678-1] c 76 N90-24168

- Three-dimensional laser velocimeter simultaneity detector  
[NASA-CASE-ARC-11876-1] c 36 N90-25340
- Measurement of waves in flows across a surface  
[NASA-CASE-NPO-17479-1-CU] c 34 N91-13658
- Method of remotely characterizing thermal properties of a sample  
[NASA-CASE-LAR-13508-3-CU] c 09 N93-11057
- Atmospheric pressure flow reactor: Gas phase chemical kinetics under tropospheric conditions without wall effects  
[NASA-CASE-MSC-21384-2] c 35 N93-17626
- Reflection type skin friction meter  
[NASA-CASE-LAR-14520-1-SB] c 02 N93-18275
- Flow rate logging seepage meter  
[NASA-CASE-LAR-14835-1] c 35 N93-19328
- Method of measuring cross-flow vortices by use of an array of hot-film sensors  
[NASA-CASE-LAR-14824-1-SB] c 34 N93-26000

**FLOW REGULATORS**

- Anti-backlash circuit for hydraulic drive system Patent  
[NASA-CASE-XNP-01020] c 03 N71-12260
- Fluid flow restrictor Patent  
[NASA-CASE-NPO-10117] c 15 N71-15608
- Fluid flow control valve Patent  
[NASA-CASE-XLE-00703] c 15 N71-15967
- Gas regulator Patent  
[NASA-CASE-XNP-10298] c 12 N71-17661
- Semitoroidal diaphragm cavitating valve Patent  
[NASA-CASE-XNP-09704] c 12 N71-18615
- Temperature sensitive flow regulator Patent  
[NASA-CASE-MFS-14259] c 15 N71-19213
- Pneumatic amplifier Patent  
[NASA-CASE-MSC-12121-1] c 15 N71-27147
- Gas flow control device  
[NASA-CASE-NPO-11479] c 15 N73-13462
- Pressure modulating valve  
[NASA-CASE-MSC-14905-1] c 37 N77-28487
- Automotive gas turbine fuel control  
[NASA-CASE-LEW-12785-1] c 37 N78-24545
- Flow diverter valve and flow diversion method  
[NASA-CASE-HQN-00573-1] c 37 N79-33468
- Automatic thermal switch  
[NASA-CASE-GSC-12415-1] c 33 N82-24419
- Bio-medical flow sensor --- intravenous procedures  
[NASA-CASE-MSC-18761-1] c 52 N83-27577
- Fluidized bed desulfurization  
[NASA-CASE-NPO-15924-1] c 25 N85-35253
- Combined riblet and lebu drag reduction system  
[NASA-CASE-LAR-13286-1] c 02 N88-14071
- Moving wall, continuous flow electrophoresis apparatus  
[NASA-CASE-MFS-28142-1] c 25 N88-23845
- Bio-reactor chamber  
[NASA-CASE-MSC-20929-1] c 51 N91-14703
- Energy efficient continuous flow ash lockhopper  
[NASA-CASE-NPO-16985-1-CU] c 31 N91-15423
- Variable orifice flow regulator  
[NASA-CASE-MSC-21549-1] c 34 N91-27504

**FLOW RESISTANCE**

- Flow resistivity instrument  
[NASA-CASE-LAR-13053-1] c 43 N83-29783

**FLOW STABILITY**

- Continuous detonation reaction engine Patent  
[NASA-CASE-XMF-06926] c 28 N71-22983
- Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c 34 N74-27730
- Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12720-1] c 44 N83-21504

**FLOW VELOCITY**

- Method for continuous variation of propellant flow and thrust in propulsive devices Patent  
[NASA-CASE-XLE-00177] c 28 N70-40367
- Densitometer Patent  
[NASA-CASE-XLE-00688] c 14 N70-41330
- Device for suppressing sound and heat produced by high-velocity exhaust jets Patent  
[NASA-CASE-XMF-01813] c 28 N70-41582
- Positive displacement flowmeter Patent  
[NASA-CASE-XMF-02822] c 14 N70-41994
- Zeta potential flowmeter Patent  
[NASA-CASE-XNP-06509] c 14 N71-23226
- Method for measuring the characteristics of a gas Patent  
[NASA-CASE-XLA-03375] c 16 N71-24074
- Laser fluid velocity detector Patent  
[NASA-CASE-XAC-10770-1] c 16 N71-24828
- Gas low pressure low flow rate metering system Patent  
[NASA-CASE-FRC-10022] c 12 N71-26546
- Force-balanced, throttle valve Patent  
[NASA-CASE-NPO-10808] c 15 N71-27432
- Flow rate switch  
[NASA-CASE-NPO-10722] c 09 N72-20199



- Flow velocity and directional instrument  
[NASA-CASE-LAR-10855-1] c 14 N73-13415
- Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c 34 N74-27730
- Wind tunnel flow generation section  
[NASA-CASE-ARC-10710-1] c 09 N75-12969
- Combined dual scatter, local oscillator laser Doppler velocimeter  
[NASA-CASE-ARC-10642-1] c 36 N76-14447
- System for measuring three fluctuating velocity components in a turbulently flowing fluid  
[NASA-CASE-ARC-10974-1] c 34 N77-27345
- Fluid velocity measuring device  
[NASA-CASE-LAR-11729-1] c 34 N79-12359
- Wind tunnel supplementary Mach number minimum section insert  
[NASA-CASE-LAR-12532-1] c 09 N82-11088
- Flow modifying device  
[NASA-CASE-LEW-13562-2] c 07 N85-35195
- Multi-colored layers for visualizing aerodynamic flow effects  
[NASA-CASE-LAR-13742-1] c 02 N92-21588
- Vaporizing particle velocimeter  
[NASA-CASE-LAR-14685-1] c 02 N92-34172
- Flow rate logging seepage meter  
[NASA-CASE-LAR-14835-1] c 35 N93-19328
- FLOW VISUALIZATION**
- Shock-layer radiation measurement  
[NASA-CASE-XAC-02970] c 14 N69-39896
- Method of recording a gas flow pattern Patent  
[NASA-CASE-XMF-01779] c 12 N71-20815
- Continuous laminar smoke generator  
[NASA-CASE-LAR-13014-1] c 09 N85-21178
- Method for laminar boundary layer transition visualization in flight  
[NASA-CASE-LAR-13554-1] c 02 N89-12551
- Dual wavelength holographic interferometry system  
[NASA-CASE-MFS-28242-1] c 35 N89-26202
- Synchronous strobe apparatus for flow visualization  
[NASA-CASE-LAR-14568-1] c 36 N91-25392
- Schlieren system for visualizing the flow within a pipe of circular cross-section  
[NASA-CASE-LAR-13944-1] c 35 N92-11336
- Multi-colored layers for visualizing aerodynamic flow effects  
[NASA-CASE-LAR-13742-1] c 02 N92-21588
- Off-surface infrared flow visualization  
[NASA-CASE-LAR-14568-1] c 74 N93-22037
- Shear sensitive monomer-polymer laminate structure and method of using same  
[NASA-CASE-LAR-14654-1-CU] c 39 N93-29613
- FLOWMETERS**
- Flow test device  
[NASA-CASE-XMS-04917] c 14 N69-24257
- Positive displacement flowmeter Patent  
[NASA-CASE-XMF-02822] c 14 N70-41994
- Heated element fluid flow sensor Patent  
[NASA-CASE-MSC-12084-1] c 12 N71-17569
- Laser Doppler system for measuring three dimensional vector velocity Patent  
[NASA-CASE-MFS-20386] c 21 N71-19212
- Zeta potential flowmeter Patent  
[NASA-CASE-XNP-06509] c 14 N71-23226
- Traversing probe Patent  
[NASA-CASE-XFR-02007] c 12 N71-24692
- Laser fluid velocity detector Patent  
[NASA-CASE-XAC-10770-1] c 16 N71-24828
- Gas low pressure low flow rate metering system Patent  
[NASA-CASE-FRC-10022] c 12 N71-26546
- Nuclear mass flowmeter  
[NASA-CASE-MFS-20485] c 14 N72-11365
- Respiratory analysis system and method  
[NASA-CASE-MSC-13436-1] c 05 N73-32015
- Low power electromagnetic flowmeter providing accurate zero set  
[NASA-CASE-ARC-10362-1] c 14 N73-32326
- Electromagnetic flow rate meter --- for liquid metals  
[NASA-CASE-LEW-10981-1] c 35 N74-21018
- Leak detector  
[NASA-CASE-MFS-21761-1] c 35 N75-15931
- System for measuring three fluctuating velocity components in a turbulently flowing fluid  
[NASA-CASE-ARC-10974-1] c 34 N77-27345
- Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c 34 N81-26402
- Miniature electrooptical air flow sensor  
[NASA-CASE-LAR-13065-1] c 35 N85-20295
- State-of-charge coulometer  
[NASA-CASE-NPO-15759-1] c 35 N85-21596
- Technique for measuring gas conversion factors  
[NASA-CASE-LAR-13220-1] c 34 N86-12547
- Fluid flow meter for measuring the rate of fluid flow in a conduit  
[NASA-CASE-MFS-28030-1] c 35 N86-25752
- Crossflow vorticity sensor  
[NASA-CASE-LAR-13436-1-CU] c 02 N88-23759
- Flow rate logging seepage meter  
[NASA-CASE-LAR-14835-1] c 35 N93-19328
- FLUID AMPLIFIERS**
- Fluid jet amplifier  
[NASA-CASE-XLE-03512] c 12 N69-21466
- Multiway vortex valve system Patent  
[NASA-CASE-XMF-04709] c 15 N71-15609
- Shear modulated fluid amplifier Patent  
[NASA-CASE-MFS-10412] c 12 N71-17578
- Rocket thrust throttling system  
[NASA-CASE-LEW-10374-1] c 28 N73-13773
- Fluid pressure amplifier and system  
[NASA-CASE-LAR-10868-1] c 33 N74-11050
- Fluid thrust control system --- for liquid propellant rocket engines  
[NASA-CASE-XMF-05964-1] c 20 N79-21124
- FLUID DYNAMICS**
- Degassing and mixing apparatus for liquids --- potable water for spacecraft  
[NASA-CASE-MSC-18936-1] c 35 N83-29652
- FLUID FILLED SHELLS**
- Method and apparatus for producing gas-filled hollow spheres --- target pellets for inertial confinement fusion  
[NASA-CASE-NPO-14596-3] c 31 N83-31896
- FLUID FILMS**
- Journal bearings --- for lubricant films  
[NASA-CASE-LEW-11076-1] c 37 N74-21061
- Fluid journal bearings  
[NASA-CASE-LEW-11076-4] c 37 N76-15461
- Fluid seal for rotating shafts  
[NASA-CASE-LEW-11676-1] c 37 N76-22541
- FLUID FILTERS**
- Liquid-gas separator for zero gravity environment Patent  
[NASA-CASE-XMS-01492] c 05 N70-41297
- High pressure filter Patent  
[NASA-CASE-XNP-00732] c 28 N70-41447
- Water separating system Patent  
[NASA-CASE-XMS-13052] c 14 N71-20427
- Fluid control apparatus and method  
[NASA-CASE-LAR-11110-1] c 34 N75-26282
- Filter regeneration systems --- a system for regenerating a system filter in a fluid flow line  
[NASA-CASE-MSC-14273-1] c 34 N75-33342
- Quick disconnect filter coupling  
[NASA-CASE-MFS-22323-1] c 37 N76-14463
- Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points  
[NASA-CASE-MSC-16841-1] c 34 N79-24285
- Air removal device --- life support systems  
[NASA-CASE-XLA-08914-2] c 25 N82-21269
- Rapid, quantitative determination of bacteria in water --- adenosine triphosphate  
[NASA-CASE-GSC-12158-1] c 51 N83-27569
- FLUID FLOW**
- Fluid jet amplifier  
[NASA-CASE-XLE-03512] c 12 N69-21466
- Pneumatic system for controlling and actuating pneumatic cyclic devices  
[NASA-CASE-XMS-04843] c 03 N69-21469
- Full flow with shut off and selective drainage control valve Patent application  
[NASA-CASE-ERC-10208] c 15 N70-10867
- Conical valve plug Patent  
[NASA-CASE-XLE-00715] c 15 N70-34859
- Pressure regulating system Patent  
[NASA-CASE-XNP-00450] c 15 N70-38603
- Antiflutter ball check valve Patent  
[NASA-CASE-XNP-01152] c 15 N70-41811
- Inductive liquid level detection system Patent  
[NASA-CASE-XLE-01609] c 14 N71-10500
- Multiway vortex valve system Patent  
[NASA-CASE-XMF-04709] c 15 N71-15609
- Heated element fluid flow sensor Patent  
[NASA-CASE-MSC-12084-1] c 12 N71-17569
- Multiple orifice throttle valve Patent  
[NASA-CASE-XNP-09698] c 15 N71-18580
- Fluid flow meter with comparator reference means Patent  
[NASA-CASE-XGS-01331] c 14 N71-22996
- Pressure transducer calibrator Patent  
[NASA-CASE-XNP-01660] c 14 N71-23036
- Dual latching solenoid valve Patent  
[NASA-CASE-XMS-05890] c 09 N71-23191
- Gas low pressure low flow rate metering system Patent  
[NASA-CASE-FRC-10022] c 12 N71-26546
- Electrohydrodynamic control valve Patent  
[NASA-CASE-NPO-10416] c 12 N71-27332
- Fluid jet amplifier Patent  
[NASA-CASE-XLE-09341] c 12 N71-28741
- Nuclear mass flowmeter  
[NASA-CASE-MFS-20485] c 14 N72-11365
- Flow rate switch  
[NASA-CASE-NPO-10722] c 09 N72-20199
- Torsional disconnect unit  
[NASA-CASE-NPO-10704] c 15 N72-20445
- Capacitive tank gaging apparatus being independent of liquid distribution  
[NASA-CASE-MFS-21629] c 14 N72-22442
- Cryogenic feedthrough  
[NASA-CASE-LAR-10031] c 15 N72-22484
- Geysering inhibitor for vertical cryogenic transfer pipe  
[NASA-CASE-KSC-10615] c 15 N73-12486
- Pump for delivering heated fluids  
[NASA-CASE-NPO-11417] c 15 N73-24513
- Flow control valve --- for high temperature fluids  
[NASA-CASE-NPO-11951-1] c 37 N74-21065
- Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c 34 N74-27730
- Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
[NASA-CASE-MFS-19193-1] c 37 N75-19686
- Flow measuring apparatus  
[NASA-CASE-LEW-12078-1] c 35 N75-30503
- Filter regeneration systems --- a system for regenerating a system filter in a fluid flow line  
[NASA-CASE-MSC-14273-1] c 34 N75-33342
- Combined dual scatter, local oscillator laser Doppler velocimeter  
[NASA-CASE-ARC-10642-1] c 36 N76-14447
- Externally supported internally stabilized flexible duct joint  
[NASA-CASE-MFS-19194-1] c 37 N76-14460
- Vortex generator for controlling the dispersion of effluents in a flowing liquid  
[NASA-CASE-LAR-12045-1] c 34 N77-24423
- Pseudo-backscatter laser Doppler velocimeter employing antiparallel-reflector in the forward direction  
[NASA-CASE-ARC-10970-1] c 36 N77-25501
- Accumulator  
[NASA-CASE-MFS-19287-1] c 34 N77-30399
- Apparatus for measuring a sorbate dispersed in a fluid stream  
[NASA-CASE-ARC-10896-1] c 35 N78-19465
- Flow compensating pressure regulator  
[NASA-CASE-LEW-12718-1] c 34 N78-25351
- Fluid valve assembly  
[NASA-CASE-MSC-12731-1] c 37 N78-25426
- Positive isolation disconnect  
[NASA-CASE-MSC-16043-1] c 37 N79-11402
- Fluid velocity measuring device  
[NASA-CASE-LAR-11729-1] c 34 N79-12359
- Hot foil transducer skin friction sensor  
[NASA-CASE-LAR-12321-1] c 35 N82-24470
- Dual laser optical system and method for studying fluid flow  
[NASA-CASE-MFS-25315-1] c 36 N83-29680
- Flow modifying device  
[NASA-CASE-LEW-13562-2] c 07 N85-35195
- Fluid leak indicator  
[NASA-CASE-MSC-20783-1] c 35 N86-20756
- Fluid flow meter for measuring the rate of fluid flow in a conduit  
[NASA-CASE-MFS-28030-1] c 35 N86-25752
- Two-axis, self-nulling skin friction balance  
[NASA-CASE-LAR-13294-1] c 35 N86-32696
- Multi-path peristaltic pump  
[NASA-CASE-MSC-20907-1] c 37 N87-18818
- Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N87-21332
- Pressure measuring probe  
[NASA-CASE-LAR-13853-1] c 35 N89-14423
- Fluidic momentum controller  
[NASA-CASE-MSC-20906-2] c 35 N89-15379
- Dual wavelength holographic interferometry system  
[NASA-CASE-MFS-28242-1] c 35 N89-26202
- Apparatus for mixing solutions in low gravity environments  
[NASA-CASE-MFS-26047-1] c 29 N90-21209
- Liquid sheet radiator apparatus  
[NASA-CASE-LEW-14295-1] c 31 N91-15424
- Mechanized fluid connector and assembly tool system with ball detents  
[NASA-CASE-MSC-21434-1] c 37 N92-10197
- Multi-colored layers for visualizing aerodynamic flow effects  
[NASA-CASE-LAR-13742-1] c 02 N92-21588
- Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-1] c 34 N92-28752
- Pulse thermal energy transport/storage system  
[NASA-CASE-LEW-15235-1] c 34 N92-29125
- Converting a CO<sub>2</sub> atmosphere to a high-purity O<sub>2</sub> supply  
[NASA-CASE-LAR-14398-1] c 25 N92-30098
- Off-surface infrared flow visualization  
[NASA-CASE-LAR-14568-1] c 74 N93-22037



## FLUID INJECTION

- Apparatus for igniting solid propellants Patent  
[NASA-CASE-XLE-00207] c 28 N70-33375
- Method of igniting solid propellants Patent  
[NASA-CASE-XLE-01988] c 27 N71-15634
- Aerodynamic spike nozzle Patent  
[NASA-CASE-XGS-01143] c 31 N71-15647
- Process of forming particles in a cryogenic path Patent  
[NASA-CASE-NPO-10250] c 23 N71-16212
- Apparatus for purging systems handling toxic, corrosive, noxious and other fluids Patent  
[NASA-CASE-XMS-01905] c 12 N71-21089
- Tertiary flow injection thrust vectoring system Patent  
[NASA-CASE-MFS-20831] c 28 N71-29153
- Programmable physiological infusion  
[NASA-CASE-ARC-10447-1] c 52 N74-22771

## FLUID JETS

- Propeller blade loading control Patent  
[NASA-CASE-XAC-00139] c 02 N70-34856

## FLUID LOGIC

- Logic AND gate for fluid circuits Patent  
[NASA-CASE-XLA-07391] c 12 N71-17579

## FLUID MANAGEMENT

- Capillary heat transport and fluid management device  
[NASA-CASE-MFS-28217-1] c 34 N89-14392

## FLUID MECHANICS

- Leak detector Patent  
[NASA-CASE-LAR-10323-1] c 12 N71-17573
- Parallel-plate viscometer with double diaphragm suspension  
[NASA-CASE-NPO-11387] c 14 N73-14429
- Modified face seal for positive film stiffness  
[NASA-CASE-LEW-12989-1] c 37 N82-12442

## FLUID POWER

- Fluid power transmission Patent  
[NASA-CASE-XMS-01445] c 12 N71-16031
- Fluid power transmitting gas bearing Patent  
[NASA-CASE-ERC-10097] c 15 N71-28465

## FLUID PRESSURE

- Flow compensating pressure regulator  
[NASA-CASE-LEW-12718-1] c 34 N78-25351
- Self-stabilizing radial face seal  
[NASA-CASE-LEW-12991-1] c 37 N81-24442
- Pressure letdown method and device for coal conversion systems  
[NASA-CASE-NPO-15100-1] c 44 N84-14583
- Damping seal for turbomachinery  
[NASA-CASE-MFS-25842-2] c 37 N86-20788
- Thermal power transfer system using applied potential difference to sustain operating pressure difference  
[NASA-CASE-NPO-18034-1-CU] c 44 N92-16457
- Passive control of pressure loads using porosity  
[NASA-CASE-LAR-14547-1] c 34 N92-17909

## FLUID ROTOR GYROSCOPES

- Piezoelectric pump Patent  
[NASA-CASE-XNP-05429] c 26 N71-21824

## FLUID SWITCHING ELEMENTS

- Booster tank system Patent  
[NASA-CASE-MSC-12390] c 27 N71-29155

## FLUID TRANSMISSION LINES

- Low heat leak connector for cryogenic system  
[NASA-CASE-XLE-02367-1] c 31 N79-21225

## FLUIDIC CIRCUITS

- Technique of duplicating fragile core  
[NASA-CASE-XLA-07829] c 15 N72-16329
- Flow measuring apparatus  
[NASA-CASE-LEW-12078-1] c 35 N75-30503

## FLUIDICS

- Fluidic-thermochromic display device Patent  
[NASA-CASE-ERC-10031] c 12 N71-18603
- Plasma fluidic hybrid display Patent  
[NASA-CASE-ERC-10100] c 09 N71-33519
- Fluidic proportional thruster system  
[NASA-CASE-ARC-10106-1] c 28 N72-22769
- Fluid pressure amplifier and system  
[NASA-CASE-LAR-10868-1] c 33 N74-11050
- Fluid valve assembly  
[NASA-CASE-MSC-12731-1] c 37 N78-25426
- Fluidic angular velocity sensor  
[NASA-CASE-NPO-16479-1CU] c 35 N86-32695
- Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-1] c 34 N92-28752

## FLUIDIZED BED PROCESSORS

- Continuous coal processing method  
[NASA-CASE-NPO-13758-2] c 31 N81-15154
- Fluidized bed coal combustion reactor  
[NASA-CASE-NPO-14273-1] c 25 N82-11144
- Solar heated fluidized bed gasification system  
[NASA-CASE-NPO-15071-1] c 44 N82-16475
- Use of glow discharge in fluidized beds  
[NASA-CASE-ARC-11245-1] c 28 N82-18401
- Fluidized bed desulfurization  
[NASA-CASE-NPO-15924-1] c 25 N85-35253

## FLUIDS

- Automated fluid chemical analyzer Patent  
[NASA-CASE-XNP-09451] c 06 N71-26754
- Bacteria detection instrument and method  
[NASA-CASE-GSC-11533-1] c 14 N73-13435
- Low outgassing polydimethylsiloxane material and preparation thereof  
[NASA-CASE-GSC-11358-1] c 06 N73-26100
- Fluid mass sensor for a zero gravity environment  
[NASA-CASE-MSC-14653-1] c 35 N77-19385
- Self-charging metering and dispensing device for fluids  
[NASA-CASE-MSC-20275-1] c 35 N85-21595
- Fluid-loop reaction system  
[NASA-CASE-NPO-17204-1-CU] c 34 N91-25380
- Adjustable steam producing flexible orifice independent of fluid pressure  
[NASA-CASE-NPO-17625-1-CU] c 34 N92-21724
- Fluid separator  
[NASA-CASE-MFS-28658-1] c 34 N93-17039

## FLUORESCENCE

- Apparatus for producing three-dimensional recordings of fluorescence spectra Patent  
[NASA-CASE-XGS-01231] c 14 N70-41676
- Internal work light Patent  
[NASA-CASE-XKS-05932] c 09 N71-26787
- Chromato-fluorographic drug detector --- device for detecting and recording fluorescent properties of materials  
[NASA-CASE-ARC-10633-1] c 25 N74-26947
- Fluorescence detector for monitoring atmospheric pollutants  
[NASA-CASE-NPO-12321-1] c 45 N75-27585
- Fluorescent radiation converter  
[NASA-CASE-GSC-12528-1] c 74 N81-24900
- Optical multiple sample vacuum integrating sphere  
[NASA-CASE-GSC-12849-1] c 74 N86-26190
- Optical fiber sensor having an active core  
[NASA-CASE-LAR-14607-1SB] c 74 N92-30029

## FLUORIDES

- Self-lubricating fluoride metal composite materials Patent  
[NASA-CASE-XLE-08511] c 18 N71-23710
- Corrosion resistant beryllium Patent  
[NASA-CASE-LEW-10327] c 17 N71-33408
- Perfluoro polyether acyl fluorides  
[NASA-CASE-NPO-10765] c 06 N72-20121
- Carbide-fluoride-silver self-lubricating composite  
[NASA-CASE-LEW-14196-2] c 37 N87-25585
- Graphite fluoride fiber polymer composite material  
[NASA-CASE-LEW-14472-1] c 24 N91-15320
- Tm,Ho:YLF laser end-pumped by a semiconductor diode laser array  
[NASA-CASE-NPO-17282-1-CU] c 36 N91-15528
- Graphite fluoride from iodine intercalated graphitized carbon  
[NASA-CASE-LEW-15360-1] c 25 N92-34206
- Polyimides prepared from 3,5-diamino benzo trifluoride  
[NASA-CASE-LAR-14206-1] c 27 N93-29083

## FLUORINATION

- Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-2] c 06 N72-27151
- Fluorinated esters of polycarboxylic acids  
[NASA-CASE-MFS-21040-1] c 06 N73-30098

## FLUORINE

- Reaction of fluorine with polyperfluoropolyenes  
[NASA-CASE-NPO-10862] c 06 N72-22107
- Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c 27 N81-17259

## FLUORINE COMPOUNDS

- Fluorine-containing polyformals  
[NASA-CASE-XMF-06900-1] c 27 N79-21191
- Precision heat forming of tetrafluoroethylene tubing  
[NASA-CASE-MSC-18430-1] c 37 N82-24491
- Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-4] c 23 N91-25185

## FLUORINE ORGANIC COMPOUNDS

- Low dielectric fluorinated poly(phenylene ether ketone) film and coating  
[NASA-CASE-LAR-13992-1-CU] c 23 N91-27220
- Process to prepare  
1,3-diamino-5-pentafluorosulfanylbenzene  
[NASA-CASE-LAR-14773-2-CU] c 25 N93-29506
- New polymers of perfluorobutadiene and method of manufacture Patent application  
[NASA-CASE-NPO-10863] c 06 N70-11251
- Method of polymerizing perfluorobutadiene Patent application  
[NASA-CASE-NPO-10447] c 06 N70-11252
- Fluorohydroxy ethers  
[NASA-CASE-MFS-10507] c 06 N73-30101

## Highly fluorinated polymers

- [NASA-CASE-MFS-11492] c 06 N73-30102
- Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-1] c 06 N73-33076
- Utilization of oxygen difluoride for syntheses of fluoropolymers  
[NASA-CASE-NPO-12061-1] c 27 N76-16228
- The 1,1,1-triaryl-2,2,2-trifluoroethanes and process for their synthesis  
[NASA-CASE-ARC-11097-1] c 25 N82-24312
- Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-2] c 25 N90-23497
- Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-6] c 23 N92-17882
- Optical fiber fluorosensor  
[NASA-CASE-LAR-14525-1-CU] c 74 N93-22008

## FLUOROCARBONS

- Electrically conductive fluorocarbon polymer  
[NASA-CASE-XLE-06774-2] c 06 N72-25150
- Substituted 1,1,1-Triaryl-2,2,2-Trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-1] c 23 N88-26404

## FLUOROHYDROCARBONS

- New Condensation polyimides containing 1,1,1-triaryl-2,2,2-trifluoroethane structures  
[NASA-CASE-LEW-14345-1] c 23 N90-19300
- Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-3] c 23 N91-17141

## FLUOROPOLYMERS

- Perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c 25 N81-14016
- Texturing polymer surfaces by transfer casting --- cardiovascular prosthesis  
[NASA-CASE-LEW-13120-1] c 27 N82-28440
- Surface texturing of fluoropolymers  
[NASA-CASE-LEW-13028-1] c 27 N82-33521
- Cellular thermosetting fluoropolymers and process for making them  
[NASA-CASE-GSC-13008-1] c 27 N88-23894
- Substituted 1,1,1-Triaryl-2,2,2-Trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-1] c 23 N88-26404
- Cellular thermosetting fluorodiepoxy polymers  
[NASA-CASE-GSC-13008-2] c 27 N90-16949
- New Condensation polyimides containing 1,1,1-triaryl-2,2,2-trifluoroethane structures  
[NASA-CASE-LEW-14345-1] c 23 N90-19300

## FLUTTER

- Antiflutter ball check valve Patent  
[NASA-CASE-XNP-01152] c 15 N70-41811
- Suppression of flutter  
[NASA-CASE-LAR-10682-1] c 02 N73-26004
- Decoupler pylon: wing/store flutter suppressor  
[NASA-CASE-LAR-12468-1] c 08 N82-32373
- Remote pivot decoupler pylon: Wing/store flutter suppressor  
[NASA-CASE-LAR-13173-1] c 05 N87-14314
- Airfoil flutter model suspension system  
[NASA-CASE-LAR-13522-1-SB] c 09 N87-25334

## FLUTTER ANALYSIS

- Model mount system for testing flutter  
[NASA-CASE-LAR-12950-1] c 09 N84-34448

## FLUX (RATE)

- Two axis fluxgate magnetometer Patent  
[NASA-CASE-GSC-10441-1] c 14 N71-27325
- Apparatus for measuring charged particle beam  
[NASA-CASE-MFS-25641-1] c 72 N84-28575

## FLUX DENSITY

- Particle beam measurement apparatus using beam kinetic energy to change the heat sensitive resistance of the detection probe Patent  
[NASA-CASE-XLE-00243] c 14 N70-38602
- Apparatus for measuring charged particle beam  
[NASA-CASE-MFS-25641-1] c 72 N84-28575
- Copper chloride cathode for a secondary battery  
[NASA-CASE-NPO-17640-1-CU] c 33 N91-14538
- Gas arc constriction for plasma arc welding  
[NASA-CASE-MFS-28844-1] c 37 N93-31292

## FLUXES

- Solder flux which leaves corrosion-resistant coating Patent  
[NASA-CASE-XNP-03459-2] c 18 N71-15688
- Soldering with solder flux which leaves corrosion resistant coating Patent  
[NASA-CASE-XNP-03459] c 15 N71-21078

## FLYING PLATFORMS

- System and method for measuring ocean surface currents at locations remote from land masses using synthetic aperture radar  
[NASA-CASE-NPO-17937-1-CU] c 43 N91-21621

## SUBJECT INDEX

### FLYWHEELS

- Energy storage apparatus  
[NASA-CASE-GSC-12030-1] c 44 N78-24608
- Rotatable mass for a flywheel  
[NASA-CASE-MFS-23051-1] c 37 N79-10422
- Safety flywheel --- using flexible materials energy storage  
[NASA-CASE-HQN-10888-1] c 44 N79-14527
- Method of manufacture of bonded fiber flywheel --- fiberglass-epoxy  
[NASA-CASE-MFS-23674-1] c 24 N81-29163
- Bidirectional control system for energy flow in solar powered flywheel  
[NASA-CASE-MFS-25978-1] c 44 N87-21410
- Three axis attitude control system  
[NASA-CASE-GSC-12970-1] c 08 N88-23808

### FOAMS

- Foam generator Patent  
[NASA-CASE-XLA-00838] c 03 N70-36778
- Method for continuous variation of propellant flow and thrust in propulsive devices Patent  
[NASA-CASE-XLE-00177] c 28 N70-40367
- Filament wound container Patent  
[NASA-CASE-XLE-03803] c 15 N71-23816
- Novel polycarboxylic prepolymeric materials and polymers thereof Patent  
[NASA-CASE-NPO-10596] c 06 N71-25929
- Thermally activated foaming compositions Patent  
[NASA-CASE-LAR-10373-1] c 18 N71-26155
- Method of making a solid propellant rocket motor Patent  
[NASA-CASE-XLA-04126] c 28 N71-26779
- Thickness measuring and injection device Patent  
[NASA-CASE-MFS-20261] c 14 N71-27005
- Method of making foamed materials in zero gravity  
[NASA-CASE-XMF-09902] c 15 N72-11387
- Polyimide foam for the thermal insulation and fire protection  
[NASA-CASE-ARC-10464-1] c 27 N74-12812
- Intumescent composition, foamed product prepared therewith and process for making same  
[NASA-CASE-ARC-10304-2] c 27 N74-27037
- Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c 27 N78-31232
- Ambient cure polyimide foams --- thermal resistant foams  
[NASA-CASE-ARC-11170-1] c 27 N79-11215
- Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c 25 N80-16116
- Impacting device for testing insulation  
[NASA-CASE-MFS-25862-2] c 37 N84-33807
- Insulation bonding test system  
[NASA-CASE-MFS-25862-1] c 27 N85-20126
- Cryogenic insulation strength and bond tester  
[NASA-CASE-MFS-25910-1] c 39 N86-20841
- Cellular thermosetting fluoropolymers and process for making them  
[NASA-CASE-GSC-13008-1] c 27 N88-23894
- Cellular thermosetting fluorodiepoxide polymers  
[NASA-CASE-GSC-13008-2] c 27 N90-16949
- Protective helmet assembly  
[NASA-CASE-MSC-21842-1] c 54 N93-17088

### FOCAL PLANE DEVICES

- Antenna array at focal plane of reflector with coupling network for beam switching Patent  
[NASA-CASE-GSC-10220-1] c 07 N71-27233
- High speed multi focal plane optical system  
[NASA-CASE-GSC-12683-1] c 74 N83-36898
- Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c 74 N85-22139
- Projection lens scanning laser velocimeter system  
[NASA-CASE-ARC-11547-1] c 36 N87-17026
- Laterally stacked Schottky diodes for infrared sensor applications  
[NASA-CASE-NPO-17426-1-CU] c 33 N91-21434
- Programmable hyperspectral image mapper with on-array processing  
[NASA-CASE-NPO-17794-1-CU] c 74 N92-30104
- INAS hole-immobilized doping superlattice long-wave-infrared detector  
[NASA-CASE-NPO-17880-1-CU] c 76 N93-11056

### FOCI

- High speed multi focal plane optical system  
[NASA-CASE-GSC-12683-1] c 74 N83-36898

### FOCUSING

- X-ray reflection collimator adapted to focus X-radiation directly on a detector Patent  
[NASA-CASE-XHQ-04106] c 14 N70-40240
- Focusing system for an ion source having apertured electrodes Patent  
[NASA-CASE-XNP-03332] c 09 N71-10618
- Petzval type objective including field shaping lens Patent  
[NASA-CASE-GSC-10700] c 23 N71-30027

### Absolute focus lock for microscopes

- [NASA-CASE-LAR-10184] c 14 N72-22445
- Electron beam controller --- using magnetic field to refocus spent electron beam in microwave oscillator tube  
[NASA-CASE-LEW-11617-1] c 33 N74-10195
- Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c 35 N75-15014
- Multiplate focusing collimator --- for scanning small near radiation sources  
[NASA-CASE-MFS-20932-1] c 35 N75-19616
- RF beam center location method and apparatus for power transmission system  
[NASA-CASE-NPO-13821-1] c 44 N78-28594
- Scanning alocal laser velocimeter projection lens system  
[NASA-CASE-LAR-12328-1] c 36 N82-32712
- Gyrotrotron transmitting tube  
[NASA-CASE-LEW-13429-1] c 33 N83-31952
- Dual mode laser velocimeter  
[NASA-CASE-ARC-11634-1] c 36 N88-14350
- Apparatus for precision focussing and positioning of a beam waist on a target  
[NASA-CASE-ARC-11916-1-SB] c 74 N92-16811

### FOG

- Anti-fog composition --- for prevention of fogging on surfaces such as space helmet visors and windshields  
[NASA-CASE-MSC-13530-2] c 23 N75-14834
- Environmental fog/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c 09 N82-24212
- Warm fog dissipation using large volume water sprays  
[NASA-CASE-MFS-25962-1] c 09 N89-25242

### FOILS (MATERIALS)

- Foil seal  
[NASA-CASE-XLE-05130] c 15 N69-21362
- Method of making an insulation foil  
[NASA-CASE-LEW-11484-1] c 24 N75-33181
- Partial interlaminar separation system for composites  
[NASA-CASE-LAR-12065-1] c 24 N81-14000
- Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c 24 N81-33235
- Oxygen diffusion barrier coating  
[NASA-CASE-LAR-13474-1-SB] c 26 N87-25455

### FOLDING

- Folding apparatus Patent  
[NASA-CASE-XLA-00137] c 15 N70-33180

### FOLDING STRUCTURES

- Space and atmospheric reentry vehicle Patent  
[NASA-CASE-XGS-00260] c 31 N70-37924
- Collapsible loop antenna for space vehicle Patent  
[NASA-CASE-XMF-00437] c 07 N70-40202
- Folding boom assembly Patent  
[NASA-CASE-XGS-00938] c 32 N70-41367
- Foldable conduit Patent  
[NASA-CASE-XLE-00620] c 32 N70-41579
- Foldable solar concentrator Patent  
[NASA-CASE-XLA-04622] c 03 N70-41580
- Wing deployment method and apparatus Patent  
[NASA-CASE-XMS-00907] c 02 N70-41630
- Variable sweep aircraft Patent  
[NASA-CASE-XLA-03659] c 02 N71-11041
- Radiator deployment actuator Patent  
[NASA-CASE-MSC-11817-1] c 15 N71-26611
- Foldable construction block  
[NASA-CASE-MSC-12233-1] c 15 N72-25454
- Folding structure fabricated of rigid panels  
[NASA-CASE-XHQ-02146] c 18 N75-27040
- Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c 32 N80-29539
- Foldable beam  
[NASA-CASE-LAR-12077-1] c 31 N81-25259
- Telescoping columns --- parabolic antenna support  
[NASA-CASE-LAR-12195-1] c 31 N81-27324
- Sequentially deployable maneuverable tetrahedral beam  
[NASA-CASE-LAR-13098-1] c 31 N86-19479
- Self-locking telescoping manipulator arm  
[NASA-CASE-MFS-25906-1] c 37 N86-20789
- Shuttle-launch triangular space station  
[NASA-CASE-MSC-20676-1] c 18 N86-24729
- Synchronously deployable truss structure  
[NASA-CASE-LAR-13117-1] c 37 N86-25789
- Protective telescoping shield for solar concentrator  
[NASA-CASE-NPO-16236-1] c 44 N86-27706
- Deployable M-braced truss structure  
[NASA-CASE-LAR-13081-1] c 37 N86-32737
- Foldable self-erecting joint  
[NASA-CASE-MSC-20635-1] c 18 N87-14373
- Sun shield  
[NASA-CASE-MSC-20162-1] c 37 N87-17036
- Deployable geodesic truss structure  
[NASA-CASE-LAR-13113-1] c 31 N87-25492

## FORMING TECHNIQUES

- Shuttle orbiter with telescoping main propulsion unit and payload  
[NASA-CASE-LAR-13586-1] c 16 N92-10035
- Shuttle orbiter with telescoping main propulsion unit and payload  
[NASA-CASE-LAR-13586-1] c 16 N93-20115

### FOOD

- Bacteria detection instrument and method  
[NASA-CASE-GSC-11533-1] c 14 N73-13435

### FOOTPRINTS

- Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c 32 N83-31918

### FORCE

- Ferrofluidic solenoid  
[NASA-CASE-NPO-11738-1] c 09 N73-30185

### FORCE DISTRIBUTION

- Device for handling heavy loads  
[NASA-CASE-XNP-04969] c 11 N69-27466
- Two force component measuring device Patent  
[NASA-CASE-XAC-04886-1] c 14 N71-20439
- Tensile strength testing device Patent  
[NASA-CASE-XNP-05634] c 15 N71-24834
- Impact monitoring apparatus  
[NASA-CASE-MSC-15626-1] c 14 N72-25411
- Variable direction force coupler  
[NASA-CASE-MFS-20317] c 15 N73-13463
- Subminiature insertable force transducer --- including a strain gage to measure forces in muscles  
[NASA-CASE-NPO-13423-1] c 33 N75-31329
- Device for quick changeover between wind tunnel force and pressure testing  
[NASA-CASE-LAR-13512-1] c 35 N87-28884
- Linear force device  
[NASA-CASE-MSC-20549-2] c 35 N88-24927

### FORCED VIBRATION

- Seismic vibration source  
[NASA-CASE-NPO-14112-1] c 46 N79-22679

### FOREARM

- Prosthetic helping hand  
[NASA-CASE-MFS-28430-1] c 54 N92-24044
- Prosthetic elbow joint  
[NASA-CASE-MFS-28707-1] c 54 N93-30566

### FOREBODIES

- Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c 02 N81-14968
- Actuated forebody strakes  
[NASA-CASE-LAR-13983-1] c 05 N90-23390

### FORMALDEHYDE

- Synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c 23 N82-16174
- Synthesis of 2,4,8,10-tetroxaspiro[5.5]undecane  
[NASA-CASE-ARC-11243-2] c 23 N85-33187

### FORMAT

- Digital data reformatter/deserializer  
[NASA-CASE-NPO-13676-1] c 60 N79-20751

### FORMATES

- Fluorine containing polyurethane  
[NASA-CASE-MFS-10509] c 06 N73-30103

### FORMING TECHNIQUES

- Wire grid forming apparatus Patent  
[NASA-CASE-XLE-00023] c 15 N70-33330
- Method for forming plastic materials Patent  
[NASA-CASE-XMS-05516] c 15 N71-17803
- Method of making tubes Patent  
[NASA-CASE-XGS-04175] c 15 N71-18579
- Magnetomotive metal working device Patent  
[NASA-CASE-XMF-03793] c 15 N71-24833
- Apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917-2] c 15 N71-24836
- Method of forming shapes from planar sheets of thermosetting materials  
[NASA-CASE-NPO-11036] c 15 N72-24522
- Method of heat treating a formed powder product material  
[NASA-CASE-LEW-10805-3] c 26 N74-10521
- Molding apparatus --- for thermosetting plastic compositions  
[NASA-CASE-LAR-10489-2] c 31 N74-32920
- Process for making sheets with parallel pores of uniform size  
[NASA-CASE-GSC-10984-1] c 37 N75-26371
- Drilled ball bearing with a one piece anti-tipping cage assembly  
[NASA-CASE-LEW-11925-1] c 37 N75-31446
- Apparatus for forming dished ion thruster grids  
[NASA-CASE-LEW-11694-2] c 37 N76-14461
- Acoustic energy shaping  
[NASA-CASE-NPO-13802-1] c 71 N78-10837
- Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c 37 N78-13436
- Method of producing complex aluminum alloy parts of high temper, and products thereof  
[NASA-CASE-MSC-19693-1] c 26 N78-24333

- Solar cell with improved N-region contact and method of forming the same  
[NASA-CASE-NPO-14205-1] c 44 N79-31752  
Method and apparatus for producing concentric hollow spheres --- inertial confinement fusion targets  
[NASA-CASE-NPO-14596-1] c 31 N81-33319  
Precision heat forming of tetrafluoroethylene tubing  
[NASA-CASE-MSC-18430-1] c 37 N82-24491  
Sphere forming method and apparatus  
[NASA-CASE-NPO-15070-1] c 31 N83-35176  
Method of fabricating composite structures  
[NASA-CASE-MFS-28390-1] c 24 N91-15333
- FOSSIL FUELS**  
Supercritical solvent coal extraction  
[NASA-CASE-NPO-15210-1] c 25 N84-22709
- FOUNDATIONS**  
Expandable support means  
[NASA-CASE-NPO-11059] c 15 N72-17454  
Adjustable securing base  
[NASA-CASE-MSC-19666-1] c 37 N78-17383  
Space station erectable manipulator placement system  
[NASA-CASE-MSC-21096-1] c 18 N89-12621
- FOURIER TRANSFORMATION**  
Continuous Fourier transform method and apparatus --- for the analysis of simultaneous analog signal components  
[NASA-CASE-ARC-10466-1] c 60 N75-13539  
Remotely controllable real-time optical processor  
[NASA-CASE-NPO-16750-1-CU] c 74 N89-14078
- FRACTIONATION**  
Method and apparatus for distillation of liquids Patent  
[NASA-CASE-XNP-08124] c 15 N71-27184  
Electrophoretic fractional elution apparatus employing a rotational seal fraction collector  
[NASA-CASE-MFS-23284-1] c 37 N80-14397  
Electrophoresis device  
[NASA-CASE-MFS-25426-1] c 25 N83-10126  
Spillage detector for liquid chromatography systems  
[NASA-CASE-MSC-20206-1] c 25 N86-27431  
Acoustophoresis separation method  
[NASA-CASE-LAR-13388-2] c 25 N93-20570
- FRACTURE MECHANICS**  
Apparatus for positioning and loading a test specimen Patent  
[NASA-CASE-XLE-01300] c 15 N70-41993
- FRACTURE STRENGTH**  
Process for making a high toughness-high strength ion alloy  
[NASA-CASE-LEW-12542-2] c 26 N79-22271  
High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c 26 N80-32484  
Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c 24 N81-33235  
Process of end-capping a polyimide system  
[NASA-CASE-LAR-13135-1] c 27 N86-19456  
Polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-13633-1] c 27 N87-24575  
Directional solidification of superalloys  
[NASA-CASE-MFS-28314-1] c 26 N91-14462  
Fully articulated four-point-bend loading fixture  
[NASA-CASE-LEW-14776-1] c 37 N91-21540
- FRAGMENTS**  
Amino acid sequences for the binding regions in serum albumin proteins  
[NASA-CASE-MFS-28402-1] c 51 N93-28952
- FRAMES**  
Articulated multiple couch assembly Patent  
[NASA-CASE-MSC-11253] c 05 N71-12343  
Soft frame adjustable eyeglasses Patent  
[NASA-CASE-XMS-06064] c 05 N71-23096  
Expandable space frames  
[NASA-CASE-ERC-10365-1] c 31 N73-32749  
Laser measuring system for incremental assemblies --- measuring wire-wrapped frame assemblies in spark chambers  
[NASA-CASE-GSC-12321-1] c 36 N82-16396  
Inorganic spark chamber frame and method of making the same  
[NASA-CASE-GSC-12354-1] c 35 N82-24471  
Page turning system  
[NASA-CASE-GSC-13415-1] c 37 N92-33616
- FRAMING CAMERAS**  
High speed photo-optical time recording  
[NASA-CASE-KSC-10294] c 14 N72-18411
- FREE FLIGHT TEST APPARATUS**  
Support apparatus for dynamic testing Patent  
[NASA-CASE-XMF-01772] c 11 N70-41677  
Hydraulic support for dynamic testing Patent  
[NASA-CASE-XMF-03248] c 11 N71-10604  
Test unit free-flight suspension system Patent  
[NASA-CASE-XLA-00939] c 11 N71-15926

**FREE WING AIRCRAFT**

- Free wing assembly for an aircraft  
[NASA-CASE-FRC-10092-1] c 05 N79-12061

**FREEZE DRYING**

- Modification of the physical properties of freeze-dried rice  
[NASA-CASE-MSC-13540-1] c 05 N72-33096

**FREEZING**

- System for and method of freezing biological tissue  
[NASA-CASE-GSC-12173-1] c 51 N79-10694  
Method of forming frozen spheres in a force-free drop tower  
[NASA-CASE-NPO-14845-1] c 27 N82-28442

**FREON**

- Solar energy power system --- using Freon  
[NASA-CASE-MFS-21628-1] c 44 N75-32581

**FREQUENCIES**

- Controlled oscillator system with a time dependent output frequency  
[NASA-CASE-NPO-11962-1] c 33 N74-10194  
High efficiency multifrequency feed  
[NASA-CASE-GSC-11909] c 32 N74-20863  
Modified fast frequency acquisition via adaptive least squares algorithm  
[NASA-CASE-NPO-17845-2-CU] c 61 N93-14882

**FREQUENCY ANALYZERS**

- Digital frequency discriminator Patent  
[NASA-CASE-MFS-14322] c 08 N71-18692  
Broadband frequency discriminator Patent  
[NASA-CASE-NPO-10096] c 07 N71-24583  
Audio frequency marker system  
[NASA-CASE-NPO-11147] c 14 N72-27408  
Continuous Fourier transform method and apparatus --- for the analysis of simultaneous analog signal components  
[NASA-CASE-ARC-10466-1] c 60 N75-13539  
Frequency discriminator and phase detector circuit  
[NASA-CASE-NPO-11515-1] c 33 N77-13315  
Vibration analyzer  
[NASA-CASE-MSC-21408-1] c 37 N91-14607

**FREQUENCY CONTROL**

- Bus voltage compensation circuit for controlling direct current motor  
[NASA-CASE-XMS-04215-1] c 09 N69-39987  
Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00458] c 09 N70-38604  
Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00131] c 09 N70-38995  
Automatic frequency discriminators and control for a phase-lock loop providing frequency preset capabilities Patent  
[NASA-CASE-XMF-08665] c 10 N71-19467  
Linear accelerator frequency control system Patent  
[NASA-CASE-XGS-05441] c 10 N71-22962  
Tuning arrangement for an electron discharge device or the like Patent  
[NASA-CASE-XNP-09771] c 09 N71-24841  
Low loss dichroic plate  
[NASA-CASE-NPO-13171-1] c 32 N74-11000  
Automatic frequency control for FM transmitter  
[NASA-CASE-MFS-21540-1] c 32 N74-19790  
Acoustically controlled distributed feedback laser  
[NASA-CASE-NPO-13175-1] c 36 N75-31427  
Reflex feed system for dual frequency antenna with frequency cutoff means  
[NASA-CASE-NPO-14022-1] c 32 N78-31321  
Cam-operated pitch-change apparatus  
[NASA-CASE-LEW-13050-1] c 07 N79-14095  
Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c 33 N81-17349  
High stability buffered phase comparator  
[NASA-CASE-GSC-12645-1] c 33 N84-16454  
Spectrophone stabilized laser with line center offset frequency control  
[NASA-CASE-NPO-15516-1] c 36 N84-22943  
Automatic oscillator frequency control system  
[NASA-CASE-GSC-12804-1] c 33 N86-20668  
Dual frequency optical carrier technique for transmission of reference frequencies in dispersive media  
[NASA-CASE-NPO-18007-1-CU] c 74 N92-11791  
Burst-by-burst laser frequency monitor  
[NASA-CASE-NPO-18596-1-CU] c 36 N93-28132

**FREQUENCY CONVERTERS**

- Frequency to analog converter Patent  
[NASA-CASE-XNP-07040] c 08 N71-12500  
Static inverters which sum a plurality of waves Patent  
[NASA-CASE-XMF-00663] c 08 N71-18752  
Voltage to frequency converter Patent  
[NASA-CASE-GSC-10022-1] c 10 N71-25882  
Family of frequency to amplitude converters  
[NASA-CASE-MSC-12395] c 09 N72-25257  
Variable frequency inverter for ac induction motors with torque, speed and braking control  
[NASA-CASE-MFS-22088-1] c 33 N75-15874

**FREQUENCY DISCRIMINATORS**

- PN lock indicator for dithered PN code tracking loop  
[NASA-CASE-NPO-14435-1] c 33 N81-33405  
Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N87-22895  
Acoustic emission frequency discrimination  
[NASA-CASE-MSC-20467-1] c 35 N88-23966

**FREQUENCY DISTRIBUTION**

- Antenna system using parasitic elements and two driven elements at 90 deg angle fed 180 deg out of phase Patent  
[NASA-CASE-XLA-00414] c 07 N70-38200  
Variable frequency oscillator with temperature compensation Patent  
[NASA-CASE-XNP-03916] c 09 N71-28810  
Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c 32 N78-15323  
Method and apparatus for frequency spectrum analysis  
[NASA-CASE-NPO-17759-1-CU] c 32 N92-29124

**FREQUENCY DIVIDERS**

- Low phase noise digital frequency divider  
[NASA-CASE-NPO-11569] c 10 N73-26229  
Technique for extending the frequency range of digital dividers  
[NASA-CASE-LAR-10730-1] c 33 N74-10223  
Symmetrical odd-modulus frequency divider  
[NASA-CASE-NPO-13426-1] c 33 N75-31330  
Electronic analog divider  
[NASA-CASE-LEW-11881-1] c 33 N77-17354

**FREQUENCY DIVISION MULTIPLEXING**

- Satellite communication system and method Patent  
[NASA-CASE-GSC-10118-1] c 07 N71-24621  
Frequency division multiplex technique  
[NASA-CASE-KSC-10521] c 07 N73-20176

**FREQUENCY MEASUREMENT**

- Measurement system  
[NASA-CASE-MFS-20658-1] c 14 N73-30386  
Frequency measurement by coincidence detection with standard frequency  
[NASA-CASE-MSC-14649-1] c 33 N76-16331  
Time domain phase measuring apparatus  
[NASA-CASE-GSC-12228-1] c 33 N79-10338  
Method and apparatus for measuring frequency and phase difference  
[NASA-CASE-MSC-20865-1] c 32 N87-18692  
Frequency domain laser velocimeter signal processor  
[NASA-CASE-LAR-13552-1-CU] c 33 N89-14385  
Apparatus for using a time interval counter to measure frequency stability  
[NASA-CASE-NPO-17325-1-CU] c 32 N90-17005  
Edge technique for measurement of laser frequency shifts including the Doppler shift  
[NASA-CASE-GSC-13343-1] c 36 N91-28557  
Constant frequency pulsed phase-locked loop measuring device  
[NASA-CASE-LAR-13823-1] c 35 N93-29084

**FREQUENCY MODULATION**

- Accelerometer with FM output Patent  
[NASA-CASE-XLA-00492] c 14 N70-34799  
Means for generating a sync signal in an FM communication system Patent  
[NASA-CASE-XNP-10830] c 07 N71-11281  
Bi-carrier demodulator with modulation Patent  
[NASA-CASE-XMF-01160] c 07 N71-11298  
Optical tracker having overlapping reticles on parallel axes Patent  
[NASA-CASE-XGS-05715] c 23 N71-16100  
Atomic hydrogen maser with bulb temperature control to remove wall shift in maser output frequency  
[NASA-CASE-HON-10654-1] c 16 N73-13489  
Junction range finder  
[NASA-CASE-KSC-10108] c 14 N73-25461  
Automatic frequency control for FM transmitter  
[NASA-CASE-MFS-21540-1] c 32 N74-19790  
Symmetrical odd-modulus frequency divider  
[NASA-CASE-NPO-13426-1] c 33 N75-31330  
Frequency modulated oscillator  
[NASA-CASE-MFS-23181-1] c 33 N77-17351  
FM/CW radar system  
[NASA-CASE-MFS-22234-1] c 32 N79-10264  
Thickness measurement system  
[NASA-CASE-MFS-23721-1] c 31 N79-28370  
Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c 32 N80-24510  
Adaptive control system for line-commutated inverters  
[NASA-CASE-MFS-25209-1] c 33 N83-35227  
Fiber optic frequency transfer link  
[NASA-CASE-NPO-17703-1-CU] c 74 N91-27957
- FREQUENCY MULTIPLIERS**  
Multiple varactor frequency doubler Patent  
[NASA-CASE-XMF-04958-1] c 10 N71-26414  
Open loop digital frequency multiplier  
[NASA-CASE-MSC-12709-1] c 33 N77-24375

Millimeter-wave monolithic diode-grid frequency multiplier  
[NASA-CASE-NPO-17258-1-CU] c 33 N91-14551  
Planar varactor frequency multiplier devices with blocking barrier  
[NASA-CASE-NPO-18428-1-CU] c 33 N92-23464

**FREQUENCY RANGES**  
Variable time constant smoothing circuit Patent  
[NASA-CASE-XGS-01983] c 10 N70-41964  
Variable frequency nuclear magnetic resonance spectrometer Patent  
[NASA-CASE-XNP-09830] c 14 N71-26266  
Technique for extending the frequency range of digital dividers  
[NASA-CASE-LAR-10730-1] c 33 N74-10223  
Multichannel logarithmic RF level detector  
[NASA-CASE-LAR-11021-1] c 32 N76-14321  
Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c 32 N77-20289  
Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-1] c 32 N79-19195  
Improving the geometric fidelity of imaging systems employing sensor arrays  
[NASA-CASE-NPO-17970-1-CU] c 43 N90-26384  
Method and apparatus for frequency spectrum analysis  
[NASA-CASE-NPO-17759-1-CU] c 32 N92-29124

**FREQUENCY RESPONSE**  
Multiresponse imager and imaging process for improved resolution  
[NASA-CASE-LAR-14779-1] c 74 N92-29951

**FREQUENCY SCANNING**  
Automatic communication signal monitoring system  
[NASA-CASE-NPO-13941-1] c 32 N79-10262  
Frequency-scanning particle size spectrometer  
[NASA-CASE-NPO-13606-2] c 35 N80-18364  
Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c 32 N81-27341

**FREQUENCY SHIFT**  
Doppler frequency spread correction device for multiplex transmissions  
[NASA-CASE-XGS-02749] c 07 N69-39978  
Serrrodyne frequency converter re-entrant amplifier system Patent  
[NASA-CASE-XGS-01022] c 07 N71-16088  
Elimination of frequency shift in a multiplex communication system Patent  
[NASA-CASE-XNP-01306] c 07 N71-20814  
Laser fluid velocity detector Patent  
[NASA-CASE-XAC-10770-1] c 16 N71-24828  
Laser Doppler velocity simulator --- to induce frequency shift  
[NASA-CASE-LAR-12176-1] c 36 N80-16321  
Edge technique for measurement of laser frequency shifts including the Doppler shift  
[NASA-CASE-GSC-13343-1] c 36 N91-28557

**FREQUENCY SHIFT KEYING**  
Frequency shift keyed demodulator Patent  
[NASA-CASE-XGS-02889] c 07 N71-11282  
Frequency shift keying apparatus Patent  
[NASA-CASE-XGS-01537] c 07 N71-23405  
Single frequency multitransmitter telemetry  
[NASA-CASE-LAR-13006-1] c 17 N87-16663

**FREQUENCY STABILITY**  
Method and apparatus for stabilizing a gaseous optical maser Patent  
[NASA-CASE-XGS-03644] c 16 N71-18614  
Broadband stable power multiplier Patent  
[NASA-CASE-XNP-10854] c 10 N71-26331  
Low phase noise oscillator using two parallel connected amplifiers  
[NASA-CASE-GSC-13018-1] c 33 N87-21232  
Apparatus for using a time interval counter to measure frequency stability  
[NASA-CASE-NPO-17325-1-CU] c 32 N90-17005  
Dual frequency optical carrier technique for transmission of reference frequencies in dispersive media  
[NASA-CASE-NPO-18007-1-CU] c 74 N92-11791

**FREQUENCY STANDARDS**  
Method of resolving clock synchronization error and means therefor Patent  
[NASA-CASE-XNP-08875] c 10 N71-23099  
Atomic standard with variable storage volume  
[NASA-CASE-GSC-11895-1] c 35 N76-15436  
Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c 32 N78-15323  
External bulb variable volume maser  
[NASA-CASE-GSC-12334-1] c 36 N79-14362  
Precise RF timing signal distribution to remote stations --- fiber optics  
[NASA-CASE-NPO-14749-1] c 32 N81-14186

Dual frequency optical carrier technique for transmission of reference frequencies in dispersive media  
[NASA-CASE-NPO-18007-1-CU] c 74 N92-11791

**FREQUENCY SYNCHRONIZATION**  
Pseudonoise (PN) synchronization of data system with derivation of clock frequency from received signal for clocking receiver PN generator  
[NASA-CASE-XNP-03623] c 09 N73-28084  
Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c 32 N78-15323  
System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c 32 N79-20296

**FREQUENCY SYNTHESIZERS**  
Digitally controlled frequency synthesizer Patent  
[NASA-CASE-XGS-02317] c 09 N71-23525  
System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c 32 N79-20296  
Method for shaping and aiming narrow beams --- sonar mapping and target identification  
[NASA-CASE-NPO-14632-1] c 32 N82-18443  
Reactanceless synthesized impedance bandpass amplifier  
[NASA-CASE-GSC-12788-1] c 33 N85-29145  
JFET reflection oscillator  
[NASA-CASE-GSC-12555-1] c 33 N86-19515

**FRICION**  
Refractory coatings  
[NASA-CASE-LEW-13169-2] c 26 N82-30371  
Missile rolling tail brake torque system --- simulating bearing friction on canard controlled missiles  
[NASA-CASE-LAR-12751-1] c 15 N84-16231  
Thumb-actuated two-axis controller  
[NASA-CASE-ARC-11372-1] c 08 N86-27288  
Multi-colored layers for visualizing aerodynamic flow effects  
[NASA-CASE-LAR-13742-1] c 02 N92-21588  
Rolling friction robot fingers  
[NASA-CASE-GSC-13261-1] c 37 N92-29138  
Energy dissipator  
[NASA-CASE-MSC-21555-1] c 37 N93-23075

**FRICION DRAG**  
Combined riblet and lebu drag reduction system  
[NASA-CASE-LAR-13286-1] c 02 N88-14071

**FRICION FACTOR**  
Self-lubricating gears and other mechanical parts Patent  
[NASA-CASE-MFS-14971] c 15 N71-24984  
Unidirectional flexural pivot  
[NASA-CASE-GSC-12622-1] c 37 N84-12492  
Bidirectional drive and brake mechanism  
[NASA-CASE-MSC-21540-1] c 37 N91-32514  
Magnetostrictive roller drive motor  
[NASA-CASE-GSC-13369-1] c 33 N92-15331  
Linear mass actuator  
[NASA-CASE-LAR-14352-1] c 37 N92-34173

**FRICION MEASUREMENT**  
Friction measuring apparatus Patent  
[NASA-CASE-NPO-08680] c 14 N71-22995  
Static coefficient test method and apparatus  
[NASA-CASE-GSC-11893-1] c 35 N76-31489  
Two-axis, self-nulling skin friction balance  
[NASA-CASE-LAR-13294-1] c 35 N86-32696  
Reflection type skin friction meter  
[NASA-CASE-LAR-14520-1-SB] c 02 N93-18275

**FRICION REDUCTION**  
Low friction magnetic recording tape Patent  
[NASA-CASE-XGS-00373] c 23 N71-15978  
Production of hollow components for rolling element bearings by diffusion welding  
[NASA-CASE-LEW-11026-1] c 15 N73-33383  
Hydrodynamic skin-friction reduction  
[NASA-CASE-LAR-14078-1-CU] c 34 N90-27071  
Polymer/riblet combination for hydrodynamic skin friction reduction  
[NASA-CASE-LAR-14271-1-CU] c 27 N91-13558

**FRICIONLESS ENVIRONMENTS**  
Air bearing Patent  
[NASA-CASE-XMF-01887] c 15 N71-10617  
Air cushion lift pad Patent  
[NASA-CASE-MFS-14685] c 31 N71-15689  
Method and apparatus of simulating zero gravity conditions Patent  
[NASA-CASE-MFS-12750] c 27 N71-16223

**FROST**  
Insulating structure Patent  
[NASA-CASE-XMF-00341] c 15 N70-33323  
Device for determining frost depth and density  
[NASA-CASE-MFS-25754-1] c 35 N84-28018

**FROZEN FOODS**  
Low temperature storage container for transporting perishables to space station  
[NASA-CASE-MFS-28248-1] c 31 N88-24817

**FRUSTUMS**  
Metallic threaded composite fastener  
[NASA-CASE-MSC-21580-1] c 37 N92-21726

**FUEL CAPSULES**  
Acoustic suspension system  
[NASA-CASE-NPO-15435-1] c 71 N83-36846

**FUEL CELL POWER PLANTS**  
Reactant pressure differential control for fuel cell gases  
[NASA-CASE-MSC-20127-2] c 37 N85-34403

**FUEL CELLS**  
Method of making membranes  
[NASA-CASE-XNP-04264] c 03 N69-21337  
Combined electrolysis device and fuel cell and method of operation Patent  
[NASA-CASE-XLE-01645] c 03 N71-20904  
Sealing member and combination thereof and method of producing said sealing member Patent  
[NASA-CASE-XMS-01625] c 15 N71-23022  
Ion-exchange membrane with platinum electrode assembly Patent  
[NASA-CASE-XMS-02063] c 03 N71-29044  
Reconstituted asbestos matrix --- for use in fuel or electrolysis cells  
[NASA-CASE-MSC-12568-1] c 24 N76-14204  
Dual membrane hollow fiber fuel cell and method of operating same  
[NASA-CASE-NPO-13732-1] c 44 N79-10513  
Method of making a light weight battery plaque  
[NASA-CASE-LEW-13349-1] c 26 N84-22734  
Reactant pressure differential control for fuel cell gases  
[NASA-CASE-MSC-20127-2] c 37 N85-34403

**FUEL COMBUSTION**  
Fuel combustor  
[NASA-CASE-LEW-12137-1] c 25 N78-10224  
Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c 37 N84-22958

**FUEL CONSUMPTION**  
Method for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-2] c 07 N86-20389  
Method for providing real-time control of a gaseous propellant rocket propulsion system  
[NASA-CASE-MSC-21542-1] c 20 N92-15122

**FUEL CONTROL**  
Attitude and propellant flow control system and method Patent  
[NASA-CASE-XMF-00185] c 21 N70-34539  
Flexible ring slosh damping baffle Patent  
[NASA-CASE-LAR-10317-1] c 32 N71-16103  
Buoyant anti-slosh system Patent  
[NASA-CASE-XLA-04605] c 32 N71-16106  
Control valve and co-axial variable injector Patent  
[NASA-CASE-XNP-09702] c 15 N71-17654  
Force-balanced, throttle valve Patent  
[NASA-CASE-NPO-10808] c 15 N71-27432  
Gas turbine engine fuel control  
[NASA-CASE-LEW-11187-1] c 28 N73-19793  
Automotive gas turbine fuel control  
[NASA-CASE-LEW-12785-1] c 37 N78-24545  
Electrical servo actuator bracket --- fuel control valves on jet engines  
[NASA-CASE-FRC-11044-1] c 37 N81-33483  
Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c 37 N84-22958

**FUEL FLOW**  
System for preconditioning a combustible vapor  
[NASA-CASE-NPO-12072] c 28 N72-22772

**FUEL FLOW REGULATORS**  
Two-step rocket engine bipropellant valve Patent  
[NASA-CASE-XMS-04890-1] c 15 N70-22192  
Passively regulated water electrolysis rocket engine Patent  
[NASA-CASE-XGS-08729] c 28 N71-14044  
Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c 07 N77-23106

**FUEL GAGES**  
Response analyzers for sensors Patent  
[NASA-CASE-MFS-11204] c 14 N71-29134

**FUEL INJECTION**  
Injector-valve device Patent  
[NASA-CASE-XLE-00303] c 15 N70-36535  
Rocket engine injector Patent  
[NASA-CASE-XLE-00111] c 28 N70-38199  
Injector assembly for liquid fueled rocket engines Patent  
[NASA-CASE-XMF-00968] c 28 N71-15660  
Injection head for delivering liquid fuel and oxidizers  
[NASA-CASE-NPO-10046] c 28 N72-17843  
Injector for use in high voltage isolators for liquid feed lines  
[NASA-CASE-NPO-11377] c 15 N73-27406  
Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c 07 N81-29129

- Low thrust monopropellant engine  
[NASA-CASE-GSC-12194-2] c 20 N82-18314  
Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c 37 N84-22958  
Low loss injector for liquid propellant rocket engines  
[NASA-CASE-MFS-25989-1] c 20 N87-14420  
Method of injecting fluid propellants into a rocket combustion chamber  
[NASA-CASE-LEW-14846-2] c 20 N91-26200  
Extended temperature range rocket injector  
[NASA-CASE-LEW-14846-1] c 20 N92-10054  
Liquid fuel injection elements for rocket engines  
[NASA-CASE-MFS-28547-1] c 20 N93-29847

**FUEL OILS**

- Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c 07 N77-23106

**FUEL PUMPS**

- Fuel injection pump for internal combustion engines  
Patent  
[NASA-CASE-MSC-12139-1] c 28 N71-14058

**FUEL SYSTEMS**

- Propellant feed isolator Patent  
[NASA-CASE-LEW-10210-1] c 28 N71-26781  
System for preconditioning a combustible vapor  
[NASA-CASE-NPO-12072] c 28 N72-22772  
Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c 20 N74-13502  
Fuel combustor  
[NASA-CASE-LEW-12137-1] c 25 N78-10224  
Fuel delivery system including heat exchanger means  
[NASA-CASE-LEW-12793-1] c 37 N79-11403  
Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c 07 N81-29129  
Apparatus for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-1] c 07 N83-36029  
Method for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-2] c 07 N86-20389  
Extended temperature range rocket injector  
[NASA-CASE-LEW-14846-1] c 20 N92-10054

**FUEL TANK PRESSURIZATION**

- Venting vapor apparatus Patent  
[NASA-CASE-XLE-00288] c 15 N70-34247  
Automatic pump Patent  
[NASA-CASE-XNP-04731] c 15 N71-24042  
Propellant tank pressurization system Patent  
[NASA-CASE-XNP-00650] c 27 N71-28929

**FUEL TANKS**

- Reduced gravity liquid configuration simulator  
[NASA-CASE-XLE-02624] c 12 N69-39988  
Flexible ring slosh damping baffle Patent  
[NASA-CASE-LAR-10317-1] c 32 N71-16103  
Buoyant anti-slosh system Patent  
[NASA-CASE-XLA-04605] c 32 N71-16106  
Instrument for measuring the dynamic behavior of liquids  
Patent  
[NASA-CASE-XLA-05541] c 12 N71-26387  
Electrical apparatus for detection of thermal decomposition of insulation Patent  
[NASA-CASE-XMF-03968] c 14 N71-27186  
High performance channel injection sealant invention abstract  
[NASA-CASE-ARC-14408-1] c 27 N82-33523  
Tanker orbit transfer vehicle and method  
[NASA-CASE-MSC-20543-1] c 18 N84-22610  
Cryogenic insulation strength and bond tester  
[NASA-CASE-MFS-25910-1] c 39 N86-20841  
Cryogenic insulation system  
[NASA-CASE-LAR-13506-1] c 27 N89-12741  
Tank gauging apparatus and method  
[NASA-CASE-MSC-21059-2] c 35 N91-15511  
Tank gauging apparatus and method  
[NASA-CASE-MSC-21059-3] c 35 N91-21495

**FUEL VALVES**

- Injector-valve device Patent  
[NASA-CASE-XLE-00303] c 15 N70-36535  
Semitoroidal diaphragm cavitating valve Patent  
[NASA-CASE-XNP-09704] c 12 N71-18615  
Filler valve Patent  
[NASA-CASE-XNP-01747] c 15 N71-23024  
Combination automatic-starting electrical plasma torch and gas shutoff valve --- for satellite attitude control  
[NASA-CASE-XLE-10717] c 37 N75-29426  
High-temperature, high-pressure oxygen metering valve  
[NASA-CASE-MSC-21823-1] c 37 N93-14843

**FUEL-AIR RATIO**

- Flow modifying device  
[NASA-CASE-LEW-13562-2] c 07 N85-35195

**FUELS**

- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c 28 N81-14103

**FUNCTION GENERATORS**

- Line following servosystem Patent  
[NASA-CASE-XAC-00001] c 15 N71-28952

- Digital quasi-exponential function generator  
[NASA-CASE-NPO-11130] c 08 N72-20176  
Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-10503-1] c 09 N72-21248  
Function generator for synthesizing complex vibration mode patterns  
[NASA-CASE-LAR-10310-1] c 10 N73-20253  
Derivation of a tangent function using an integrated circuit four-quadrant multiplier  
[NASA-CASE-MSC-13907-1] c 10 N73-26230  
A generalized compliant motion primitive  
[NASA-CASE-NPO-18134-1-CU] c 37 N91-32510

**FURLABLE ANTENNAS**

- Unfurlable structure including coiled strips thrust launched upon tension release Patent  
[NASA-CASE-HON-00937] c 07 N71-28979  
Singly-curved reflector for use in high-gain antennas  
[NASA-CASE-NPO-11361] c 07 N72-32169  
Furlable antenna --- antenna design  
[NASA-CASE-NPO-13553-1] c 33 N76-32457

**FURNACES**

- High-speed infrared furnace  
[NASA-CASE-XLE-10466] c 17 N69-25147  
Black-body furnace Patent  
[NASA-CASE-XLE-01399] c 33 N71-15625  
Induction furnace with perforated tungsten foil shielding  
Patent  
[NASA-CASE-XLE-04026] c 14 N71-23267  
High temperature furnace for melting materials in space  
[NASA-CASE-MFS-20710] c 11 N72-23215  
High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c 35 N76-24523  
Exothermic furnace module  
[NASA-CASE-MFS-25707-1] c 35 N82-26631  
Apparatus and method for heating a material in a transparent ampoule --- crystal growth  
[NASA-CASE-MFS-25436-1] c 27 N83-36220  
Apparatus and method for quiescent containerless processing of high temperature metals and alloys in low gravity  
[NASA-CASE-MFS-28087-1] c 35 N87-23944  
Method of preparing radially homogeneous mercury cadmium telluride crystals  
[NASA-CASE-MFS-25786-2] c 76 N90-20896  
High temperature electric arc furnace and method  
[NASA-CASE-MFS-28281-1] c 09 N90-23415  
Furnace for tensile/fatigue testing  
[NASA-CASE-LEW-14848-1] c 14 N91-27175

**FUSELAGES**

- Fuselage structure using advanced technology fiber reinforced composites  
[NASA-CASE-LAR-11688-1] c 24 N82-26384  
Adapter for mounting a microphone flush with the external surface of the skin of a pressurized aircraft  
[NASA-CASE-FRC-11072-1] c 05 N83-27975  
Helicopter anti-torque system using strakes  
[NASA-CASE-LAR-13233-1] c 05 N84-33400  
Multi-body aircraft with an all-movable center fuselage actively controlling fuselage pressure drag  
[NASA-CASE-LAR-13511-1] c 05 N88-23765  
Helicopter anti-torque system using fuselage strakes  
[NASA-CASE-LAR-13630-1] c 08 N88-23809

**FUSION (MELTING)**

- Bonding graphite with fused silver chloride  
[NASA-CASE-XGS-00963] c 15 N69-39735  
Method for fiberizing ceramic materials Patent  
[NASA-CASE-XNP-00597] c 18 N71-23088  
One-step dual purpose joining technique  
[NASA-CASE-LAR-12595-1] c 33 N82-26571  
Absorbable-susceptor joining of ceramic surfaces  
[NASA-CASE-NPO-15640-1] c 27 N84-22748  
Multicolor printing plate joining  
[NASA-CASE-LEW-13598-1] c 35 N84-22930  
Induction heating gun  
[NASA-CASE-LAR-13181-1] c 31 N85-29083

**FUSION WELDING**

- Method for producing a solar cell having an integral protective covering  
[NASA-CASE-XGS-04531] c 03 N69-24267  
Weld control system using thermocouple wire Patent  
[NASA-CASE-MFS-06074] c 15 N71-20393  
Butt welder for fine gauge tungsten/rhenium thermocouple wire  
[NASA-CASE-LAR-10103-1] c 15 N73-14468  
Diffusion welding in air --- solid state welding of butt joint by fusion welding, surface cleaning, and heating  
[NASA-CASE-LEW-11387-1] c 37 N74-18128

**FUZZY SYSTEMS**

- Reconfigurable fuzzy cell  
[NASA-CASE-MSC-21613-1] c 61 N92-10331

**G****GADOLINIUM**

- Method of making a silicon semiconductor device  
Patent  
[NASA-CASE-XLE-02792] c 26 N71-10607  
Gd or Sm doped silicon semiconductor composition  
Patent  
[NASA-CASE-XLE-10715] c 26 N71-23292

**GALILEO PROJECT**

- Reed-Solomon decoder  
[NASA-CASE-NPO-15982-1] c 60 N87-21591

**GALLIUM**

- Floating two force component measuring device  
Patent  
[NASA-CASE-XAC-04885] c 14 N71-23790

**GALLIUM ARSENIDES**

- GaAs solar detector using manganese as a doping agent  
Patent  
[NASA-CASE-XNP-01328] c 26 N71-18064  
Simple method of making photovoltaic junctions  
Patent  
[NASA-CASE-XNP-01960] c 09 N71-23027  
Method of changing the conductivity of vapor deposited gallium arsenide by the introduction of water into the vapor deposition atmosphere Patent  
[NASA-CASE-XNP-01961] c 26 N71-29156  
Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c 25 N75-26043  
Vapor deposition apparatus --- semiconductors and gallium arsenides  
[NASA-CASE-HON-10462] c 25 N75-29192  
GaAs Schottky barrier photo-responsive device and method of fabrication  
[NASA-CASE-GSC-12816-1] c 76 N86-20150  
Liquid encapsulated crystal growth  
[NASA-CASE-NPO-16808-1-CU] c 76 N87-25868  
MBE growth technology for high quality strained III-V layers  
[NASA-CASE-NPO-17723-1-CU] c 76 N90-26685  
Motion detection, novelty filtering, and target tracking using an interferometric technique with a GaAs phase conjugate mirror  
[NASA-CASE-NPO-17784-1-CU] c 74 N91-13998  
Method of fabricating germanium and gallium arsenide devices  
[NASA-CASE-GSC-13265-1] c 76 N91-14066  
Millimeter-wave monolithic diode-grid frequency multiplier  
[NASA-CASE-NPO-17258-1-CU] c 33 N91-14551  
Whiskerless Schottky diode  
[NASA-CASE-GSC-13063-2-CU] c 33 N92-16197  
GaAs-based optoelectronic neurons  
[NASA-CASE-NPO-18497-1-CU] c 63 N92-24245  
Hybridization of detector array and integrated circuit for readout  
[NASA-CASE-NPO-18062-1-CU] c 33 N92-30542  
Real-time edge-enhanced optical correlator  
[NASA-CASE-NPO-18379-1-CU] c 74 N92-33022  
GaAs-based optoelectronic neurons  
[NASA-CASE-NPO-18497-1-CU] c 63 N93-24599

**GALLIUM PHOSPHIDES**

- Liquid encapsulated crystal growth  
[NASA-CASE-NPO-16808-1-CU] c 76 N87-25868  
Annealing group III-V compound doped silicon-germanium alloy for improved thermo-electric conversion efficiency  
[NASA-CASE-NPO-17259-1-CU] c 76 N90-19884

**GALVANIC SKIN RESPONSE**

- Method and apparatus for attaching physiological monitoring electrodes Patent  
[NASA-CASE-XFR-07658-1] c 05 N71-26293

**GAMMA RAY SPECTROMETERS**

- Low intensity X-ray and gamma-ray spectrometer  
[NASA-CASE-GSC-12587-1] c 35 N82-32659  
Method and apparatus for mapping the distribution of chemical elements in an extended medium  
[NASA-CASE-GSC-12808-1] c 25 N85-21279

**GAMMA RAYS**

- Compton scatter attenuation gamma ray spectrometer  
[NASA-CASE-MFS-21441-1] c 14 N73-30392  
Low intensity X-ray and gamma-ray imaging device --- fiber optics  
[NASA-CASE-GSC-12263-1] c 74 N79-20857  
Real-time 3-D X-ray and gamma-ray viewer  
[NASA-CASE-GSC-12640-1] c 74 N84-11920  
Three-dimensional and tomographic imaging device for X-ray and gamma-ray emitting objects  
[NASA-CASE-GSC-12851-1] c 35 N85-30281  
Gamma ray collimator  
[NASA-CASE-SSC-00013-1] c 38 N91-32515

**GANTRY CRANES**

- Mechanically extendible telescoping boom  
[NASA-CASE-NPO-11118] c 03 N72-25021

## GAPS

- Electromagnetic transducer recording head having a laminated core section and tapered gap  
[NASA-CASE-NPO-10711-1] c 35 N77-21392  
Method of making a high voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c 44 N82-29709  
Thermally activated retainer means  
[NASA-CASE-MS-C-21793-1] c 16 N91-28186

## GARMENTS

- Biomedical electrode arrangement Patent  
[NASA-CASE-XFR-10856] c 05 N71-11189  
Flexible joint for pressurizable garment  
[NASA-CASE-MS-C-11072] c 54 N74-32546  
Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c 54 N78-31736  
Urine collection apparatus --- feminine hygiene  
[NASA-CASE-MS-C-18381-1] c 52 N81-28740  
Thermal garment  
[NASA-CASE-XMS-03694-1] c 54 N82-29002

## GAS ANALYSIS

- Gas analyzer for bi-gaseous mixtures Patent  
[NASA-CASE-XLA-01131] c 14 N71-10774  
Microbalance including crystal oscillators for measuring contaminants in a gas system Patent  
[NASA-CASE-NPO-10144] c 14 N71-17701  
Time of flight mass spectrometer with feedback means from the detector to the low source and a specific counter Patent  
[NASA-CASE-XNP-01056] c 14 N71-23041  
Dual resonant cavity absorption cell Patent  
[NASA-CASE-LAR-10305] c 14 N71-26137  
Ion microprobe mass spectrometer for analyzing fluid materials Patent  
[NASA-CASE-ERC-10014] c 14 N71-28863  
Nondispersive gas analyzing method and apparatus wherein radiation is serially passed through a reference and unknown gas  
[NASA-CASE-ARC-10308-1] c 06 N72-31141  
Method and apparatus for determining the contents of contained gas samples  
[NASA-CASE-GSC-10903-1] c 14 N73-12444  
Coaxial anode wire for gas radiation counters  
[NASA-CASE-GSC-11492-1] c 35 N74-26949  
Fast scan control for deflection type mass spectrometers  
[NASA-CASE-LAR-11428-1] c 35 N74-34857  
NDIR gas analyzer based on absorption modulation ratios for known and unknown samples  
[NASA-CASE-ARC-10802-1] c 35 N75-30502  
Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c 45 N76-17656  
Nulling device for detection of trace gases by NDIR absorption  
[NASA-CASE-ARC-10760-1] c 25 N76-22323  
Analysis of volatile organic compounds --- trace amounts of organic volatiles in gas samples  
[NASA-CASE-MS-C-14428-1] c 23 N77-17161  
Fluid sampling device  
[NASA-CASE-GSC-12143-1] c 35 N77-32456  
Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c 25 N81-14015  
Stark effect spectrophone for continuous absorption spectra monitoring --- a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c 25 N81-25159  
Method and device for determining heats of combustion of gaseous hydrocarbons  
[NASA-CASE-LAR-13528-1] c 25 N88-29002  
Device for quickly sensing the amount of O<sub>2</sub> in a combustion product gas  
[NASA-CASE-LAR-13816-1] c 35 N90-22025  
Apparatus and method for characterizing the transmission efficiency of a mass spectrometer  
[NASA-CASE-NPO-16989-1-CU] c 35 N91-14587  
Two-stage gas measurement system  
[NASA-CASE-LAR-14791-1] c 35 N93-31297

## GAS BAGS

- Omnidirectional multiple impact landing system Patent  
[NASA-CASE-XLA-09881] c 31 N71-16085

## GAS BEARINGS

- Externally pressurized fluid bearing Patent  
[NASA-CASE-XMF-00515] c 15 N70-34664  
Slit regulated gas journal bearing Patent  
[NASA-CASE-XNP-00476] c 15 N70-38620  
Air bearing Patent  
[NASA-CASE-XMF-00339] c 15 N70-39896  
Air bearing Patent  
[NASA-CASE-XMF-01887] c 15 N71-10617  
Fluid power transmission Patent  
[NASA-CASE-XMS-01445] c 12 N71-16031  
Bismuth-lead coatings for gas bearings used in atmospheric environments and vacuum chambers Patent  
[NASA-CASE-XGS-02011] c 15 N71-20739  
Swivel support for gas bearings Patent  
[NASA-CASE-XMF-07808] c 15 N71-23812

- Fluid power transmitting gas bearing Patent  
[NASA-CASE-ERC-10097] c 15 N71-28465  
Angular displacement indicating gas bearing support system Patent  
[NASA-CASE-XLA-09346] c 15 N71-28740  
Air bearing assembly for curved surfaces  
[NASA-CASE-MFS-20423] c 15 N72-11388  
Air bearing  
[NASA-CASE-WLP-10002] c 15 N72-17451  
Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c 37 N76-18459  
Thrust bearing  
[NASA-CASE-LEW-11949-1] c 37 N76-29588  
Cantilever mounted resilient pad gas bearing  
[NASA-CASE-LEW-12569-1] c 37 N79-10418  
Compliant hydrodynamic fluid journal bearing  
[NASA-CASE-LEW-13670-1] c 37 N86-19606

## GAS CHROMATOGRAPHY

- Micropacked column for a chromatographic system  
[NASA-CASE-XNP-04816] c 06 N69-39936  
Baseline stabilization system for ionization detector Patent  
[NASA-CASE-XNP-03128] c 10 N70-41991  
Procedure and apparatus for determination of water in nitrogen tetroxide  
[NASA-CASE-NPO-10234] c 06 N72-17094  
Analysis of hydrogen-deuterium mixtures  
[NASA-CASE-NPO-11322] c 06 N72-25146  
Ultraviolet atomic emission detector  
[NASA-CASE-HQN-10756-1] c 14 N72-25428  
Method and apparatus for determining the contents of contained gas samples  
[NASA-CASE-GSC-10903-1] c 14 N73-12444  
Gas chromatograph injection system  
[NASA-CASE-ARC-10344-2] c 35 N75-26334  
Chelate-modified polymers for atmospheric gas chromatography  
[NASA-CASE-ARC-11154-1] c 25 N80-23383

## GAS COMPOSITION

- Method and means for helium/hydrogen ratio measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c 25 N80-20334  
Microwave limb sounder --- measuring trace gases in the upper atmosphere  
[NASA-CASE-NPO-14544-1] c 46 N82-12685  
Mobile sampler for use in acquiring samples of terrestrial atmospheric gases  
[NASA-CASE-NPO-15220-1] c 45 N83-25217  
Moisture content and gas sampling device  
[NASA-CASE-MS-C-18866-1] c 35 N85-29213  
Two-stage gas measurement system  
[NASA-CASE-LAR-14791-1] c 35 N93-31297

## GAS COOLED REACTORS

- Gas core nuclear reactor Patent  
[NASA-CASE-LEW-10250-1] c 22 N71-28759

## GAS COOLING

- Refrigeration apparatus  
[NASA-CASE-NPO-10309] c 15 N69-23190  
Gas cooled high temperature thermocouple Patent  
[NASA-CASE-XLE-09475-1] c 33 N71-15568  
Apparatus and method for heating a material in a transparent ampoule --- crystal growth  
[NASA-CASE-MFS-25436-1] c 27 N83-36220  
Ultra-high temperature stability Joule-Thomson cooler with capability to accommodate pressure variations  
[NASA-CASE-NPO-18184-1-CU] c 35 N92-29156

## GAS DENSITY

- Dynamic sensor Patent  
[NASA-CASE-XAC-02877] c 14 N70-41681  
Method for measuring the characteristics of a gas Patent  
[NASA-CASE-XLA-03375] c 16 N71-24074  
Device for measuring light scattering wherein the measuring beam is successively reflected between a pair of parallel reflectors Patent  
[NASA-CASE-XER-11203] c 14 N71-28994  
Gaseous control system for nuclear reactors  
[NASA-CASE-XLE-04599] c 22 N72-20597  
Method of producing crystalline materials  
[NASA-CASE-NPO-10440] c 15 N72-21466  
Wide range dynamic pressure sensor  
[NASA-CASE-ARC-10263-1] c 14 N72-22438  
Apparatus for absolute pressure measurement  
[NASA-CASE-LAR-10000] c 14 N73-30394  
Method and apparatus for compensating reflection losses in a path length modulated absorption-absorption trace gas detector --- for determining density of gas  
[NASA-CASE-ARC-10631-1] c 74 N76-20958  
Method and apparatus for convection control of metallic halide vapor density in a metallic halide laser  
[NASA-CASE-NPO-15021-1] c 36 N83-10417  
Acoustic device and method for measuring gas densities  
[NASA-CASE-NPO-18155-1-CU] c 71 N93-13421

## GAS DETECTORS

- Method for detecting hydrogen gas  
[NASA-CASE-XMF-03873] c 06 N69-39733  
Hydrogen leak detection device Patent  
[NASA-CASE-MFS-11537] c 14 N71-20442  
Leak detector wherein a probe is monitored with ultraviolet radiation Patent  
[NASA-CASE-ERC-10034] c 15 N71-24896  
Miniature carbon dioxide sensor and methods  
[NASA-CASE-MS-C-13332-1] c 14 N72-21408  
Fluorescence detector for monitoring atmospheric pollutants  
[NASA-CASE-NPO-13231-1] c 45 N75-27585  
Carbon monoxide monitor --- using real time operation  
[NASA-CASE-MFS-22060-1] c 35 N75-29380  
Method and apparatus for compensating reflection losses in a path length modulated absorption-absorption trace gas detector --- for determining density of gas  
[NASA-CASE-ARC-10631-1] c 74 N76-20958  
Indicator providing continuous indication of the presence of a specific pollutant in air  
[NASA-CASE-NPO-13474-1] c 45 N76-21742  
Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c 35 N76-22509  
Cryogenic liquid sensor  
[NASA-CASE-NPO-10619-1] c 35 N77-21393  
Optically selective, acoustically resonant gas detecting transducer  
[NASA-CASE-ARC-10639-1] c 35 N78-13400  
Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c 25 N81-14015  
Stark effect spectrophone for continuous absorption spectra monitoring --- a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c 25 N81-25159  
Portable remote laser sensor for methane leak detection  
[NASA-CASE-NPO-15790-1] c 36 N85-21631  
Predictive sensor method and apparatus  
[NASA-CASE-SSC-00006-1] c 35 N91-13691
- GAS DISCHARGE TUBES**  
Self-repeating plasma generator having communicating annular and linear arc discharge passages Patent  
[NASA-CASE-XLA-03103] c 25 N71-21693
- GAS DISCHARGES**  
Parametric microwave noise generator Patent  
[NASA-CASE-XER-11019] c 09 N71-23598  
Multiplex electric discharge gas laser system  
[NASA-CASE-NPO-16433-1] c 36 N87-23961  
Etching method for photoresists or polymers  
[NASA-CASE-ARC-11873-2] c 25 N91-31258
- GAS EVOLUTION**  
Filter system for control of outgas contamination in vacuum Patent  
[NASA-CASE-MFS-14711] c 15 N71-26185
- GAS EXPANSION**  
Sealed battery gas manifold construction Patent  
[NASA-CASE-XNP-03378] c 03 N71-11051  
Refrigeration apparatus Patent  
[NASA-CASE-XNP-08877] c 15 N71-23025  
Gas operated actuator  
[NASA-CASE-NPO-11340] c 15 N72-33477  
Multicomponent gas sorption Joule-Thomson refrigeration  
[NASA-CASE-NPO-17569-1-CU] c 31 N92-15203  
Rocket engine nozzle attenuator  
[NASA-CASE-MFS-28739-1] c 20 N93-28324
- GAS FLOW**  
Fluid flow restrictor Patent  
[NASA-CASE-NPO-10117] c 15 N71-15608  
High pressure gas filter system Patent  
[NASA-CASE-MFS-12806] c 14 N71-17588  
Burst diaphragm flow initiator Patent  
[NASA-CASE-MFS-12915] c 11 N71-17600  
Method of recording a gas flow pattern Patent  
[NASA-CASE-XMF-01779] c 12 N71-20815  
Respiration monitor  
[NASA-CASE-FRC-10012] c 14 N72-17329  
Shock tube bypass piston tunnel  
[NASA-CASE-NPO-12109] c 11 N72-22245  
Fluidic proportional thruster system  
[NASA-CASE-ARC-10106-1] c 28 N72-22769  
Gas filter mounting structure  
[NASA-CASE-MS-C-12297] c 14 N72-23457  
Pressurized lighting system  
[NASA-CASE-KSC-10644] c 09 N72-27227  
Method for controlling vapor content of a gas  
[NASA-CASE-NPO-10633] c 03 N72-28025  
Gas flow control device  
[NASA-CASE-NPO-11479] c 15 N73-13462  
Compact hydrogenator  
[NASA-CASE-NPO-11682-1] c 35 N74-15127  
Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c 34 N74-27730



- Condensate removal device for heat exchanger  
[NASA-CASE-MSC-14143-1] c 77 N75-20139
- Flow measuring apparatus  
[NASA-CASE-LEW-12078-1] c 35 N75-30503
- Gas compression apparatus  
[NASA-CASE-MSC-14757-1] c 35 N78-10428
- Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c 37 N78-17384
- Covering solid, film cooled surfaces with a duplex thermal barrier coating  
[NASA-CASE-LEW-13450-1] c 31 N83-35177
- Apparatus and method for destructive removal of particles contained in flowing fluid  
[NASA-CASE-NPO-15426-1] c 35 N84-17555
- Vortex generating flow passage design for increased film cooling effectiveness  
[NASA-CASE-LEW-14039-1] c 34 N85-33433
- Technique for measuring gas conversion factors  
[NASA-CASE-LAR-13220-1] c 34 N86-12547
- Low noise lead screw positioner  
[NASA-CASE-NPO-15617-1] c 35 N87-21304
- Tank gauging apparatus and method  
[NASA-CASE-MSC-21059-3] c 35 N91-21495
- High velocity gas particulate sampling system  
[NASA-CASE-MSC-21729-1] c 34 N92-16241
- Arc/gas electrode  
[NASA-CASE-MFS-29766-1] c 33 N92-33030
- Atmospheric pressure flow reactor: Gas phase chemical kinetics under tropospheric conditions without wall effects  
[NASA-CASE-MSC-21384-2] c 35 N93-17626
- GAS GENERATORS**  
Specialized halogen generator for purification of water  
Patent  
[NASA-CASE-XLA-08913] c 14 N71-28933
- Quick disconnect coupling  
[NASA-CASE-NPO-11202] c 15 N72-25450
- Electrolytic gas operated actuator  
[NASA-CASE-NPO-11369] c 15 N73-13467
- Vortex breech high pressure gas generator  
[NASA-CASE-LAR-10549-1] c 31 N73-13898
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-1] c 37 N76-16446
- Hydrogen-rich gas generator  
[NASA-CASE-NPO-13464-1] c 44 N76-18642
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c 44 N76-29700
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13464-2] c 44 N76-29704
- Hydrogen-rich gas generator  
[NASA-CASE-NPO-13560-1] c 44 N77-10636
- GAS GUNS**  
Electric arc device for heating gases Patent  
[NASA-CASE-XAC-00319] c 25 N70-41628
- GAS HEATING**  
Bimetallic fluid displacement apparatus --- for stirring and heating stored gases and liquids  
[NASA-CASE-ARC-10441-1] c 35 N74-15126
- GAS INJECTION**  
Burning rate control of solid propellants Patent  
[NASA-CASE-XLE-03494] c 27 N71-21819
- Compact hydrogenator  
[NASA-CASE-NPO-11682-1] c 35 N74-15127
- Gas chromatograph injection system  
[NASA-CASE-ARC-10344-2] c 35 N75-26334
- In-situ laser retorting of oil shale  
[NASA-CASE-LEW-12217-1] c 43 N78-14452
- Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c 07 N78-25089
- Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c 45 N80-14579
- Solid sorbent air sampler  
[NASA-CASE-MSC-20653-1] c 35 N86-26595
- GAS IONIZATION**  
Electrostatic plasma modulator for space vehicle re-entry communication Patent  
[NASA-CASE-XLA-01400] c 07 N70-41331
- A multichannel photoionization chamber for absorption analysis Patent  
[NASA-CASE-ERC-10044-1] c 14 N71-27090
- Modulated hydrogen ion flame detector  
[NASA-CASE-ARC-10322-1] c 35 N76-18403
- Gas ion laser construction for electrically isolating the pressure gauge thereof  
[NASA-CASE-MFS-22597] c 36 N78-17366
- Charge transfer reaction laser with preionization means  
[NASA-CASE-NPO-13945-1] c 36 N78-27402
- Hydrogen hollow cathode ion source  
[NASA-CASE-LEW-12940-1] c 72 N80-33186
- Reversal electron attachment ionizer for detection of trace species  
[NASA-CASE-NPO-17596-1-CU] c 35 N89-28795

**GAS JETS**

- Apparatus and method to keep the walls of a free-space reactor free from deposits of solid materials  
[NASA-CASE-NPO-15851-1] c 37 N85-21652

**GAS LASERS**

- Method and apparatus for stabilizing a gaseous optical maser Patent  
[NASA-CASE-XGS-03644] c 16 N71-18614
- Inert gas metallic vapor laser  
[NASA-CASE-NPO-13449-1] c 36 N75-32441
- Diffused waveguiding capillary tube with distributed feedback for a gas laser  
[NASA-CASE-NPO-13544-1] c 36 N76-18428
- Gas ion laser construction for electrically isolating the pressure gauge thereof  
[NASA-CASE-MFS-22597] c 36 N78-17366
- Charge transfer reaction laser with preionization means  
[NASA-CASE-NPO-13945-1] c 36 N78-27402
- Solar pumped laser  
[NASA-CASE-LAR-12870-1] c 36 N84-16542
- Spectrophone stabilized laser with line center offset frequency control  
[NASA-CASE-NPO-15516-1] c 36 N84-22943
- Long gain length solar pumped box laser  
[NASA-CASE-MFS-12356-1] c 36 N86-29204

**GAS LUBRICANTS**

- Gas lubricant compositions Patent  
[NASA-CASE-XLE-00353] c 18 N70-39897
- Thrust bearing  
[NASA-CASE-LEW-11949-1] c 37 N76-29588
- Caniliver mounted resilient pad gas bearing  
[NASA-CASE-LEW-12569-1] c 37 N79-10418
- Dual clearance squeeze film damper  
[NASA-CASE-LEW-13506-1] c 37 N85-33490

**GAS MASERS**

- Solid state chemical source for ammonia beam maser Patent  
[NASA-CASE-XGS-01504] c 16 N70-41578
- Atomic hydrogen maser with bulb temperature control to remove wall shift in maser output frequency  
[NASA-CASE-HQN-10654-1] c 16 N73-13489
- Method of producing a storage bulb for an atomic hydrogen maser  
[NASA-CASE-NPO-13050-1] c 36 N75-15029
- Atomic standard with variable storage volume  
[NASA-CASE-GSC-11895-1] c 35 N76-15436

**GAS MIXTURES**

- Gas analyzer for bi-gaseous mixtures Patent  
[NASA-CASE-XLA-01131] c 14 N71-10774
- Vapor pressure measuring system and method Patent  
[NASA-CASE-XMS-01618] c 14 N71-20741
- Mixture separation cell Patent  
[NASA-CASE-XMS-02952] c 18 N71-20742
- Analysis of hydrogen-deuterium mixtures  
[NASA-CASE-NPO-11322] c 06 N72-25146
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c 44 N76-29700
- Hydrogen-rich gas generator  
[NASA-CASE-NPO-13560-1] c 44 N77-10636
- Chemical vapor deposition reactor --- providing uniform film thickness  
[NASA-CASE-NPO-13650-1] c 25 N79-28253
- Multicomponent gas sorption Joule-Thomson refrigeration  
[NASA-CASE-NPO-17569-1-CU] c 31 N92-15203

**GAS PIPES**

- Fluid flow restrictor Patent  
[NASA-CASE-NPO-10117] c 15 N71-15608
- Trailer shield assembly for a welding torch  
[NASA-CASE-MFS-29260-1] c 37 N90-19602

**GAS PRESSURE**

- Measuring device Patent  
[NASA-CASE-XMS-01546] c 14 N70-40233
- Dynamic sensor Patent  
[NASA-CASE-XAC-02877] c 14 N70-41681
- Wide range dynamic pressure sensor  
[NASA-CASE-ARC-10263-1] c 14 N72-22438
- Measurement of gas production of microorganisms --- using pressure sensors  
[NASA-CASE-LAR-11326-1] c 35 N75-33368
- Depressurization of arc lamps  
[NASA-CASE-NPO-10790-1] c 33 N77-21316
- Pressure limiting propellant actuating system  
[NASA-CASE-MSC-18179-1] c 20 N80-18097
- Method and apparatus for producing gas-filled hollow spheres --- target pellets for inertial confinement fusion  
[NASA-CASE-NPO-14596-3] c 31 N83-31896
- Pressure vessel flex joint  
[NASA-CASE-MSC-21748-1] c 37 N92-21727
- Converting a CO<sub>2</sub> atmosphere to a high-purity O<sub>2</sub> supply  
[NASA-CASE-LAR-14398-1] c 25 N92-30098
- Arc/gas electrode  
[NASA-CASE-MFS-29766-1] c 33 N92-33030

**GAS RECOVERY**

- Gas storage and recovery system  
[NASA-CASE-MSC-22091-1] c 31 N93-28136

**GAS STREAMS**

- Method for measuring the characteristics of a gas Patent  
[NASA-CASE-XLA-03375] c 16 N71-24074
- Stagnation pressure probe --- for measuring pressure of supersonic gas streams  
[NASA-CASE-LAR-11139-1] c 35 N74-32878
- Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c 07 N78-18067
- Simultaneous treatment of SO<sub>2</sub> containing stack gases and waste water  
[NASA-CASE-MSC-16258-1] c 45 N79-12584
- Gas levitator having fixed levitation node for containerless processing  
[NASA-CASE-MFS-25509-1] c 35 N83-24828
- High temperature sorbents for oxygen  
[NASA-CASE-NPO-18409-1-CU] c 25 N93-19025

**GAS TEMPERATURE**

- Method for measuring the characteristics of a gas Patent  
[NASA-CASE-XLA-03375] c 16 N71-24074

**GAS TRANSPORT**

- Purging means and method for Xenon arc lamps  
[NASA-CASE-NPO-11978] c 31 N78-17238

**GAS TUBES**

- Toggle mechanism for pinching metal tubes  
[NASA-CASE-GSC-12274-1] c 37 N79-28550

**GAS TUNGSTEN ARC WELDING**

- Internal wire guide for GTAW welding  
[NASA-CASE-MFS-29489-1] c 31 N90-23586
- Electrode carrying wire for GTAW welding  
[NASA-CASE-MFS-29491-1] c 31 N90-26168

**GAS TURBINE ENGINES**

- Gas turbine engine fuel control  
[NASA-CASE-LEW-11187-1] c 28 N73-19793
- Swirl can primary combustor  
[NASA-CASE-LEW-11326-1] c 23 N73-30665
- Controlled separation combustor --- airflow distribution in gas turbine engines  
[NASA-CASE-LEW-11593-1] c 20 N76-14190
- Fused silicide coatings containing discrete particles for protecting niobium alloys --- used in space shuttle thermal protection systems and turbine engine components  
[NASA-CASE-LEW-11179-1] c 27 N76-16229
- Dual output variable pitch turbopump actuation system  
[NASA-CASE-LEW-12419-1] c 07 N77-14025
- Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c 07 N77-23106
- Blade retainer assembly  
[NASA-CASE-LEW-12608-1] c 07 N77-27116
- Nickel base alloy --- for gas turbine engine stator vanes  
[NASA-CASE-LEW-12270-1] c 26 N77-32280
- Bearing seat usable in a gas turbine engine  
[NASA-CASE-LEW-12477-1] c 37 N77-32501
- Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c 37 N78-10467
- Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c 37 N78-17384
- Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-2] c 07 N78-18066
- Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c 07 N78-18067
- Automotive gas turbine fuel control  
[NASA-CASE-LEW-12785-1] c 37 N78-24545
- Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c 07 N78-25089
- Independent power generator  
[NASA-CASE-LAR-11208-1] c 44 N78-32539
- Redundant disc  
[NASA-CASE-LEW-12496-1] c 07 N78-33101
- Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-3] c 07 N79-14096
- Variable area exhaust nozzle  
[NASA-CASE-LEW-12378-1] c 07 N79-14097
- Power control for hot gas engines  
[NASA-CASE-NPO-14220-1] c 37 N81-14318
- Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c 07 N81-14999
- Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c 07 N81-19115
- Active clearance control system for a turbomachine  
[NASA-CASE-LEW-12938-1] c 07 N82-32366
- Control means for a gas turbine engine  
[NASA-CASE-LEW-14586-1] c 07 N83-31603
- Silicon-slurry/aluminate coating --- protecting gas turbine engine vanes and blades  
[NASA-CASE-LEW-13343] c 26 N83-31795
- Apparatus for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-1] c 07 N83-36029

- Tip cap for a rotor blade  
[NASA-CASE-LEW-13654-1] c 07 N84-22560
- Combustor liner construction  
[NASA-CASE-LEW-14035-1] c 07 N84-24577
- Air modulation apparatus  
[NASA-CASE-LEW-13524-1] c 07 N84-33410
- Dual clearance squeeze film damper  
[NASA-CASE-LEW-13506-1] c 37 N85-33490
- Compliant hydrodynamic fluid journal bearing  
[NASA-CASE-LEW-13670-1] c 37 N86-19606
- Method for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-2] c 07 N86-20389
- Thermal stress minimized, two component, turbine shroud seal  
[NASA-CASE-LEW-14212-1] c 37 N88-23978
- GAS TURBINES**
- Gas turbine combustor Patent  
[NASA-CASE-LEW-10286-1] c 28 N71-28915
- Gas turbine exhaust nozzle --- for noise reduction  
[NASA-CASE-LEW-11569-1] c 07 N74-15453
- Gas turbine engine with convertible accessories  
[NASA-CASE-LEW-12390-1] c 07 N78-17056
- Counter pumping debris excluder and separator --- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c 07 N78-25090
- Direct heating surface combustor  
[NASA-CASE-LEW-11877-1] c 34 N78-27357
- Apparatus and method for reducing thermal stress in a turbine rotor  
[NASA-CASE-LEW-12232-1] c 07 N79-10057
- Method and turbine for extracting kinetic energy from a stream of two-phase fluid  
[NASA-CASE-NPO-14130-1] c 34 N79-20335
- Corrosion resistant thermal barrier coating --- protecting gas turbines and other engine parts  
[NASA-CASE-LEW-13088-1] c 26 N81-25188
- Multi-heat addition turbine engine  
[NASA-CASE-LEW-15094-1] c 07 N93-22034
- GAS VALVES**
- High-temperature, high-pressure spherical segment valve Patent  
[NASA-CASE-XAC-00074] c 15 N70-34817
- Shrink-fit gas valve Patent  
[NASA-CASE-XGS-00587] c 15 N70-35087
- Thermally operated valve Patent  
[NASA-CASE-XLE-00815] c 15 N70-35407
- Transfer valve Patent  
[NASA-CASE-XAC-01158] c 15 N71-23051
- Slow opening valve --- valve design for shuttle portable oxygen system  
[NASA-CASE-MS-C-20112-1] c 37 N85-20338
- Zero-G phase detector and separator  
[NASA-CASE-LEW-14844-1] c 35 N90-22024
- Pressure wall patch  
[NASA-CASE-MFS-28724-1] c 18 N93-17061
- GAS WELDING**
- Spectral method for monitoring atmospheric contamination of inert-gas welding shields Patent  
[NASA-CASE-XMF-02039] c 15 N71-15871
- Grain refinement control in TIG arc welding  
[NASA-CASE-MS-C-19095-1] c 37 N75-19683
- GAS-LIQUID INTERACTIONS**
- Fluid control apparatus and method  
[NASA-CASE-LAR-11110-1] c 34 N75-26282
- GAS-METAL INTERACTIONS**
- Improved refractory coatings --- sputtered coatings on substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c 26 N81-16209
- Refractory coatings and method of producing the same  
[NASA-CASE-LEW-13169-1] c 26 N82-29415
- GASDYNAMIC LASERS**
- Diatom infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c 36 N75-31426
- GASEOUS DIFFUSION**
- Gas purged dry box glove Patent  
[NASA-CASE-XLE-02531] c 05 N71-23080
- Gas core nuclear reactor Patent  
[NASA-CASE-LEW-10250-1] c 22 N71-28759
- Gas diffusion liquid storage bag and method of use for storing blood  
[NASA-CASE-NPO-13930-1] c 52 N79-14749
- Drop deployment system for crystal growth apparatus  
[NASA-CASE-MFS-28422-1] c 29 N91-17250
- GASEOUS FISSION REACTORS**
- Gas core nuclear reactor Patent  
[NASA-CASE-LEW-10250-1] c 22 N71-28759
- GASEOUS ROCKET PROPELLANTS**
- Ion rocket Patent  
[NASA-CASE-XLE-00376] c 28 N70-37245
- Continuous detonation reaction engine Patent  
[NASA-CASE-XMF-06926] c 28 N71-22983
- GASES**
- Gas liquefaction and dispensing apparatus Patent  
[NASA-CASE-NPO-10070] c 15 N71-27372
- Observation window for a gas confining chamber  
[NASA-CASE-NPO-10890] c 11 N73-12265
- Combustion detector  
[NASA-CASE-LAR-10739-1] c 14 N73-16484
- Low gravity phase separator  
[NASA-CASE-MS-C-14773-1] c 35 N78-12390
- Water separator  
[NASA-CASE-XMS-01295-1] c 37 N79-21345
- System for venting gas from a liquid storage tank  
[NASA-CASE-MS-C-21253-1] c 31 N90-20254
- Tank gauging apparatus and method  
[NASA-CASE-MS-C-21059-2] c 35 N91-15511
- Atmospheric pressure flow reactor: Gas phase chemical kinetics under tropospheric conditions without wall effects  
[NASA-CASE-MS-C-21384-1] c 34 N92-16243
- Atmospheric pressure flow reactor: Gas phase chemical kinetics under tropospheric conditions without wall effects  
[NASA-CASE-MS-C-21384-2] c 35 N93-17626
- GASIFICATION**
- Mixed polyvalent-monovalent metal coating for carbon-graphite fibers  
[NASA-CASE-NPO-14987-1] c 24 N83-33950
- GASKETS**
- Cryogenic connector for vacuum use Patent  
[NASA-CASE-XGS-02441] c 15 N70-41629
- Reinforced polyquinoxaline gasket and method of preparing the same --- resistant to ionizing radiation and liquid hydrogen temperatures  
[NASA-CASE-MFS-21364-1] c 37 N74-18126
- Process for preparing perfluorotriazine elastomers and precursors thereof  
[NASA-CASE-ARC-11402-1] c 27 N84-22744
- O-ring gasket test fixture  
[NASA-CASE-MFS-28376-1] c 14 N91-21175
- GATES (CIRCUITS)**
- Flux sensing device using a tubular core with toroidal gating coil and solenoidal output coil wound thereon Patent  
[NASA-CASE-XGS-01881] c 09 N70-40123
- SCR blocking pulse gate amplifier Patent  
[NASA-CASE-XLA-07497] c 09 N71-12514
- Logic AND gate for fluid circuits Patent  
[NASA-CASE-XLA-07391] c 12 N71-17579
- Synchronous counter Patent  
[NASA-CASE-XGS-02440] c 08 N71-19432
- Increasing efficiency of switching type regulator circuits Patent  
[NASA-CASE-XMS-09352] c 09 N71-23316
- Memory device for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-2] c 60 N78-10709
- Transformer regulated self-stabilizing chopper  
[NASA-CASE-XGS-09186] c 33 N78-17295
- Controller for computer control of brushless dc motors --- automobile engines  
[NASA-CASE-NPO-13970-1] c 33 N81-20352
- Combinational logic for generating gate drive signals for phase control rectifiers  
[NASA-CASE-MFS-25208-1] c 33 N83-10345
- Pulsed phase locked loop strain monitor --- voltage controlled oscillators  
[NASA-CASE-LAR-12772-1] c 33 N83-16626
- FET charge sensor and voltage probe  
[NASA-CASE-NPO-16045-1] c 76 N87-13313
- Auto and hetero-associative memory using a 2-D optical logic gate  
[NASA-CASE-NPO-17997-1-CU] c 60 N92-33057
- GATES (OPENINGS)**
- Film feed camera having a detent means Patent  
[NASA-CASE-LAR-10686] c 14 N71-28935
- GAW-1 AIRFOIL**
- Airfoil shape for flight at subsonic speeds --- design analysis and aerodynamic characteristics of the GAW-1 airfoil  
[NASA-CASE-LAR-10585-1] c 02 N76-22154
- GEAR TEETH**
- Wobble gear drive mechanism --- for aerospace environments  
[NASA-CASE-WOO-00625] c 37 N78-17385
- Belt for transmitting power from a cogged driving member to a cogged driven member  
[NASA-CASE-GSC-12289-1] c 37 N80-32717
- GEARS**
- Precision stepping drive Patent  
[NASA-CASE-MFS-14772] c 15 N71-17692
- Bidirectional step torque filter with zero backlash characteristic Patent  
[NASA-CASE-XGS-04227] c 15 N71-21744
- Self-lubricating gears and other mechanical parts Patent  
[NASA-CASE-MFS-14971] c 15 N71-24984
- Concentric differential gearing arrangement  
[NASA-CASE-ARC-10462-1] c 37 N74-27901
- Sequencing device utilizing planetary gear set  
[NASA-CASE-MS-C-19514-1] c 37 N79-20377
- Power control for hot gas engines  
[NASA-CASE-NPO-14220-1] c 37 N81-14318
- Clutchless multiple drive source for output shaft  
[NASA-CASE-ARC-11325-1] c 37 N82-22496
- Directional gear ratio transmissions  
[NASA-CASE-LAR-12644-1] c 37 N84-28084
- Linear force device  
[NASA-CASE-MS-C-20549-2] c 35 N88-24927
- GELATION**
- Method of controlling a resin curing process --- for fiber reinforced composites  
[NASA-CASE-MS-C-21169-1] c 27 N89-29539
- GELLED ROCKET PROPELLANTS**
- Process of forming particles in a cryogenic path Patent  
[NASA-CASE-NPO-10250] c 23 N71-16212
- GELS**
- Intermittent type silica gel adsorption refrigerator Patent  
[NASA-CASE-XNP-00920] c 15 N71-15906
- Cellular thermosetting fluoropolymers and process for making them  
[NASA-CASE-GSC-13008-1] c 27 N88-23894
- Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14162-1] c 27 N90-15259
- Tissue simulating gel for medical research  
[NASA-CASE-LAR-14036-1] c 27 N91-13562
- Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14489-1] c 37 N91-27562
- Production of mulitite fibers  
[NASA-CASE-MFS-28431-1] c 24 N92-17870
- GENERAL AVIATION AIRCRAFT**
- Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c 01 N83-35992
- GENERATORS**
- Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c 34 N74-27730
- Continuous laminar smoke generator  
[NASA-CASE-LAR-13014-1] c 09 N85-21178
- A digitally controlled system for effecting and presenting a selected electrical resistance  
[NASA-CASE-MFS-29149-1] c 33 N90-19492
- Slow positron beam generator for lifetime studies  
[NASA-CASE-LAR-14250-1-SB] c 72 N91-27936
- GENETIC ENGINEERING**
- Human serum albumin crystals and method of preparation  
[NASA-CASE-MFS-28234-1] c 52 N90-20616
- GEODESY**
- Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-2] c 36 N83-29681
- GEODETIC SURVEYS**
- Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-1] c 36 N81-22344
- GEODIMETERS**
- Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-1] c 36 N81-22344
- GEOLOGICAL SURVEYS**
- Borehole geological assessment  
[NASA-CASE-NPO-14231-1] c 46 N80-10709
- Geological assessment probe  
[NASA-CASE-NPO-14558-1] c 46 N80-24906
- GEOMETRY**
- Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612
- Ice detector  
[NASA-CASE-LAR-13776-1] c 35 N88-29149
- Improving the geometric fidelity of imaging systems employing sensor arrays  
[NASA-CASE-NPO-17970-1-CU] c 43 N90-26384
- GERMANIUM**
- Germanium coated microbridge and method  
[NASA-CASE-MFS-23274-1] c 33 N78-13320
- Method of fabricating germanium and gallium arsenide devices  
[NASA-CASE-GSC-13265-1] c 76 N91-14066
- GERMANIUM ALLOYS**
- Annealing group III-V compound doped silicon-germanium alloy for improved thermo-electric conversion efficiency  
[NASA-CASE-NPO-17259-1-CU] c 76 N90-19884
- GIMBALS**
- Gimballed, partially submerged rocket nozzle Patent  
[NASA-CASE-XMF-01544] c 28 N70-34162
- Azimuth laying system Patent  
[NASA-CASE-XMF-01669] c 21 N71-23289
- Passive caging mechanism Patent  
[NASA-CASE-GSC-10306-1] c 15 N71-24694

- Hermetic sealed vibration damper Patent  
[NASA-CASE-MSC-10959] c 15 N71-26243
- Bearing and gimbal lock mechanism and spiral flex lead module Patent  
[NASA-CASE-GSC-10556-1] c 31 N71-26537
- Failure detection and control means for improved drift performance of a gimbal platform system  
[NASA-CASE-MFS-23551-1] c 04 N76-26175
- Autonomous navigation system --- gyroscopic pendulum for air navigation  
[NASA-CASE-ARC-11257-1] c 04 N81-21047
- Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c 06 N83-33882
- Apparatus for simulating an exoatmospheric structure  
[NASA-CASE-MSC-21975-1] c 14 N93-22016
- Quick acting gimbal joint  
[NASA-CASE-MSC-21918-1] c 37 N93-23076

## GLANDS (SEALS)

- Spiral groove seal  
[NASA-CASE-XLE-10326-2] c 15 N72-29488
- Circumferential shaft seal  
[NASA-CASE-LEW-12119-2] c 37 N81-26447

## GLASS

- Method for producing a solar cell having an integral protective covering  
[NASA-CASE-XGS-04531] c 03 N69-24267
- Reduced gravity liquid configuration simulator  
[NASA-CASE-XLE-02624] c 12 N69-39988
- Silicon solar cell with cover glass bonded to cell by metal pattern Patent  
[NASA-CASE-XLE-08569] c 03 N71-23449
- Apparatus for applying cover slides  
[NASA-CASE-NPO-10575] c 03 N72-25019
- Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c 37 N74-21063
- Covered silicon solar cells and method of manufacture --- with polymeric films  
[NASA-CASE-LEW-11065-2] c 44 N76-14600
- Window defect planar mapping technique  
[NASA-CASE-MSC-19442-1] c 74 N77-10899
- Method of forming shrink-fit compression seal  
[NASA-CASE-LAR-11563-1] c 37 N77-23482
- Reaction cured glass and glass coatings  
[NASA-CASE-ARC-11051-1] c 27 N78-32260
- Method of forming frozen spheres in a force-free drop tower  
[NASA-CASE-NPO-14845-1] c 27 N82-28442
- Method for milling and drilling glass  
[NASA-CASE-GSC-12636-1] c 31 N83-27058
- Acoustic bubble removal method  
[NASA-CASE-NPO-15334-1] c 71 N83-35781
- Glass heating panels and method for preparing the same from architectural reflective glass  
[NASA-CASE-NPO-15753-1] c 27 N84-33589
- Thin solar cell and lightweight array  
[NASA-CASE-LEW-14959-1] c 44 N91-27614
- Sintering silicon nitride  
[NASA-CASE-LEW-15489-1] c 27 N93-17062
- SiC fiber-reinforced Celsian glass-ceramic matrix composite  
[NASA-CASE-LEW-15264-1] c 24 N93-31293
- Method of producing a ceramic fiber-reinforced glass-ceramic matrix composite  
[NASA-CASE-LEW-15264-2] c 24 N93-31299

## GLASS COATINGS

- Method of attaching a cover glass to a silicon solar cell Patent  
[NASA-CASE-XLE-08569-2] c 03 N71-24681
- Process for glass coating an ion accelerator grid Patent  
[NASA-CASE-LEW-10278-1] c 15 N71-28582
- Method of coating solar cell with borosilicate glass and resultant product  
[NASA-CASE-GSC-11514-1] c 03 N72-24037
- Transmitting and reflecting diffuser --- using ultraviolet grade fused silica coatings  
[NASA-CASE-LAR-10385-3] c 74 N78-15879
- Method for repair of thin glass coatings --- on space shuttle orbiter tiles  
[NASA-CASE-KSC-11097-1] c 27 N82-33520
- High temperature glass thermal control structure and coating --- for application to spacecraft reusable heat shielding  
[NASA-CASE-ARC-11164-1] c 44 N83-34448

## GLASS ELECTRODES

- Liquid junction and method of fabricating the same Patent Application  
[NASA-CASE-NPO-10682] c 15 N70-34699
- Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means  
[NASA-CASE-NPO-13910-1] c 52 N79-27836

## GLASS FIBER REINFORCED PLASTICS

- Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c 24 N79-16915

- Method of manufacture of bonded fiber flywheel --- fiberglass-epoxy  
[NASA-CASE-MFS-23674-1] c 24 N81-29163

## GLASS FIBERS

- Non-magnetic battery case Patent  
[NASA-CASE-XGS-00886] c 03 N71-11053
- Lathe tool bit and holder for machining fiberglass materials  
[NASA-CASE-XLA-10470] c 15 N72-21489
- Polyimide resin-fiberglass cloth laminates for printed circuit boards  
[NASA-CASE-MFS-20408] c 18 N73-12604
- Method of repairing discontinuity in fiberglass structures  
[NASA-CASE-LAR-10416-1] c 24 N74-30001
- Fiber modified polyurethane foam for ballistic protection  
[NASA-CASE-ARC-10714-1] c 27 N76-15310
- Vacuum pressure molding technique  
[NASA-CASE-LAR-10073-1] c 37 N76-24575
- Glass compositions with a high modulus of elasticity --- nontoxic glass fibers  
[NASA-CASE-HQN-10274-1] c 27 N82-29451
- High modulus invert analog glass compositions containing beryllia  
[NASA-CASE-HQN-10931-2] c 27 N82-29452
- Method and technique for installing light-weight, fragile, high-temperature fiber insulation  
[NASA-CASE-MSC-16934-3] c 24 N84-16262
- Containerless high purity pulling process and apparatus for glass fiber  
[NASA-CASE-MFS-25905-2] c 31 N86-21718
- Quasi-containerless glass formation method and apparatus  
[NASA-CASE-MFS-28090-1] c 27 N87-21111
- Fiber-reinforced monoclinic celsian matrix composite material  
[NASA-CASE-LEW-15269-1] c 24 N93-20040
- Ceramic fiber reinforced glass-ceramic matrix composite  
[NASA-CASE-LEW-15262-1] c 24 N93-26100

## GLASS TRANSITION TEMPERATURE

- Polyimides containing the cyclobutene-3,4-dione moiety  
[NASA-CASE-LAR-14753-1] c 27 N93-25999

## GLASSWARE

- Laboratory glassware rack for seismic safety  
[NASA-CASE-ARC-11422-1] c 35 N86-20751

## GLAUCOMA

- Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12955-1] c 52 N80-14684

## GLIDE LANDINGS

- Integrated launch and emergency vehicle system  
[NASA-CASE-LAR-13780-1] c 18 N92-33013

## GLIDE PATHS

- Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c 05 N75-12930

## GLOBAL POSITIONING SYSTEM

- Navigation system and method  
[NASA-CASE-GSC-12508-1] c 04 N84-22546
- High dynamic global positioning system receiver  
[NASA-CASE-NPO-16171-1CU] c 04 N86-27270
- Multistage estimation of received carrier signal parameters under very high dynamic conditions of the receiver  
[NASA-CASE-NPO-17911-1CU] c 32 N90-27016
- System and method for measuring ocean surface currents at locations remote from land masses using synthetic aperture radar  
[NASA-CASE-NPO-17937-1CU] c 43 N91-21621

## GLOBES

- Orbital and entry tracking accessory for globes --- to provide range requirements for reentry vehicles to any landing site  
[NASA-CASE-LAR-10626-1] c 19 N74-21015

## GLOVES

- Gas purged dry box glove Patent  
[NASA-CASE-XLE-02531] c 05 N71-23080
- Restraining mechanism  
[NASA-CASE-MSC-13054] c 54 N78-17677
- Heat resistant protective hand covering  
[NASA-CASE-MSC-20261-2] c 54 N84-23113
- Heat resistant protective hand covering  
[NASA-CASE-MSC-20261-1] c 54 N84-28484
- Ballast system for maintaining constant pressure in a glove box  
[NASA-CASE-NPO-17786-1CU] c 35 N90-17104
- Glove attachment  
[NASA-CASE-MSC-21632-1] c 54 N92-34210

## GLOW DISCHARGES

- Deposition of alloy films --- on irregularly shaped metal object  
[NASA-CASE-LEW-11262-1] c 27 N74-13270

- Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c 27 N78-31233
- Electric discharge for treatment of trace contaminants  
[NASA-CASE-ARC-10975-1] c 33 N79-15245
- Use of glow discharge in fluidized beds  
[NASA-CASE-ARC-11245-1] c 28 N82-18401

## GLUCOSE

- Use of the enzyme hexokinase for the reduction of inherent light levels  
[NASA-CASE-XGS-05533] c 04 N69-27487

## GLYCOLS

- Stabilized unsaturated polyesters  
[NASA-CASE-NPO-16103-1] c 27 N85-29043

## GOLD COATINGS

- Thin window, drifted silicon, charged particle detector  
[NASA-CASE-XLE-10529] c 14 N69-23191
- Chromium electrodes for REDOX cells  
[NASA-CASE-LEW-13653-1] c 44 N84-28205

## GONDOLAS

- System for stabilizing torque between a balloon and gondola  
[NASA-CASE-GSC-11077-1] c 02 N73-13008

## GRADIENTS

- Alternating gradient photodetector  
[NASA-CASE-NPO-17235-1CU] c 35 N90-21358
- Gradient tempering process  
[NASA-CASE-MFS-28496-1] c 26 N92-34239

## GRANULAR MATERIALS

- Soil particles separator, collector and viewer Patent  
[NASA-CASE-XNP-09770] c 15 N71-20440
- Carbon granule probe microphone for leak detection --- recovery boilers  
[NASA-CASE-NPO-16027-1] c 35 N85-21597

## GRAPHITE

- Bonding graphite with fused silver chloride  
[NASA-CASE-XGS-00963] c 15 N69-39735
- Method of preparing graphite reinforced aluminum composite  
[NASA-CASE-MFS-21077-1] c 24 N75-28135
- Method of adhering bone to a rigid substrate using a graphite fiber reinforced bone cement  
[NASA-CASE-NPO-13764-1] c 27 N78-17215
- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c 28 N81-14103
- Mixed polyvalent-monovalent metal coating for carbon-graphite fibers  
[NASA-CASE-NPO-14987-1] c 24 N83-33950
- Multistage spent particle collector and a method for making same  
[NASA-CASE-LEW-13914-1] c 37 N85-33489
- Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267
- Light weight fire resistant graphite composites  
[US-PATENT-4,598,007] c 24 N86-28131
- Light weight polymer matrix composite material  
[NASA-CASE-LEW-14734-1] c 24 N89-23623
- Intercalated hybrid graphite fiber composite  
[NASA-CASE-LEW-15241-1] c 24 N92-17861
- Graphite fluoride from iodine intercalated graphitized carbon  
[NASA-CASE-LEW-15360-1] c 25 N92-34206
- Heat transfer device  
[NASA-CASE-LEW-14162-4] c 24 N93-20568
- Apparatus for intercalating large quantities of fibrous structures  
[NASA-CASE-LEW-15077-2] c 24 N93-29609

## GRAPHITE-EPOXY COMPOSITES

- Partial interlaminar separation system for composites  
[NASA-CASE-LAR-12065-1] c 24 N81-14000
- Method and device for detection of a substance --- determining carbon fiber release in fire situations  
[NASA-CASE-NPO-14940-1] c 33 N83-31954
- Method for machining holes in composite materials  
[NASA-CASE-MFS-28044-1] c 31 N87-25491

## GRAPHITIZATION

- Graphite fluoride fiber polymer composite material  
[NASA-CASE-LEW-14472-1] c 24 N91-15320
- Brominated graphitized carbon fibers  
[NASA-CASE-LEW-14698-2] c 27 N92-10090
- Graphite fluoride from iodine intercalated graphitized carbon  
[NASA-CASE-LEW-15360-1] c 25 N92-34206
- Method for producing hybrid graphite composite  
[NASA-CASE-LEW-15241-2] c 24 N93-31296

## GRATINGS (SPECTRA)

- Concave grating spectrometer Patent  
[NASA-CASE-XGS-01036] c 14 N70-40003
- Diffraction grating configuration for X-ray and ultraviolet focusing  
[NASA-CASE-GSC-12357-1] c 74 N80-21140
- Solar energy converter using surface plasma waves  
[NASA-CASE-LEW-13827-1] c 44 N85-21768

- Control system for ruling blazed, aberration corrected diffraction gratings  
[NASA-CASE-GSC-13240-1] c 35 N92-10186
- Wavelength-division multiplexed optical integrated circuit with vertical diffraction grating  
[NASA-CASE-NPO-18357-1-CU] c 74 N93-29848
- GRAVIMETERS**  
Gravimeter Patent  
[NASA-CASE-XMF-05844] c 14 N71-17587
- GRAVITATION**  
Alignment apparatus using a laser having a gravitationally sensitive cavity reflector  
[NASA-CASE-ARC-10444-1] c 16 N73-33397
- Anti-gravity device  
[NASA-CASE-MFS-22758-1] c 70 N75-26789
- GRAVITATIONAL CONSTANT**  
Gravity device Patent  
[NASA-CASE-XMF-00424] c 11 N70-38196
- GRAVITATIONAL EFFECTS**  
Locomotion and restraint aid Patent  
[NASA-CASE-ARC-10153] c 05 N71-28619
- Rotary plant growth accelerating apparatus --- weightlessness  
[NASA-CASE-ARC-10722-1] c 51 N75-25503
- Method and apparatus for simulating gravitational forces on a living organism  
[NASA-CASE-MSC-20202-1] c 54 N84-16803
- Load positioning system with gravity compensation  
[NASA-CASE-ARC-11525-1] c 37 N86-27629
- Hollow fiber clinostat for simulating microgravity in cell culture  
[NASA-CASE-MFS-28370-1] c 35 N92-31790
- GRAVITATIONAL FIELDS**  
Difference circuit Patent  
[NASA-CASE-XNP-08274] c 10 N71-13537
- Process for preparation of large-particle-size monodisperse latexes  
[NASA-CASE-MFS-25000-1] c 25 N81-19242
- Three-dimensional cell to tissue assembly process  
[NASA-CASE-MSC-21559-1] c 51 N92-34231
- GRAVITY GRADIENT SATELLITES**  
Stabilization of gravity oriented satellites Patent  
[NASA-CASE-XAC-01591] c 31 N71-17729
- Station keeping of a gravity gradient stabilized satellite Patent  
[NASA-CASE-XLA-03132] c 31 N71-22969
- GRAVITY GRADIOMETERS**  
Gravity device Patent  
[NASA-CASE-XMF-00424] c 11 N70-38196
- Gravity gradient attitude control system Patent  
[NASA-CASE-GSC-10555-1] c 21 N71-27324
- GRAZING INCIDENCE**  
Diffraction grating configuration for X-ray and ultraviolet focusing  
[NASA-CASE-GSC-12357-1] c 74 N80-21140
- Multispectral glancing incidence X-ray telescope  
[NASA-CASE-MFS-28013-1] c 89 N86-22459
- GRAZING INCIDENCE TELESCOPES**  
Multispectral glancing incidence X-ray telescope  
[NASA-CASE-MFS-28013-1] c 89 N86-22459
- GREENHOUSES**  
Method and apparatus for bio-regenerative life support system  
[NASA-CASE-MSC-21629-1] c 54 N91-31803
- GRIDS**  
Method of making dished ion thruster grids  
[NASA-CASE-LEW-11694-1] c 20 N75-18310
- Apparatus for forming dished ion thruster grids  
[NASA-CASE-LEW-11694-2] c 37 N76-14461
- Method of constructing dished ion thruster grids to provide hole array spacing compensation  
[NASA-CASE-LEW-11876-1] c 20 N76-21276
- Solar cell grid patterns  
[NASA-CASE-NPO-13087-2] c 44 N76-31666
- GRINDING (MATERIAL REMOVAL)**  
Laser apparatus for removing material from rotating objects Patent  
[NASA-CASE-MFS-11279] c 16 N71-20400
- Method for producing dispersion strengthened alloys by converting metal to a halide, comminuting, reducing the metal halide to the metal and sintering  
[NASA-CASE-LEW-10450-1] c 15 N72-25448
- Method of forming a sharp edge on an optical device  
[NASA-CASE-GSC-12348-1] c 74 N80-24149
- GRINDING MACHINES**  
Grinding arrangement for ball nose milling cutters  
[NASA-CASE-LAR-10450-1] c 37 N74-27905
- GROOVES**  
Energy absorbing device Patent  
[NASA-CASE-XMF-10040] c 15 N71-22877
- Spiral groove seal --- for hydraulic rotating shaft  
[NASA-CASE-LEW-10326-3] c 37 N74-10474
- Spiral groove seal --- for rotating shaft  
[NASA-CASE-XLE-10326-4] c 37 N74-15125
- Monogroove heat pipe design: Insulated liquid channel with bridging wick  
[NASA-CASE-MSC-20497-1] c 34 N85-29180
- Nozzle fabrication technique  
[NASA-CASE-MSC-21299-2] c 37 N91-32508
- GROUND EFFECT (COMMUNICATIONS)**  
Ground plane interference elimination by passive element  
[NASA-CASE-NPO-16632-1-CU] c 32 N87-15390
- GROUND EFFECT MACHINES**  
Gravity stabilized flying vehicle Patent  
[NASA-CASE-MSC-12111-1] c 02 N71-11039
- Air cushion lift pad Patent  
[NASA-CASE-MFS-14685] c 31 N71-15689
- Open tube guideway for high speed air cushioned vehicles  
[NASA-CASE-LAR-10256-1] c 85 N74-34672
- GROUND HANDLING**  
Supporting and protecting device Patent  
[NASA-CASE-XMF-00580] c 11 N70-35383
- GROUND STATE**  
Surface modification using low energy ground state ion beams  
[NASA-CASE-NPO-17498-1-CU] c 72 N91-14813
- GROUND STATIONS**  
Traffic control system and method Patent  
[NASA-CASE-GSC-10087-1] c 02 N71-19287
- Method and apparatus for mapping planets  
[NASA-CASE-NPO-11001] c 07 N72-21118
- Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c 32 N78-15323
- GROUND SUPPORT EQUIPMENT**  
Dynamic Doppler simulator Patent  
[NASA-CASE-XMS-05454-1] c 07 N71-12391
- Controlled release device Patent  
[NASA-CASE-XKS-03338] c 15 N71-24043
- Apparatus for measuring an aircraft's speed and height  
[NASA-CASE-LAR-12275-1] c 35 N79-18296
- GROUND WATER**  
Flow rate logging seepage meter  
[NASA-CASE-LAR-14835-1] c 35 N93-19328
- GROUND-AIR-GROUND COMMUNICATION**  
Retrodirectional optical system  
[NASA-CASE-XGS-04480] c 16 N69-27491
- Closed loop ranging system Patent  
[NASA-CASE-XNP-01501] c 21 N70-41930
- Location identification system  
[NASA-CASE-ERC-10324] c 07 N72-25173
- Satellite personal communications system  
[NASA-CASE-NPO-14480-1] c 32 N80-20448
- GROUT**  
Antenna grout replacement system  
[NASA-CASE-NPO-15202-1] c 27 N83-34043
- GUANIDINES**  
Method of making contamination-free ceramic bodies  
[NASA-CASE-LEW-14984-1] c 27 N92-16122
- Guanidine based vehicle/binders for use with oxides, metals, and ceramics  
[NASA-CASE-LEW-15314-1] c 27 N92-23461
- Guanidine based vehicle/binders for use with oxides, metals, and ceramics  
[NASA-CASE-LEW-15314-2] c 27 N93-28423
- GUARDS (SHIELDS)**  
Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c 31 N81-19343
- Trailer shield assembly for a welding torch  
[NASA-CASE-MFS-29260-1] c 37 N90-19602
- GUIDANCE (MOTION)**  
Gravity stabilized flying vehicle Patent  
[NASA-CASE-MSC-12111-1] c 02 N71-11039
- Adjustable attitude guide device Patent  
[NASA-CASE-XLA-07911] c 15 N71-15571
- Film feed camera having a detent means Patent  
[NASA-CASE-LAR-10686] c 14 N71-28935
- Two component bearing Patent  
[NASA-CASE-XLA-00013] c 15 N71-29136
- Cable stabilizer for open shaft cable operated elevators  
[NASA-CASE-KSC-10513] c 15 N72-25453
- Thumb-actuated two-axis controller  
[NASA-CASE-ARC-11372-1] c 08 N86-27288
- GUIDANCE SENSORS**  
Light sensitive digital aspect sensor Patent  
[NASA-CASE-XGS-00359] c 14 N70-34158
- Guidance and maneuver analyzer Patent  
[NASA-CASE-XNP-09572] c 14 N71-15621
- Optical machine tool alignment indicator Patent  
[NASA-CASE-XAC-09489-1] c 15 N71-26673
- Light sensor  
[NASA-CASE-NPO-11311] c 14 N72-25414
- Sun direction detection system  
[NASA-CASE-NPO-13722-1] c 74 N77-22951
- Sun sensing guidance system for high altitude aircraft  
[NASA-CASE-FRC-11052-1] c 04 N82-23231
- Phase sensitive guidance sensor for wire-following vehicles  
[NASA-CASE-NPO-15341-1] c 35 N84-33769
- GUN LAUNCHERS**  
Self-obturator, gas operated launcher  
[NASA-CASE-NPO-11013] c 11 N72-22247
- GUN PROPELLANTS**  
Nitramine propellants --- gun propellant burning rate  
[NASA-CASE-NPO-14103-1] c 28 N78-31255
- Hypervelocity gun --- using both electric and chemical energy for projectile propulsion  
[NASA-CASE-XLE-03186-1] c 09 N79-21084
- GUNN EFFECT**  
Voltage tunable Gunn-type microwave generator Patent  
[NASA-CASE-XER-07894] c 09 N71-18721
- Shielded cathode mode bulk effect devices  
[NASA-CASE-ERC-10119] c 26 N72-21701
- Gunn-type solid state devices  
[NASA-CASE-XER-07895] c 26 N72-25679
- Magnetically actuated tuning method for Gunn oscillators  
[NASA-CASE-NPO-12106] c 09 N73-15235
- GUNS**  
Method of peening and portable peening gun  
[NASA-CASE-MFS-23047-1] c 37 N76-18454
- GUNS (ORDNANCE)**  
Ignitability test method and apparatus  
[NASA-CASE-LAR-14454-1] c 25 N91-32196
- GYNECOLOGY**  
Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c 52 N82-22875
- GYRATORS**  
Gyrator type circuit Patent  
[NASA-CASE-XAC-10608-1] c 09 N71-12517
- Gyrator employing field effect transistors  
[NASA-CASE-MFS-21433] c 09 N73-20232
- Integrated P-channel MOS gyrator  
[NASA-CASE-MFS-22343-1] c 33 N74-34638
- Integrable power gyrator --- with Z-matrix design using parallel transistors  
[NASA-CASE-MFS-22342-1] c 33 N75-30428
- GYROSCOPES**  
Externally pressurized fluid bearing Patent  
[NASA-CASE-XMF-00515] c 15 N70-34664
- Air bearing Patent  
[NASA-CASE-XMF-00339] c 15 N70-39896
- Spacecraft experiment pointing and attitude control system Patent  
[NASA-CASE-XLA-05464] c 21 N71-14132
- Temperature compensated digital inertial sensor --- circuit for maintaining inertial element of gyroscope or accelerometer at constant position  
[NASA-CASE-NPO-13044-1] c 35 N74-15094
- All sky pointing attitude control system  
[NASA-CASE-ARC-10716-1] c 35 N77-20399
- GYROSCOPIC PENDULUMS**  
Autonomous navigation system --- gyroscopic pendulum for air navigation  
[NASA-CASE-ARC-11257-1] c 04 N81-21047
- GYROSTABILIZERS**  
Passive dual spin misalignment compensators --- gyro stabilized device  
[NASA-CASE-GSC-11479-1] c 35 N74-28097
- Angular momentum control device used for stabilization of space vehicles and the like  
[NASA-CASE-LAR-11051-1] c 15 N76-14158
- Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c 06 N83-33882

## H

## HABITATS

- Method and apparatus for bio-regenerative life support system  
[NASA-CASE-MSC-21629-1] c 54 N91-31803
- Pressure wall patch  
[NASA-CASE-MFS-28724-1] c 18 N93-17061

## HAFNIUM

- Thermal shock resistant hafnia ceramic material  
[NASA-CASE-LAR-10894-1] c 18 N73-14584

## HALIDES

- Method for producing dispersion strengthened alloys by converting metal to a halide, comminuting, reducing the metal halide to the metal and sintering  
[NASA-CASE-LEW-10450-1] c 15 N72-25448
- Zinc-halide battery with molten electrolyte  
[NASA-CASE-NPO-11961-1] c 44 N76-18643

## HALL EFFECT

- Hall current measuring apparatus having a series resistor for temperature compensation Patent  
[NASA-CASE-XAC-01662] c 14 N71-23037
- Brushless direct current tachometer Patent  
[NASA-CASE-MFS-20385] c 09 N71-24904

# HALL GENERATORS

- Hall effect transducer  
[NASA-CASE-LAR-10620-1] c 09 N72-25255
- Redundant speed control for brushless Hall effect motor  
[NASA-CASE-MFS-20207-1] c 09 N73-32107
- Hall effect magnetometer  
[NASA-CASE-LEW-11632-2] c 35 N75-13213
- Magnetic field control --- electromechanical torquing device  
[NASA-CASE-MFS-23828-1] c 33 N82-26569

# HALL GENERATORS

- Hall current measuring apparatus having a series resistor for temperature compensation Patent  
[NASA-CASE-XAC-01662] c 14 N71-23037

# HALOGENS

- Modified polyurethane foams for fuel-fire Patent  
[NASA-CASE-ARC-10098-1] c 06 N71-24739

# HAMMERS

- Apparatus for making diamonds  
[NASA-CASE-MFS-20698] c 15 N72-20446

# HAND (ANATOMY)

- Mechanically actuated triggered hand  
[NASA-CASE-MFS-20413] c 15 N72-21463
- Therapeutic hand exerciser  
[NASA-CASE-LAR-11667-1] c 52 N76-19785
- Compact artificial hand  
[NASA-CASE-NPO-13906-1] c 54 N79-24652
- Bar-holding prosthetic limb  
[NASA-CASE-MFS-28481-1] c 54 N93-14870

# HANDLES

- Releasable clamping apparatus  
[NASA-CASE-MFS-28192-1] c 37 N90-17154
- Extra-vehicular activity translation tool  
[NASA-CASE-MSC-21955-1] c 37 N93-14842

# HANDLING EQUIPMENT

- Supporting and protecting device Patent  
[NASA-CASE-XMF-00580] c 11 N70-35383
- Device for handling printed circuit cards Patent  
[NASA-CASE-MFS-20453] c 15 N71-29133

# HARDENING (MATERIALS)

- Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c 26 N75-29236

# HARDNESS

- Deposition of diamondlike carbon films  
[NASA-CASE-LEW-14080-1] c 31 N85-20153

# HARMONIC GENERATIONS

- Millimeter-wave monolithic diode-grid frequency multiplier  
[NASA-CASE-NPO-17258-1-CU] c 33 N91-14551

# HARMONIC GENERATORS

- Wide band doubler and sine wave quadrature generator  
[NASA-CASE-NPO-11133] c 10 N72-20223

# HARNESSES

- Pressure suit tie-down mechanism Patent  
[NASA-CASE-XMS-00784] c 05 N71-12335
- One hand backpack harness  
[NASA-CASE-LAR-10102-1] c 05 N72-23085
- Shoulder harness and lap belt restraint system  
[NASA-CASE-ARC-10519-2] c 05 N75-25915

# HATCHES

- Emergency escape system Patent  
[NASA-CASE-MSC-12086-1] c 05 N71-12345
- Hatch cover  
[NASA-CASE-MSC-21356-1] c 18 N90-19278
- Double face sealing device  
[NASA-CASE-MFS-28521-1] c 37 N91-26542

# HAZARDS

- Hazards protection for space suits and spacecraft  
[NASA-CASE-MSC-21366-1] c 54 N90-25498

# HEAD-UP DISPLAYS

- Heads up display  
[NASA-CASE-LAR-12630-1] c 06 N84-27733

# HEART FUNCTION

- Ratemeter  
[NASA-CASE-MFS-20418] c 14 N73-24473
- Ultrasonic biomedical measuring and recording apparatus --- for recording motion of internal organs such as heart valves  
[NASA-CASE-ARC-10597-1] c 52 N74-20726

# HEART RATE

- Digital cardiometer system Patent  
[NASA-CASE-XMS-02399] c 05 N71-22896
- Ratemeter  
[NASA-CASE-MFS-20418] c 14 N73-24473
- Digital computing cardiometer  
[NASA-CASE-MFS-20284-1] c 52 N74-12778
- Pulse transducer with artifact signal attenuator --- heart rate sensors  
[NASA-CASE-FRC-11012-1] c 52 N80-23969
- Passive fetal monitoring sensor  
[NASA-CASE-LAR-14088-1-CU] c 35 N92-33016

# HEAT

- Thermionic converter with current augmented by self induced magnetic field Patent  
[NASA-CASE-XLE-01903] c 22 N71-23599

# HEAT EXCHANGERS

- Electro-thermal rocket Patent  
[NASA-CASE-XLE-00267] c 28 N70-33356
- Space suit heat exchanger Patent  
[NASA-CASE-XMS-09571] c 05 N71-19439
- Dual solid cryogenics for spacecraft refrigeration Patent  
[NASA-CASE-GSC-10188-1] c 23 N71-24725
- Shell side liquid metal boiler  
[NASA-CASE-NPO-10831] c 33 N72-20915
- Helium refrigerator and method for decontaminating the refrigerator  
[NASA-CASE-NPO-10634] c 23 N72-25619
- Condensate removal device for heat exchanger  
[NASA-CASE-MSC-14143-1] c 77 N75-20139
- Heat exchanger system and method  
[NASA-CASE-LAR-10799-2] c 34 N76-17317
- Heat transfer device  
[NASA-CASE-MFS-22938-1] c 34 N76-18374
- Heat exchanger  
[NASA-CASE-MFS-22991-1] c 34 N77-10463
- Flat-plate heat pipe  
[NASA-CASE-GSC-11998-1] c 34 N77-32413
- Combustor --- low nitrogen oxide formation  
[NASA-CASE-NPO-13958-1] c 25 N79-11151
- Fuel delivery system including heat exchanger means  
[NASA-CASE-LEW-12793-1] c 37 N79-11403
- Heat exchanger --- rocket combustion chambers and cooling systems  
[NASA-CASE-LEW-12252-1] c 34 N79-13288
- Heat exchanger and method of making --- bonding rocket chambers with a porous metal matrix  
[NASA-CASE-LEW-12441-1] c 34 N79-13289
- Thermal energy transformer  
[NASA-CASE-NPO-14058-1] c 44 N79-18443
- Portable breathing system --- a breathing apparatus using a rebreathing system of heat exchangers for carbon dioxide removal  
[NASA-CASE-MSC-16182-1] c 54 N80-10799
- Heat exchanger and method of making --- rocket lining  
[NASA-CASE-LEW-12441-2] c 34 N80-24573
- Heat exchanger and method of making  
[NASA-CASE-LEW-12441-3] c 44 N81-24519
- Cycling Joule Thomson refrigerator  
[NASA-CASE-NPO-15251-1] c 31 N83-31897
- Reciprocating magnetic refrigerator employing tandem porous matrices within a reciprocating displacer  
[NASA-CASE-NPO-16257-1] c 31 N85-29082
- Heat exchanger for electrothermal devices  
[NASA-CASE-LEW-14037-1] c 20 N87-16875
- Monogroove cold plate  
[NASA-CASE-MSC-20946-1] c 34 N87-28867
- High effectiveness contour matching contact heat exchanger  
[NASA-CASE-MSC-20840-1] c 34 N88-29132
- Capillary heat transport and fluid management device  
[NASA-CASE-MFS-28217-1] c 34 N89-14392
- Pressurized bellows flat contact heat exchanger interface  
[NASA-CASE-MSC-21271-1] c 34 N90-21999
- Thermal power transfer system using applied potential difference to sustain operating pressure difference  
[NASA-CASE-NPO-18034-1-CU] c 44 N92-16457
- Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-1] c 34 N92-28752
- Ultra-high temperature stability Joule-Thomson cooler with capability to accommodate pressure variations  
[NASA-CASE-NPO-18184-1-CU] c 35 N92-29156
- Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-2] c 34 N92-30024

# HEAT FLUX

- Heat flux sensor assembly  
[NASA-CASE-XMS-05909-1] c 14 N69-27459
- Heat flux measuring system Patent  
[NASA-CASE-XFR-03802] c 33 N71-23085
- Radial heat flux transformer  
[NASA-CASE-NPO-10828] c 33 N72-17948
- Plug-type heat flux gauge  
[NASA-CASE-LEW-14967-1] c 35 N91-31608
- Method of producing a plug-type heat flux gauge  
[NASA-CASE-LEW-14967-2] c 35 N92-22038
- Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-1] c 34 N92-28752
- Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-2] c 34 N92-30024

# HEAT MEASUREMENT

- Thermal detector of electromagnetic energy by means of a vibrating electrode Patent  
[NASA-CASE-XAC-10768] c 09 N71-18830
- Specific wavelength colorimeter --- for measuring given solute concentration in test sample  
[NASA-CASE-MSC-14081-1] c 35 N74-27860
- Method and device for determining heats of combustion of gaseous hydrocarbons  
[NASA-CASE-LAR-13528-1] c 25 N88-29002

# SUBJECT INDEX

# HEAT OF COMBUSTION

- Method and device for determining heats of combustion of gaseous hydrocarbons  
[NASA-CASE-LAR-13528-1] c 25 N88-29002

# HEAT OF VAPORIZATION

- Pumped two-phase heat transfer loop  
[NASA-CASE-MSC-20841-1] c 34 N87-22950

# HEAT PIPES

- Heat pipe thermionic diode power system Patent  
[NASA-CASE-XMF-05843] c 03 N71-11055
- Microwave power receiving antenna Patent  
[NASA-CASE-MFS-20333] c 09 N71-13486
- Isothermal cover with thermal reservoirs Patent  
[NASA-CASE-MFS-20355] c 33 N71-25353
- Structural heat pipe --- for spacecraft wall thermal insulation system  
[NASA-CASE-GSC-11619-1] c 34 N75-12222
- Method of forming a wick for a heat pipe  
[NASA-CASE-NPO-13391-1] c 34 N76-27515
- Production of I-123  
[NASA-CASE-LEW-11390-3] c 25 N76-29379
- Heat pipe with dual working fluids  
[NASA-CASE-ARC-10198] c 34 N78-17336
- Multi-chamber controllable heat pipe  
[NASA-CASE-ARC-10199] c 34 N78-17337
- Thermal control canister  
[NASA-CASE-GSC-12253-1] c 34 N79-31523
- High thermal power density heat transfer --- thermionic converters  
[NASA-CASE-LEW-12950-1] c 34 N82-11399
- Heat pipes containing alkali metal working fluid  
[NASA-CASE-LEW-12253-1] c 74 N83-19596
- Heat pipe thermal switch  
[NASA-CASE-GSC-12812-1] c 34 N83-35307
- Thermal control system --- removing waste heat from industrial process spacecraft  
[NASA-CASE-GSC-12771-1] c 34 N84-14461
- Heat pipe cooled probe  
[NASA-CASE-LAR-12588-1] c 34 N85-21568
- High thermal power density heat transfer apparatus providing electrical isolation at high temperature using heat pipes  
[NASA-CASE-LEW-12950-2] c 34 N85-29179
- Multi-leg heat pipe evaporator  
[NASA-CASE-MSC-20812-1] c 34 N86-27593
- Monogroove cold plate  
[NASA-CASE-MSC-20946-1] c 34 N87-28867
- Space vehicle thermal rejection system  
[NASA-CASE-LAR-13738-1] c 18 N87-29586
- Polymeric heat pipe wick  
[NASA-CASE-GSC-13019-1] c 34 N88-29133
- Reusable high-temperature heat pipes and heat pipe panels  
[NASA-CASE-LAR-13761-1] c 34 N90-20323
- Ceramic heat pipe wick  
[NASA-CASE-GSC-13199-1] c 27 N90-23541
- Heat tube device  
[NASA-CASE-KSC-11395-1-CU] c 34 N91-21473
- Solar thermal energy receiver  
[NASA-CASE-LEW-14949-1] c 44 N92-29143

# HEAT PUMPS

- Thermal pump-compressor for space use Patent  
[NASA-CASE-XLA-00377] c 33 N71-17610
- Manually actuated heat pump  
[NASA-CASE-NPO-10677] c 05 N72-11084
- Pump for delivering heated fluids  
[NASA-CASE-NPO-11417] c 15 N73-24513
- Magnetic heat pumping  
[NASA-CASE-LEW-12508-1] c 34 N78-17335
- Cooling system for high speed aircraft  
[NASA-CASE-LAR-12406-1] c 05 N81-26114
- Magnetic heat pumping  
[NASA-CASE-LEW-12508-3] c 34 N83-29625
- Ceramic heat pipe wick  
[NASA-CASE-GSC-13199-1] c 27 N90-23541
- Convergent strand array liquid pumping system  
[NASA-CASE-NPO-17301-1-CU] c 31 N90-23587

# HEAT RADIATORS

- Capillary radiator Patent  
[NASA-CASE-XLE-03307] c 33 N71-14035
- Radiator deployment actuator Patent  
[NASA-CASE-MSC-11817-1] c 15 N71-26611
- Space simulation and radiative property testing system and method Patent  
[NASA-CASE-MFS-20096] c 14 N71-30026
- Space vehicle thermal rejection system  
[NASA-CASE-LAR-13738-1] c 18 N87-29586
- Arc-textured high emittance radiator surfaces  
[NASA-CASE-LEW-14679-1] c 27 N91-25296
- Lunar radiator shade  
[NASA-CASE-MSC-21868-1] c 54 N92-21589

# HEAT RESISTANT ALLOYS

- High temperature nickel-base alloy Patent  
[NASA-CASE-XLE-00151] c 17 N70-33283
- Nickel-base alloy Patent  
[NASA-CASE-XLE-00283] c 17 N70-36616

- High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-02991] c 17 N71-16025
- Brazing alloy Patent  
[NASA-CASE-XNP-03063] c 17 N71-23365
- Method of forming superalloys  
[NASA-CASE-LEW-10805-1] c 15 N73-13465
- Method of making pressure tight seal for super alloy  
[NASA-CASE-LAR-10170-1] c 37 N74-11301
- Method of forming articles of manufacture from superalloy powders  
[NASA-CASE-LEW-10805-2] c 37 N74-13179
- Refractory porcelain enamel passive control coating for high temperature alloys  
[NASA-CASE-MFS-22324-1] c 27 N75-27160
- Cermet composition and method of fabrication --- heat resistant alloys and powders  
[NASA-CASE-NPO-13120-1] c 27 N76-15311
- Metallic hot wire anemometer --- for high speed wind tunnel tests  
[NASA-CASE-ARC-10911-1] c 35 N77-20400
- Method of growing composites of the type exhibiting the Soret effect --- improved structure of eutectic alloy crystals  
[NASA-CASE-MFS-22926-1] c 24 N77-27187
- Directionally solidified eutectic gamma plus beta nickel-base superalloys  
[NASA-CASE-LEW-12906-1] c 26 N77-32279
- Nickel base alloy --- for gas turbine engine stator vanes  
[NASA-CASE-LEW-12270-1] c 26 N77-32280
- Directionally solidified eutectic gamma-gamma nickel-base superalloys  
[NASA-CASE-LEW-12905-1] c 26 N78-18183
- Coating with overlay metallic-cermet alloy systems  
[NASA-CASE-LEW-13639-2] c 26 N84-27855
- Heat treatment for superalloy  
[NASA-CASE-LEW-14262-1] c 26 N87-28647
- Elevated temperature aluminum alloys  
[NASA-CASE-LAR-13632-1] c 26 N87-29650
- Directional solidification of superalloys  
[NASA-CASE-MFS-28314-1] c 26 N91-14462
- Metallic threaded composite fastener  
[NASA-CASE-MSC-21580-1] c 37 N92-21726
- High-temperature, bellows hybrid seal  
[NASA-CASE-LEW-15570-1] c 37 N93-19027
- High temperature creep and oxidation resistant chromium silicide matrix alloy containing molybdenum  
[NASA-CASE-LEW-15697-1] c 26 N93-29172
- Oxidation resistant overlay coatings for low expansion substrates  
[NASA-CASE-LEW-15154-2] c 27 N93-31300
- HEAT SHIELDING**
- Heat flux sensor assembly  
[NASA-CASE-XMS-05909-1] c 14 N69-27459
- Heat shield oven  
[NASA-CASE-XMS-04318] c 15 N69-27871
- Heat shield Patent  
[NASA-CASE-XMS-00486] c 33 N70-33344
- Sandwich panel construction Patent  
[NASA-CASE-XLA-00349] c 33 N70-37979
- Hypersonic reentry vehicle Patent  
[NASA-CASE-XMS-04142] c 31 N70-41631
- Transpirationally cooled heat ablation system Patent  
[NASA-CASE-XMS-02677] c 31 N70-42075
- Azine polymers and process for preparing the same Patent  
[NASA-CASE-XMF-08656] c 06 N71-11242
- Synthesis of polymeric Schiff bases by reaction of acetals and amine compounds Patent  
[NASA-CASE-XMF-08652] c 06 N71-11243
- Lightweight refractory insulation and method of preparing the same Patent  
[NASA-CASE-XMF-05279] c 18 N71-16124
- Thermal radiation shielding Patent  
[NASA-CASE-XLE-03432] c 33 N71-24145
- Spacecraft Patent  
[NASA-CASE-MSC-13047-1] c 31 N71-25434
- Fabric for micrometeoroid protection garment Patent  
[NASA-CASE-MSC-12109] c 18 N71-26285
- Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles  
[NASA-CASE-MSC-12619-2] c 27 N79-12221
- Thermal insulation protection means  
[NASA-CASE-MSC-12737-1] c 24 N79-25142
- Installing fiber insulation  
[NASA-CASE-MSC-16973-1] c 37 N81-14317
- Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures  
[NASA-CASE-MSC-18134-1] c 37 N81-15363
- Multilayer thermal protection system  
[NASA-CASE-LAR-12620-1] c 24 N82-32417
- High temperature silicon carbide impregnated insulating fabrics  
[NASA-CASE-MSC-18832-1] c 27 N83-18908
- Mechanical fastener  
[NASA-CASE-LAR-12738-2] c 37 N85-30335

## HEAT SINKS

- Thermal conductive connection and method of making same Patent  
[NASA-CASE-XMS-02087] c 09 N70-41717
- Constant temperature heat sink for calorimeters Patent  
[NASA-CASE-XMF-04208] c 33 N71-29051
- Tubular sublimator evaporator heat sink  
[NASA-CASE-ARC-10912-1] c 34 N77-19353
- Compact pulsed laser having improved heat conductance  
[NASA-CASE-NPO-13147-1] c 36 N77-25502
- Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c 15 N78-32168
- Electroexplosive device  
[NASA-CASE-NPO-13858-1] c 28 N79-11231
- Thermal control canister  
[NASA-CASE-GSC-12253-1] c 34 N79-31523
- Heat pipe thermal switch  
[NASA-CASE-GSC-12812-1] c 34 N83-35307
- Self-actuating heat switches for redundant refrigeration systems  
[NASA-CASE-NPO-17085-1-CU] c 31 N89-12785
- High temperature refractory member with radiation emissive overcoat  
[NASA-CASE-NPO-17122-1-CU] c 27 N91-14489
- Cooling apparatus and couplings therefor  
[NASA-CASE-ARC-11921-1] c 34 N92-11286
- Semiconductor cooling apparatus  
[NASA-CASE-LEW-14162-3] c 24 N93-29614
- HEAT SOURCES**
- Conically shaped cavity radiometer with a dual purpose cone winding Patent  
[NASA-CASE-XNP-09701] c 14 N71-26475
- Thermally cascaded thermoelectric generator  
[NASA-CASE-NPO-10753] c 03 N72-26031
- Protected isotope heat source --- for atmospheric reentry protection and heat transmission to spacecraft  
[NASA-CASE-LEW-11227-1] c 73 N75-30876
- Portable electrophoresis apparatus using minimum electrolyte  
[NASA-CASE-NPO-13274-1] c 25 N79-10163
- Low gravity exothermic heating/cooling apparatus  
[NASA-CASE-MSC-25707-1] c 35 N85-29214
- High temperature electric arc furnace and method  
[NASA-CASE-MFS-28281-1] c 09 N90-23415
- Method and apparatus for thermographically and quantitatively analyzing a structure for disbands and/or inclusions  
[NASA-CASE-LAR-14559-1] c 38 N92-29829
- HEAT STORAGE**
- Solar energy trap  
[NASA-CASE-MFS-22744-1] c 44 N76-24696
- Thermal energy storage system --- operating on superheating of liquids  
[NASA-CASE-MFS-23167-1] c 44 N76-31667
- Saltless solar pond  
[NASA-CASE-NPO-15808-1] c 44 N84-34792
- Stable density stratification solar pond  
[NASA-CASE-NPO-15419-2] c 44 N85-30474
- Pulse thermal energy transport/storage system  
[NASA-CASE-LEW-15235-1] c 34 N92-29125
- HEAT TRANSFER**
- Thermal switch Patent  
[NASA-CASE-XNP-00463] c 33 N70-36847
- Sandwich panel construction Patent  
[NASA-CASE-XLA-00349] c 33 N70-37979
- Apparatus for transferring cryogenic liquids Patent  
[NASA-CASE-XLE-00345] c 15 N70-38020
- Method of improving heat transfer characteristics in a nucleate boiling process Patent  
[NASA-CASE-XMS-04268] c 33 N71-16277
- Transmission line thermal short Patent  
[NASA-CASE-XNP-09775] c 09 N71-20445
- Heat sensing instrument Patent  
[NASA-CASE-XLA-01551] c 14 N71-22989
- Fluid phase analyzer Patent  
[NASA-CASE-NPO-10691] c 14 N71-26199
- Heat conductive resiliently compressible structure for space electronics package modules Patent  
[NASA-CASE-MSC-12389] c 33 N71-29052
- Space simulation and radiative property testing system and method Patent  
[NASA-CASE-MFS-20096] c 14 N71-30026
- Manually actuated heat pump  
[NASA-CASE-NPO-10677] c 05 N72-11084
- High intensity radiant energy pulse source having means for opening shutter when light flux has reached a desired level  
[NASA-CASE-ARC-10178-1] c 09 N72-17152
- Apparatus for sensing temperature  
[NASA-CASE-XLE-05230] c 14 N72-27410
- Thermal control system for a spacecraft modular housing  
[NASA-CASE-GSC-11018-1] c 31 N73-30829

- Thermal flux transfer system  
[NASA-CASE-NPO-12070-1] c 28 N73-32606
- Electrostatically controlled heat shutter  
[NASA-CASE-NPO-11942-1] c 33 N73-32818
- Heat transfer device  
[NASA-CASE-NPO-11120-1] c 34 N74-18552
- Heat exchanger  
[NASA-CASE-MFS-22991-1] c 34 N77-10463
- Heat pipe with dual working fluids  
[NASA-CASE-ARC-10198] c 34 N78-17336
- Low cost cryostat  
[NASA-CASE-NPO-14513-1] c 35 N81-14287
- Heat exchanger and method of making  
[NASA-CASE-LEW-12441-3] c 44 N81-24519
- Thermochemical generation of hydrogen  
[NASA-CASE-NPO-15015-1] c 25 N82-28368
- Heat pipes containing alkali metal working fluid  
[NASA-CASE-LEW-12253-1] c 74 N83-19596
- Automatic thermal switch --- spacecraft applications  
[NASA-CASE-GSC-12553-1] c 34 N83-28356
- Heat pipe thermal switch  
[NASA-CASE-GSC-12812-1] c 34 N83-35307
- Tip cap for a rotor blade  
[NASA-CASE-LEW-13654-1] c 07 N84-22560
- Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c 37 N84-22958
- High thermal power density heat transfer apparatus providing electrical isolation at high temperature using heat pipes  
[NASA-CASE-LEW-12950-2] c 34 N85-29179
- Monogroove heat pipe design: Insulated liquid channel with bridging wick  
[NASA-CASE-MSC-20497-1] c 34 N85-29180
- Pumped two-phase heat transfer loop  
[NASA-CASE-MSC-20841-1] c 34 N87-22950
- Pumped two-phase heat transfer loop  
[NASA-CASE-MSC-20841-2] c 34 N88-23958
- Method and apparatus for growing crystals  
[NASA-CASE-MFS-28137-1] c 76 N88-24544
- Pressurized bellows flat contact heat exchanger interface  
[NASA-CASE-MSC-21271-1] c 34 N90-21999
- Hydrodynamic skin-friction reduction  
[NASA-CASE-LAR-14078-1-CU] c 34 N90-27071
- Heat transfer device and method of making the same  
[NASA-CASE-LEW-14162-1] c 34 N91-13668
- Acoustic transducer apparatus with reduced thermal conduction  
[NASA-CASE-NPO-17620-1-CU] c 71 N91-14808
- Heat tube device  
[NASA-CASE-KSC-11395-1-CU] c 34 N91-21473
- Flexible thermal apparatus for mounting of thermoelectric cooler  
[NASA-CASE-NPO-17806-1-CU] c 31 N91-27385
- Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-1] c 34 N92-28752
- Pulse thermal energy transport/storage system  
[NASA-CASE-LEW-15235-1] c 34 N92-29125
- Solar thermal energy receiver  
[NASA-CASE-LEW-14949-1] c 44 N92-29143
- Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-2] c 34 N92-30024
- Heat transfer device  
[NASA-CASE-LEW-14162-4] c 24 N93-20568
- Multi-heat addition turbine engine  
[NASA-CASE-LEW-15094-1] c 07 N93-22034
- Semiconductor cooling apparatus  
[NASA-CASE-LEW-14162-3] c 24 N93-29614
- HEAT TRANSMISSION**
- Heat flow calorimeter --- measures output of Ni-Cd batteries  
[NASA-CASE-GSC-11434-1] c 34 N74-27859
- Protected isotope heat source --- for atmospheric reentry protection and heat transmission to spacecraft  
[NASA-CASE-LEW-11227-1] c 73 N75-30876
- Heat transparent high intensity high efficiency solar cell  
[NASA-CASE-LEW-12892-1] c 44 N83-14692
- Method and apparatus for thermographically and quantitatively analyzing a structure for disbands and/or inclusions  
[NASA-CASE-LAR-14559-1] c 38 N92-29829
- HEAT TREATMENT**
- High-speed infrared furnace  
[NASA-CASE-XLE-10466] c 17 N69-25147
- Heat shield oven  
[NASA-CASE-XMS-04318] c 15 N69-27871
- Method for molding compounds Patent  
[NASA-CASE-XLA-01091] c 15 N71-10672
- Method of producing refractory bodies having controlled porosity Patent  
[NASA-CASE-LEW-10393-1] c 17 N71-15468
- Inorganic thermal control pigment Patent  
[NASA-CASE-XNP-02139] c 18 N71-24184
- Thermal compression bonding of interconnectors  
[NASA-CASE-GSC-10303] c 15 N72-22487



- Method of heat treating a formed powder product material  
[NASA-CASE-LEW-10805-3] c 26 N74-10521
- Diffusion welding --- heat treatment of nickel alloys following single step vacuum welding process  
[NASA-CASE-LEW-11388-2] c 37 N74-21055
- Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c 54 N75-27761
- Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c 26 N75-29236
- Method for detecting pollutants --- through chemical reactions and heat treatment  
[NASA-CASE-LAR-11405-1] c 45 N76-31714
- Method of producing complex aluminum alloy parts of high temper, and products thereof  
[NASA-CASE-MSC-19693-1] c 26 N78-24333
- Bakeable McLeod gauge  
[NASA-CASE-XGS-01293-1] c 35 N79-33450
- Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c 26 N80-28492
- Active hold-down for heat treating  
[NASA-CASE-NPO-16892-1-CU] c 37 N87-14704
- Heat treatment for superalloy  
[NASA-CASE-LEW-14262-1] c 26 N87-28647
- Method of preparing fiber reinforced ceramic material  
[NASA-CASE-LEW-14392-1] c 27 N87-28656
- Cellular thermosetting fluoropolymers and process for making them  
[NASA-CASE-GSC-13008-1] c 27 N88-23894
- Solidification processing of alloys using an applied electric field  
[NASA-CASE-MFS-26083-1-CU] c 26 N90-26940
- Thermal treatment of silicon integrated circuit chips to prevent and heal voids in aluminum metallization  
[NASA-CASE-NPO-17678-1-CU] c 76 N91-28014
- Low toxicity high temperature PMR polyimide  
[NASA-CASE-LAR-14639-1] c 27 N93-14709
- HEATERS**
- Inherent redundancy electric heater  
[NASA-CASE-MFS-21462-1] c 33 N74-14935
- Heating head for induction heating apparatus  
[NASA-CASE-LAR-14429-1] c 33 N93-29173
- HEATING**
- System for preconditioning a combustible vapor  
[NASA-CASE-NPO-12072] c 28 N72-22772
- Diffusion welding in air --- solid state welding of butt joint by fusion welding, surface cleaning, and heating  
[NASA-CASE-LEW-11387-1] c 37 N74-18128
- Heating and cooling system --- for fatigue test specimens  
[NASA-CASE-LAR-12393-1] c 34 N83-34221
- Low gravity exothermic heating/cooling apparatus  
[NASA-CASE-MSC-25707-1] c 35 N85-29214
- Method for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-2] c 07 N86-20389
- Thermocouple for heating and cooling of memory metal actuators  
[NASA-CASE-NPO-17068-1-CU] c 35 N88-29151
- Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-2-SB] c 27 N90-21177
- Acoustic convective system  
[NASA-CASE-NPO-17278-1-CU] c 31 N90-21215
- Convergent strand array liquid pumping system  
[NASA-CASE-NPO-17301-1-CU] c 31 N90-23587
- Furnace for tensile/fatigue testing  
[NASA-CASE-LEW-14848-1] c 14 N91-27175
- Method and apparatus for preloading a joint by remotely operable means  
[NASA-CASE-MSC-21940-1] c 37 N92-30540
- Method and apparatus for preloading a joint by remotely operable means  
[NASA-CASE-MSC-21940-1] c 37 N93-20120
- HEATING EQUIPMENT**
- Method and apparatus for controllably heating fluid  
Patent  
[NASA-CASE-XMF-04237] c 33 N71-16278
- Electric arc apparatus Patent  
[NASA-CASE-XAC-01677] c 09 N71-20816
- Radial heat flux transformer  
[NASA-CASE-NPO-10828] c 33 N72-17948
- Self-cycling fluid heater  
[NASA-CASE-MSC-15567-1] c 33 N73-16918
- Portable heatable container  
[NASA-CASE-NPO-14237-1] c 44 N80-20808
- Glass heating panels and method for preparing the same from architectural reflective glass  
[NASA-CASE-NPO-15753-1] c 27 N84-33589
- Precision manipulator heating and cooling apparatus for use in UHV systems with sample transfer capability  
[NASA-CASE-LAR-13040-1] c 37 N85-29286
- Spacecraft component heater control system  
[NASA-CASE-MFS-28327-1] c 18 N89-28556

- Active control of boundary layer transition and turbulence  
[NASA-CASE-LAR-13532-1] c 34 N91-14562
- Flexible heating head for induction heating apparatus and method  
[NASA-CASE-LAR-14679-2] c 32 N92-31150
- HEIGHT**
- Sideloooking laser altimeter for a flight simulator  
[NASA-CASE-ARC-11312-1] c 36 N83-34304
- HELICAL ANTENNAS**
- Weatherproof helix antenna Patent  
[NASA-CASE-XKS-08485] c 07 N71-19493
- Collapsible high gain antenna  
[NASA-CASE-KSC-10392] c 07 N73-26117
- HELICAL WINDINGS**
- High temperature, flexible, fiber-preform seal  
[NASA-CASE-LEW-15085-1] c 37 N92-22043
- HELICES**
- Helix translation device --- shim for precision displacements  
[NASA-CASE-GSC-13141-1] c 37 N92-23548
- HELICOPTER CONTROL**
- Helicopter anti-torque system using fuselage strakes  
[NASA-CASE-LAR-13630-1] c 08 N88-23809
- Helicopter low-speed yaw control  
[NASA-CASE-LAR-14219-1] c 08 N93-25998
- HELICOPTER DESIGN**
- Helicopter anti-torque system using fuselage strakes  
[NASA-CASE-LAR-13630-1] c 08 N88-23809
- HELICOPTER WAKES**
- Variable geometry rotor system  
[NASA-CASE-LAR-10557] c 02 N72-11018
- HELICOPTERS**
- Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c 05 N77-17029
- Non-destructive method for applying and removing instrumentation on helicopter rotor blades  
[NASA-CASE-LAR-11201-1] c 35 N78-24515
- Constant lift rotor for a heavier than air craft  
[NASA-CASE-ARC-11045-1] c 05 N79-17847
- Shapes for rotating airfoils  
[NASA-CASE-LAR-12396-1] c 02 N84-28732
- Helicopter anti-torque system using strakes  
[NASA-CASE-LAR-13233-1] c 05 N84-33400
- Swashplate control system  
[NASA-CASE-ARC-11633-1] c 08 N87-23631
- High lift, low pitching moment airfoils  
[NASA-CASE-LAR-13215-1] c 02 N89-14224
- Airborne rescue system  
[NASA-CASE-ARC-11909-1] c 03 N91-31113
- Helicopter low-speed yaw control  
[NASA-CASE-LAR-14219-1] c 08 N93-25998
- HELIOSTATS**
- Solar tracking system  
[NASA-CASE-MFS-23999-1] c 44 N81-24520
- HELIUM**
- Helium refining by superfluidity Patent  
[NASA-CASE-XNP-00733] c 06 N70-34946
- High pressure helium purifier Patent  
[NASA-CASE-XMF-06888] c 15 N71-24044
- Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback  
[NASA-CASE-NPO-13346-1] c 36 N76-29575
- Cryostat system for temperatures on the order of 2 deg K or less  
[NASA-CASE-NPO-13459-1] c 31 N77-10229
- Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c 31 N79-17029
- Reciprocating magnetic refrigerator employing tandem porous matrices within a reciprocating displacer  
[NASA-CASE-NPO-16257-1] c 31 N85-29082
- Gas storage and recovery system  
[NASA-CASE-MSC-22091-1] c 31 N93-28136
- HELIUM HYDROGEN ATMOSPHERES**
- Method and means for helium/hydrogen ratio measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c 25 N80-20334
- HELIUM IONS**
- Charge transfer reaction laser with preionization means  
[NASA-CASE-NPO-13945-1] c 36 N78-27402
- HELIUM-NEON LASERS**
- Laser communication system for controlling several functions at a location remote to the laser  
[NASA-CASE-LAR-10311-1] c 16 N73-16536
- Direction sensitive laser velocimeter --- determining the direction of particles using a helium-neon laser  
[NASA-CASE-LAR-12177-1] c 36 N81-24422
- Radiation sensitive area detection device and method  
[NASA-CASE-MFS-28563-1] c 35 N91-25388
- HELMET MOUNTED DISPLAYS**
- EMU helmet mounted display  
[NASA-CASE-MSC-21460-1] c 54 N91-13879

## HELMETS

- Helmet assembly and latch means therefor Patent  
[NASA-CASE-XMS-04935] c 05 N71-11190
- Electrode construction Patent  
[NASA-CASE-ARC-10043-1] c 05 N71-11193
- Venting device for pressurized space suit helmet Patent  
[NASA-CASE-XMS-09652-1] c 05 N71-26333
- Helmet latching and attaching ring  
[NASA-CASE-XMS-04670] c 54 N78-17678
- Protective garment ventilation system  
[NASA-CASE-XMS-04928] c 54 N78-17679
- Helmet feedport  
[NASA-CASE-XMS-09653] c 54 N78-17680
- Emergency space-suit helmet  
[NASA-CASE-MSC-10954-1] c 54 N78-18761
- Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c 54 N81-27806
- Helmet of a laminate construction of polycarbonate and polysulfone polymeric material  
[NASA-CASE-MSC-21503-1] c 27 N92-10091
- Protective helmet assembly  
[NASA-CASE-MSC-21842-1] c 54 N93-17088
- HELMHOLTZ RESONATORS**
- Acoustic ground impedance meter  
[NASA-CASE-LAR-12955-1] c 35 N84-22933
- HEMISPHERICAL SHELLS**
- Anti-glare improvement for optical imaging systems Patent  
[NASA-CASE-NPO-10337] c 14 N71-15604
- HERMETIC SEALS**
- Line cutter Patent  
[NASA-CASE-XMS-04072] c 15 N70-42017
- Hermetically sealed explosive release mechanism Patent  
[NASA-CASE-XGS-00824] c 15 N71-16078
- Traveling sealer for contoured table Patent  
[NASA-CASE-XLA-01494] c 15 N71-24164
- Method for detecting leaks in hermetically sealed containers Patent  
[NASA-CASE-ERC-10045] c 15 N71-24910
- Hermetic sealed vibration damper Patent  
[NASA-CASE-MSC-10959] c 15 N71-26243
- Method of forming ceramic to metal seal Patent  
[NASA-CASE-XNP-01263-2] c 15 N71-26312
- Pressure seal Patent  
[NASA-CASE-NPO-10796] c 15 N71-27068
- Tube sealing device Patent  
[NASA-CASE-NPO-10431] c 15 N71-29132
- Hermetically sealed elbow actuator  
[NASA-CASE-MFS-14710] c 09 N72-22195
- Heat transfer device  
[NASA-CASE-NPO-11120-1] c 34 N74-18552
- Device for tensioning test specimens within an hermetically sealed chamber  
[NASA-CASE-MFS-23281-1] c 35 N77-22450
- Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c 54 N78-32721
- Hermetic seal for a shaft  
[NASA-CASE-NPO-15115-1] c 37 N82-24493
- Method for forming hermetic seals  
[NASA-CASE-NPO-16423-1-CU] c 37 N87-21334
- Hermetically sealable package for hybrid solid-state electronic devices and the like  
[NASA-CASE-MSC-20181-1] c 33 N88-23941
- HETEROCYCLIC COMPOUNDS**
- Polybenzimidazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14643-1] c 27 N92-29953
- Poly(1,2,4-triazole) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14440-1] c 23 N93-18283
- Polybenzoxazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14606-1-CU] c 23 N93-23077
- HETEROJUNCTIONS**
- High-gain AlGaAs/GaAs double heterojunction Darlington phototransistors for optical neural networks  
[NASA-CASE-NPO-18101-1-CU] c 74 N91-25841
- Planar varactor frequency multiplier devices with blocking barrier  
[NASA-CASE-NPO-18428-1-CU] c 33 N92-23464
- Epitaxial heterojunctions of oxide semiconductors and metals on high temperature superconductors  
[NASA-CASE-NPO-18483-1-CU] c 76 N93-15151
- HEURISTIC METHODS**
- Backward assembly planning with DFA analysis  
[NASA-CASE-NPO-18817-1-CU] c 31 N93-12202
- HEXAGONS**
- Hexagon solar power panel  
[NASA-CASE-NPO-12148-1] c 44 N78-27515
- HEXAMETHYLENETETRAMINE**
- Structural wood panels with improved fire resistance  
[NASA-CASE-ARC-11174-1] c 24 N81-13999

**HEXOKINASE**

Use of the enzyme hexokinase for the reduction of inherent light levels

[NASA-CASE-XGS-05533] c 04 N69-27487

**HIERARCHIES**

Fault tolerant hypercube computer system architecture

[NASA-CASE-NPO-16859-1-CU] c 60 N90-21527

Bi-level shared control for teleoperators

[NASA-CASE-NPO-17800-1-CU] c 37 N92-22036

**HIGH ACCELERATION**

Universal pilot restraint suit and body support therefor

Patent

[NASA-CASE-XAC-00405] c 05 N70-41819

High acceleration cable deployment system

[NASA-CASE-ARC-11256-1] c 15 N82-24272

**HIGH ALTITUDE**

Balanced bellows spirometer

[NASA-CASE-XAR-01547] c 05 N69-21473

Sun sensing guidance system for high altitude aircraft

[NASA-CASE-FRC-11052-1] c 04 N82-23231

**HIGH ALTITUDE BALLOONS**

Thin film strain transducer

[NASA-CASE-WLP-10055-1] c 35 N84-28015

Thin film strain transducer --- suitable for in-flight measurement of scientific balloon strain

[NASA-CASE-WLP-10055-2] c 35 N85-21598

**HIGH ALTITUDE ENVIRONMENTS**

Method of making a solid propellant rocket motor

Patent

[NASA-CASE-XLA-04126] c 28 N71-26779

**HIGH ASPECT RATIO**

Landing arrangement for aerial vehicles Patent

[NASA-CASE-XLA-00142] c 02 N70-33286

Landing arrangement for aerial vehicle Patent

[NASA-CASE-XLA-00806] c 02 N70-34858

Means for controlling aerodynamically induced twist

[NASA-CASE-LAR-12175-1] c 05 N82-28279

**HIGH FREQUENCIES**

Apparatus for ballasting high frequency transistors

[NASA-CASE-XGS-05003] c 09 N69-24318

Holder for crystal resonators Patent

[NASA-CASE-XNP-03637] c 15 N71-21311

Multiple varactor frequency doubler Patent

[NASA-CASE-XMF-04958-1] c 10 N71-26414

Filtering technique based on high-frequency plant modeling for high-gain control

[NASA-CASE-LAR-12215-1] c 08 N79-23097

Method of and apparatus for double-exposure holographic interferometry

[NASA-CASE-MFS-25405-1] c 35 N84-22929

JFET reflection oscillator

[NASA-CASE-GSC-12555-1] c 33 N86-19515

Improved high power/high frequency inductor

[NASA-CASE-NPO-17830-1-CU] c 33 N91-14539

**HIGH GAIN**

Filtering technique based on high-frequency plant modeling for high-gain control

[NASA-CASE-LAR-12215-1] c 08 N79-23097

Position-error-based force reflection and compliance control

[NASA-CASE-NPO-18668-1-CU] c 37 N92-29765

**HIGH LEVEL LANGUAGES**

High level language-based robotic control system

[NASA-CASE-NPO-17918-2-CU] c 63 N92-17895

**HIGH PASS FILTERS**

Radio frequency coaxial high pass filter Patent

[NASA-CASE-XGS-01418] c 09 N71-23573

**HIGH POLYMERS**

Variable stiffness polymeric damper

[NASA-CASE-XAC-11225] c 14 N69-27486

Vacuum powder injector and method of impregnating fiber with powder

[NASA-CASE-LAR-14179-1] c 31 N93-26101

**HIGH POWER LASERS**

Large volume multiple-path nuclear pumped laser

[NASA-CASE-LAR-12592-1] c 36 N82-13415

Pulse switching for high energy lasers

[NASA-CASE-NPO-14556-1] c 33 N82-24418

High power metallic halide laser --- amplifying a copper chloride laser

[NASA-CASE-NPO-14782-1] c 36 N82-28616

Solar pumped laser

[NASA-CASE-LAR-12870-1] c 36 N84-16542

Self-collimated unstable resonator semiconductor laser

[NASA-CASE-NPO-18386-1-CU] c 36 N93-18277

**HIGH PRESSURE**

High-temperature, high-pressure spherical segment valve Patent

[NASA-CASE-XAC-00074] c 15 N70-34817

High pressure four-way valve Patent

[NASA-CASE-XNP-00214] c 15 N70-36908

High pressure filter Patent

[NASA-CASE-XNP-00732] c 28 N70-41447

Antiflutter ball check valve Patent

[NASA-CASE-XNP-01152] c 15 N70-41811

Liquid flow sight assembly Patent

[NASA-CASE-XLE-02998] c 14 N70-42074

High pressure regulator valve Patent

[NASA-CASE-XNP-00710] c 15 N71-10778

Hypersonic test facility Patent

[NASA-CASE-XLA-00378] c 11 N71-15925

High pressure air valve Patent

[NASA-CASE-MSC-11010] c 15 N71-19485

Valve seat with resilient support member Patent

[NASA-CASE-XKS-02582] c 15 N71-21234

High pressure helium purifier Patent

[NASA-CASE-XMF-06888] c 15 N71-24044

Liquid aerosol dispenser

[NASA-CASE-MFS-20829] c 12 N72-21310

Gas compression apparatus

[NASA-CASE-MSC-14757-1] c 35 N78-10428

Purging means and method for Xenon arc lamps

[NASA-CASE-NPO-11978] c 31 N78-17238

Shaft seal assembly for high speed and high pressure applications

[NASA-CASE-LEW-11873-1] c 37 N79-22475

Surface conforming thermal/pressure seal --- tail assemblies of space shuttle orbiters

[NASA-CASE-MSC-18422-1] c 37 N82-16408

Damping seal for turbomachinery

[NASA-CASE-MFS-25842-2] c 37 N86-20788

High-temperature, high-pressure optical cell

[NASA-CASE-MFS-26000-1] c 74 N87-14971

Ultrasonic depth gauge for liquids under high pressure

[NASA-CASE-LAR-13300-1-CU] c 35 N89-14407

High-pressure promoted combustion chamber

[NASA-CASE-MSC-21470-1] c 09 N91-21157

Variable orifice flow regulator

[NASA-CASE-MSC-21549-1] c 34 N91-27504

High-temperature, high-pressure oxygen metering valve

[NASA-CASE-MSC-21823-1] c 37 N93-14843

**HIGH RESOLUTION**

High pulse rate high resolution optical radar system

[NASA-CASE-NPO-11426] c 07 N73-26119

High resolution Fourier

interferometer-spectrophotopolarimeter

[NASA-CASE-NPO-13604-1] c 35 N76-31490

High resolution threshold photoelectron spectroscopy by electron attachment

[NASA-CASE-NPO-14078-1] c 72 N80-14877

Interferometer --- high resolution

[NASA-CASE-NPO-14448-1] c 74 N81-29963

High speed multi focal plane optical system

[NASA-CASE-GSC-12683-1] c 74 N83-36898

Correlation spectrometer having high resolution and multiplexing capability

[NASA-CASE-NPO-15558-1] c 35 N84-34705

Water window imaging x ray microscope

[NASA-CASE-MFS-28485-1] c 35 N92-29135

Multispectral variable magnification glancing incidence x ray telescope

[NASA-CASE-MFS-28013-4] c 89 N92-33012

**HIGH SPEED**

Balanced bellows spirometer

[NASA-CASE-XAR-01547] c 05 N69-21473

High speed low level electrical stepping switch Patent

[NASA-CASE-XAC-00060] c 09 N70-39915

Impact testing machine Patent

[NASA-CASE-XNP-04817] c 14 N71-23225

Traversing probe Patent

[NASA-CASE-XFR-02007] c 12 N71-24692

High speed rolling element bearing

[NASA-CASE-LEW-10856-1] c 15 N72-22490

Two stage light gas-plasma projectile accelerator

[NASA-CASE-MFS-22287-1] c 75 N76-14931

Selective data segment monitoring system --- using shift registers

[NASA-CASE-ARC-10899-1] c 60 N77-19760

Shaft seal assembly for high speed and high pressure applications

[NASA-CASE-LEW-11873-1] c 37 N79-22475

High speed multi focal plane optical system

[NASA-CASE-GSC-12683-1] c 74 N83-36898

Pressure measuring probe

[NASA-CASE-LAR-13853-1] c 35 N89-14423

Controlling flexible robot arms using a high speed dynamics process

[NASA-CASE-NPO-18499-1-CU] c 37 N92-24042

Controlling under-actuated robot arms using a high speed dynamics process

[NASA-CASE-NPO-18498-1-CU] c 37 N92-24043

High speed magneto-resistive random access memory

[NASA-CASE-NPO-17954-1-CU] c 60 N93-14704

**HIGH SPEED CAMERAS**

Electrically-operated rotary shutter Patent

[NASA-CASE-XNP-00637] c 14 N70-40273

**HIGH STRENGTH**

Method of making fiber composites

[NASA-CASE-LEW-10424-2-2] c 18 N72-25539

High resistance and raised modulus carbon fibers

[NASA-TM-76884] c 24 N85-25436

Method of making contamination-free ceramic bodies

[NASA-CASE-LEW-14984-1] c 27 N92-16122

**HIGH STRENGTH ALLOYS**

High temperature cobalt-base alloy Patent

[NASA-CASE-XLE-00726] c 17 N71-15644

Low temperature aluminum alloy Patent

[NASA-CASE-XMF-02786] c 17 N71-20743

Method of producing refractory composites containing tantalum carbide, hafnium carbide, and hafnium boride

Patent

[NASA-CASE-XLE-03940] c 18 N71-26153

Nickel base alloy

[NASA-CASE-LEW-10874-1] c 17 N72-22535

Cobalt-base alloy

[NASA-CASE-LEW-10436-1] c 17 N73-32415

High toughness-high strength iron alloy

[NASA-CASE-LEW-12542-3] c 26 N80-32484

**HIGH STRENGTH STEELS**

Prevention of hydrogen embrittlement of high strength steel by hydrazine compositions --- by adding potassium hydroxide to hydrazine

[NASA-CASE-NPO-12122-1] c 24 N76-14203

Process for making a high toughness-high strength ion alloy

[NASA-CASE-LEW-12542-2] c 26 N79-22271

**HIGH TEMPERATURE**

High temperature heat source Patent

[NASA-CASE-XLE-00490] c 33 N70-34545

Thermionic diode switch Patent

[NASA-CASE-NPO-10404] c 03 N71-12255

Hypersonic test facility Patent

[NASA-CASE-XLA-00378] c 11 N71-15925

Method for fiberizing ceramic materials Patent

[NASA-CASE-XNP-00597] c 18 N71-23088

Induction furnace with perforated tungsten foil shielding

Patent

[NASA-CASE-XLE-04026] c 14 N71-23267

Method of forming ceramic to metal seal Patent

[NASA-CASE-XNP-01263-2] c 15 N71-26312

Method of making fiber composites

[NASA-CASE-LEW-10424-2-2] c 18 N72-25539

Method of forming superalloys

[NASA-CASE-LEW-10805-1] c 15 N73-13465

High temperature beryllium oxide capacitor

[NASA-CASE-LEW-11938-1] c 33 N76-15373

Low to high temperature energy conversion system

[NASA-CASE-NPO-13510-1] c 44 N77-32581

Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance

[NASA-CASE-LEW-12174-2] c 35 N79-14346

High thermal power density heat transfer --- thermionic converters

[NASA-CASE-LEW-12950-1] c 34 N82-11399

Overlay metallic-cermet alloy coating systems

[NASA-CASE-LEW-13639-1] c 26 N84-33555

Chemical approach for controlling nadimide cure temperature and rate

[NASA-CASE-LEW-13770-5] c 27 N85-21352

Multistage spent particle collector and a method for making same

[NASA-CASE-LEW-13914-1] c 37 N85-33489

Negative electrode catalyst for the iron chromium redox energy storage system

[NASA-CASE-LEW-14028-1] c 44 N86-19721

High-temperature, high-pressure optical cell

[NASA-CASE-MFS-26000-1] c 74 N87-14971

Method of making a flexible diaphragm

[NASA-CASE-MSC-20797-1] c 37 N87-23981

Bis(4-(3,4-dimethylenepyrrolidyl)-phenyl) methane

[NASA-CASE-LAR-13965-1-CU] c 23 N90-21118</

## HIGH TEMPERATURE AIR

- Polyimide from bis(n-isoprenyl)s of aryl diamides  
[NASA-CASE-LAR-14330-2-CU] c 27 N93-22033  
High temperature creep and oxidation resistant  
chromium silicide matrix alloy containing molybdenum  
[NASA-CASE-LEW-15697-1] c 26 N93-29172

### HIGH TEMPERATURE AIR

- Apparatus and method for generating large mass flow  
of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10612-1] c 12 N73-28144

### HIGH TEMPERATURE ENVIRONMENTS

- High-speed infrared furnace  
[NASA-CASE-XLE-10466] c 17 N69-25147  
Nickel-base alloy Patent  
[NASA-CASE-XLE-00283] c 17 N70-36616  
Strain sensor for high temperatures Patent  
[NASA-CASE-XNP-09205] c 14 N71-17657  
Trielectrode capacitive pressure transducer  
[NASA-CASE-ARC-10711-2] c 33 N76-21390  
Integrated structure vacuum tube  
[NASA-CASE-ARC-10445-1] c 31 N76-31365  
Installing fiber insulation  
[NASA-CASE-MS-C-16973-1] c 37 N81-14317  
Corrosion resistant thermal barrier coating --- protecting  
gas turbines and other engine parts  
[NASA-CASE-LEW-13088-1] c 26 N81-25188  
High temperature penetrator assembly with bayonet plug  
and ramp-activated lock  
[NASA-CASE-MS-C-18526-1] c 37 N82-24494  
Fully plasma-sprayed compliant backed ceramic turbine  
seal  
[NASA-CASE-LEW-13268-1] c 27 N82-29453  
Heat pipe cooled probe  
[NASA-CASE-LAR-12588-1] c 34 N85-21568  
Thermal barrier coating system  
[NASA-CASE-LEW-14057-1] c 24 N85-35233  
Reusable high-temperature heat pipes and heat pipe  
panels  
[NASA-CASE-LAR-13761-1] c 34 N90-20323  
Multi-layer light-weight protective coating and method  
for application  
[NASA-CASE-LAR-14448-1] c 27 N93-11912  
Compensated high temperature strain gage  
[NASA-CASE-LAR-14776-1] c 35 N93-12205  
High temperature sorbents for oxygen  
[NASA-CASE-NPO-18409-1-CU] c 25 N93-19025  
Fiber optic microphone having a pressure sensing  
reflective membrane and a voltage source for calibration  
purpose  
[NASA-CASE-LAR-14402-2-CU] c 71 N93-24602

### HIGH TEMPERATURE FLUIDS

- Self-cycling fluid heater  
[NASA-CASE-MS-C-15567-1] c 33 N73-16918  
High-temperature microphone system --- for measuring  
pressure fluctuations in gases at high temperature  
[NASA-CASE-LAR-12375-1] c 32 N79-24203

### HIGH TEMPERATURE GASES

- Instrument for the quantitative measurement of radiation  
at multiple wave lengths Patent  
[NASA-CASE-XLE-00011] c 14 N70-41946  
Ablative resin Patent  
[NASA-CASE-XLE-05913] c 33 N71-14032  
Transient heat transfer gauge Patent  
[NASA-CASE-XNP-09802] c 33 N71-15641  
Apparatus and method for generating large mass flow  
of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10578-1] c 12 N73-25262  
Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c 36 N77-26477  
Start up system for hydrogen generator used with an  
internal combustion engine  
[NASA-CASE-NPO-13849-1] c 28 N80-10374  
Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c 37 N80-31790  
Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c 37 N81-25370  
Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c 34 N83-27144  
High-temperature, high-pressure oxygen metering  
valve  
[NASA-CASE-MS-C-21823-1] c 37 N93-14843  
Spectroscopic wear detector  
[NASA-CASE-LEW-15200-1] c 20 N93-18856

### HIGH TEMPERATURE LUBRICANTS

- Method of making self lubricating fluoride- metal  
composite materials Patent  
[NASA-CASE-XLE-08511-2] c 18 N71-16105  
Self-lubricating fluoride metal composite materials  
Patent  
[NASA-CASE-XLE-08511] c 18 N71-23710  
Method of making bearing materials --- self-lubricating,  
oxidation resistant composites for high temperature  
applications  
[NASA-CASE-LEW-11930-4] c 24 N79-17916

### HIGH TEMPERATURE PLASMAS

- Method and apparatus for producing a plasma Patent  
[NASA-CASE-XLA-00147] c 25 N70-34661

### HIGH TEMPERATURE PROPELLANTS

- Feed system for an ion thruster  
[NASA-CASE-NPO-10737] c 28 N72-11709

### HIGH TEMPERATURE RESEARCH

- Gas cooled high temperature thermocouple Patent  
[NASA-CASE-XLE-09475-1] c 33 N71-15568  
Light shield and infrared reflector for fatigue testing  
Patent  
[NASA-CASE-XLA-01782] c 14 N71-26136

- High temperature oxidation resistant cermet  
compositions  
[NASA-CASE-NPO-13666-1] c 27 N77-13217

### HIGH TEMPERATURE SUPERCONDUCTORS

- Passivation of high temperature superconductors  
[NASA-CASE-NPO-17949-1-CU] c 76 N92-10681  
An improved SNS superconducting junction with weak  
link barrier and method of producing  
[NASA-CASE-NPO-18552-1-CU] c 33 N92-24246  
Superconducting bearings with levitation control  
configurations  
[NASA-CASE-GSC-13346-1] c 37 N92-29099  
Epitaxial heterojunctions of oxide semiconductors and  
metals on high temperature superconductors  
[NASA-CASE-NPO-18483-1-CU] c 76 N93-15151

### HIGH TEMPERATURE TESTS

- High-temperature, high-pressure spherical segment  
valve Patent  
[NASA-CASE-XAC-00074] c 15 N70-34817  
High temperature testing apparatus Patent  
[NASA-CASE-XLE-00335] c 14 N70-35368  
Apparatus for positioning and loading a test specimen  
Patent  
[NASA-CASE-XLE-01300] c 15 N70-41993  
Containerless high temperature calorimeter apparatus  
[NASA-CASE-MFS-23923-1] c 35 N81-19426  
Heating and cooling system --- for fatigue test  
specimens  
[NASA-CASE-LAR-12393-1] c 34 N83-34221

### HIGH VACUUM

- Sealing device for an electrochemical cell Patent  
[NASA-CASE-XGS-02630] c 03 N71-22974  
Vacuum evaporator with electromagnetic ion steering  
Patent  
[NASA-CASE-NPO-10331] c 09 N71-26701  
Apparatus for absolute pressure measurement  
[NASA-CASE-LAR-10000] c 14 N73-30394  
Plasma cleaning device --- designed for high vacuum  
environments  
[NASA-CASE-MFS-22906-1] c 75 N78-27913

### HIGH VACUUM ORBITAL SIMULATOR

- Space environmental work simulator Patent  
[NASA-CASE-XMF-07488] c 11 N71-18773

### HIGH VOLTAGES

- Electrode and insulator with shielded dielectric  
junction  
[NASA-CASE-XLE-03778] c 09 N69-21542  
High-voltage cable Patent  
[NASA-CASE-XNP-00738] c 09 N70-38201  
High voltage pulse generator Patent  
[NASA-CASE-MS-C-12178-1] c 09 N71-13518  
High voltage transistor circuit Patent  
[NASA-CASE-XNP-06937] c 09 N71-19516  
High voltage divider system Patent  
[NASA-CASE-XLE-02008] c 09 N71-21583  
High voltage distributor  
[NASA-CASE-GSC-11849-1] c 33 N76-16332  
Sustained arc ignition system  
[NASA-CASE-LEW-12444-1] c 33 N77-28385  
High voltage planar multijunction solar cell  
[NASA-CASE-LEW-13400-1] c 44 N82-31764  
Electronic system for high power load control --- solar  
arrays  
[NASA-CASE-NPO-15358-1] c 33 N83-27126  
High voltage v-groove solar cell  
[NASA-CASE-LEW-13401-2] c 44 N83-32177  
High voltage isolation transformer  
[NASA-CASE-GSC-12817-1] c 33 N85-29146  
High voltage power supply  
[NASA-CASE-GSC-12818-1] c 33 N85-29147

### HIGHWAYS

- Traffic survey system --- using optical scanners  
[NASA-CASE-MFS-22631-1] c 66 N76-19888

### HINGES

- Foldable beam  
[NASA-CASE-LAR-12077-1] c 31 N81-25259  
Joint for deployable structures  
[NASA-CASE-NPO-16038-1] c 37 N86-19605  
Locking hinge  
[NASA-CASE-MS-C-21056-1] c 18 N88-23827  
Payload deployment method and system  
[NASA-CASE-MS-C-21330-1] c 16 N88-24660  
Space station erectable manipulator placement  
system  
[NASA-CASE-MS-C-21096-1] c 18 N89-12621

## SUBJECT INDEX

- Synchronously deployable double fold beam and planar  
truss structure  
[NASA-CASE-LAR-13490-1] c 18 N91-27199

### HISTOGRAMS

- Data compression system  
[NASA-CASE-XNP-09785] c 08 N69-21928

### HISTOLOGY

- Three-dimensional cultured glioma cell lines  
[NASA-CASE-MS-C-21843-1-NP] c 51 N92-24052

### HOLDERS

- Water cooled contactor for anode in carbon arc  
mechanism  
[NASA-CASE-XMS-03700] c 15 N69-24266  
Quick disconnect latch and handle combination Patent  
[NASA-CASE-MFS-11132] c 15 N71-17649  
Holder for crystal resonators Patent  
[NASA-CASE-XNP-03637] c 15 N71-21311  
Adjustable force probe  
[NASA-CASE-MFS-20760] c 14 N72-33377  
Fifth wheel  
[NASA-CASE-FRC-10081-1] c 37 N77-14477  
Combined docking and grasping device  
[NASA-CASE-MFS-23088-1] c 37 N77-23483  
Plural output optometric sample cell and analysis  
system  
[NASA-CASE-NPO-10233-1] c 74 N78-33913  
Method and apparatus for holding two separate metal  
pieces together for welding  
[NASA-CASE-GSC-12318-1] c 37 N80-23655  
Head for high speed spinner having a vacuum chuck  
--- holding silicon dioxide chips for etching  
[NASA-CASE-NPO-15227-1] c 37 N81-33482  
Scriber for silicon wafers  
[NASA-CASE-NPO-15539-1] c 37 N82-11469  
Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c 37 N82-12441  
Spray coating apparatus having a rotatable workpiece  
holder  
[NASA-CASE-ARC-11110-1] c 37 N82-24492  
Compression test apparatus  
[NASA-CASE-MS-C-18723-1] c 35 N83-21312  
Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c 37 N84-12491  
Hot melt recharge system --- repairing damaged or  
missing tiles on space shuttle orbiter  
[NASA-CASE-LAR-12881-1] c 27 N84-14323  
Method and apparatus for gripping uniaxial fibrous  
composite materials  
[NASA-CASE-LEW-13758-1] c 24 N84-27829  
Laboratory glassware rack for seismic safety  
[NASA-CASE-ARC-11422-1] c 35 N86-20751  
Apparatus and method for inspecting a bearing ball  
[NASA-CASE-MFS-25833-1] c 35 N86-32698  
Active hold-down for heat treating  
[NASA-CASE-NPO-16892-1-CU] c 37 N87-14704  
Apparatus for mounting a field emission cathode  
[NASA-CASE-LEW-14108-1] c 33 N87-28832  
Ignitability test method and apparatus  
[NASA-CASE-LAR-13996-1-SB] c 25 N90-15161  
Gripping device  
[NASA-CASE-MS-C-21365-1] c 37 N90-20408  
Post clamp  
[NASA-CASE-LEW-14862-1] c 37 N91-14617  
Sample holder support for microscopes  
[NASA-CASE-MFS-28420-1] c 37 N91-21545  
Ignitability test method and apparatus  
[NASA-CASE-LAR-14454-1] c 25 N91-32196  
Removable hand hold  
[NASA-CASE-LEW-15196-1] c 37 N92-29092  
Rolling friction robot fingers  
[NASA-CASE-GSC-13261-1] c 37 N92-29138  
Fingered bola body, bola with same, and methods of  
use  
[NASA-CASE-MS-C-21967-1] c 37 N92-30026  
Split rail gripper assembly and tool driver therefor  
[NASA-CASE-GSC-13370-2] c 37 N93-18288  
System for testing bearings  
[NASA-CASE-MFS-28589-1] c 37 N93-29618

### HOLE DISTRIBUTION (MECHANICS)

- Thermocouple installation  
[NASA-CASE-NPO-13540-1] c 35 N77-14409

### HOLE GEOMETRY (MECHANICS)

- Device for measuring hole elongation in a bolted joint  
[NASA-CASE-LAR-13453-1] c 37 N88-14361  
Apparatus for checking threaded hole perpendicularity  
[NASA-CASE-LEW-15444-1] c 35 N93-14840

### HOLE MOBILITY

- Depositing semiconductor films utilizing a thermal  
gradient  
[NASA-CASE-XKS-04614] c 15 N69-21460

### HOLES (MECHANICS)

- Hole cutter --- drill bits and rotating shaft  
[NASA-CASE-MFS-22649-1] c 37 N75-25186  
Device for measuring hole elongation in a bolted joint  
[NASA-CASE-LAR-13453-1] c 37 N88-14361

# SUBJECT INDEX

# HULLS (STRUCTURES)

- Mold bolt and means for achieving close tolerances between bolts and bolt holes  
[NASA-CASE-MFS-28720-1] c 37 N93-30567
- HOLLOW**  
Dual membrane hollow fiber fuel cell and method of operating same  
[NASA-CASE-NPO-17332-1] c 44 N79-10513
- HOLLOW CATHODES**  
Hydrogen hollow cathode ion source  
[NASA-CASE-LEW-12940-1] c 72 N80-33186  
Hollow cathode apparatus  
[NASA-CASE-NPO-15560-1] c 33 N85-21491
- HOLMIUM**  
Tm,Ho:YLF laser end-pumped by a semiconductor diode laser array  
[NASA-CASE-NPO-17282-1-CU] c 36 N91-15528
- HOLOGRAPHIC INTERFEROMETRY**  
Interferometric angle monitor  
[NASA-CASE-GSC-12614-1] c 74 N83-32577  
Method of and apparatus for double-exposure holographic interferometry  
[NASA-CASE-MFS-25405-1] c 35 N84-22929  
Dual wavelength holographic interferometry system  
[NASA-CASE-MFS-28242-1] c 35 N89-26202
- HOLOGRAPHY**  
Focused image holography with extended sources Patent  
[NASA-CASE-ERC-10019] c 16 N71-15551  
Hybrid holographic system using reflected and transmitted object beams simultaneously Patent  
[NASA-CASE-MFS-20074] c 16 N71-15565  
Recording and reconstructing focused image holograms Patent  
[NASA-CASE-ERC-10017] c 16 N71-15567  
Method and means for recording and reconstructing holograms without use of a reference beam Patent  
[NASA-CASE-ERC-10020] c 16 N71-26154  
Multiple image storing system for high speed projectile holography  
[NASA-CASE-MFS-20596] c 14 N72-17324  
Holographic thin film analyzer  
[NASA-CASE-MFS-20823-1] c 16 N73-30476  
Method and apparatus for checking the stability of a setup for making reflection type holograms  
[NASA-CASE-MFS-21455-1] c 35 N74-15146  
Real time moving scene holographic camera system  
[NASA-CASE-MFS-21087-1] c 35 N74-17153  
Holography utilizing surface plasmon resonances  
[NASA-CASE-MFS-22040-1] c 35 N74-26946  
Holographic system for nondestructive testing  
[NASA-CASE-MFS-21704-1] c 35 N75-25124  
Real time, large volume, moving scene holographic camera system  
[NASA-CASE-MFS-22537-1] c 35 N75-27328  
Holographic motion picture camera with Doppler shift compensation  
[NASA-CASE-MFS-22517-1] c 35 N76-18402  
Optical process for producing classification maps from multispectral data  
[NASA-CASE-MSC-14472-1] c 43 N77-10584  
Real-time dynamic holographic image storage device  
[NASA-CASE-LAR-13989-1] c 35 N81-13694  
Control system for ruling blazed, aberration corrected diffraction gratings  
[NASA-CASE-GSC-13240-1] c 35 N92-10186  
All-optical photochromic spatial light modulators based on photoinduced electron transfer in rigid matrices  
[NASA-CASE-NPO-17612-1-CU] c 74 N92-16808
- HOMING DEVICES**  
Location identification system  
[NASA-CASE-ERC-10324] c 07 N72-25173
- HONEYCOMB CORES**  
Method of making inflatable honeycomb Patent  
[NASA-CASE-XLA-03492] c 15 N71-22713  
Method of forming shapes from planar sheets of thermosetting materials  
[NASA-CASE-NPO-11036] c 15 N72-24522  
Honeycomb core structures of minimal surface tubule sections  
[NASA-CASE-ERC-10363] c 18 N72-25541
- HONEYCOMB STRUCTURES**  
Method for making a heat insulating and ablative structure  
[NASA-CASE-XMS-01108] c 15 N69-24322  
Inflatable honeycomb Patent  
[NASA-CASE-XLA-00204] c 32 N70-36536  
Fluid flow control valve Patent  
[NASA-CASE-XLE-00703] c 15 N71-15967  
Method and apparatus for making a heat insulating and ablative structure Patent  
[NASA-CASE-XMS-02009] c 33 N71-20834  
Honeycomb panel and method of making same Patent  
[NASA-CASE-XMF-01402] c 18 N71-21651  
Cryogenic thermal insulation Patent  
[NASA-CASE-XMF-05046] c 33 N71-28892
- Honeycomb panels formed of minimal surface periodic tubule layers  
[NASA-CASE-ERC-10364] c 18 N72-25540  
Bonding or repairing process  
[NASA-CASE-MSC-12357] c 15 N73-12489  
Insert facing tool --- manually operated cutting tool for forming studs in honeycomb material  
[NASA-CASE-MFS-21485-1] c 37 N74-25968  
Vacuum pressure molding technique  
[NASA-CASE-LAR-10073-1] c 37 N76-24575  
Honeycomb-laminate composite structure  
[NASA-CASE-ARC-10913-1] c 24 N78-15180  
Method of making a composite sandwich lattice structure  
[NASA-CASE-LAR-11898-2] c 24 N78-17149  
Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c 24 N79-16915  
Ceramic honeycomb structures and the method thereof  
[NASA-CASE-ARC-11652-1] c 27 N87-23737  
Reusable cryogenic liquid rocket propellant tank  
[NASA-CASE-LAR-14172-1] c 20 N93-31295
- HOOKS**  
Fingered boia body, bola with same, and methods of use  
[NASA-CASE-MSC-21967-1] c 37 N92-30026
- HOOP COLUMN ANTENNAS**  
Latching mechanism for deployable/re-stowable columns useful in satellite construction  
[NASA-CASE-LAR-13169-1] c 37 N86-25791  
Antenna surface contour control system  
[NASA-CASE-LAR-13798-1] c 32 N89-25363
- HOPPERS**  
Energy efficient continuous flow ash lockhopper  
[NASA-CASE-NPO-16985-1-CU] c 31 N91-15423
- HORIZON SCANNERS**  
Electromagnetic mirror drive system  
[NASA-CASE-XLA-03724] c 14 N69-27461  
Multi-lobe scan horizon sensor Patent  
[NASA-CASE-XGS-00809] c 21 N70-35427  
Altitude orientation of spin-stabilized space vehicles Patent  
[NASA-CASE-XLA-00281] c 21 N70-36943  
Amplifier clamping circuit for horizon scanner Patent  
[NASA-CASE-XGS-01784] c 10 N71-20782  
Horizon sensor with a plurality of fixedly positioned radiation compensated radiation sensitive detectors Patent  
[NASA-CASE-XNP-06957] c 14 N71-21088  
Infrared horizon locator  
[NASA-CASE-LAR-10726-1] c 14 N73-20475
- HORIZONTAL SPACECRAFT LANDING**  
Variable-geometry winged reentry vehicle Patent  
[NASA-CASE-XLA-00241] c 31 N70-37986
- HORIZONTAL TAIL SURFACES**  
Translating horizontal tail Patent  
[NASA-CASE-XLA-08801-1] c 02 N71-11043  
Apparatus and method for improving spin recovery on aircraft  
[NASA-CASE-LAR-14747-1] c 08 N93-20039
- HORN ANTENNAS**  
Antenna beam-shaping apparatus Patent  
[NASA-CASE-XNP-00611] c 09 N70-35219  
Parabolic reflector horn feed with spillover correction Patent  
[NASA-CASE-XNP-00540] c 09 N70-35382  
Horn feed having overlapping apertures Patent  
[NASA-CASE-GSC-10452] c 07 N71-12396  
Dual mode horn antenna Patent  
[NASA-CASE-XNP-01057] c 07 N71-15907  
Multi-purpose antenna employing dish reflector with plural coaxial horn feeds  
[NASA-CASE-NPO-11264] c 07 N72-25174  
Horn antenna having V-shaped corrugated slots  
[NASA-CASE-LAR-11112-1] c 32 N76-15330  
Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NPO-13568-1] c 32 N76-21365  
Reflex feed system for dual frequency antenna with frequency cutoff means  
[NASA-CASE-NPO-14022-1] c 32 N78-31321  
Dual band combiner for horn antenna  
[NASA-CASE-NPO-14519-1] c 32 N80-23524  
Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c 32 N80-29539  
Multifrequency broadband polarized horn antenna  
[NASA-CASE-NPO-14588-1] c 32 N81-25278
- HOSES**  
Self-contained, single-use hose and tubing cleaning module  
[NASA-CASE-MSC-20857-1] c 37 N87-17035
- HOT CATHODES**  
Ion thruster cathode  
[NASA-CASE-XLE-07087] c 06 N69-39889
- HOT CORROSION**  
Castable hot corrosion resistant alloy  
[NASA-CASE-LEW-14134-2] c 26 N89-14303
- HOT ISOSTATIC PRESSING**  
One step HIP canning of powder metallurgy composites  
[NASA-CASE-LEW-14719-1] c 24 N90-23493  
Process for HIP canning of composites  
[NASA-CASE-LEW-14990-1-CU] c 24 N91-17145
- HOT PRESSING**  
Method of making a cermet Patent  
[NASA-CASE-LEW-10219-1] c 18 N71-28729  
Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c 37 N84-12491  
Silicon carbide fiber reinforced strontium aluminosilicate glass-ceramic matrix composite  
[NASA-CASE-LEW-15263-1] c 24 N93-11543
- HOT WORKING**  
Method for forming plastic materials Patent  
[NASA-CASE-XMS-05516] c 15 N71-17803
- HOT-FILM ANEMOMETERS**  
Crossflow vorticity sensor  
[NASA-CASE-LAR-13436-1-CU] c 02 N88-23759  
Method of forming a multiple layer dielectric and a hot film sensor therewith  
[NASA-CASE-LAR-13678-1] c 76 N90-24168
- HOT-WIRE ANEMOMETERS**  
Metallic hot wire anemometer --- for high speed wind tunnel tests  
[NASA-CASE-ARC-10911-1] c 35 N77-20400  
Method for making a hot wire anemometer and product thereof  
[NASA-CASE-ARC-10900-1] c 35 N77-24454
- HOT-WIRE FLOWMETERS**  
Hot wire liquid level detector for cryogenic fluids Patent  
[NASA-CASE-XLE-00454] c 23 N71-17802  
Flow separation detector  
[NASA-CASE-ARC-11046-1] c 35 N78-14364  
Hot foil transducer skin friction sensor  
[NASA-CASE-LAR-12321-1] c 35 N82-24470
- HOUSINGS**  
Sealed cabinetry Patent  
[NASA-CASE-MSC-12168-1] c 09 N71-18600  
Open type urine receptacle  
[NASA-CASE-MSC-12324-1] c 05 N72-22093  
Universal environment package with sectional component housing  
[NASA-CASE-KSC-10031] c 15 N72-22486  
Gas flow control device  
[NASA-CASE-NPO-11479] c 15 N73-13462  
Cryogenic gyroscope housing --- with annular disks for gas spin-up  
[NASA-CASE-MFS-21136-1] c 35 N74-18323  
Heat transfer device  
[NASA-CASE-NPO-11120-1] c 34 N74-18552  
Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c 37 N77-32500  
Preloadable vector sensitive latch  
[NASA-CASE-MSC-20910-1] c 37 N87-25582  
Double face sealing device  
[NASA-CASE-MFS-28521-1] c 37 N91-26542  
Cooling apparatus and couplings therefor  
[NASA-CASE-ARC-11921-1] c 34 N92-11286  
Roller locking brake  
[NASA-CASE-GSC-13376-1] c 37 N92-21728  
Electromagnetic attachment mechanism  
[NASA-CASE-MSC-21463-1] c 37 N92-33018  
Arc/gas electrode  
[NASA-CASE-MFS-29766-1] c 33 N92-33030  
Device for removing foreign objects from anatomic organs  
[NASA-CASE-GSC-13306-1] c 52 N92-33032
- HOVERING**  
Gravity stabilized flying vehicle Patent  
[NASA-CASE-MSC-12111-1] c 02 N71-11039
- HUBBLE SPACE TELESCOPE**  
System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
[NASA-CASE-MFS-23513-1] c 74 N79-11865  
Orbital maneuvering end effectors  
[NASA-CASE-MSC-28161-1] c 37 N87-18817
- HUBS**  
Self-locking mechanical center joint  
[NASA-CASE-LAR-12864-1] c 37 N85-30336
- HUGENIOT EQUATION OF STATE**  
Determining particle density using known material Hugoniot curves  
[NASA-CASE-LAR-11059-1] c 76 N75-12810
- HULLS (STRUCTURES)**  
Hydrofoil Patent  
[NASA-CASE-XLA-00229] c 12 N70-33305

## HUMAN BEHAVIOR

- Method of encouraging attention by correlating video game difficulty with attention level  
[NASA-CASE-LAR-15022-1] c 53 N93-28128

## HUMAN BEINGS

- Skeletal stressing method and apparatus Patent  
[NASA-CASE-ARC-10100-1] c 05 N71-24738  
Emergency escape system Patent  
[NASA-CASE-XKS-07814] c 15 N71-27067  
Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-2] c 52 N92-11621

## HUMAN BODY

- Mass measuring system Patent  
[NASA-CASE-XMS-03371] c 05 N70-42000  
Biomedical electrode arrangement Patent  
[NASA-CASE-XFR-10856] c 05 N71-11189  
Garments for controlling the temperature of the body Patent  
[NASA-CASE-XMS-10269] c 05 N71-24147  
Tilting table for ergometer and for other biomedical devices  
[NASA-CASE-MFS-21010-1] c 05 N73-30078  
Method and system for in vivo measurement of bone tissue using a two level energy source  
[NASA-CASE-MSC-14276-1] c 52 N77-14737  
Circumferential pressure probe  
[NASA-CASE-LAR-13775-1] c 35 N90-23706

## HUMAN FACTORS ENGINEERING

- Shock absorbing support and restraint means Patent  
[NASA-CASE-XMS-01240] c 05 N70-35152  
Harness assembly Patent  
[NASA-CASE-MFS-14671] c 05 N71-12341  
Multiple circuit switch apparatus with improved pivot actuator structure Patent  
[NASA-CASE-XAC-03777] c 10 N71-15909  
Three-axis finger tip controller for switches Patent  
[NASA-CASE-XAC-02405] c 09 N71-16089  
Extravehicular tunnel suit system Patent  
[NF SA-CASE-MSC-12243-1] c 05 N71-24728  
EEG sleep analyzer and method of operation Patent  
[NASA-CASE-MSC-13282-1] c 05 N71-24729  
Spacesuit mobility joints  
[NASA-CASE-ARC-11058-1] c 54 N78-31735  
Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c 54 N78-31736  
Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means  
[NASA-CASE-NPO-13910-1] c 52 N79-27836  
Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c 52 N81-25661  
Urine collection apparatus --- feminine hygiene  
[NASA-CASE-MSC-18381-1] c 52 N81-28740  
Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c 04 N82-16059  
Thermal garment  
[NASA-CASE-XMS-03694-1] c 54 N82-29002  
Kinesimetric method and apparatus  
[NASA-CASE-MSC-18929-1] c 39 N83-20280  
Torso sizing ring construction for hard space suit  
[NASA-CASE-ARC-11616-1] c 54 N86-28618  
Shoulder and hip joint for hard space suits  
[NASA-CASE-ARC-11543-1] c 54 N86-28620  
Multi-adjustable headband --- for headsets  
[NASA-CASE-KSC-11322-1] c 54 N89-29953  
Compliant walker  
[NASA-CASE-GSC-13348-2] c 52 N93-14708  
Portable seat lift  
[NASA-CASE-MFS-28610-1] c 54 N93-17045

## HUMAN PERFORMANCE

- Color perception tester  
[NASA-CASE-KSC-10278] c 05 N72-16015  
Bright light delivery system  
[NASA-CASE-MFS-28723-1] c 52 N93-17058  
Method of encouraging attention by correlating video game difficulty with attention level  
[NASA-CASE-LAR-15022-1] c 53 N93-28128

## HUMAN REACTIONS

- Reaction tester  
[NASA-CASE-MSC-13604-1] c 05 N73-13114  
Visual accommodation trainer-tester  
[NASA-CASE-ARC-11426-2] c 52 N89-16256

## HUMAN WASTES

- Reduced gravity fecal collector seat and urinal  
[NASA-CASE-MFS-22102-1] c 54 N74-20725  
Automatic biowaste sampling  
[NASA-CASE-MSC-14640-1] c 54 N76-14804  
Absorbent product to absorb fluids --- for collection of human wastes  
[NASA-CASE-MSC-18223-1] c 24 N82-29362  
Absorbent product and articles made therefrom  
[NASA-CASE-MSC-18223-2] c 54 N84-11758

## HUMIDITY

- Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c 33 N80-23559

- Apparatus for supplying conditioned air at a substantially constant temperature and humidity  
[NASA-CASE-GSC-12191-1] c 31 N80-32583

## HUMIDITY MEASUREMENT

- Water-absorbing capacitor system for measuring relative humidity  
[NASA-CASE-NPO-16544-1-CU] c 35 N87-22953

## HYBRID CIRCUITS

- Integrating IR detector imaging systems  
[NASA-CASE-NPO-15805-1] c 74 N84-28590  
Hybrid power semiconductor  
[NASA-CASE-LEW-13922-1] c 33 N86-20672  
Hermetically sealable package for hybrid solid-state electronic devices and the like  
[NASA-CASE-MSC-20181-1] c 33 N88-23941

## HYBRID COMPOSITES

- Method for producing hybrid graphite composite  
[NASA-CASE-LEW-15241-2] c 24 N93-31296

## HYBRID COMPUTERS

- Adaptive voting computer system  
[NASA-CASE-MSC-13932-1] c 62 N74-14920

## HYBRID PROPELLANTS

- Solid propellant liner Patent  
[NASA-CASE-XNP-09744] c 27 N71-16392

## HYDRAULIC CONTROL

- Shear modulated fluid amplifier Patent  
[NASA-CASE-MFS-10412] c 12 N71-17578  
Multiple orifice throttle valve Patent  
[NASA-CASE-XNP-09698] c 15 N71-18580  
Fluidic-thermochromic display device Patent  
[NASA-CASE-ERC-10031] c 12 N71-18603  
Hydraulic transformer Patent  
[NASA-CASE-MFS-20830] c 15 N71-30028  
Hydraulic drain means for servo-systems  
[NASA-CASE-NPO-10316-1] c 37 N77-22479

## HYDRAULIC EQUIPMENT

- Support apparatus for dynamic testing Patent  
[NASA-CASE-XMF-01772] c 11 N70-41677  
Hydraulic support for dynamic testing Patent  
[NASA-CASE-XMF-03248] c 11 N71-10604  
Hydraulic drive mechanism Patent  
[NASA-CASE-XMS-03252] c 15 N71-10658  
Anti-backlash circuit for hydraulic drive system Patent  
[NASA-CASE-XNP-01020] c 03 N71-12260  
Hydraulic grip Patent  
[NASA-CASE-XLA-05100] c 15 N71-17696  
Shock absorber Patent  
[NASA-CASE-XMS-03722] c 15 N71-21530  
Hydraulic casting of liquid polymers Patent  
[NASA-CASE-XNP-07659] c 06 N71-22975  
Energy limiter for hydraulic actuators Patent  
[NASA-CASE-ARC-10131-1] c 15 N71-27754  
Mechanically limited, electrically operated hydraulic valve system for aircraft controls Patent  
[NASA-CASE-XAC-00048] c 02 N71-29128  
Hydraulic transformer Patent  
[NASA-CASE-MFS-20830] c 15 N71-30028  
Mechanically extendible telescoping boom  
[NASA-CASE-NPO-11118] c 03 N72-25021  
Geysering inhibitor for vertical cryogenic transfer pipe  
[NASA-CASE-KSC-10615] c 15 N73-12486  
Redundant hydraulic control system for actuators  
[NASA-CASE-MFS-20944] c 15 N73-13466  
Combined pressure regulator and shutoff valve  
[NASA-CASE-NPO-13201-1] c 37 N75-15050  
Ultrasonically bonded valve assembly  
[NASA-CASE-NPO-13360-1] c 37 N75-25185  
Filter regeneration systems --- a system for regenerating a system filter in a fluid flow line  
[NASA-CASE-MSC-14273-1] c 34 N75-33342  
Quick disconnect filter coupling  
[NASA-CASE-MFS-22323-1] c 37 N76-14463  
Actuator device for artificial leg  
[NASA-CASE-MFS-23225-1] c 52 N77-14735  
Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c 37 N81-17432  
Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c 43 N81-26509  
Gas-to-hydraulic power converter  
[NASA-CASE-MSC-18794-1] c 44 N83-14693  
Tubing and cable cutting tool  
[NASA-CASE-LAR-12786-1] c 37 N84-28085  
Personnel emergency carrier vehicle  
[NASA-CASE-KSC-11282-1] c 85 N87-21755  
Fatigue testing a plurality of test specimens and method  
[NASA-CASE-MFS-28118-1] c 39 N87-25601  
Control surface actuator  
[NASA-CASE-LAR-12852-1] c 05 N89-11738  
Passively activated prehensile digit for a robotic end effector  
[NASA-CASE-NPO-16766-1-CU] c 37 N89-13785  
Hydraulic lifting device  
[NASA-CASE-SSC-00008-1] c 37 N91-13733

## HYDRAULIC FLUIDS

- Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c 37 N80-31790

## HYDRAULIC JETS

- Warm fog dissipation using large volume water sprays  
[NASA-CASE-MFS-25962-1] c 09 N89-25242

## HYDRAZIDES

- Poly(1,3,4-oxadiazoles) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14427-1] c 23 N92-29141

## HYDRAZINE ENGINES

- Reciprocating engines  
[NASA-CASE-MSC-16239-1] c 37 N81-32510

## HYDRAZINE NITROFORM

- Hydrazinium nitroformate propellant with saturated polymeric hydrocarbon binder  
[NASA-CASE-NPO-12015] c 27 N73-16764

## HYDRAZINES

- Ignition means for monopropellant Patent  
[NASA-CASE-XNP-00876] c 28 N70-41311  
Solder flux which leaves corrosion-resistant coating Patent  
[NASA-CASE-XNP-03459-2] c 18 N71-15688  
Prevention of hydrogen embrittlement of high strength steel by hydrazine compositions --- by adding potassium hydroxide to hydrazine  
[NASA-CASE-NPO-12122-1] c 24 N76-14203  
Poly 1, 2, 4-triazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14440-1] c 23 N92-10066  
A process for preparing 1,3-diamino-5-pentafluorosulfanylbenezene and polymers therefrom  
[NASA-CASE-LAR-14773-1-CU] c 27 N92-10105

## HYDRIDES

- Ten degree Kelvin hydride refrigerator  
[NASA-CASE-NPO-16393-1-CU] c 31 N87-21159

## HYDROCARBON COMBUSTION

- In-situ laser retorting of oil shale  
[NASA-CASE-LEW-12217-1] c 43 N78-14452

## HYDROCARBON FUEL PRODUCTION

- Molten salt pyrolysis of latex --- synthetic hydrocarbon fuel production using the Guayule shrub  
[NASA-CASE-NPO-14315-1] c 27 N81-17261

## HYDROCARBON FUELS

- Apparatus for making a metal slurry product Patent  
[NASA-CASE-XLE-00010] c 15 N70-33382  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c 44 N76-29700  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13464-2] c 44 N76-29704  
Dual-fuel, dual-mode rocket engine  
[NASA-CASE-LAR-13773-1] c 20 N90-19298  
Regenerative Cu/La zeolite supported desulfurizing sorbents  
[NASA-CASE-NPO-17480-1-CU] c 25 N92-10073

## HYDROCARBONS

- Hydrazinium nitroformate propellant with saturated polymeric hydrocarbon binder  
[NASA-CASE-NPO-12015] c 27 N73-16764  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-1] c 37 N76-16446  
Combustion engine --- for air pollution control  
[NASA-CASE-NPO-13671-1] c 37 N77-31497  
Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same  
[NASA-CASE-NPO-13137-1] c 27 N80-32514  
Technique for measuring gas conversion factors  
[NASA-CASE-LAR-13220-1] c 34 N86-12547  
Method and device for determining heats of combustion of gaseous hydrocarbons  
[NASA-CASE-LAR-13528-1] c 25 N88-29002  
Some 1-(diorganooxyphosphonyl)methyl-2,4- and -2,6-dinitro-benzenes  
[NASA-CASE-ARC-11425-3] c 23 N90-23475  
Polyimide from bis(n-isoprenyl)s of aryl diamides  
[NASA-CASE-LAR-14330-2-CU] c 27 N93-22033

## HYDROCHLORIC ACID

- Indicator providing continuous indication of the presence of a specific pollutant in air  
[NASA-CASE-NPO-13474-1] c 45 N76-21742

## HYDROCHLORIDES

- Method and apparatus for rebalancing a REDOX flow cell system  
[NASA-CASE-LEW-14127-1] c 33 N86-20680

## HYDRODYNAMICS

- Dual clearance squeeze film damper  
[NASA-CASE-LEW-13506-1] c 37 N85-33490  
Hydrodynamic skin-friction reduction  
[NASA-CASE-LAR-14078-1-CU] c 34 N90-27071  
Polymer/riblet combination for hydrodynamic skin friction reduction  
[NASA-CASE-LAR-14271-1-CU] c 27 N91-13558  
Passive laminar flow control of crossflow vorticity  
[NASA-CASE-LAR-13563-1] c 34 N91-23410

## HYDROFOILS

Hydrofoil Patent  
[NASA-CASE-XLA-00229] c 12 N70-33305

## HYDROFORMING

Hydroforming techniques using epoxy molds Patent  
[NASA-CASE-XLE-05641-1] c 15 N71-26346

## HYDROGEN

Method for detecting hydrogen gas  
[NASA-CASE-XMF-03873] c 06 N69-39733

Prevention of pressure build-up in electrochemical cells  
[NASA-CASE-XGS-01419] c 03 N70-41864

Pulse activated polarographic hydrogen detector  
Patent  
[NASA-CASE-XMF-06531] c 14 N71-17575

Hydrogen leak detection device Patent  
[NASA-CASE-MFS-11537] c 14 N71-20442

Analysis of hydrogen-deuterium mixtures  
[NASA-CASE-NPO-11322] c 06 N72-25146

Hydrogen fire blink detector  
[NASA-CASE-MFS-15063] c 14 N72-25412

Process for separation of dissolved hydrogen from water  
by use of palladium and process for coating palladium  
with palladium black  
[NASA-CASE-MSC-13335-1] c 06 N72-31140

Atomic hydrogen maser with bulb temperature control  
to remove wall shift in maser output frequency  
[NASA-CASE-HON-10654-1] c 16 N73-13489

Method of producing a storage bulb for an atomic  
hydrogen maser  
[NASA-CASE-NPO-13050-1] c 36 N75-15029

Atomic standard with variable storage volume  
[NASA-CASE-GSC-11895-1] c 35 N76-15436

Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-1] c 37 N76-16446

Hydrogen-bromine secondary battery  
[NASA-CASE-NPO-13237-1] c 44 N76-18641

Hydrogen-rich gas generator  
[NASA-CASE-NPO-13464-1] c 44 N76-18642

Solar hydrogen generator  
[NASA-CASE-LAR-11361-1] c 44 N77-22607

Solar photolysis of water  
[NASA-CASE-NPO-13675-1] c 44 N77-32580

Method and automated apparatus for detecting coliform  
organisms  
[NASA-CASE-MSC-16777-1] c 51 N80-27067

Method of cross-linking polyvinyl alcohol and other water  
soluble resins  
[NASA-CASE-LEW-13103-1] c 27 N80-32516

Fluidized bed desulfurization  
[NASA-CASE-NPO-15924-1] c 25 N85-35253

Static feed water electrolysis subsystem development  
[NASA-CASE-MSC-21577-1-SB] c 25 N91-23271

## HYDROGEN ATOMS

Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-1] c 28 N78-24365

Atomic hydrogen storage --- cryotrapping and magnetic  
field strength  
[NASA-CASE-LEW-12081-2] c 28 N80-20402

Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c 28 N81-14103

## HYDROGEN EMBRITTLEMENT

Prevention of hydrogen embrittlement of high strength  
steel by hydrazine compositions --- by adding potassium  
hydroxide to hydrazine  
[NASA-CASE-NPO-12122-1] c 24 N76-14203

## HYDROGEN ENGINES

Hydrogen-fueled engine  
[NASA-CASE-NPO-13763-1] c 44 N78-33526

## HYDROGEN FUELS

Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c 44 N76-29700

Hydrogen rich gas generator  
[NASA-CASE-NPO-13464-2] c 44 N76-29704

Hydrogen-rich gas generator  
[NASA-CASE-NPO-13560-1] c 44 N77-10636

Dual-fuel, dual-mode rocket engine  
[NASA-CASE-LAR-13773-1] c 20 N90-19298

## HYDROGEN IONS

Hydrogen hollow cathode ion source  
[NASA-CASE-LEW-12940-1] c 72 N80-33186

## HYDROGEN OXYGEN FUEL CELLS

Electrolytically regenerative hydrogen-oxygen fuel cell  
Patent  
[NASA-CASE-XLE-04526] c 03 N71-11052

Passively regulated water electrolysis rocket engine  
Patent  
[NASA-CASE-XGS-08729] c 28 N71-14044

## HYDROGEN PEROXIDE

Decomposition unit Patent  
[NASA-CASE-XMS-00583] c 28 N70-38504

## HYDROGEN PRODUCTION

Start up system for hydrogen generator used with an  
internal combustion engine  
[NASA-CASE-NPO-13849-1] c 28 N80-10374

Thermochemical generation of hydrogen  
[NASA-CASE-NPO-15015-1] c 25 N82-28368

Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-2] c 28 N91-14495

## HYDROGENATION

Production of high purity silicon carbide Patent  
[NASA-CASE-XLA-00158] c 26 N70-36805

Compact hydrogenator  
[NASA-CASE-NPO-11682-1] c 35 N74-15127

## HYDROLOGY

Radar target for remotely sensing hydrological  
phenomena  
[NASA-CASE-LAR-12344-1] c 43 N80-18498

Flow rate logging seepage meter  
[NASA-CASE-LAR-14835-1] c 35 N93-19328

## HYDROSULFIDIZATION

Hydrosulfidization of chlorinated coal  
[NASA-CASE-NPO-15304-1] c 25 N83-31743

Apparatus and method for cellulose processing using  
microwave pretreatment  
[NASA-CASE-MSC-21936-1-SB] c 25 N93-22036

## HYDROSTATIC PRESSURE

Method and apparatus for simulating gravitational forces  
on a living organism  
[NASA-CASE-MSC-20202-1] c 54 N84-16803

## HYDROSTATICS

Hydrostatic bearing support  
[NASA-CASE-LEW-11158-1] c 37 N77-28486

Hybrid bearings for turbopumps and the like  
[NASA-CASE-MFS-28491-1] c 37 N93-28326

## HYDROXIDES

Method for determining presence of OH in magnesium  
oxide  
[NASA-CASE-NPO-10774] c 06 N72-17095

Separator for alkaline electric batteries and method of  
making  
[NASA-CASE-GSC-10018-1] c 44 N82-24644

Synthesis of dawsonites --- for use in fire extinguishing  
operations  
[NASA-CASE-ARC-11326-1] c 25 N83-33977

## HYDROXYL COMPOUNDS

Synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c 23 N82-16174

## HYGIENE

Urine collection apparatus --- feminine hygiene  
[NASA-CASE-MSC-18381-1] c 52 N81-28740

## HYGROMETERS

Polymeric electrolytic hygrometer  
[NASA-CASE-NPO-13948-1] c 35 N78-25391

Trace water sensor  
[NASA-CASE-NPO-15722-1] c 35 N85-29212

## HYGROSCOPICITY

Method of evaluating moisture barrier properties of  
encapsulating materials Patent  
[NASA-CASE-NPO-10051] c 18 N71-24934

## HYOSCINE

Intranasal scopolamine preparation and method  
[NASA-CASE-MSC-21858-1] c 52 N92-11628

## HYPERCUBE MULTIPROCESSORS

Fault tolerant hypercube computer system architecture  
[NASA-CASE-NPO-16859-1-CU] c 60 N90-21527

Method of up-front load balancing for local memory  
parallel processors  
[NASA-CASE-MSC-21348-1] c 62 N91-14769

## HYPERFINE STRUCTURE

Process for producing dispersion strengthened nickel  
with aluminum Patent  
[NASA-CASE-XLE-06969] c 17 N71-24142

## HYPERGOLIC ROCKET PROPELLANTS

Apparatus for igniting solid propellants Patent  
[NASA-CASE-XLE-00207] c 28 N70-33375

Small rocket engine Patent  
[NASA-CASE-XLE-00685] c 28 N70-41992

Method of igniting solid propellants Patent  
[NASA-CASE-XLE-01988] c 27 N71-15634

## HYPERSONIC AIRCRAFT

Multistage aerospace craft --- perspective drawings of  
conceptual design  
[NASA-CASE-XMF-02263] c 05 N74-10907

## HYPERSONIC FLIGHT

Hyperonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c 15 N78-32168

## HYPERSONIC FLOW

Hyperonic test facility Patent  
[NASA-CASE-XLA-05378] c 11 N71-21475

## HYPERSONIC SPEED

Reentry vehicle leading edge Patent  
[NASA-CASE-XLA-00165] c 31 N70-33242

Landing arrangement for aerospace vehicle Patent  
[NASA-CASE-XLA-00805] c 31 N70-38010

Variable geometry manned orbital vehicle Patent  
[NASA-CASE-XLA-03691] c 31 N71-15674

High speed flight vehicle control Patent  
[NASA-CASE-XLA-08967] c 02 N71-27088

Apparatus and method for generating large mass flow  
of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10578-1] c 12 N73-25262

Apparatus and method for generating large mass flow  
of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10612-1] c 12 N73-28144

## HYPERSONIC VEHICLES

Techniques for insulating cryogenic fuel containers  
Patent  
[NASA-CASE-XLA-01967] c 31 N70-42015

## HYPERSONIC WIND TUNNELS

Sound shield  
[NASA-CASE-LAR-12883-1] c 71 N83-17235

Quantitative surface temperature measurement using  
two-color thermographic phosphors and video  
equipment  
[NASA-CASE-LAR-13740-1] c 35 N90-22770

Pilot-pressure probe for measuring pressure in a  
hypersonic wind tunnel  
[NASA-CASE-LAR-14232-1] c 09 N92-34213

## HYPERHERMIA

Hyperthermia heating apparatus --- cancer therapy  
[NASA-CASE-NPO-14549-2] c 52 N82-33996

## HYPERVELOCITY GUNS

Dust particle injector for hypervelocity accelerators  
Patent  
[NASA-CASE-XGS-06628] c 24 N71-16213

Hypervelocity gun Patent  
[NASA-CASE-XAC-05902] c 11 N71-18578

Collapsible pistons  
[NASA-CASE-MSC-13789-1] c 11 N73-32152

Hypervelocity gun --- using both electric and chemical  
energy for projectile propulsion  
[NASA-CASE-XLE-03186-1] c 09 N79-21084

## HYPERVELOCITY IMPACT

Method of and device for determining the characteristics  
and flux distribution of micrometeorites --- scanning  
puncture holes in sheet material with photoelectric cell  
[NASA-CASE-NPO-12127-1] c 91 N74-13130

Hypervelocity impact shield  
[NASA-CASE-MSC-21420-1] c 18 N92-15114

## HYPERVELOCITY PROJECTILES

Impact measuring technique  
[NASA-CASE-LAR-10913] c 14 N72-16282

Multiple image storing system for high speed projectile  
holography  
[NASA-CASE-MFS-20596] c 14 N72-17324

Ablative shielding for hypervelocity projectiles  
[NASA-CASE-MSC-21884-1] c 27 N93-29088

## HYPERVELOCITY WIND TUNNELS

Hyperonic test facility Patent  
[NASA-CASE-XLA-00378] c 11 N71-15925

Hyperonic test facility Patent  
[NASA-CASE-XLA-05378] c 11 N71-21475

## HYSTERESIS

Bellevue spring assembly with elastic guides  
[NASA-CASE-XNP-09452] c 15 N69-27504

Wind tunnel balance  
[NASA-CASE-ARC-11877-1-SB] c 09 N91-14357

## ICE

Ice detector  
[NASA-CASE-LAR-13776-1] c 35 N88-29149

## IDENTIFYING

Lightning discharge identification system  
[NASA-CASE-KSC-11099-1] c 47 N82-24779

## IGNITERS

Solid propellant rocket motor  
[NASA-CASE-NPO-11559] c 28 N73-24784

Remote fire stack igniter --- with solenoid-controlled  
valve  
[NASA-CASE-MFS-21675-1] c 25 N74-33378

Molded composite pyrogen igniter for rocket motors ---  
solid propellant ignition  
[NASA-CASE-LAR-12018-1] c 20 N78-24275

Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c 37 N79-11405

Hollow cathode apparatus  
[NASA-CASE-NPO-15560-1] c 33 N85-21491

Low gravity exothermic heating/cooling apparatus  
[NASA-CASE-MSC-25707-1] c 35 N85-29214

## IGNITION

Magnetically controlled plasma accelerator Patent  
[NASA-CASE-XLA-00327] c 25 N71-29184

Device and method for frictionally testing materials for  
ignitability  
[NASA-CASE-MSC-20622-1] c 25 N86-19413

Ignitability test method and apparatus  
[NASA-CASE-LAR-13996-1-SB] c 25 N90-15161

Ignitability test method and apparatus  
[NASA-CASE-LAR-14454-1] c 25 N91-32196

Protective helmet assembly  
[NASA-CASE-MSC-21842-1] c 54 N93-17088



## IGNITION LIMITS

### IGNITION LIMITS

High voltage pulse generator Patent  
[NASA-CASE-MS-12178-1] c 09 N71-13518

### IGNITION SYSTEMS

Apparatus for igniting solid propellants Patent  
[NASA-CASE-XLE-00207] c 28 N70-33375  
Ignition system for monopropellant combustion devices Patent

[NASA-CASE-XNP-00249] c 28 N70-38249  
Rocket motor system Patent  
[NASA-CASE-XLE-00323] c 28 N70-38505  
Ignition means for monopropellant Patent  
[NASA-CASE-XNP-00876] c 28 N70-41311  
Sustained arc ignition system  
[NASA-CASE-LEW-12444-1] c 33 N77-28385

### IGNITION TEMPERATURE

Autoignition test cell Patent  
[NASA-CASE-KSC-10198] c 11 N71-28629

### ILLUMINATING

EMU helmet mounted display  
[NASA-CASE-MS-21460-1] c 54 N91-13879

### ILLUMINATORS

Image magnification adapter for cameras Patent  
[NASA-CASE-XMF-03844-1] c 14 N71-26474  
Illumination system including a virtual light source Patent  
[NASA-CASE-HQN-10781] c 23 N71-30292

### IMAGE ANALYSIS

Real-time image difference detection using a polarization rotation spatial light modulator  
[NASA-CASE-NPO-17144-1-CU] c 74 N88-25305  
Method and apparatus for sensor fusion  
[NASA-CASE-MS-21334-1] c 32 N91-25317  
General method of pattern classification using the two-domain theory  
[NASA-CASE-MS-21737-1] c 61 N93-18282

### IMAGE CONTRAST

Video signal enhancement system with dynamic range compression and modulation index expansion Patent  
[NASA-CASE-NPO-10343] c 07 N71-27341  
Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c 74 N77-28932

### IMAGE CONVERTERS

Deep trap, laser activated image converting system  
[NASA-CASE-NPO-13131-1] c 36 N75-19652  
Resistive anode image converter  
[NASA-CASE-HQN-10876-1] c 33 N76-27473  
Wedge immersed thermistor bolometers  
[NASA-CASE-XGS-01245-1] c 35 N79-33449  
Photocapacitive image converter  
[NASA-CASE-LAR-12513-1] c 44 N82-32841

### IMAGE CORRELATORS

Multiple hologram recording and readout system Patent  
[NASA-CASE-ERC-10151] c 16 N71-29131  
Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c 35 N75-15014  
Azimuth correlator for real-time synthetic aperture radar image processing  
[NASA-CASE-NPO-14019-1] c 32 N79-14268  
Servomechanism for Doppler shift compensation in optical correlator for synthetic aperture radar  
[NASA-CASE-NPO-14998-1] c 32 N83-18975  
Optical stereo video signal processor  
[NASA-CASE-MFS-25752-1] c 74 N86-21348

### IMAGE DISSECTOR TUBES

Apparatus for calibrating an image dissector tube  
[NASA-CASE-MFS-22208-1] c 33 N75-26244  
Electronic optical transfer function analyzer  
[NASA-CASE-MFS-21672-1] c 74 N76-19935

### IMAGE ENHANCEMENT

Method and means for an improved electron beam scanning system Patent  
[NASA-CASE-ERC-10552] c 09 N71-12539

Physical correction filter for improving the optical quality of an image  
[NASA-CASE-HQN-10542-1] c 74 N75-25706  
Method of obtaining intensified image from developed photographic films and plates  
[NASA-CASE-MFS-23461-1] c 35 N79-10389

Dynamic range compression/expansion of light beams by photorefractive crystals  
[NASA-CASE-NPO-17140-1-CU] c 74 N89-14077

Real-time edge-enhanced optical correlator  
[NASA-CASE-NPO-18379-1-CU] c 74 N92-33022

Large area projection liquid-crystal video display system with inherent grid pattern optically removed  
[NASA-CASE-NPO-16932-2-CU] c 74 N93-13711

### IMAGE FILTERS

Motion picture camera for optical pyrometry Patent  
[NASA-CASE-XLA-00062] c 14 N70-33254  
Compact spectroradiometer  
[NASA-CASE-HQN-10683] c 14 N71-34389

Physical correction filter for improving the optical quality of an image

[NASA-CASE-HQN-10542-1] c 74 N75-25706

Method for providing a polarization filter for processing synthetic aperture radar image data

[NASA-CASE-NPO-17904-1-CU] c 32 N91-13594

Multiresponse imager and imaging process for improved resolution

[NASA-CASE-LAR-14779-1] c 74 N92-29951

### IMAGE FURNACES

Correction-free pyrometry in radiant wall furnaces  
[NASA-CASE-NPO-18655-1-CU] c 35 N93-28322

### IMAGE INTENSIFIERS

Magnifying image intensifier  
[NASA-CASE-GSC-12010-1] c 74 N78-18905

Method of obtaining intensified image from developed photographic films and plates

[NASA-CASE-MFS-23461-1] c 35 N79-10389

### IMAGE PROCESSING

Azimuth correlator for real-time synthetic aperture radar image processing  
[NASA-CASE-NPO-14019-1] c 32 N79-14268

Interleaving device  
[NASA-CASE-GSC-12111-2] c 33 N81-29342

Clutter free synthetic aperture radar correlator  
[NASA-CASE-NPO-14035-1] c 32 N83-19968

Longwall shearer tracking system  
[NASA-CASE-MFS-25717-1] c 35 N84-33768

Data volume reduction for imaging radar polarimetry  
[NASA-CASE-NPO-17184-1-CU] c 32 N88-26541

Programmable pipelined image processor  
[NASA-CASE-NPO-16461-1-CU] c 60 N89-26400

Method for providing a polarization filter for processing synthetic aperture radar image data

[NASA-CASE-NPO-17904-1-CU] c 32 N91-13594

Real-time dynamic holographic image storage device  
[NASA-CASE-LAR-13989-1] c 35 N91-13694

Programmable remapper with single flow architecture  
[NASA-CASE-MS-21481-1] c 60 N91-13890

General method of pattern classification using the two-domain theory

[NASA-CASE-MS-21737-1] c 61 N91-13911

Motion detection, novelty filtering, and target tracking using an interferometric technique with a GaAs phase conjugate mirror

[NASA-CASE-NPO-17784-1-CU] c 74 N91-13998

Generation of topographic terrain models utilizing synthetic aperture radar and surface level data

[NASA-CASE-GSC-13212-1] c 43 N91-32546

Optoelectronic associative memory  
[NASA-CASE-NPO-18278-1-CU] c 74 N91-32925

Composite video and graphics display for multiple camera viewing system in robotics and teleoperation  
[NASA-CASE-NPO-17836-1-CU] c 32 N92-10126

Programmable remapper for image processing  
[NASA-CASE-MS-21350-1] c 60 N92-16563

Digital data registration and differencing compression system  
[NASA-CASE-SSC-00010-2] c 82 N92-23550

Method and apparatus for predicting the direction of movement in machine vision

[NASA-CASE-NPO-17552-1-CU] c 54 N92-29129

Multiresponse imager and imaging process for improved resolution

[NASA-CASE-LAR-14779-1] c 74 N92-29951

Near real-time stereo vision system  
[NASA-CASE-NPO-18593-1-CU] c 74 N93-18276

General method of pattern classification using the two-domain theory

[NASA-CASE-MS-21737-1] c 61 N93-18282

Composite video and graphics display for camera viewing systems in robotics and teleoperation

[NASA-CASE-NPO-17836-1-CU] c 32 N93-18284

### IMAGE RECONSTRUCTION

Digital data registration and differencing compression system  
[NASA-CASE-SSC-00010-1] c 82 N91-23976

Programmable remapper for image processing  
[NASA-CASE-MS-21350-1] c 60 N92-16563

### IMAGE RESOLUTION

Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N82-24072

Multiresponse imager and imaging process for improved resolution

[NASA-CASE-LAR-14779-1] c 74 N92-29951

Improved real-time imaging spectrometer  
[NASA-CASE-NPO-18410-1-CU] c 74 N93-29086

### IMAGE ROTATION

Rhomboid prism pair for rotating the plane of parallel light beams  
[NASA-CASE-ARC-11311-1] c 74 N83-13978

### IMAGE TUBES

Image tube --- deriving electron beam replica of image  
[NASA-CASE-GSC-11602-1] c 33 N74-21850

System for producing chroma signals  
[NASA-CASE-MS-14683-1] c 74 N77-18893

## IMAGERY

Television monitor field shifter and an opto-electronic method for obtaining a stereo image of optimal depth resolution and reduced depth distortion on a single screen

[NASA-CASE-NPO-17249-1-CU] c 32 N89-28676

Atmospheric autorotating imaging device  
[NASA-CASE-NPO-17390-1-CU] c 35 N90-22769

### IMAGES

Image magnification adapter for cameras Patent  
[NASA-CASE-XMF-03844-1] c 14 N71-26474

Stereoscopic television system and apparatus  
[NASA-CASE-ARC-10160-1] c 23 N72-27728

Wide-angle flat field telescope  
[NASA-CASE-GSC-12825-1] c 74 N86-28732

Picture data compression coder using subband/transform coding with a Lempel-Ziv-based coder

[NASA-CASE-LEW-15700-1] c 82 N93-28130

### IMAGING RADAR

Data volume reduction for imaging radar polarimetry  
[NASA-CASE-NPO-17184-1-CU] c 32 N88-26541

### IMAGING SPECTROMETERS

Improved real-time imaging spectrometer  
[NASA-CASE-NPO-18410-1-CU] c 74 N93-29086

### IMAGING TECHNIQUES

Optical mirror apparatus Patent  
[NASA-CASE-ERC-10001] c 23 N71-24868

Method and apparatus for eliminating coherent noise in a coherent energy imaging system without destroying spatial coherence

[NASA-CASE-GSC-11133-1] c 23 N72-11568

Phototransistor imaging system  
[NASA-CASE-MFS-20809] c 23 N73-13660

Multispectral imaging system  
[NASA-CASE-MS-12404-1] c 23 N73-13661

Multiple pass reimaging optical system  
[NASA-CASE-ARC-10194-1] c 23 N73-20741

Ritchey-Chretien Telescope  
[NASA-CASE-GSC-11487-1] c 14 N73-30393

Data storage, image tube type  
[NASA-CASE-MS-14053-1] c 60 N74-12888

Optical instruments  
[NASA-CASE-MS-14096-1] c 74 N74-15095

Electron microscope aperture system  
[NASA-CASE-ARC-10448-3] c 35 N77-14408

Method and apparatus for producing an image from a transparent object

[NASA-CASE-GSC-11989-1] c 74 N77-28932

Full color hybrid display for aircraft simulators --- landing aids

[NASA-CASE-ARC-10903-1] c 09 N78-18083

Multispectral imaging and analysis system --- using charge coupled devices and linear arrays

[NASA-CASE-NPO-13691-1] c 43 N79-17288

System and method for obtaining wide screen Schlieren photographs

[NASA-CASE-NPO-14174-1] c 74 N79-20856

Low intensity X-ray and gamma-ray imaging device --- fiber optics

[NASA-CASE-GSC-12263-1] c 74 N79-20857

Diffraction grating configuration for X-ray and ultraviolet focusing

[NASA-CASE-GSC-12357-1] c 74 N80-21140

Multispectral scanner optical system  
[NASA-CASE-MS-12855-1] c 74 N80-33210

System for forming a quadrified image comprising angularly related fields of view of a three dimensional object

[NASA-CASE-NPO-14219-1] c 74 N81-17886

Time delay and integration detectors using charge transfer devices

[NASA-CASE-GSC-12324-1] c 33 N81-33403

Image readout device with electronically variable spatial resolution

[NASA-CASE-LAR-12633-1] c 33 N82-24416

Low intensity X-ray and gamma-ray spectrometer  
[NASA-CASE-GSC-12587-1] c 35 N82-32659

Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths

[NASA-CASE-NPO-14525-2] c 32 N83-31918

High speed multi focal plane optical system  
[NASA-CASE-GSC-12683-1] c 74 N83-36898

Real-time 3-D X-ray and gamma-ray viewer  
[NASA-CASE-GSC-12640-1] c 74 N84-11920

Longwall shearer tracking system  
[NASA-CASE-MFS-25717-1] c 35 N84-33768

### Optical system

[NASA-CASE-NPO-15801-1] c 74 N85-23396

Three-dimensional and tomographic imaging device for X-ray and gamma-ray emitting objects

[NASA-CASE-GSC-12851-1] c 35 N85-30281

Method and apparatus for Delta Kappa synthetic aperture radar measurement of ocean current

[NASA-CASE-NPO-15704-1] c 32 N85-34327

## SUBJECT INDEX

Multispectral linear array multiband selection device  
[NASA-CASE-GSC-12911-1] c 74 N86-29650

Optical scanner  
[NASA-CASE-GSC-12897-1] c 74 N87-21679

Noncontact temperature pattern measuring device  
[NASA-CASE-NPO-17824-1-CU] c 36 N90-17132

Quantitative surface temperature measurement using two-color thermographic phosphors and video equipment  
[NASA-CASE-LAR-13740-1] c 35 N90-22770

Improving the geometric fidelity of imaging systems employing sensor arrays  
[NASA-CASE-NPO-17970-1-CU] c 43 N90-26384

Variable magnification variable dispersion glancing incidence imaging x ray spectroscopic telescope  
[NASA-CASE-MFS-28013-3] c 89 N90-27594

Detection of multiple-bit errors from single-ion tracks in integrated circuits  
[NASA-CASE-NPO-18075-1-CU] c 33 N91-13622

Variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-2] c 89 N91-14096

Programmable remapper for image processing  
[NASA-CASE-MSC-21350-1] c 60 N92-16563

Wide field strip-imaging optical system  
[NASA-CASE-NPO-18146-1-CU] c 74 N92-17892

Water window imaging x ray microscope  
[NASA-CASE-MFS-28485-1] c 35 N92-29135

Method for advanced material characterization by laser induced eddy current imaging  
[NASA-CASE-GSC-13386-1] c 38 N92-29154

Multiresponse imager and imaging process for improved resolution  
[NASA-CASE-LAR-14779-1] c 74 N92-29951

Programmable hyperspectral image mapper with on-array processing  
[NASA-CASE-NPO-17794-1-CU] c 74 N92-30104

Multispectral variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-4] c 89 N92-33012

Method of remotely characterizing thermal properties of a sample  
[NASA-CASE-LAR-13508-3-CU] c 09 N93-11057

Method and apparatus for filtering visual documents  
[NASA-CASE-MSC-22093-1] c 82 N93-22017

Off-surface infrared flow visualization  
[NASA-CASE-LAR-14568-1] c 74 N93-22037

**IMIDES**

Imidazopyrrolone/imide copolymers Patent  
[NASA-CASE-XLA-08802] c 06 N71-11238

Molding process for imidazopyrrolone polymers  
[NASA-CASE-LAR-10547-1] c 31 N74-13177

Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c 27 N83-31854

Polyphenylene ethers with imide linking groups  
[NASA-CASE-LAR-12980-1] c 27 N84-22749

Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-2] c 27 N85-21347

High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1SB] c 24 N86-21590

Fire and heat resistant laminating resins based on maleimido substituted aromatic cyclotriphosphazene polymer  
[NASA-CASE-ARC-11428-2] c 27 N87-16909

Process for preparing phthalocyanine polymer from imide containing bisphthalonitrile  
[NASA-CASE-ARC-11511-2] c 27 N87-21112

Fire and heat resistant laminating resins based on maleimido and citraconimido substituted 1-(diorgano oxyphosphonyl) methyl -2,4- and -2,6- diaminobenzenes  
[NASA-CASE-ARC-11533-3] c 27 N87-24564

Aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-3] c 23 N88-24692

Fire and heat resistant laminating resin based on maleimido and citraconimido substituted 1-(diorgano oxyphosphonyl-methyl)-2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-2] c 27 N89-16042

Acetylene terminated aspartimides and resins therefrom  
[NASA-CASE-LAR-14188-1] c 27 N90-23545

N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14188-2] c 23 N91-14419

Polyimide processing additives  
[NASA-CASE-LAR-13669-1] c 27 N92-29157

Imide/arylene ether copolymers  
[NASA-CASE-LAR-14159-1-CU] c 27 N92-31792

Imide/arylene ether copolymers containing phosphine oxide groups  
[NASA-CASE-LAR-14925-1] c 27 N93-20567

**IMINES**

Synthesis of polymeric schiff bases by schiff-base exchange reactions Patent  
[NASA-CASE-XMF-08651] c 06 N71-11236

Direct synthesis of polymeric schiff bases from two amines and two aldehydes Patent  
[NASA-CASE-XMF-08655] c 06 N71-11239

Synthesis of polymeric schiff bases by reaction of acetals and amine compounds Patent  
[NASA-CASE-XMF-08652] c 06 N71-11243

Aromatic diamine-aromatic dialdehyde high molecular weight Schiff base polymers prepared in a monofunctional Schiff base Patent  
[NASA-CASE-XMF-03074] c 06 N71-24740

**IMMOBILIZATION**

Stretcher Patent  
[NASA-CASE-XMF-06589] c 05 N71-23159

Absolute focus lock for microscopes  
[NASA-CASE-LAR-10184] c 14 N72-22445

Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c 52 N81-25662

Active hold-down for heat treating  
[NASA-CASE-NPO-16892-1-CU] c 37 N87-14704

**IMPACT**

Impact energy absorbing system utilizing fractureable material  
[NASA-CASE-NPO-10671] c 15 N72-20443

Cosmic dust or other similar outer space particles impact location detector  
[NASA-CASE-GSC-11291-1] c 25 N72-33696

Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c 35 N75-27331

Method and apparatus for determining time, direction, and composition of impacting space particles  
[NASA-CASE-LAR-13392-1-CU] c 19 N91-14412

System for determining the angle of impact of an object on a structure  
[NASA-CASE-LAR-14817-1] c 35 N93-17041

System for determining the angle of impact of an object on a structure  
[NASA-CASE-LAR-14817-1] c 35 N93-20569

**IMPACT ACCELERATION**

Suspended mass impact damper Patent  
[NASA-CASE-LAR-10193-1] c 15 N71-27146

**IMPACT DAMAGE**

Micrometeoroid penetration measuring device Patent  
[NASA-CASE-XLA-00941] c 14 N71-23240

Curved cap corrugated sheet  
[NASA-CASE-LAR-12884-1] c 18 N84-33450

Impact tolerant material  
[NASA-CASE-LAR-12887-3] c 24 N90-21822

System for determining the angle of impact of an object on a structure  
[NASA-CASE-LAR-14817-1] c 35 N93-20569

**IMPACT LOADS**

Force transducer Patent  
[NASA-CASE-XAC-01101] c 14 N70-41957

Impact testing machine Patent  
[NASA-CASE-XNP-04817] c 14 N71-23225

**IMPACT RESISTANCE**

Electric storage battery  
[NASA-CASE-NPO-11021] c 03 N72-20032

Hybrid composite laminate structures  
[NASA-CASE-LEW-12118-1] c 24 N77-27188

Protective helmet assembly  
[NASA-CASE-MSC-21842-1] c 54 N93-17088

**IMPACT STRENGTH**

High impact pressure regulator Patent  
[NASA-CASE-NPO-10175] c 14 N71-18625

**IMPACT TESTING MACHINES**

Lunar penetrometer Patent  
[NASA-CASE-XLA-00934] c 14 N71-22765

Impact testing machine Patent  
[NASA-CASE-XNP-04817] c 14 N71-23225

Impacting device for testing insulation  
[NASA-CASE-MFS-25862-2] c 37 N84-33807

**IMPACT TESTS**

Impacting device for testing insulation  
[NASA-CASE-MFS-25862-2] c 37 N84-33807

**IMPACT TOLERANCES**

High impact antenna Patent  
[NASA-CASE-NPO-10231] c 07 N71-26101

Vehicular impact absorption system  
[NASA-CASE-NPO-14014-1] c 37 N79-10420

**IMPEDANCE**

Low noise tuned amplifier  
[NASA-CASE-GSC-12567-1] c 33 N84-22887

Power supply conditioning circuit  
[NASA-CASE-NPO-17233-1-CU] c 33 N88-29095

Microwave field effect transistor  
[NASA-CASE-GSC-12442-2] c 33 N90-20282

Nonintrusive method and apparatus for monitoring the cure of polymeric materials  
[NASA-CASE-LAR-13465-1] c 27 N90-23544

**IMPEDANCE MATCHING**

Signal multiplexer  
[NASA-CASE-XGS-01110] c 07 N69-24334

Reflectometer for receiver input impedance match measurement Patent  
[NASA-CASE-XNP-10843] c 07 N71-11267

## INDICATING INSTRUMENTS

Radio frequency coaxial high pass filter Patent  
[NASA-CASE-XGS-01418] c 09 N71-23573

Triaxial antenna Patent  
[NASA-CASE-XGS-02290] c 07 N71-28809

**IMPEDANCE MEASUREMENT**

High impedance measuring apparatus Patent  
[NASA-CASE-XMS-08589-1] c 09 N71-20569

Apparatus for measuring semiconductor device resistance  
[NASA-CASE-NPO-14424-1] c 33 N80-32650

**IMPELLERS**

Turbomachinery shaft insert  
[NASA-CASE-MFS-28345-2] c 37 N89-28842

**IMPLANTATION**

Telemeter adaptable for implanting in an animal Patent  
[NASA-CASE-XAC-05706] c 05 N71-12342

Magnetic electrical connectors for biomedical percutaneous implants  
[NASA-CASE-KSC-11030-1] c 52 N77-25772

Prosthetic occlusive device for an internal passageway  
[NASA-CASE-MFS-25740-1] c 52 N84-11744

**IMPLANTED ELECTRODES (BIOLOGY)**

Pocket ECG electrode  
[NASA-CASE-ARC-11258-1] c 52 N80-33081

Subcutaneous electrode structure  
[NASA-CASE-ARC-11117-1] c 52 N81-14612

Implantable electrical device  
[NASA-CASE-GSC-12560-1] c 52 N82-29863

**IMPLOSIONS**

Hypervelocity gun Patent  
[NASA-CASE-XAC-05902] c 11 N71-18578

**IMPREGNATING**

Composite lamination method  
[NASA-CASE-LAR-12019-1] c 24 N78-17150

Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
[NASA-CASE-NPO-13530-1] c 25 N81-17187

High temperature silicon carbide impregnated insulating fabrics  
[NASA-CASE-MSC-18832-1] c 27 N83-18908

Continuous fiber thermoplastic prepreg  
[NASA-CASE-LAR-14459-1] c 24 N91-15334

Continuous fiber thermoplastic prepreg  
[NASA-CASE-LAR-14459-1] c 24 N93-24597

Vacuum powder injector and method of impregnating fiber with powder  
[NASA-CASE-LAR-14179-1] c 31 N93-26101

**IMPULSE GENERATORS**

Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c 52 N77-14738

**IMPURITIES**

Method of making impurity-type semiconductor electrical contacts Patent  
[NASA-CASE-XMF-01016] c 26 N71-17818

Method of mitigating titanium impurities effects in p-type silicon material for solar cells  
[NASA-CASE-NPO-14635-1] c 44 N80-24741

Electromigration process for the purification of molten silicon during crystal growth  
[NASA-CASE-NPO-14831-1] c 76 N82-30105

**IN-FLIGHT MONITORING**

System for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations  
[NASA-CASE-FRC-11024-1] c 02 N80-28300

**INCIDENCE**

Method of and means for testing a glancing-incidence mirror system of an X-ray telescope  
[NASA-CASE-MFS-22409-2] c 74 N78-15880

**INCIDENT RADIATION**

Solar cell assembly --- for use under high intensity illumination  
[NASA-CASE-LEW-11549-1] c 44 N77-19571

**INCLINATION**

Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c 05 N77-17020

**INCLUSIONS**

Method and apparatus for thermographically and quantitatively analyzing a structure for disbands and/or inclusions  
[NASA-CASE-LAR-14559-1] c 38 N92-29829

**INCOHERENT SCATTERING**

Rapidly pulsed, high intensity, incoherent light source  
[NASA-CASE-XLE-2529-3] c 33 N74-20859

**INDICATING INSTRUMENTS**

Missile stage separation indicator and stage initiator Patent  
[NASA-CASE-XLA-00791] c 03 N70-39930

Inductive liquid level detection system Patent  
[NASA-CASE-XLE-01609] c 14 N71-10500

Apparatus for the determination of the existence or non-existence of a bonding between two members Patent  
[NASA-CASE-MFS-13686] c 15 N71-18132

- Hydrogen fire detection system with logic circuit to analyze the spectrum of temporal variations of the optical spectrum  
[NASA-CASE-MFS-13130] c 10 N72-17173
- Fatigue failure load indicator  
[NASA-CASE-LAR-12027-1] c 39 N79-22537
- System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c 06 N82-16075
- Film advance indicator  
[NASA-CASE-LAR-12474-1] c 35 N82-26628
- Adjustable indicating device for load position  
[NASA-CASE-MFS-28008-1] c 35 N85-20300
- Fluid leak indicator  
[NASA-CASE-MSC-20783-1] c 35 N86-20756
- Hollow fiber clinostat for simulating microgravity in cell culture  
[NASA-CASE-MFS-28370-1] c 35 N92-31790
- INDIUM ALLOYS**
- Method for attaching a fused-quartz mirror to a conductive metal substrate  
[NASA-CASE-MFS-23405-1] c 26 N77-29260
- Solar cell collector  
[NASA-CASE-LEW-12552-1] c 44 N78-25527
- Aluminum alloy  
[NASA-CASE-LAR-13924-1-CU] c 26 N89-28621
- INDIUM COMPOUNDS**
- Liquid crystal light valve structures  
[NASA-CASE-MSC-20036-1] c 76 N85-33826
- INDUCED DRAG**
- Minimum induced drag airfoil body Patent  
[NASA-CASE-XLA-00755] c 01 N71-13410
- Minimum induced drag airfoil body Patent  
[NASA-CASE-XLA-05828] c 01 N71-13411
- INDUCTANCE**
- Current dependent filter inductance  
[NASA-CASE-ERC-10139] c 09 N72-17154
- Inductance device with vacuum insulation  
[NASA-CASE-LEW-10330-1] c 09 N72-27226
- Direct reading inductance meter  
[NASA-CASE-NPO-13792-1] c 35 N77-32455
- INDUCTION**
- Induction-type metal detector with increased scanning area capability  
[NASA-CASE-KSC-11386-1] c 35 N90-22023
- INDUCTION HEATING**
- Induction furnace with perforated tungsten foil shielding Patent  
[NASA-CASE-XLE-04026] c 14 N71-23267
- Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c 33 N81-19389
- One-step dual purpose joining technique  
[NASA-CASE-LAR-12595-1] c 33 N82-26571
- Induction heating gun  
[NASA-CASE-LAR-13181-1] c 31 N85-29083
- Induction boiler  
[NASA-CASE-MFS-28634-1] c 37 N92-24055
- Flexible heating head for induction heating apparatus and method  
[NASA-CASE-LAR-14679-2] c 32 N92-31150
- Flexible heating head for induction heating apparatus and method  
[NASA-CASE-LAR-14418-1] c 32 N92-31257
- Heating head for induction heating apparatus  
[NASA-CASE-LAR-14429-1] c 33 N93-29173
- INDUCTION MOTORS**
- Induction motor control system with voltage controlled oscillator circuit  
[NASA-CASE-MFS-21465-1] c 10 N73-32145
- Variable frequency inverter for ac induction motors with torque, speed and braking control  
[NASA-CASE-MFS-22088-1] c 33 N75-15874
- Power factor control system for AC induction motors  
[NASA-CASE-MFS-23280-1] c 33 N78-10376
- Three phase power factor controller  
[NASA-CASE-MFS-25535-1] c 33 N81-12330
- Power factor control system for ac induction motors  
[NASA-CASE-MFS-23988-1] c 33 N81-27395
- Motor power factor controller with a reduced voltage starter  
[NASA-CASE-MFS-25586-1] c 33 N82-11360
- Magnetic field control --- electromechanical torquing device  
[NASA-CASE-MFS-23828-1] c 33 N82-26569
- Electrical power generating system  
[NASA-CASE-MFS-25302-1] c 33 N83-28319
- Triac failure detector  
[NASA-CASE-MFS-25607-1] c 33 N83-34190
- Control system for an induction motor with energy recovery  
[NASA-CASE-MFS-25477-1] c 33 N84-14424
- Three phase power factor controller  
[NASA-CASE-MFS-25535-2] c 33 N84-22885
- Motor power control circuit for ac induction motors  
[NASA-CASE-MFS-25323-1] c 33 N84-22886
- Coupling an induction motor type generator to ac power lines --- making windmill generators compatible with public power lines  
[NASA-CASE-MFS-25302-2] c 33 N84-33660
- Three-phase power factor controller with induced EMF sensing  
[NASA-CASE-MFS-25852-1] c 33 N84-33661
- Solar powered actuator with continuously variable auxiliary power control  
[NASA-CASE-MFS-25637-1] c 44 N85-21769
- Power control for ac motor  
[NASA-CASE-MFS-25861-1] c 33 N85-22877
- INDUCTORS**
- Inductive liquid level detection system Patent  
[NASA-CASE-XLE-01609] c 14 N71-10500
- Vacuum deposition apparatus Patent  
[NASA-CASE-XMF-01667] c 15 N71-17647
- Constant frequency output two stage induction machine systems Patent  
[NASA-CASE-ERC-10065] c 09 N71-27364
- Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c 33 N81-19393
- Improved high power/high frequency inductor  
[NASA-CASE-NPO-17830-1-CU] c 33 N91-14539
- INDUSTRIAL PLANTS**
- Process for making diamonds  
[NASA-CASE-MFS-20698-2] c 15 N73-19457
- INDUSTRIAL WASTES**
- Process of forming catalytic surfaces for wet oxidation reactions  
[NASA-CASE-MSC-14831-1] c 25 N78-10225
- Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c 85 N79-17747
- Hazardous materials emergency response mobile robot  
[NASA-CASE-NPO-18690-1-CU] c 37 N92-34205
- INERT ATMOSPHERE**
- Method for retarding dye fading during archival storage of developed color photographic film --- inert atmosphere  
[NASA-CASE-MFS-23250-1] c 35 N82-11432
- INERTIA**
- Bidirectional step torque filter with zero backlash characteristic Patent  
[NASA-CASE-XGS-04227] c 15 N71-21744
- INERTIAL CONFINEMENT FUSION**
- Method and apparatus for producing gas-filled hollow spheres --- target pellets for inertial confinement fusion  
[NASA-CASE-NPO-14596-3] c 31 N83-31896
- Contactless pellet fabrication  
[NASA-CASE-NPO-15592-1] c 71 N84-16940
- INERTIAL GUIDANCE**
- Hermetic sealed vibration damper Patent  
[NASA-CASE-MSC-10959] c 15 N71-26243
- INERTIAL NAVIGATION**
- Autonomous navigation system --- gyroscopic pendulum for air navigation  
[NASA-CASE-ARC-11257-1] c 04 N81-21047
- Assured crew return vehicle  
[NASA-CASE-MSC-21536-1] c 18 N92-21999
- INERTIAL PLATFORMS**
- Clamping assembly for inertial components Patent  
[NASA-CASE-XMS-02184] c 15 N71-20813
- Azimuth laying system Patent  
[NASA-CASE-XMF-01669] c 21 N71-23289
- Temperature compensated digital inertial sensor --- circuit for maintaining inertial element of gyroscope or accelerometer at constant position  
[NASA-CASE-NPO-13044-1] c 35 N74-15094
- Attitude control system  
[NASA-CASE-MFS-22787-1] c 15 N77-10113
- Rim inertial measuring system  
[NASA-CASE-LAR-12052-1] c 18 N81-29152
- INERTIAL REFERENCE SYSTEMS**
- Attitude control system Patent  
[NASA-CASE-XGS-04393] c 21 N71-14159
- Inertial reference apparatus Patent  
[NASA-CASE-XAC-03107] c 23 N71-16098
- INFLATABLE SPACECRAFT**
- Thermal control of space vehicles Patent  
[NASA-CASE-XLA-01291] c 33 N70-36617
- Passive communication satellite Patent  
[NASA-CASE-XLA-00210] c 30 N70-40309
- Rotating mandrel for assembly of inflatable devices Patent  
[NASA-CASE-XLA-04143] c 15 N71-17687
- Method of making an inflatable panel Patent  
[NASA-CASE-XLA-03497] c 15 N71-23052
- Orbital escape device Patent  
[NASA-CASE-XMS-06162] c 31 N71-28851
- INFLATABLE STRUCTURES**
- Aeroflexible structures  
[NASA-CASE-XLA-06095] c 01 N69-39981
- Life raft Patent  
[NASA-CASE-XMS-00863] c 05 N70-34857
- Life preserver Patent  
[NASA-CASE-XMS-00864] c 05 N70-36493
- Inflatable honeycomb Patent  
[NASA-CASE-XLA-00204] c 32 N70-36536
- Inflatable radar reflector unit Patent  
[NASA-CASE-XMS-00893] c 07 N70-40063
- Excessive temperature warning system Patent  
[NASA-CASE-XLA-01926] c 14 N71-15620
- Inflation system for balloon type satellites Patent  
[NASA-CASE-XGS-03351] c 31 N71-16081
- Aerodynamic protection for space flight vehicles Patent  
[NASA-CASE-XNP-02507] c 31 N71-17679
- Self supporting space vehicle Patent  
[NASA-CASE-XLA-00117] c 31 N71-17680
- Conforming polisher for aspheric surface of revolution Patent  
[NASA-CASE-XGS-02884] c 15 N71-22705
- Method of making inflatable honeycomb Patent  
[NASA-CASE-XLA-03492] c 15 N71-22713
- Collapsible antenna boom and transmission line Patent  
[NASA-CASE-MFS-20068] c 07 N71-27191
- Inflatable tether Patent  
[NASA-CASE-XMS-10993] c 15 N71-28936
- Inflatable transpiration cooled nozzle  
[NASA-CASE-MFS-20619] c 28 N72-11708
- Modification of one man life raft  
[NASA-CASE-LAR-10241-1] c 54 N74-14845
- Emergency space-suit helmet  
[NASA-CASE-MSC-10954-1] c 54 N78-18761
- Pressure control valve --- inflating flexible bladders  
[NASA-CASE-ARC-11251-1] c 37 N81-17433
- Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c 54 N81-26718
- Inflatable device for installing strain gage bridges  
[NASA-CASE-FRC-11068-1] c 35 N84-12443
- Ballast system for maintaining constant pressure in a glove box  
[NASA-CASE-NPO-17786-1-CU] c 35 N90-17104
- INFORMATION**
- Method and apparatus for filtering visual documents  
[NASA-CASE-MSC-22093-1] c 82 N93-22017
- INFORMATION FLOW**
- Hidden Markov models for fault detection in dynamic systems  
[NASA-CASE-NPO-18982-1-CU] c 38 N93-30413
- INFORMATION RETRIEVAL**
- Multiple hologram recording and readout system Patent  
[NASA-CASE-ERC-10151] c 16 N71-29131
- Dynamic pattern matcher using incomplete data  
[NASA-CASE-MSC-21415-1-SB] c 61 N93-18858
- INFORMATION SYSTEMS**
- Dynamic pattern matcher using incomplete data  
[NASA-CASE-MSC-21415-1-SB] c 61 N93-18858
- INFORMATION THEORY**
- Dynamic pattern matcher using incomplete data  
[NASA-CASE-MSC-21415-1-SB] c 61 N93-18858
- INFRARED DETECTORS**
- Temperature sensitive capacitor device  
[NASA-CASE-XNP-09750] c 14 N69-39937
- Sight switch using an infrared source and sensor Patent  
[NASA-CASE-XMF-03934] c 09 N71-22985
- Infrared detectors  
[NASA-CASE-LAR-10728-1] c 14 N73-12445
- Doped Josephson tunneling junction for use in a sensitive IR detector  
[NASA-CASE-NPO-13348-1] c 33 N75-31332
- Multispectral scanner optical system  
[NASA-CASE-MSC-18255-1] c 74 N80-33210
- Broadband optical radiation detector  
[US-PATENT-4,262,198] c 74 N83-19597
- Integrating IR detector imaging systems  
[NASA-CASE-NPO-15805-1] c 74 N84-28590
- Integrated photo-responsive metal oxide semiconductor circuit  
[NASA-CASE-GSC-12782-1] c 33 N88-14271
- Field induced gap infrared detector  
[NASA-CASE-NPO-17526-1-CU] c 35 N91-14588
- Laterally stacked Schottky diodes for infrared sensor applications  
[NASA-CASE-NPO-17426-1-CU] c 33 N91-21434
- INAS hole-immobilized doping superlattice long-wave-infrared detector  
[NASA-CASE-NPO-17880-1-CU] c 76 N93-11056
- Long wavelength infrared detector  
[NASA-CASE-NPO-17543-2-CU] c 35 N93-19387
- INFRARED IMAGERY**
- Off-surface infrared flow visualization  
[NASA-CASE-LAR-14568-1] c 74 N93-22037

## INFRARED INSTRUMENTS

- Infrared scanner Patent  
[NASA-CASE-XLA-00120] c 21 N70-33181  
Instrumentation for sensing moisture content of material  
using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373

## INFRARED INTERFEROMETERS

- Over-under double-pass interferometer  
[NASA-CASE-NPO-13999-1] c 35 N78-18395

## INFRARED LASERS

- Monitoring atmospheric pollutants with a heterodyne  
radiometer transmitter-receiver  
[NASA-CASE-NPO-11919-1] c 35 N74-11284  
Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c 74 N77-26942  
Thermal compensator for closed-cycle helium  
refrigerator --- assuring constant temperature for an  
infrared laser diode  
[NASA-CASE-GSC-12168-1] c 31 N79-17029

## INFRARED PHOTOMETRY

- Tailorable infrared sensing device with strain layer  
superlattice structure  
[NASA-CASE-NPO-16607-1-CU] c 76 N88-14836  
Tailorable infrared sensing device with strain layer  
superlattice structure  
[NASA-CASE-NPO-16617-2-CU] c 35 N90-17118

## INFRARED RADIATION

- High-speed infrared furnace  
[NASA-CASE-XLE-10466] c 17 N69-25147  
High field CdS detector for infrared radiation  
[NASA-CASE-LAR-11027-1] c 35 N74-18088  
Double photon excitation of high-Rydberg atoms as a  
long-lived submillimeter detector  
[NASA-CASE-NPO-16372-1] c 72 N86-33127  
Lunar radiator shade  
[NASA-CASE-MSC-21868-1] c 54 N92-21589  
Off-surface infrared flow visualization  
[NASA-CASE-LAR-14568-1] c 74 N93-22037

## INFRARED REFLECTION

- Electromagnetic radiation energy arrangement ---  
coatings for solar energy absorption and infrared  
reflection  
[NASA-CASE-WOO-00428-1] c 32 N79-19186

## INFRARED SCANNERS

- Infrared scanner Patent  
[NASA-CASE-XLA-00120] c 21 N70-33181  
Infrared horizon locator  
[NASA-CASE-LAR-10726-1] c 14 N73-20475

## INFRARED SPECTRA

- Diatom infrared gasdynamic laser --- for producing  
different wavelengths  
[NASA-CASE-ARC-10370-1] c 36 N75-31426  
Gas particle radiator  
[NASA-CASE-LEW-14297-1] c 35 N89-12048

## INFRARED SPECTROMETERS

- Telespectrograph Patent  
[NASA-CASE-XLA-03273] c 14 N71-18699  
Cooled echelle grating spectrometer --- for space  
telescope applications  
[NASA-CASE-NPO-14372-1] c 35 N80-26635

## INFRARED SPECTROSCOPY

- Apparatus for providing a servo drive signal in a  
high-speed stepping interferometer  
[NASA-CASE-NPO-13569-2] c 35 N79-14348

## INFRARED TELESCOPES

- Optical system with reflective baffles  
[NASA-CASE-ARC-11502-1] c 74 N86-20125

## INFRASONIC FREQUENCIES

- Resonant infrasonic gauging apparatus  
[NASA-CASE-MSC-11847-1] c 14 N72-11363

## INHIBITORS

- Inhibited solid propellant composition containing  
beryllium hydride  
[NASA-CASE-NPO-10866-1] c 28 N79-14228

## INITIATORS (EXPLOSIVES)

- Missile stage separation indicator and stage initiator  
Patent  
[NASA-CASE-XLA-00791] c 03 N70-39930  
Safe-arm initiator Patent  
[NASA-CASE-LAR-10372] c 09 N71-18599  
Electroexplosive device  
[NASA-CASE-NPO-13858-1] c 28 N79-11231  
Four-terminal electrical testing device --- initiator  
bridgewire resistance  
[NASA-CASE-MSC-21166-1] c 35 N87-25555

## INJECTION

- Thickness measuring and injection device Patent  
[NASA-CASE-MFS-20261] c 14 N71-27005  
High performance channel injection sealant invention  
abstract  
[NASA-CASE-ARC-14408-1] c 27 N82-33523

## INJECTION LASERS

- Arrangement for damping the resonance in a laser  
diode  
[NASA-CASE-NPO-15980-1] c 36 N85-30305

## INJECTORS

- Rocket propellant injector Patent  
[NASA-CASE-XLE-00103] c 28 N70-33241  
Rocket engine injector Patent  
[NASA-CASE-XLE-00111] c 28 N70-38199  
Injector for bipropellant rocket engines Patent  
[NASA-CASE-XMF-00148] c 28 N70-38710  
Dust particle injector for hypervelocity accelerators  
Patent  
[NASA-CASE-XGS-06628] c 24 N71-16213  
Control valve and co-axial variable injector Patent  
[NASA-CASE-XNP-09702] c 15 N71-17654  
Rocket engine injector Patent  
[NASA-CASE-XLE-03157] c 28 N71-24736  
Bipropellant injector  
[NASA-CASE-XNP-09461] c 28 N72-23809  
Coaxial injector for reaction motors  
[NASA-CASE-NPO-11095] c 15 N72-25455  
Injector for use in high voltage isolators for liquid feed  
lines  
[NASA-CASE-NPO-11377] c 15 N73-27406  
Rocket injector head  
[NASA-CASE-XMF-04592-1] c 20 N79-21125  
Method of injecting fluid propellants into a rocket  
combustion chamber  
[NASA-CASE-LEW-14846-2] c 20 N91-26200  
Extended temperature range rocket injector  
[NASA-CASE-LEW-14846-1] c 20 N92-10054  
Liquid fuel injection elements for rocket engines  
[NASA-CASE-MFS-28547-1] c 20 N93-29847

## INKS

- Multicolor printing plate joining  
[NASA-CASE-LEW-13598-1] c 35 N84-22930

## INLET FLOW

- High pressure four-way valve Patent  
[NASA-CASE-XNP-00214] c 15 N70-36908  
Gas turbine combustor Patent  
[NASA-CASE-LEW-10286-1] c 28 N71-28915  
Airflow control system for supersonic inlets  
[NASA-CASE-LEW-11188-1] c 02 N74-20646  
Variably positioned guide vanes for aerodynamic  
choking  
[NASA-CASE-LAR-10642-1] c 07 N74-31270  
Shock position sensor for supersonic inlets --- measuring  
pressure in the throat of a supersonic inlet  
[NASA-CASE-LEW-11915-1] c 35 N76-14431  
Method for fabricating a mass spectrometer inlet leak  
[NASA-CASE-GSC-12077-1] c 35 N77-24455  
Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c 07 N78-25089  
Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c 05 N79-24976  
Nozzle diffuser for use with an open test section of a  
wind tunnel  
[NASA-CASE-LAR-14424-1-SB] c 09 N93-25996  
Gas storage and recovery system  
[NASA-CASE-MSC-22091-1] c 31 N93-28136

## INLET NOZZLES

- Rocket injector head  
[NASA-CASE-XMF-04592-1] c 20 N79-21125  
Nozzle diffuser for use with an open test section of a  
wind tunnel  
[NASA-CASE-LAR-14424-1-SB] c 09 N93-25996

## INLET PRESSURE

- Fluid jet amplifier  
[NASA-CASE-XLE-03512] c 12 N69-21466  
Shock position sensor for supersonic inlets --- measuring  
pressure in the throat of a supersonic inlet  
[NASA-CASE-LEW-11915-1] c 35 N76-14431

## INOCULATION

- Automatic inoculating apparatus --- includes movable  
carriage, drive motor, and swabbing motor  
[NASA-CASE-LAR-11074-1] c 51 N75-13502

## INORGANIC COATINGS

- Diffuse reflective coating  
[NASA-CASE-GSC-11214-1] c 06 N73-13128  
Boron trifluoride coatings for thermoplastic materials and  
method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c 27 N78-31233

## INORGANIC COMPOUNDS

- Method of making membranes  
[NASA-CASE-XNP-04264] c 03 N69-21337  
Inorganic solid film lubricants Patent  
[NASA-CASE-XMF-03988] c 15 N71-21403  
Modified polyurethane foams for fuel-fire Patent  
[NASA-CASE-ARC-10098-1] c 06 N71-24739  
Inorganic thermal control coatings  
[NASA-CASE-MFS-20011] c 18 N72-22566  
Inorganic-organic separators for alkaline batteries  
[NASA-CASE-LEW-12649-1] c 44 N78-25530  
Method for the preparation of inorganic single crystal  
and polycrystalline electronic materials  
[NASA-CASE-XLE-02545-1] c 76 N79-21910

## INORGANIC PEROXIDES

- Process for preparing higher oxides of the alkali and  
alkaline earth metals  
[NASA-CASE-ARC-10992-1] c 26 N78-32229  
Process for the preparation of calcium superoxide  
[NASA-CASE-ARC-11053-1] c 25 N79-10162

## INPUT

- Remodulator filter Patent  
[NASA-CASE-NPO-10198] c 09 N71-24806  
Active RC networks  
[NASA-CASE-ARC-10020] c 10 N72-17172  
High-speed multiplexing of keyboard data inputs  
[NASA-CASE-NPO-14554-1] c 60 N81-27814

## INPUT/OUTPUT ROUTINES

- Analog to digital converter  
[NASA-CASE-NPO-13385-1] c 33 N76-18345

## INSERTION

- Apparatus and method of inserting a microelectrode in  
body tissue or the like using vibration means  
[NASA-CASE-NPO-13910-1] c 52 N79-27836

## INSERTION LOSS

- Insertion loss measuring apparatus having transformer  
means connected across a pair of bolometers Patent  
[NASA-CASE-XNP-01193] c 10 N71-16057

## INSERTS

- Method of repairing hidden leaks in tubes  
[NASA-CASE-MFS-19796-1] c 37 N86-32736  
Turbomachinery shaft insert  
[NASA-CASE-MFS-28345-2] c 37 N89-28842  
Improved method and apparatus for Mach number  
change in wind tunnel  
[NASA-CASE-LAR-13548-1] c 09 N91-28175  
Blind fastening apparatus  
[NASA-CASE-LAR-14542-1] c 37 N93-22384

## INSPECTION

- Automatic visual inspection system for  
microelectronics  
[NASA-CASE-NPO-13282] c 38 N78-17396  
Method for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-1] c 09 N82-29330  
Apparatus and method for inspecting a bearing ball  
[NASA-CASE-MFS-25833-1] c 35 N86-32698  
Method of radiographic inspection of wooden  
members  
[NASA-CASE-LAR-13724-1] c 38 N90-23756  
Tissue simulating gel for medical research  
[NASA-CASE-LAR-14036-1] c 27 N91-13562

## INSTALLING

- Device for installing rocket engines  
[NASA-CASE-MFS-19220-1] c 20 N76-22296  
Thermocouple installation  
[NASA-CASE-NPO-13540-1] c 35 N77-14409  
A method and technique for installing light-weight fragile,  
high-temperature fiber insulation  
[NASA-CASE-MSC-18934-3] c 24 N82-26387  
Inflatable device for installing strain gage bridges  
[NASA-CASE-FRC-11068-1] c 35 N84-12443  
Automatic system for installation and replacement of  
Space Station components  
[NASA-CASE-LEW-14906-1] c 37 N93-12203

## INSTRUMENT COMPENSATION

- Compensation for primary reflector wavefront error  
[NASA-CASE-NPO-16869-1CU] c 74 N86-33138

## INSTRUMENT ERRORS

- Radiation direction detector including means for  
compensating for photocell aging Patent  
[NASA-CASE-XLA-00183] c 14 N70-40239

## INSTRUMENT FLIGHT RULES

- Controlled visibility device for an aircraft Patent  
[NASA-CASE-XFR-04147] c 11 N71-10748

## INSTRUMENT ORIENTATION

- Plurality of photosensitive cells on a pyramidal base  
for planetary trackers  
[NASA-CASE-XNP-04180] c 07 N69-39736  
Azimuth laying system Patent  
[NASA-CASE-XMF-01669] c 21 N71-23289  
Optical machine tool alignment indicator Patent  
[NASA-CASE-XAC-09489-1] c 15 N71-26673  
Solar energy powered heliotrope  
[NASA-CASE-GSC-10945-1] c 21 N72-31637

## INSTRUMENT PACKAGES

- Apparatus for ejection of an instrument cover  
[NASA-CASE-XMF-04132] c 15 N69-27502  
Method and apparatus for shock protection Patent  
[NASA-CASE-XLA-00482] c 15 N70-36409  
Foam generator Patent  
[NASA-CASE-XLA-00838] c 03 N70-36778  
Velocity package Patent  
[NASA-CASE-XLA-01339] c 31 N71-15692  
Processing for producing a sterilized instrument  
Patent  
[NASA-CASE-XNP-09763] c 14 N71-20461  
Thermal control canister  
[NASA-CASE-GSC-12253-1] c 34 N79-31523

## INSTRUMENTS

- Radio frequency shielded enclosure Patent  
[NASA-CASE-XMF-09422] c 07 N71-19436
- Linear differential pressure sensor Patent  
[NASA-CASE-XMF-01974] c 14 N71-22752
- Precision thrust gage Patent  
[NASA-CASE-XGS-02319] c 14 N71-22965
- Self-calibrating displacement transducer Patent  
[NASA-CASE-XLA-00781] c 09 N71-22999
- Sensing probe  
[NASA-CASE-LEW-10281-1] c 14 N72-17327
- Scientific experiment flexible mount  
[NASA-CASE-MS-12372-1] c 31 N72-25842
- Magnetic suspension and pointing system  
[NASA-CASE-LAR-11889-2] c 37 N78-27424
- Rotary leveling base platform  
[NASA-CASE-ARC-10981-1] c 37 N78-27425
- INSULATED STRUCTURES**  
Piping arrangement through a double chamber structure  
[NASA-CASE-XNP-08882] c 15 N69-39935
- INSULATION**  
Electrode construction Patent  
[NASA-CASE-ARC-10043-1] c 05 N71-11193
- Foamed in place ceramic refractory insulating material Patent  
[NASA-CASE-XGS-02435] c 18 N71-22998
- Method of removing insulated material from insulated wires  
[NASA-CASE-FRC-10038] c 15 N72-20444
- Inductance device with vacuum insulation  
[NASA-CASE-LEW-10330-1] c 09 N72-27226
- Insulated electrocardiographic electrodes --- without paste electrolyte  
[NASA-CASE-MS-14339-1] c 05 N75-24716
- Silica reusable surface insulation  
[NASA-CASE-ARC-10721-1] c 27 N76-22376
- Two-component ceramic coating for silica insulation  
[NASA-CASE-MS-14270-1] c 27 N76-22377
- Three-component ceramic coating for silica insulation  
[NASA-CASE-MS-14270-2] c 27 N76-23426
- Field effect transistor and method of construction thereof  
[NASA-CASE-MFS-23312-1] c 33 N78-27326
- Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MFS-23626-1] c 24 N80-26388
- Impacting device for testing insulation  
[NASA-CASE-MFS-25862-2] c 37 N84-33807
- Cryogenic insulation system  
[NASA-CASE-LAR-13506-1] c 27 N89-12741
- Pressure rig for repetitive casting  
[NASA-CASE-LAR-14050-1] c 31 N90-21216
- High temperature insulation barrier composite  
[NASA-CASE-MFS-29241-1] c 24 N90-23480
- Toughened uni-piece fibrous insulation  
[NASA-CASE-ARC-11888-1] c 24 N92-16026
- Sprayable lightweight ablative coating  
[NASA-CASE-MFS-28372-1] c 27 N92-16123
- Whiskerless Schottky diode  
[NASA-CASE-GSC-13063-2-CU] c 33 N92-16197
- INSULATORS**  
Electrostatic thruster with improved insulators Patent  
[NASA-CASE-XLE-01902] c 28 N71-10574
- High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c 27 N78-19302
- Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-2] c 33 N83-24763
- Process for lowering the dielectric constant of polyimides using diamine acid additives  
[NASA-CASE-LAR-13902-1] c 27 N90-23546
- Enhanced single layer multi-color or luminescent display with coactivators  
[NASA-CASE-LAR-14181-1] c 76 N91-21911
- Single layer multi-color luminescent display and method of making  
[NASA-CASE-LAR-13616-3] c 74 N92-29158
- A method of making a single layer multi-color luminescent display  
[NASA-CASE-LAR-14811-1] c 33 N92-30389
- A method of making a single layer multi-color luminescent display  
[NASA-CASE-LAR-14811-1] c 33 N93-20119
- INTAKE SYSTEMS**  
Inlet deflector for jet engines Patent  
[NASA-CASE-XLE-00388] c 28 N70-34788
- The engine air intake system  
[NASA-CASE-ARC-10761-1] c 07 N77-18154
- Fluid sampling device  
[NASA-CASE-GSC-12143-1] c 35 N77-32456
- Passive propellant system  
[NASA-CASE-MFS-23642-1] c 20 N80-10278
- Reciprocating engines  
[NASA-CASE-MS-16239-1] c 37 N81-32510
- Continuous laminar smoke generator  
[NASA-CASE-LAR-13014-1] c 09 N85-21178
- Solid sorbent air sampler  
[NASA-CASE-MS-20653-1] c 35 N86-26595
- INTEGRERS**  
Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-2-SB] c 27 N90-21177
- INTEGRATED CIRCUITS**  
Counter and shift register Patent  
[NASA-CASE-XNP-01753] c 08 N71-22897
- Pulse rise time and amplitude detector Patent  
[NASA-CASE-XMF-08804] c 09 N71-24717
- Method and apparatus for swept-frequency impedance measurements of welds  
[NASA-CASE-ARC-10176-1] c 15 N72-21464
- Integrated circuit including field effect transistor and cermet resistor  
[NASA-CASE-GSC-10835-1] c 09 N72-33205
- Derivation of a tangent function using an integrated circuit four-quadrant multiplier  
[NASA-CASE-MS-13907-1] c 10 N73-26230
- Coaxial inverted geometry transistor having buried emitter  
[NASA-CASE-ARC-10330-1] c 09 N73-32112
- Integrated circuit package with lead structure and method of preparing the same  
[NASA-CASE-MFS-21374-1] c 33 N74-12951
- Integrated P-channel MOS gyrator  
[NASA-CASE-MFS-22343-1] c 33 N74-34638
- Four phase logic systems --- including integrated microcircuits  
[NASA-CASE-MS-14240-1] c 33 N75-14957
- Integrable power gyrator --- with Z-matrix design using parallel transistors  
[NASA-CASE-MFS-22342-1] c 33 N75-30428
- Cross correlation anomaly detection system  
[NASA-CASE-NPO-13283] c 38 N78-17395
- Complementary DMOS-VMOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c 33 N79-12321
- Method for analyzing radiation sensitivity of integrated circuits  
[NASA-CASE-NPO-14350-1] c 33 N80-14332
- Solar cell system having alternating current output  
[NASA-CASE-LEW-12806-2] c 44 N81-12542
- Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MFS-23845-1] c 33 N81-17348
- Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-256704-1] c 33 N84-22884
- Split-cross-bridge resistor for testing for proper fabrication of integrated circuits  
[NASA-CASE-NPO-16021-1] c 33 N85-30187
- Cross-contact chain  
[NASA-CASE-NPO-16784-1] c 33 N87-10231
- Method of examining microcircuit patterns  
[NASA-CASE-NPO-16299-1] c 33 N87-14594
- Ion beam sputter etching  
[NASA-CASE-LEW-13899-1] c 31 N87-21160
- Integrated photo-responsive metal oxide semiconductor circuit  
[NASA-CASE-GSC-12782-1] c 33 N88-14271
- Integrated circuit reliability testing  
[NASA-CASE-NPO-17393-1-CU] c 33 N89-29679
- Detection of multiple-bit errors from single-ion tracks in integrated circuits  
[NASA-CASE-NPO-18075-1-CU] c 33 N91-13622
- Universal nondestructive mm-wave integrated circuit test fixture  
[NASA-CASE-LEW-14746-1] c 33 N91-14552
- High-gain AlGaAs/GaAs double heterojunction Darlington phototransistors for optical neural networks  
[NASA-CASE-NPO-18101-1-CU] c 74 N91-25841
- Thermal treatment of silicon integrated circuit chips to prevent and heal voids in aluminum metallization  
[NASA-CASE-NPO-17678-1-CU] c 76 N91-28014
- Integrated, non-volatile, high-speed analog random access memory  
[NASA-CASE-NPO-17998-1-CU] c 60 N92-12438
- Method and apparatus for increasing resistance of bipolar buried layer integrated circuit devices to single-event upsets  
[NASA-CASE-NPO-17573-2-CU] c 33 N92-16196
- GaAs-based optoelectronic neurons  
[NASA-CASE-NPO-18497-1-CU] c 63 N92-24245
- Hybridization of detector array and integrated circuit for readout  
[NASA-CASE-NPO-18062-1-CU] c 33 N92-30542
- GaAs-based optoelectronic neurons  
[NASA-CASE-NPO-18497-1-CU] c 63 N93-24599
- Digital parallel processor array for optimum path planning  
[NASA-CASE-NPO-18727-1-CU] c 62 N93-28427

- Wavelength-division multiplexed optical integrated circuit with vertical diffraction grating  
[NASA-CASE-NPO-18357-1-CU] c 74 N93-29848
- INTEGRATED OPTICS**  
Electro-optic resonant phase modulator  
[NASA-CASE-NPO-18702-1-CU] c 74 N92-23551
- Wavelength-division multiplexed optical integrated circuit with vertical diffraction grating  
[NASA-CASE-NPO-18357-1-CU] c 74 N93-29848
- INTEGRATORS**  
Operational integrator Patent  
[NASA-CASE-NPO-10230] c 09 N71-12520
- Variable duration pulse integrator Patent  
[NASA-CASE-XLA-01219] c 10 N71-23084
- Variable width pulse integrator Patent  
[NASA-CASE-XLA-03356] c 10 N71-23315
- Feedback integrator with grounded capacitor Patent  
[NASA-CASE-XAC-10607] c 10 N71-23669
- High speed phase detector Patent  
[NASA-CASE-NPO-01306-2] c 09 N71-24596
- Adaptive control system for line-commutated inverters  
[NASA-CASE-MFS-25209-1] c 33 N83-35227
- INTEGRITY**  
Mechanical strain isolator mount  
[NASA-CASE-LAR-13580-1] c 37 N91-21541
- INTERCALATION**  
Method of intercalating large quantities of fibrous structures  
[NASA-CASE-LEW-15077-1] c 24 N92-16025
- Apparatus for intercalating large quantities of fibrous structures  
[NASA-CASE-LEW-15077-2] c 24 N93-29609
- INTERFACES**  
Geometries for roughness shapes in laminar flow  
[NASA-CASE-LAR-13255-1] c 02 N87-16793
- Expandable pallet for space station interface attachments  
[NASA-CASE-MS-21117-1] c 18 N88-28958
- Laser Doppler velocimeter multiplexer interface for simultaneous measured events  
[NASA-CASE-ARC-11536-1] c 33 N89-14384
- Space module assembly apparatus with docking alignment flexibility and restraint  
[NASA-CASE-MS-21211-1] c 18 N89-28553
- Expandable pallet for space station interface attachments  
[NASA-CASE-MS-21117-2] c 18 N89-28554
- Printer port interface  
[NASA-CASE-LAR-13950-1] c 60 N92-30541
- INTERFACIAL TENSION**  
Passive propellant system  
[NASA-CASE-MFS-23642-1] c 20 N80-10278
- Sphere forming method and apparatus  
[NASA-CASE-NPO-15070-1] c 31 N83-35176
- Surface tension confined liquid cryogen cooler  
[NASA-CASE-GSC-13112-1] c 31 N89-29578
- Convergent strand array liquid pumping system  
[NASA-CASE-NPO-17301-1-CU] c 31 N90-23587
- INTERFERENCE FIT**  
Cryogenic anti-friction bearing with inner race  
[NASA-CASE-MFS-28384-1] c 37 N90-27112
- INTERFEROMETERS**  
Apparatus for controlling the velocity of an electromechanical drive for interferometers and the like Patent  
[NASA-CASE-XGS-03532] c 14 N71-17627
- Incremental motion drive system Patent  
[NASA-CASE-XNP-08897] c 15 N71-17694
- Laser grating interferometer Patent  
[NASA-CASE-XLA-04295] c 16 N71-24170
- Fringe counter for interferometers Patent  
[NASA-CASE-LAR-10204] c 14 N71-27215
- Interferometer-polarimeter  
[NASA-CASE-NPO-11239] c 14 N73-12446
- Interferometric rotation sensor  
[NASA-CASE-ARC-10278-1] c 14 N73-25463
- High resolution Fourier interferometer-spectrophotopolarimeter  
[NASA-CASE-NPO-13604-1] c 35 N76-31490
- Apparatus for providing a servo drive signal in a high-speed stepping interferometer  
[NASA-CASE-NPO-13569-2] c 35 N79-14348
- Velocity servo for continuous scan Fourier interference spectrometer  
[NASA-CASE-NPO-14093-1] c 35 N80-20563
- Interferometer  
[NASA-CASE-NPO-14502-1] c 74 N81-17888
- Interferometer --- high resolution  
[NASA-CASE-NPO-14448-1] c 74 N81-29963
- Optical gyroscope system  
[NASA-CASE-NPO-14258-1] c 35 N81-33448
- Dual-beam skin friction interferometer  
[NASA-CASE-ARC-11354-1] c 74 N83-21949
- Interferometric angle monitor  
[NASA-CASE-GSC-12614-1] c 74 N83-32577

- Low noise lead screw positioner  
[NASA-CASE-NPO-15617-1] c 35 N87-21304
- Fiber optic sensing system  
[NASA-CASE-LEW-14795-1] c 74 N91-21871
- Equal path, phase shifting, sample point interferometer for monitoring the configuration of surfaces  
[NASA-CASE-NPO-17913-1-CU] c 74 N92-22034
- Phase-stepping fiber-optic projected fringe system for surface topography measurements  
[NASA-CASE-LEW-14996-1] c 74 N93-11058
- An interferometer having fused optical fibers, and apparatus and method using the interferometer  
[NASA-CASE-LAR-14640-1-CU] c 74 N93-17052
- INTERFEROMETRY**
- Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c 35 N79-10391
- Interferometric locating system  
[NASA-CASE-NPO-14173-1] c 04 N80-32359
- Dual differential interferometer  
[NASA-CASE-LAR-12966-1] c 35 N85-30282
- Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629
- Motion detection, novelty filtering, and target tracking using an interferometric technique with a GaAs phase conjugate mirror  
[NASA-CASE-NPO-17784-1-CU] c 74 N91-13998
- Method for detecting surface motions and mapping small terrestrial or planetary surface deformations with synthetic aperture radar  
[NASA-CASE-NPO-17831-1-CU] c 43 N91-14642
- Equal path, phase shifting, sample point interferometer for monitoring the configuration of surfaces  
[NASA-CASE-NPO-17913-1-CU] c 74 N92-22034
- Laser optical disk position encoder with active heads  
[NASA-CASE-GSC-13175-1] c 74 N92-29133
- INTERLAYERS**
- Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c 24 N81-33235
- Diamond composite films for protective coatings on metals and method of formation  
[NASA-CASE-NPO-18501-1-CU] c 27 N93-28426
- INTERMEDIATE FREQUENCY AMPLIFIERS**
- Multichannel logarithmic RF level detector  
[NASA-CASE-LAR-11021-1] c 32 N76-14321
- INTERMETALLICS**
- Twisted multifilament superconductor  
[NASA-CASE-LEW-11726-1] c 26 N73-26752
- Synthesis of superconducting compounds by explosive compaction of powders  
[NASA-CASE-MFS-20861-1] c 18 N73-32437
- Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267
- Nickel base coating alloy  
[NASA-CASE-LEW-13834-1] c 26 N87-14482
- INTERNAL COMBUSTION ENGINES**
- Fuel injection pump for internal combustion engines Patent  
[NASA-CASE-MSC-12139-1] c 28 N71-14058
- Continuous detonation reaction engine Patent  
[NASA-CASE-XMF-06926] c 28 N71-22983
- System for preconditioning a combustible vapor  
[NASA-CASE-NPO-12072] c 28 N72-22772
- System for minimizing internal combustion engine pollution emission  
[NASA-CASE-NPO-13402-1] c 37 N76-18457
- Combustion engine --- for air pollution control  
[NASA-CASE-NPO-13671-1] c 37 N77-31497
- Hydrogen-fueled engine  
[NASA-CASE-NPO-13763-1] c 44 N78-33526
- Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c 37 N79-11405
- Indicated mean-effective pressure instrument  
[NASA-CASE-LEW-12661-1] c 35 N79-14345
- Start up system for hydrogen generator used with an internal combustion engine  
[NASA-CASE-NPO-13849-1] c 28 N80-10374
- Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c 07 N81-29129
- Automatic compression adjusting mechanism for internal combustion engines  
[NASA-CASE-MSC-18807-1] c 37 N83-36483
- Real time pressure signal system for a rotary engine  
[NASA-CASE-LEW-13622-1] c 07 N84-22559
- Composite piston  
[NASA-CASE-LAR-13435-1] c 37 N88-23981
- Lightweight piston architecture  
[NASA-CASE-LAR-13926-1] c 37 N90-22042
- INTERNAL PRESSURE**
- Pressure vessel flex joint  
[NASA-CASE-MSC-21748-1] c 37 N92-21727
- INTERPLANETARY SPACE**
- Heat shield Patent  
[NASA-CASE-XMS-00486] c 33 N70-33344
- RC networks and amplifiers employing the same  
[NASA-CASE-XAC-05462-2] c 10 N72-17171
- INTERPLANETARY SPACECRAFT**
- Transpirationally cooled heat ablation system Patent  
[NASA-CASE-XMS-02677] c 31 N70-42075
- INTERPLANETARY TRAJECTORIES**
- Means for visually indicating flight paths of vehicles between the Earth, Venus, and Mercury Patent  
[NASA-CASE-XNP-00708] c 14 N70-35394
- INTERPOLATION**
- Two dimensional vernier  
[NASA-CASE-MSC-21700-1] c 35 N92-22039
- INTERPROCESSOR COMMUNICATION**
- Highly parallel computer architecture for robotic computation  
[NASA-CASE-NPO-17632-1-CU] c 60 N91-32805
- INTERSTITIALS**
- Method for preparation of a microporous structure with layered interstitial surface treatment  
[NASA-CASE-MSC-21487-2] c 24 N93-29023
- INTERVALS**
- Apparatus for using a time interval counter to measure frequency stability  
[NASA-CASE-NPO-17325-1-CU] c 32 N90-17005
- INTRACRANIAL PRESSURE**
- Induction powered biological radiosonde  
[NASA-CASE-ARC-11120-1] c 52 N80-18691
- INTRAOCULAR PRESSURE**
- Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12955-1] c 52 N80-14684
- Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12723-1] c 52 N80-18690
- INTRAVEHICULAR ACTIVITY**
- Space suit  
[NASA-CASE-MSC-12609-1] c 05 N73-32012
- INTRAVENOUS PROCEDURES**
- Bio-medical flow sensor --- intravenous procedures  
[NASA-CASE-MSC-18761-1] c 52 N83-27577
- Intranasal scopolamine preparation and method  
[NASA-CASE-MSC-21858-1] c 52 N92-11628
- INTRUSION**
- Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c 33 N80-23559
- INVENTIONS**
- Active notch filter network with variable notch depth, width and frequency  
[NASA-CASE-FRC-11055-1] c 33 N80-29583
- Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c 25 N81-19244
- Hanging drop crystal growth apparatus  
[NASA-CASE-MFS-26061-1] c 76 N91-16815
- Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14489-1] c 37 N91-27562
- Single layer multi-color luminescent display  
[NASA-CASE-LAR-13616-1] c 74 N91-31950
- Metal etching composition  
[NASA-CASE-MFS-29576-1] c 25 N92-25399
- Whole body cleaning agent containing N-acyltaurate  
[NASA-CASE-MSC-21589-1] c 54 N92-29137
- Noncircular rolling joints for vibrational reduction in slewing maneuvers  
[NASA-CASE-LAR-14515-1-CU] c 37 N92-33031
- Protective helmet assembly  
[NASA-CASE-MSC-21842-1] c 54 N93-17088
- Quick acting gimbal joint  
[NASA-CASE-MSC-21918-1] c 37 N93-23076
- Polyimides containing the cyclobutene-3,4-dione moiety  
[NASA-CASE-LAR-14753-1] c 27 N93-25999
- Picture data compression coder using subband/transform coding with a Lempel-Ziv-based coder  
[NASA-CASE-LEW-15700-1] c 82 N93-28130
- Separation tool for multipin electrical connectors  
[NASA-CASE-NPO-18786-1-CU] c 37 N93-28131
- Burst-by-burst laser frequency monitor  
[NASA-CASE-NPO-18596-1-CU] c 36 N93-28132
- Motion-sensitive optical correlator  
[NASA-CASE-NPO-18769-1-CU] c 74 N93-28133
- Full complex modulation using two one-parameter spatial light modulators  
[NASA-CASE-MSC-22255-1] c 74 N93-28135
- INVERSE KINEMATICS**
- The adaptive neuron model: An architecture for the rapid learning of nonlinear topological transformations  
[NASA-CASE-NPO-18579-1-CU] c 63 N93-11174
- Dual arm generalized compliant motion with shared control  
[NASA-CASE-NPO-18738-1-CU] c 37 N93-28954
- INVERTED CONVERTERS (DC TO AC)**
- Inverter ratio failure detector  
[NASA-CASE-NPO-13160-1] c 35 N74-18090
- Variable frequency inverter for ac induction motors with torque, speed and braking control  
[NASA-CASE-MFS-22088-1] c 33 N75-15874
- Solar cell system having alternating current output  
[NASA-CASE-LEW-12806-2] c 44 N81-12542
- Power converter  
[NASA-CASE-FRC-11014-1] c 33 N82-18494
- INVERTERS**
- Transient-compensated SCR inverter  
[NASA-CASE-XLA-08507] c 09 N69-39984
- Inverter oscillator with voltage feedback  
[NASA-CASE-NPO-10760] c 09 N72-25254
- Overload protection system for power inverter  
[NASA-CASE-NPO-13872-1] c 33 N78-10377
- Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c 33 N79-24254
- Base drive for paralleled inverter systems  
[NASA-CASE-NPO-14163-1] c 33 N81-14220
- Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c 33 N83-31953
- Adaptive control system for line-commutated inverters  
[NASA-CASE-MFS-25209-1] c 33 N83-35227
- INVESTIGATION**
- Method for investigating the formation of crystals in a transparent material  
[NASA-CASE-MFS-26008-1-CU] c 76 N88-14835
- IODINE**
- Method of using photovoltaic cell using poly-N-vinylcarbazole complex Patent  
[NASA-CASE-NPO-10373] c 03 N71-18698
- Simple method of making photovoltaic junctions Patent  
[NASA-CASE-XNP-01960] c 09 N71-23027
- Iodine generator for reclaimed water purification  
[NASA-CASE-MSC-14632-1] c 54 N78-14784
- Graphite fluoride from iodine intercalated graphitized carbon  
[NASA-CASE-LEW-15360-1] c 25 N92-34206
- Regenerable biocide delivery unit  
[NASA-CASE-MSC-21763-1-SB] c 51 N93-18351
- IODINE COMPOUNDS**
- Perfluoroalkyl polytriazines containing pendent iodoiodofluoromethyl groups  
[NASA-CASE-ARC-11241-1] c 25 N81-14016
- IODINE ISOTOPES**
- Production of high purity I-123  
[NASA-CASE-LEW-10518-1] c 24 N72-33681
- Method of producing I-123 --- by bombardment of cesium causing spallation  
[NASA-CASE-LEW-11390-2] c 25 N76-27383
- Production of I-123  
[NASA-CASE-LEW-11390-3] c 25 N76-29379
- ION ACCELERATORS**
- Process for glass coating an ion accelerator grid Patent  
[NASA-CASE-LEW-10278-1] c 15 N71-28582
- Ion beam accelerator system  
[NASA-CASE-NPO-15547-1] c 72 N84-16959
- Three-grid accelerator system for an ion propulsion engine  
[NASA-CASE-NPO-18391-1-CU] c 20 N93-28424
- ION BEAMS**
- Ion beam deflector Patent  
[NASA-CASE-LEW-10689-1] c 28 N71-26173
- Dispensing targets for ion beam particle generators  
[NASA-CASE-NPO-13112-1] c 73 N74-26767
- Sputtering holes with ion beamlets  
[NASA-CASE-LEW-11646-1] c 20 N74-31269
- Method of constructing dished ion thruster grids to provide hole array spacing compensation  
[NASA-CASE-LEW-11876-1] c 20 N76-21276
- Ion beam thruster shield  
[NASA-CASE-LEW-12082-1] c 20 N77-10148
- Targets for producing high purity I-123  
[NASA-CASE-LEW-10518-3] c 25 N78-27226
- Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c 37 N81-19455
- Ion beam accelerator system  
[NASA-CASE-NPO-15547-1] c 72 N84-16959
- Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095
- Ion sputter textured graphite electrode plates  
[NASA-CASE-LEW-12919-2] c 70 N84-28565
- Deposition of diamondlike carbon films  
[NASA-CASE-LEW-14080-1] c 31 N85-20153
- Diamondlike flakes  
[NASA-CASE-LEW-13837-2] c 24 N85-21267
- Heat exchanger for electrothermal devices  
[NASA-CASE-LEW-14037-1] c 20 N87-16875



- Ion beam sputter etching  
[NASA-CASE-LEW-13899-1] c 31 N87-21160
- Generation of intense negative ion beams  
[NASA-CASE-NPO-16061-1-CU] c 72 N87-21660
- Ion-beam nitriding of steels  
[NASA-CASE-LEW-14104-2] c 26 N88-14179
- Trochoidal analysis of scattered electrons in a merged electron-ion beam geometry  
[NASA-CASE-NPO-16789-1-CU] c 72 N89-29169
- Surface modification using low energy ground state ion beams  
[NASA-CASE-NPO-17498-1-CU] c 72 N91-14813
- Multiple layer dielectrics, hot film sensors, and methods of producing same  
[NASA-CASE-LAR-14591-1] c 35 N93-19493
- ION CHARGE**  
Quadrupole mass filter with means to generate a noise spectrum exclusive of the resonant frequency of the desired ions to deflect stable ions  
[NASA-CASE-XNP-04231] c 14 N73-32325
- ION CONCENTRATION**  
Deposition of alloy films --- on irregularly shaped metal object  
[NASA-CASE-LEW-11262-1] c 27 N74-13270
- ION CURRENTS**  
System for monitoring the presence of neutrals in a stream of ions Patent  
[NASA-CASE-XNP-02592] c 24 N71-20518
- Three-grid accelerator system for an ion propulsion engine  
[NASA-CASE-NPO-18391-1-CU] c 20 N93-28424
- ION CYCLOTRON RADIATION**  
Ion and electron detector for use in an ICR spectrometer  
[NASA-CASE-NPO-13479-1] c 35 N77-10492
- ION DENSITY (CONCENTRATION)**  
Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NPO-13443-1] c 76 N76-20994
- ION ENGINES**  
Ion thruster cathode  
[NASA-CASE-XLE-07087] c 06 N69-39889
- High-vacuum condenser tank for ion rocket tests Patent  
[NASA-CASE-XLE-00168] c 11 N70-33278
- Ion thruster cathode Patent Application  
[NASA-CASE-LEW-10814-1] c 28 N70-35422
- Ion rocket Patent  
[NASA-CASE-XLE-00376] c 28 N70-37245
- Rocket engine Patent  
[NASA-CASE-XLE-00342] c 28 N70-37980
- Thrust dynamometer Patent  
[NASA-CASE-XLE-00702] c 14 N70-40203
- Apparatus for increasing ion engine beam density Patent  
[NASA-CASE-XLE-00519] c 28 N70-41576
- Double optic system for ion engine Patent  
[NASA-CASE-XNP-02839] c 28 N70-41922
- Electrostatic ion engine having a permanent magnetic circuit Patent  
[NASA-CASE-XLE-01124] c 28 N71-14043
- Electrostatic ion rocket engine Patent  
[NASA-CASE-XLE-02066] c 28 N71-15661
- System for monitoring the presence of neutrals in a stream of ions Patent  
[NASA-CASE-XNP-02592] c 24 N71-20518
- Construction and method of arranging a plurality of ion engines to form a cluster Patent  
[NASA-CASE-XNP-02923] c 28 N71-23081
- Electronic cathode having a brush-like structure and a relatively thick oxide emissive coating Patent  
[NASA-CASE-XLE-04501] c 09 N71-23190
- Ion engine casing construction and method of making same Patent  
[NASA-CASE-XNP-06942] c 28 N71-23293
- Ion thruster accelerator system Patent  
[NASA-CASE-LEW-10106-1] c 28 N71-26642
- Propellant feed isolator Patent  
[NASA-CASE-LEW-10210-1] c 28 N71-26781
- High efficiency ionizer assembly Patent  
[NASA-CASE-XNP-01954] c 28 N71-28850
- Feed system for an ion thruster  
[NASA-CASE-NPO-10737] c 28 N72-11709
- Ion thruster with a combination keeper electrode and electron baffle  
[NASA-CASE-NPO-11880] c 28 N73-24783
- Single grid accelerator for an ion thruster  
[NASA-CASE-XLE-10453-2] c 28 N73-27699
- Method of making dished ion thruster grids  
[NASA-CASE-LEW-11694-1] c 20 N75-18310
- Method of constructing dished ion thruster grids to provide hole array spacing compensation  
[NASA-CASE-LEW-11876-1] c 20 N76-21276
- Precision tunable resonant microwave cavity  
[NASA-CASE-LEW-13935-1] c 33 N87-21234
- Three-grid accelerator system for an ion propulsion engine  
[NASA-CASE-NPO-18391-1-CU] c 20 N93-28424
- ION EXCHANGE MEMBRANE ELECTROLYTES**  
Method of making membranes  
[NASA-CASE-XNP-04264] c 03 N69-21337
- Ion-exchange membrane with platinum electrode assembly Patent  
[NASA-CASE-XMS-02063] c 03 N71-29044
- Formulated plastic separators for soluble electrode cells --- rubber-ion transport membranes  
[NASA-CASE-LEW-12358-1] c 44 N79-17313
- Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
[NASA-CASE-NPO-13530-1] c 25 N81-17187
- Method of making formulated plastic separators for soluble electrode cells  
[NASA-CASE-LEW-12358-2] c 25 N82-21268
- Method and apparatus for rebalancing a REDOX flow cell system  
[NASA-CASE-LEW-14127-1] c 33 N86-20680
- ION EXCHANGE RESINS**  
Inorganic-organic separators for alkaline batteries  
[NASA-CASE-LEW-12649-1] c 44 N78-25530
- Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NPO-14101-1] c 52 N80-14687
- Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c 27 N81-14076
- Regenerable biocide delivery unit  
[NASA-CASE-MSC-21763-1-SB] c 51 N93-18351
- ION EXCHANGING**  
Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c 27 N81-14076
- Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c 25 N81-19244
- Ion exchange polymers and method for making  
[NASA-CASE-LEW-15576-1] c 27 N93-31316
- ION EXTRACTION**  
Apparatus for extraction and separation of a preferentially photo-dissociated molecular isotope into positive and negative ions by means of an electric field  
[NASA-CASE-LEW-12465-1] c 25 N78-25148
- Ion beam accelerator system  
[NASA-CASE-NPO-15547-1] c 72 N84-16959
- Ion generator and ion application system  
[NASA-CASE-MFS-28122-1] c 72 N88-24253
- ION IMPLANTATION**  
Method of making V-MOS field effect transistors utilizing a two-step anisotropic etching and ion implantation  
[NASA-CASE-GSC-12515-1] c 33 N81-26360
- A method of making a single layer multi-color luminescent display  
[NASA-CASE-LAR-14811-1] c 33 N92-30389
- A method of making a single layer multi-color luminescent display  
[NASA-CASE-LAR-14811-1] c 33 N93-20119
- ION IRRADIATION**  
Modification of the electrical and optical properties of polymers --- ion irradiation to create texture  
[NASA-CASE-LEW-13027-1] c 27 N80-24437
- Ion-beam nitriding of steels  
[NASA-CASE-LEW-14104-2] c 26 N88-14179
- ION MOTION**  
Ion mass spectrometer  
[NASA-CASE-NPO-15423-1] c 35 N84-28016
- ION PLATING**  
Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c 44 N81-29524
- Diamondlike flake composites  
[NASA-CASE-LEW-13837-1] c 24 N84-22695
- ION PROBES**  
Ion microprobe mass spectrometer for analyzing fluid materials Patent  
[NASA-CASE-ERC-10014] c 14 N71-28863
- ION PROPULSION**  
Variable thrust ion engine utilizing thermally decomposable solid fuel Patent  
[NASA-CASE-XMF-00923] c 28 N70-36802
- Ion rocket Patent  
[NASA-CASE-XLE-00376] c 28 N70-37245
- Rocket engine Patent  
[NASA-CASE-XLE-00342] c 28 N70-37980
- Method of producing porous tungsten ionizers for ion rocket engines Patent  
[NASA-CASE-XLE-00455] c 28 N70-38197
- Double optic system for ion engine Patent  
[NASA-CASE-XNP-02839] c 28 N70-41922
- Electron bombardment ion engine Patent  
[NASA-CASE-XNP-04124] c 28 N71-21822
- Ion beam deflector Patent  
[NASA-CASE-LEW-10689-1] c 28 N71-26173
- Ion thruster accelerator system Patent  
[NASA-CASE-LEW-10106-1] c 28 N71-26642
- Feed system for an ion thruster  
[NASA-CASE-NPO-10737] c 28 N72-11709
- Ion thruster  
[NASA-CASE-LEW-10770-1] c 28 N72-22770
- Ion thruster magnetic field control  
[NASA-CASE-LEW-10835-1] c 28 N72-22771
- Method of making dished ion thruster grids  
[NASA-CASE-LEW-11694-1] c 20 N75-18310
- Apparatus for forming dished ion thruster grids  
[NASA-CASE-LEW-11694-2] c 37 N76-14461
- Anode for ion thruster  
[NASA-CASE-LEW-12048-1] c 20 N77-20162
- Closed Loop solar array-ion thruster system with power control circuitry  
[NASA-CASE-LEW-12780-1] c 20 N79-20179
- A dc to dc converter  
[NASA-CASE-MFS-25430-1] c 33 N84-16453
- Ring-cusp ion thruster with shell anode  
[NASA-CASE-LEW-13881-1] c 20 N85-21256
- Three-grid accelerator system for an ion propulsion engine  
[NASA-CASE-NPO-18391-1-CU] c 20 N93-28424
- ION PUMPS**  
Mass spectrometer with magnetic pole pieces providing the magnetic fields for both the magnetic sector and an ion-type vacuum pump  
[NASA-CASE-NPO-13663-1] c 35 N77-14406
- ION SOURCES**  
Focussing system for an ion source having apertured electrodes Patent  
[NASA-CASE-XNP-03332] c 09 N71-10618
- Multilayer porous ionizer Patent  
[NASA-CASE-NPO-04338] c 17 N71-23046
- Ion thruster accelerator system Patent  
[NASA-CASE-LEW-10106-1] c 28 N71-26642
- High efficiency ionizer assembly Patent  
[NASA-CASE-XNP-01954] c 28 N71-28850
- Apparatus for ionization analysis  
[NASA-CASE-ARC-10017-1] c 14 N72-29464
- Sputtering holes with ion beamlets  
[NASA-CASE-LEW-11646-1] c 20 N74-31269
- Multitarget sequential sputtering apparatus  
[NASA-CASE-NPO-13345-1] c 37 N75-19684
- Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c 72 N80-27163
- Hydrogen hollow cathode ion source  
[NASA-CASE-LEW-12940-1] c 72 N80-33186
- Surface modification using low energy ground state ion beams  
[NASA-CASE-NPO-17498-1-CU] c 72 N91-14813
- ION TRAPS (INSTRUMENTATION)**  
Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NPO-13443-1] c 76 N76-20994
- IONIC MOBILITY**  
Solid electrolyte cell  
[NASA-CASE-NPO-15269-1] c 44 N82-29710
- IONIZATION**  
Ion generator and ion application system  
[NASA-CASE-MFS-28122-1] c 72 N88-24253
- Alternating gradient photodetector  
[NASA-CASE-NPO-17235-1-CU] c 35 N90-21358
- IONIZATION CHAMBERS**  
Baseline stabilization system for ionization detector Patent  
[NASA-CASE-XNP-03128] c 10 N70-41991
- Electron bombardment ion engine Patent  
[NASA-CASE-XNP-04124] c 28 N71-21822
- A multichannel photoionization chamber for absorption analysis Patent  
[NASA-CASE-ERC-10044-1] c 14 N71-27090
- Apparatus for ionization analysis  
[NASA-CASE-ARC-10017-1] c 14 N72-29464
- IONIZATION CROSS SECTIONS**  
Trochoidal analysis of scattered electrons in a merged electron-ion beam geometry  
[NASA-CASE-NPO-16789-1-CU] c 72 N89-29169
- IONIZATION GAGES**  
Ionization vacuum gauge Patent  
[NASA-CASE-NPO-00646] c 14 N70-35666
- Pressure monitoring with a plurality of ionization gauges controlled at a central location Patent  
[NASA-CASE-XLE-00787] c 14 N71-21090
- Apparatus for ionization analysis  
[NASA-CASE-ARC-10017-1] c 14 N72-29464
- Ultrahigh vacuum measuring ionization gauge  
[NASA-CASE-XLA-05087] c 14 N73-30391
- IONIZATION POTENTIALS**  
Field ionization electrodes Patent  
[NASA-CASE-ERC-10013] c 09 N71-26678

- Modulated voltage metastable ionization detector  
[NASA-CASE-ARC-11503-1] c 35 N85-34374
- IONIZED GASES**  
Probes having ring and primary sensor at same potential to prevent collection of stray wall currents in ionized gases  
[NASA-CASE-XLE-00690] c 25 N69-39884  
Transient heat transfer gauge Patent  
[NASA-CASE-XNP-09802] c 33 N71-15641  
Apparatus for extraction and separation of a preferentially photo-dissociated molecular isotope into positive and negative ions by means of an electric field  
[NASA-CASE-LEW-12465-1] c 25 N78-25148  
Hollow cathode apparatus  
[NASA-CASE-NPO-15560-1] c 33 N85-21491  
Arc/gas electrode  
[NASA-CASE-MFS-29766-1] c 33 N92-33030
- IONIZERS**  
Water management system and an electrolytic cell therefor Patent  
[NASA-CASE-MSC-10960-1] c 03 N71-24718  
Method of making dish ion thruster grids  
[NASA-CASE-LEW-11694-1] c 20 N75-18310  
Particle analyzing method and apparatus  
[NASA-CASE-NPO-15292-1] c 35 N83-27184
- IONIZING RADIATION**  
High-voltage cable Patent  
[NASA-CASE-XNP-00738] c 09 N70-38201  
Reinforced polyquinoxaline gasket and method of preparing the same --- resistant to ionizing radiation and liquid hydrogen temperatures  
[NASA-CASE-MFS-21364-1] c 37 N74-18126  
Process for crosslinking methylene-containing aromatic polymers with ionizing radiation  
[NASA-CASE-LAR-13448-1] c 27 N90-21198
- IONOSPHERIC DISTURBANCES**  
Method and apparatus for calibrating the ionosphere and application to surveillance of geophysical events  
[NASA-CASE-NPO-15430-1] c 46 N85-21846
- IONOSPHERIC ELECTRON DENSITY**  
Method and apparatus for calibrating the ionosphere and application to surveillance of geophysical events  
[NASA-CASE-NPO-15430-1] c 46 N85-21846
- IONOSPHERIC SOUNDING**  
Method and apparatus for calibrating the ionosphere and application to surveillance of geophysical events  
[NASA-CASE-NPO-15430-1] c 46 N85-21846
- IONS**  
Micrometeoroid analyzer  
[NASA-CASE-ARC-10443-1] c 14 N73-20477  
Detection of multiple-bit errors from single-ion tracks in integrated circuits  
[NASA-CASE-NPO-18075-1-CU] c 33 N91-13622
- IRIDIUM**  
Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c 35 N79-14346
- IRISES (MECHANICAL APERTURES)**  
Active microwave irises and windows  
[NASA-CASE-LAR-10513-1] c 07 N72-25170  
Thin film microwave iris  
[NASA-CASE-LAR-10511-1] c 09 N72-29172
- IRON**  
Negative electrode catalyst for the iron chromium redox energy storage system  
[NASA-CASE-LEW-14028-1] c 44 N86-19721
- IRON ALLOYS**  
Tantalum modified ferritic iron base alloys  
[NASA-CASE-LEW-12095-1] c 26 N78-18182  
Process for making a high toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-2] c 26 N79-22271  
High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c 26 N80-32484  
Thermal barrier coating system  
[NASA-CASE-LEW-14057-1] c 24 N85-35233
- IRON CHLORIDES**  
Chromium electrodes for REDOX cells  
[NASA-CASE-LEW-13653-1] c 44 N84-28205
- IRON COMPOUNDS**  
Coal desulfurization --- using iron pentacarbonyl  
[NASA-CASE-NPO-14272-1] c 25 N81-33246
- IRRADIATION**  
Solar sensor having coarse and fine sensing with matched preirradiated cells and method of selecting cells  
Patent  
[NASA-CASE-XLA-01584] c 14 N71-23269  
Apparatus for obtaining isotropic irradiation of a specimen  
[NASA-CASE-MFS-20095] c 24 N72-11595  
Production of pure metals  
[NASA-CASE-LEW-10906-1] c 25 N74-30502  
Method for analyzing radiation sensitivity of integrated circuits  
[NASA-CASE-NPO-14350-1] c 33 N80-14332
- Vitra-violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments  
[NASA-CASE-MSC-16074-1] c 27 N80-26446  
Method of measuring field funneling and range straggling in semiconductor charge-collecting junctions  
[NASA-CASE-NPO-16584-1-CU] c 76 N86-25269  
Extra-corporeal blood access, sensing, and radiation methods and apparatuses  
[NASA-CASE-MSC-21775-1] c 52 N92-11627  
Methyl substituted polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-14351-1] c 27 N92-33015
- IRRIGATION**  
Solar-powered pump  
[NASA-CASE-NPO-13567-1] c 44 N76-29701
- ISOLATION**  
High voltage isolation transformer  
[NASA-CASE-GSC-12817-1] c 33 N85-29146  
Ballast system for maintaining constant pressure in a glove box  
[NASA-CASE-NPO-17786-1-CU] c 35 N90-17104  
Active thermal isolation for temperature responsive sensors  
[NASA-CASE-LAR-14612-1] c 34 N92-29954
- ISOLATORS**  
Propellant feed isolator Patent  
[NASA-CASE-LEW-10210-1] c 28 N71-26781  
Positive isolation disconnect  
[NASA-CASE-MSC-16043-1] c 37 N79-11402  
Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c 36 N83-35350  
Low-loss, high-isolation, fiber-optic isolator  
[NASA-CASE-NPO-17207-1-CU] c 74 N88-25304  
Mechanical strain isolator mount  
[NASA-CASE-LAR-13580-1] c 37 N91-21541  
Active thermal isolation for temperature responsive sensors  
[NASA-CASE-LAR-14612-1] c 34 N92-29954
- ISOPROPYL ALCOHOL**  
Highly fluorinated polymers  
[NASA-CASE-MFS-11492] c 06 N73-30102
- ISOPROPYL COMPOUNDS**  
Polyimides containing amide and perfluoroisopropyl connecting groups  
[NASA-CASE-LAR-14608-1] c 27 N92-17676
- ISOTHERMAL LAYERS**  
Isothermal cover with thermal reservoirs Patent  
[NASA-CASE-MFS-20355] c 33 N71-25353
- ISOTHERMAL PROCESSES**  
Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c 35 N77-27366
- ISOTOPE SEPARATION**  
Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c 36 N77-26477  
Isotope separation using tuned laser and electron beam  
[NASA-CASE-NPO-16907-1-CU] c 25 N88-24732
- ITERATION**  
Neural network training by integration of adjoint systems of equations forward in time  
[NASA-CASE-NPO-18586-1-CU] c 63 N93-17276
- J**
- JACOBI MATRIX METHOD**  
Configuration control of seven-degree-of-freedom arms  
[NASA-CASE-NPO-18607-1-CU] c 37 N92-23553
- JET AIRCRAFT**  
Inlet deflector for jet engines Patent  
[NASA-CASE-XLE-00388] c 28 N70-34788  
Multiple pure tone elimination strut assembly --- air breathing engines  
[NASA-CASE-FRC-11062-1] c 71 N82-16800
- JET AIRCRAFT NOISE**  
Jet aircraft configuration Patent  
[NASA-CASE-XLA-00087] c 02 N70-33332  
Noise suppressor --- for turbofan engine by incorporating annular acoustically porous elements in exhaust and inlet ducts  
[NASA-CASE-LAR-11141-1] c 07 N74-32418  
Abating exhaust noises in jet engines  
[NASA-CASE-ARC-10712-1] c 07 N74-33218  
Instrumentation for measurement of aircraft noise and sonic boom  
[NASA-CASE-LAR-11173-1] c 35 N75-19614  
Cascade plug nozzle --- for jet noise reduction  
[NASA-CASE-LAR-11674-1] c 07 N76-18117  
Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c 07 N83-33884  
Apparatus and method for jet noise suppression  
[NASA-CASE-LAR-11903-2] c 71 N84-14873
- Jet mixer noise suppressor using acoustic feedback  
[NASA-CASE-LEW-15170-1] c 71 N93-28953
- JET AMPLIFIERS**  
Fluid jet amplifier  
[NASA-CASE-XLE-03512] c 12 N69-21466  
Fluid jet amplifier Patent  
[NASA-CASE-XLE-09341] c 12 N71-28741
- JET BLAST EFFECTS**  
Single action separation mechanism Patent  
[NASA-CASE-XLA-00188] c 15 N71-22874
- JET CONTROL**  
Attitude control for spacecraft Patent  
[NASA-CASE-XNP-00294] c 21 N70-36938
- JET ENGINES**  
Absorptive splitter for closely spaced supersonic engine air inlets Patent  
[NASA-CASE-XLA-02865] c 28 N71-15563  
Thrust dynamometer Patent  
[NASA-CASE-XLE-05260] c 14 N71-20429  
Nacelle afterbody for jet engines Patent  
[NASA-CASE-XLA-10450] c 28 N71-21493  
Welding blades to rotors  
[NASA-CASE-LEW-10533-1] c 15 N73-28515  
Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c 07 N74-31270  
Cascade plug nozzle --- for jet noise reduction  
[NASA-CASE-LAR-11674-1] c 07 N76-18117  
The engine air intake system  
[NASA-CASE-ARC-10761-1] c 07 N77-18154  
Stator rotor tools  
[NASA-CASE-MSC-16000-1] c 37 N78-24544  
Electrical servo actuator bracket --- fuel control valves on jet engines  
[NASA-CASE-FRC-11044-1] c 37 N81-33483  
Diffuser/ejector system for a very high vacuum environment  
[NASA-CASE-MFS-25791-1] c 09 N84-27749
- JET EXHAUST**  
Jet exhaust noise suppressor  
[NASA-CASE-LEW-11286-1] c 07 N74-27490  
Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c 07 N78-25089  
Reduction of nitric oxide emissions from a combustor  
[NASA-CASE-ARC-10814-2] c 07 N80-26298
- JET FLAPS**  
Jet aircraft configuration Patent  
[NASA-CASE-XLA-00087] c 02 N70-33332
- JET FLOW**  
Two phase flow system with discrete impinging two-phase jets  
[NASA-CASE-NPO-11556] c 12 N72-25292  
System for venting gas from a liquid storage tank  
[NASA-CASE-MSC-21253-1] c 31 N90-20254
- JET MIXING FLOW**  
Rocket engine injector Patent  
[NASA-CASE-XLE-00111] c 28 N70-38199
- JET NOZZLES**  
Fluid jet amplifier  
[NASA-CASE-XLE-03512] c 12 N69-21466  
Thrust and direction control apparatus Patent  
[NASA-CASE-XLE-03583] c 31 N71-17629  
Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c 35 N74-15093
- JET PROPULSION**  
Two dimensional wedge/translating shroud nozzle  
[NASA-CASE-LAR-11919-1] c 07 N78-27121
- JET PUMPS**  
Jet pump-drive system for heat removal  
[NASA-CASE-NPO-16494-1-CU] c 34 N85-29182
- JET THRUST**  
Control system for rocket vehicles Patent  
[NASA-CASE-XLA-01163] c 21 N71-15582  
Reactance control system Patent  
[NASA-CASE-XMF-01598] c 21 N71-15583  
Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c 07 N80-18039  
Method and system for monitoring and displaying engine performance parameters  
[NASA-CASE-LAR-14049-1] c 07 N89-23466
- JETTISON SYSTEMS**  
Space capsule ejection assembly Patent  
[NASA-CASE-XMF-03169] c 31 N71-15675  
Method and system for ejecting fairing sections from a rocket vehicle  
[NASA-CASE-GSC-10590-1] c 31 N73-14853  
Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c 01 N83-35992
- JIGS**  
Apparatus for positioning modular components on a vertical or overhead surface  
[NASA-CASE-LAR-11465-1] c 37 N76-21554  
Solar cell module assembly jig  
[NASA-CASE-XGS-00829-1] c 44 N79-19447

## JOINING

Integrated gas turbine engine nacelle  
[NASA-CASE-LEW-12389-3] c 07 N79-14096

## JOINTS (ANATOMY)

Space suit pressure stabilizer Patent  
[NASA-CASE-XLA-05332] c 05 N71-11194  
Equipotential space suit Patent  
[NASA-CASE-LAR-10007-1] c 05 N71-11195  
Omnidirectional joint Patent  
[NASA-CASE-XMS-09635] c 05 N71-24623  
Orthotic arm joint --- for use in mechanical arms  
[NASA-CASE-MFS-21611-1] c 54 N75-12616  
Rotational joint assembly for the prosthetic leg  
[NASA-CASE-KSC-11004-1] c 54 N77-30749  
Spacesuit mobility knee joints  
[NASA-CASE-ARC-11058-2] c 54 N79-24651  
Automatic locking orthotic knee device  
[NASA-CASE-MFS-28633-1] c 54 N92-17866

## JOINTS (JUNCTIONS)

Electrode and insulator with shielded dielectric junction  
[NASA-CASE-XLE-03778] c 09 N69-21542  
Elastic universal joint Patent  
[NASA-CASE-XNP-00416] c 15 N70-36947  
Portable alignment tool Patent  
[NASA-CASE-XMF-01452] c 15 N70-41371  
Pressure garment joint Patent  
[NASA-CASE-XMS-09636] c 05 N71-12344  
Technique of elbow bending small jacketed transfer lines Patent  
[NASA-CASE-XNP-10475] c 15 N71-24679  
Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-2] c 15 N71-26148  
Frictionless universal joint Patent  
[NASA-CASE-NPO-10646] c 15 N71-28467  
Spherical shield Patent  
[NASA-CASE-XNP-01855] c 15 N71-28937  
Universal restrainer and joint Patent  
[NASA-CASE-XNP-02278] c 15 N71-28951  
Diffusion welding in air --- solid state welding of butt joint by fusion welding, surface cleaning, and heating  
[NASA-CASE-LEW-11387-1] c 37 N74-18128  
Bonded joint and method --- for reducing peak shear stress in adhesive bonds  
[NASA-CASE-LAR-10900-1] c 37 N74-23064  
Flexible joint for pressurizable garment  
[NASA-CASE-MSC-11072] c 54 N74-32546  
Method of making an explosively welded scarf joint  
[NASA-CASE-LAR-11211-1] c 37 N75-12326  
Latching device  
[NASA-CASE-MFS-21606-1] c 37 N75-19685  
Method of determining bond quality of power transistors attached to substrates --- X ray inspection of junction microstructure  
[NASA-CASE-MFS-21931-1] c 37 N75-26372  
Externally supported internally stabilized flexible duct joint  
[NASA-CASE-MFS-19194-1] c 37 N76-14460  
Wrist joint assembly  
[NASA-CASE-MFS-23311-1] c 54 N78-17676  
Spacesuit mobility joints  
[NASA-CASE-ARC-11058-1] c 54 N78-31735  
Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures  
[NASA-CASE-MSC-18134-1] c 37 N81-15363  
Reusable captive blind fastener  
[NASA-CASE-MSC-18742-1] c 37 N82-26673  
Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c 54 N82-26987  
Mechanical end joint system for structural column elements  
[NASA-CASE-LAR-12482-1] c 37 N82-32732  
Automatic weld torch guidance control system  
[NASA-CASE-MFS-25807] c 37 N83-20154  
Electrical rotary joint apparatus for large space structures  
[NASA-CASE-MFS-23981-1] c 07 N83-20944  
Self-locking mechanical center joint  
[NASA-CASE-LAR-12864-1] c 37 N85-30336  
Joint for deployable structures  
[NASA-CASE-NPO-16038-1] c 37 N86-19605  
Fluid leak indicator  
[NASA-CASE-MSC-20783-1] c 35 N86-20756  
Optimized bolted joint  
[NASA-CASE-LAR-13250-1] c 37 N86-27630  
Elbow and knee joint for hard space suits  
[NASA-CASE-ARC-11610-1] c 54 N86-28619  
Shoulder and hip joint for hard space suits  
[NASA-CASE-ARC-11543-1] c 54 N86-28620  
Shoulder and hip joints for hard space suits and the like  
[NASA-CASE-ARC-11534-1] c 54 N86-29507  
Foldable self-erecting joint  
[NASA-CASE-MSC-20635-1] c 18 N87-14373

Preloaded space structural coupling joints  
[NASA-CASE-LAR-13489-1] c 18 N87-27713  
Bearing-bypass material system test  
[NASA-CASE-LAR-13458-1] c 35 N88-23967  
Method of inserting predesigned disbond areas into composite laminates  
[NASA-CASE-LAR-13225-1] c 24 N90-25197  
Mechanical end joint system for connecting structural column elements  
[NASA-CASE-LAR-14465-1] c 37 N91-14614  
Multi-fingered robotic hand  
[NASA-CASE-NPO-15959-2] c 37 N91-14616  
Compliant joint  
[NASA-CASE-GSC-13153-1] c 37 N91-17387  
Robot cable-compliant devices  
[NASA-CASE-GSC-13127-1] c 37 N91-17388  
Apparatus for joining trusses  
[NASA-CASE-MFS-28545-1] c 31 N91-25306  
A method and apparatus for indicating disbands in joint regions  
[NASA-CASE-LAR-14626-1] c 38 N92-17859  
Pressure vessel flex joint  
[NASA-CASE-MSC-21748-1] c 37 N92-21727  
Double-V block fingers with cruciform recess  
[NASA-CASE-GSC-13356-1] c 37 N92-24243  
Bladder operated robotic joint  
[NASA-CASE-MFS-28682-1] c 27 N92-29831  
Method and apparatus for preloading a joint by remotely operable means  
[NASA-CASE-MSC-21940-1] c 37 N92-30540  
Noncircular rolling joints for vibrational reduction in slewing maneuvers  
[NASA-CASE-LAR-14515-1-CU] c 37 N92-33031  
Flexible robotic arm  
[NASA-CASE-GSC-13161-1] c 37 N92-33634  
Double-V block fingers with cruciform recess  
[NASA-CASE-GSC-13356-2] c 37 N93-17625  
Method and apparatus for preloading a joint by remotely operable means  
[NASA-CASE-MSC-21940-1] c 37 N93-20120  
Robot friendly probe and socket assembly  
[NASA-CASE-MSC-22028-1] c 37 N93-22007  
Quick acting gimbal joint  
[NASA-CASE-MSC-21918-1] c 37 N93-23076

## JOSEPHSON JUNCTIONS

Doped Josephson tunneling junction for use in a sensitive IR detector  
[NASA-CASE-NPO-13348-1] c 33 N75-31332  
Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MFS-23845-1] c 33 N81-17348  
Planar thin film SQUID with integral flux concentrator  
[NASA-CASE-MFS-28282-1] c 76 N88-29602  
An improved SNS superconducting junction with weak link barrier and method of producing  
[NASA-CASE-NPO-18552-1-CU] c 33 N92-24246  
Epitaxial heterojunctions of oxide semiconductors and metals on high temperature superconductors  
[NASA-CASE-NPO-18483-1-CU] c 76 N93-15151

## JOULE-THOMSON EFFECT

Refrigeration apparatus  
[NASA-CASE-NPO-10309] c 15 N69-23190  
Cycling Joule Thomson refrigerator  
[NASA-CASE-NPO-15251-1] c 31 N83-31897  
Joule Thomson refrigerator  
[NASA-CASE-NPO-17143-1-CU] c 31 N89-14351  
Multicomponent gas sorption Joule-Thomson refrigeration  
[NASA-CASE-NPO-17569-1-CU] c 31 N92-15203

## JOURNAL BEARINGS

Slit regulated gas journal bearing Patent  
[NASA-CASE-XNP-00476] c 15 N70-38620  
Air bearing assembly for curved surfaces  
[NASA-CASE-MFS-20423] c 15 N72-11388  
Journal bearings --- for lubricant films  
[NASA-CASE-LEW-11076-1] c 37 N74-21061  
Journal Bearings  
[NASA-CASE-LEW-11076-2] c 37 N74-32921  
Lubricated journal bearing  
[NASA-CASE-LEW-11076-3] c 37 N75-30562  
Fluid journal bearings  
[NASA-CASE-LEW-11076-4] c 37 N76-15461  
Compliant hydrodynamic fluid journal bearing  
[NASA-CASE-LEW-13670-1] c 37 N86-19606

## JUNCTION DIODES

Phototransistor  
[NASA-CASE-MFS-20407] c 09 N73-19235  
Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-2] c 33 N75-25041  
Charge storage diode modulators and demodulators  
[NASA-CASE-NPO-10189-1] c 33 N77-21314  
Integrating IR detector imaging systems  
[NASA-CASE-NPO-15805-1] c 74 N84-28590  
High band gap 2-6 and 3-5 tunneling junctions for silicon multijunction solar cells  
[NASA-CASE-NPO-16526-1-CU] c 44 N87-17399

## JUNCTION TRANSISTORS

Apparatus for ballasting high frequency transistors  
[NASA-CASE-XGS-05003] c 09 N69-24318  
Semiconductor transducer device  
[NASA-CASE-ERC-10087-2] c 14 N72-31446  
Method of determining bond quality of power transistors attached to substrates --- X ray inspection of junction microstructure  
[NASA-CASE-MFS-21931-1] c 37 N75-26372  
Floating emitter solar cell  
[NASA-CASE-NPO-16467-1-CU] c 33 N87-23879

## K

## KALMAN FILTERS

Systolic VLSI array for implementing the Kalman filter algorithm  
[NASA-CASE-NPO-17108-1-CU] c 33 N89-28713  
Multistage estimation of received carrier signal parameters under very high dynamic conditions of the receiver  
[NASA-CASE-NPO-17911-1-CU] c 32 N90-27016

## KETONES

Polycyanines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-1-CU] c 27 N87-22847  
Polycyanines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-2-CU] c 23 N89-12667  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-4] c 23 N91-25185  
Low dielectric fluorinated poly(phenylene ether ketone) film and coating  
[NASA-CASE-LAR-13992-1-CU] c 23 N91-27220

## KEYING

High-speed multiplexing of keyboard data inputs  
[NASA-CASE-NPO-14554-1] c 60 N81-27814  
Reconfigurable work station for a video display unit and keyboard  
[NASA-CASE-MFS-26009-1-SB] c 54 N88-24163

## KIDNEY DISEASES

Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c 27 N77-30236

## KIDNEYS

Apparatus for disintegrating kidney stones  
[NASA-CASE-GSC-12652-1] c 52 N84-34913

## KINEMATICS

Method and apparatus for configuration control of redundant robots  
[NASA-CASE-NPO-17801-1-CU] c 37 N91-21544  
Configuration control of seven-degree-of-freedom arms  
[NASA-CASE-NPO-18607-1-CU] c 37 N92-23553  
New kinematic functions for redundancy resolution using configuration control  
[NASA-CASE-NPO-18608-1-CU] c 63 N93-17275

## KINETIC ENERGY

Non-reusable kinetic energy absorber Patent  
[NASA-CASE-XLE-00810] c 15 N70-34861  
Method and turbine for extracting kinetic energy from a stream of two-phase fluid  
[NASA-CASE-NPO-14130-1] c 34 N79-20335  
Energy dissipator  
[NASA-CASE-MSC-21555-1] c 37 N93-23075

## KINETIC FRICTION

Friction measuring apparatus Patent  
[NASA-CASE-XNP-08680] c 14 N71-22995  
Device and method for frictionally testing materials for ignitability  
[NASA-CASE-MSC-20622-1] c 25 N86-19413

## KINETICS

Micrometeoroid analyzer  
[NASA-CASE-ARC-10443-1] c 14 N73-20477  
Kinetic tetrazolium microtiter assay  
[NASA-CASE-MSC-21979-1] c 51 N93-17049

## KITS

Pressure wall patch  
[NASA-CASE-MFS-28724-1] c 18 N93-17061

## KNEE (ANATOMY)

Elbow and knee joint for hard space suits  
[NASA-CASE-ARC-11610-1] c 54 N86-28619  
Automatic locking orthotic knee device  
[NASA-CASE-MFS-28633-1] c 54 N92-17866

## KNOWLEDGE BASES (ARTIFICIAL INTELLIGENCE)

Parallel inferencing method and apparatus for rule-based expert systems  
[NASA-CASE-NPO-18004-1-CU] c 60 N93-29504

## KNOWLEDGE REPRESENTATION

Discrete event simulation tool for analysis of qualitative models of continuous processing systems  
[NASA-CASE-MSC-21465-1] c 61 N91-14741

**KRAFT PROCESS (WOODPULP)**

Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c 85 N79-17747

**KRYPTON**

Krypton based adsorption type cryogenic refrigerator  
[NASA-CASE-NPO-17334-1-CU] c 31 N88-23917

**L****LABORATORY EQUIPMENT**

Stirring apparatus for plural test tubes Patent  
[NASA-CASE-XAC-06956] c 15 N71-21177  
Gas purged dry box glove Patent  
[NASA-CASE-XLE-02531] c 05 N71-23080  
Gas liquefaction and dispensing apparatus Patent  
[NASA-CASE-NPO-10070] c 15 N71-27372  
Variable angle tube holder  
[NASA-CASE-LAR-10507-1] c 11 N72-25284  
Method for controlling vapor content of a gas  
[NASA-CASE-NPO-10633] c 03 N72-28025  
Zero gravity liquid mixer  
[NASA-CASE-LAR-10195-1] c 15 N73-19458  
Automatic real-time pair-feeding system for animals  
[NASA-CASE-ARC-10302-1] c 51 N74-15778  
Automated single-slide staining device  
[NASA-CASE-LAR-11649-1] c 51 N77-27677  
Machine for use in monitoring fatigue life for a plurality of elastomeric specimens  
[NASA-CASE-NPO-17331-1] c 39 N78-10493  
The 2 deg/90 deg laboratory scattering photometer --- particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c 74 N78-13874  
Automatic multiple-sample applicator and electrophoresis apparatus  
[NASA-CASE-ARC-10991-1] c 25 N78-14104  
Microelectrophoretic apparatus and process  
[NASA-CASE-ARC-11121-1] c 25 N79-14169  
Electrophoresis device  
[NASA-CASE-MFS-25426-1] c 25 N83-10126  
Laboratory glassware rack for seismic safety  
[NASA-CASE-ARC-11422-1] c 35 N86-20751  
Multi-path peristaltic pump  
[NASA-CASE-MSC-20907-1] c 37 N87-18818  
Hanging drop crystal growth apparatus and method  
[NASA-CASE-MFS-28206-1-SB] c 76 N90-23242

**LACQUERS**

Method for applying photographic resists to otherwise incompatible substrates  
[NASA-CASE-MSC-18107-1] c 27 N81-25209  
Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267

**LADDERS**

Dielectric based submillimeter backward wave oscillator circuit  
[NASA-CASE-LEW-13736-1] c 33 N84-27974

**LAMBERT SURFACE**

A reference standard for bidirectional reflection distribution function and bidirectional transmission distribution function measurement  
[NASA-CASE-MFS-28183-1] c 74 N89-13253

**LAMINAR BOUNDARY LAYER**

Method for laminar boundary layer transition visualization in flight  
[NASA-CASE-LAR-13554-1] c 02 N89-12551  
Passive laminar flow control of crossflow vorticity  
[NASA-CASE-LAR-13563-1] c 34 N91-23410  
Method of reducing drag in aerodynamic systems  
[NASA-CASE-LEW-14791-1] c 02 N92-34243  
Swept wing attachment line contamination fence  
[NASA-CASE-LAR-13400-1] c 02 N93-22015

**LAMINAR FLOW**

Laminar flow enhancement Patent  
[NASA-CASE-NPO-10122] c 12 N71-17631  
Detection of the transitional layer between laminar and turbulent flow areas on a wing surface --- using an accelerometer to measure pressure levels during wind tunnel tests  
[NASA-CASE-LAR-12261-1] c 02 N80-20224  
Continuous laminar smoke generator  
[NASA-CASE-LAR-13014-1] c 09 N85-21178  
Method and apparatus for detecting laminar flow separation and reattachment  
[NASA-CASE-LAR-13952-1-SB] c 34 N90-19534  
Method of forming a multiple layer dielectric and a hot film sensor therewith  
[NASA-CASE-LAR-13678-1] c 76 N90-24168  
Method and apparatus for detecting laminar flow separation and reattachment  
[NASA-CASE-LAR-13952-2-SB] c 34 N91-31596  
Atmospheric pressure flow reactor: Gas phase chemical kinetics under tropospheric conditions without wall effects  
[NASA-CASE-MSC-21384-1] c 34 N92-16243

Active thermal isolation for temperature responsive sensors  
[NASA-CASE-LAR-14612-1] c 34 N92-29954

Boundary layer relaminarization device  
[NASA-CASE-LAR-14470-1] c 02 N93-11876

**LAMINAR FLOW AIRFOILS**

Geometries for roughness shapes in laminar flow  
[NASA-CASE-LAR-13255-1] c 02 N87-16793

**LAMINATES**

Multilayer porous ionizer Patent  
[NASA-CASE-XNP-04338] c 17 N71-23046  
Polyimide resin-fiberglass cloth laminates for printed circuit boards  
[NASA-CASE-MFS-20408] c 18 N73-12604  
Reinforced polyquinoxaline gasket and method of preparing the same --- resistant to ionizing radiation and liquid hydrogen temperatures  
[NASA-CASE-MFS-21364-1] c 37 N74-18126  
Method of laminating structural members  
[NASA-CASE-XLA-11028-1] c 24 N74-27035  
Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c 24 N75-30260  
Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c 27 N76-16230  
Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c 24 N77-19170  
Hybrid composite laminate structures  
[NASA-CASE-LEW-12118-1] c 24 N77-27188  
Honeycomb-laminate composite structure  
[NASA-CASE-ARC-10913-1] c 24 N78-15180  
Composite lamination method  
[NASA-CASE-LAR-12019-1] c 24 N78-17150  
Lightweight electrically-powered flexible thermal laminate --- made of metal and nonconductive yarns  
[NASA-CASE-MSC-12662-1] c 33 N79-12331  
Method for alleviating thermal stress damage in laminates --- metal matrix composites  
[NASA-CASE-LEW-12493-1] c 24 N81-17170  
Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c 24 N81-26179  
Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c 24 N81-33235  
Fuselage structure using advanced technology fiber reinforced composites  
[NASA-CASE-LAR-11688-1] c 24 N82-26384  
Method of tracing contour patterns for use in making gradual contour resin matrix composites  
[NASA-CASE-ARC-11246-1] c 31 N83-34073  
Piezoelectric composite materials  
[NASA-CASE-LEW-12582-1] c 76 N83-34796  
High temperature polyimide film laminates and process for preparation thereof  
[NASA-CASE-LAR-13384-1] c 27 N86-20561  
Laminate comprising fibers embedded in cured amine terminated bis-imide  
[NASA-CASE-ARC-11421-3] c 24 N86-25416  
Fire and heat resistant laminating resins based on maleimide and citraconimide substituted 1,2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-1] c 27 N87-23751  
Method of forming a multiple layer dielectric and a hot film sensor therewith  
[NASA-CASE-LAR-13678-1] c 76 N90-24168  
Method of inseting predesigned disbond areas into composite laminates  
[NASA-CASE-LAR-13225-1] c 24 N90-25197  
Method of fabricating composite structures  
[NASA-CASE-MFS-28390-1] c 24 N91-15333  
Helmet of a laminate construction of polycarbonate and polysulfone polymeric material  
[NASA-CASE-MSC-21503-1] c 27 N92-10091  
Intercalated hybrid graphite fiber composite  
[NASA-CASE-LEW-15241-1] c 24 N92-17861  
Method and apparatus for thermographically and quantitatively analyzing a structure for disbands and/or inclusions  
[NASA-CASE-LAR-14559-1] c 38 N92-29829  
Low pressure process for continuous fiber reinforced polyamic acid resin matrix composite laminates  
[NASA-CASE-LAR-14954-1] c 24 N92-34214  
Method of forming a multiple layer dielectric and a hot film sensor therewith  
[NASA-CASE-LAR-13678-3] c 35 N93-14714  
Shear sensitive monomer-polymer laminate structure and method of using same  
[NASA-CASE-LAR-14654-1-CU] c 39 N93-29613

**LAND MOBILE SATELLITE SERVICE**

Trellis coded modulation for transmission over fading mobile satellite channel  
[NASA-CASE-NPO-16904-2-CU] c 32 N91-14523

**LANDFORMS**

Method for observing the features characterizing the surface of a land mass  
[NASA-CASE-FRC-11013-1] c 43 N81-17499

**LANDING AIDS**

Altitude sensing device  
[NASA-CASE-XMS-01994-1] c 14 N72-17326  
Magnetic position detection method and apparatus  
[NASA-CASE-ARC-10179-1] c 21 N72-22619  
Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c 09 N78-18083

**LANDING GEAR**

Pivotal shock absorbing pad assembly Patent  
[NASA-CASE-XMF-03856] c 31 N70-34159  
Nose gear steering system for vehicle with main skids Patent  
[NASA-CASE-XLA-01804] c 02 N70-34160  
Landing pad assembly for aerospace vehicles Patent  
[NASA-CASE-XMF-02853] c 31 N70-36654  
Aircraft wheel spray drag alleviator Patent  
[NASA-CASE-XLA-01583] c 02 N70-36825  
Space craft soft landing system Patent  
[NASA-CASE-XMF-02108] c 31 N70-36845  
Double-acting shock absorber Patent  
[NASA-CASE-XMF-01045] c 15 N70-40354  
Landing gear Patent  
[NASA-CASE-XMF-01174] c 02 N70-41589  
Tire/wheel concept  
[NASA-CASE-LAR-11695-2] c 37 N81-24443

**LANDING MODULES**

Double-acting shock absorber Patent  
[NASA-CASE-XMF-01045] c 15 N70-40354

**LANDING SIMULATION**

Impact simulator Patent  
[NASA-CASE-XLA-00493] c 11 N70-34786

**LANDING SITES**

Assured crew return vehicle  
[NASA-CASE-MSC-21536-1] c 18 N92-21999

**LANTHANUM COMPOUNDS**

Stabilized lanthanum sulphur compounds --- thermoelectric materials  
[NASA-CASE-NPO-16135-1] c 25 N83-24572

**LAP JOINTS**

Device for measuring hole elongation in a bolted joint  
[NASA-CASE-LAR-13453-1] c 37 N88-14361

**LARGE SCALE INTEGRATION**

Combinational logic for generating gate drive signals for phase control rectifiers  
[NASA-CASE-MFS-25208-1] c 33 N83-10345  
Method of examining microcircuit patterns  
[NASA-CASE-NPO-16299-1] c 33 N87-14594

**LARGE SPACE STRUCTURES**

Structural members, method and apparatus  
[NASA-CASE-MSC-16217-1] c 31 N81-27323  
Electrical rotary joint apparatus for large space structures  
[NASA-CASE-MFS-23981-1] c 07 N83-20944  
Beam connector apparatus and assembly  
[NASA-CASE-MFS-25134-1] c 31 N83-31895  
Self-locking mechanical center joint  
[NASA-CASE-LAR-12864-1] c 37 N85-30336  
Synchronously deployable truss structure  
[NASA-CASE-LAR-13117-1] c 37 N86-25789  
Latching mechanism for deployable/re-stowable columns useful in satellite construction  
[NASA-CASE-LAR-13169-1] c 37 N86-25791  
Measurement apparatus and procedure for the determination of surface emissivities  
[NASA-CASE-LAR-13455-1] c 32 N87-21206  
Deployable geodesic truss structure  
[NASA-CASE-LAR-13113-1] c 31 N87-25492  
Preloaded space structural coupling joints  
[NASA-CASE-LAR-13489-1] c 18 N87-27713  
Space spider crane  
[NASA-CASE-LAR-13411-1-SB] c 18 N88-23826  
Mobile remote manipulator system for a tetrahedral truss  
[NASA-CASE-MSC-20985-1] c 18 N88-26398  
Antenna surface contour control system  
[NASA-CASE-LAR-13798-1] c 32 N89-25363  
Clevis joint for deployable space structures  
[NASA-CASE-LAR-13898-1] c 37 N91-15544  
Torsional suspension system for testing space structures  
[NASA-CASE-LAR-14149-1-SB] c 14 N91-21176  
Synchronously deployable double fold beam and planar truss structure  
[NASA-CASE-LAR-13490-1] c 18 N91-27199

**LASER ALTIMETERS**

Sidelooking laser altimeter for a flight simulator  
[NASA-CASE-ARC-11312-1] c 36 N83-34304

## LASER ANNEALING

Enhanced fatigue and retention in ferroelectric thin film memory capacitors by post-top electrode anneal treatment

[NASA-CASE-NPO-18551-1-CU] c 33 N93-17277

## LASER APPLICATIONS

High power laser apparatus and system

[NASA-CASE-XLE-2529-2] c 36 N75-27364

Fiber distributed feedback laser

[NASA-CASE-NPO-13531-1] c 36 N76-24553

Wind measurement system

[NASA-CASE-MFS-23362-1] c 47 N77-10753

Pseudo-backscatter laser Doppler velocimeter

employing antiparallel-reflector in the forward direction

[NASA-CASE-ARC-10970-1] c 36 N77-25501

Compact pulsed laser having improved heat

conductance

[NASA-CASE-NPO-13147-1] c 36 N77-25502

Laser extensometer

[NASA-CASE-MFS-19259-1] c 36 N78-14380

Apparatus for extraction and separation of a

preferentially photo-dissociated molecular isotope into

positive and negative ions by means of an electric field

[NASA-CASE-LEW-12465-1] c 25 N78-25148

Volumetric direct nuclear pumped laser

[NASA-CASE-LAR-12183-1] c 36 N79-18307

Rhomboid prism pair for rotating the plane of parallel

light beams

[NASA-CASE-ARC-11311-1] c 74 N83-13978

Dual laser optical system and method for studying fluid

flow

[NASA-CASE-MFS-25315-1] c 36 N83-29680

Portable remote laser sensor for methane leak

detection

[NASA-CASE-NPO-15790-1] c 36 N85-21631

Method of and apparatus for measuring temperature and

pressure — atmospheric sounding

[NASA-CASE-GSC-12558-1] c 36 N85-21639

Laser activated MTOS microwave device

[NASA-CASE-NPO-16112-1] c 33 N86-19516

Discharge cell for optogalvanic spectroscopy having

orthogonal relationship between the probe laser and

discharge axis

[NASA-CASE-NPO-16271-1] c 35 N86-25753

High-temperature, high-pressure optical cell

[NASA-CASE-MFS-26000-1] c 74 N87-14971

Multiplex electric discharge gas laser system

[NASA-CASE-NPO-16433-1] c 36 N87-23961

Laser schlieren crystal monitor

[NASA-CASE-MFS-28060-1] c 76 N87-25862

Isotope separation using tuned laser and electron

beam

[NASA-CASE-NPO-16907-1-CU] c 25 N88-24732

Optically controlled welding system

[NASA-CASE-MFS-29291-1] c 37 N89-12868

Noncontact temperature pattern measuring device

[NASA-CASE-NPO-17824-1-CU] c 36 N90-17132

Isotope exchange in oxide-containing catalyst

[NASA-CASE-LAR-13542-2-SB] c 25 N90-20154

Electrostatically suspended rotor for angular encoder

[NASA-CASE-MFS-28294-1] c 31 N91-14508

Optical joint correlator for real-time image tracking and

retinal surgery

[NASA-CASE-MSC-21509-1] c 74 N91-25840

Method of remotely characterizing thermal properties

of a sample

[NASA-CASE-LAR-13508-3-CU] c 09 N93-11057

Multiplexed-grating surface-emitting lasers

[NASA-CASE-NPO-17763-1-CU] c 36 N93-14703

## LASER BEAMS

Hanging drop crystal growth apparatus

[NASA-CASE-MFS-26061-1] c 76 N91-16815

Apparatus for precision focussing and positioning of a

beam waist on a target

[NASA-CASE-ARC-11916-1-SB] c 74 N92-16811

Method for advanced material characterization by laser

induced eddy current imaging

[NASA-CASE-GSC-13386-1] c 38 N92-29154

Sample positioning in microgravity

[NASA-CASE-NPO-18448-1-CU] c 29 N92-30083

Quantum well, beam deflecting surface emitting lasers

[NASA-CASE-NPO-18243-1-CU] c 36 N93-13418

Sample positioning in microgravity

[NASA-CASE-NPO-18448-1-CU] c 29 N93-24600

## LASER CAVITIES

Laser apparatus

[NASA-CASE-GSC-12237-1] c 36 N80-14384

Laser Resonator

[NASA-CASE-GSC-12565-1] c 36 N84-14509

Long gain length solar pumped box laser

[NASA-CASE-LAR-13256-1] c 36 N86-29204

## LASER DOPPLER VELOCIMETERS

Dual wavelength scanning Doppler velocimeter —

without perturbation of flow fields

[NASA-CASE-ARC-10637-1] c 35 N75-16783

Combined dual scatter, local oscillator laser Doppler

velocimeter

[NASA-CASE-ARC-10642-1] c 36 N76-14447

Focused laser Doppler velocimeter

[NASA-CASE-MFS-23178-1] c 35 N77-10493

Pseudo-backscatter laser Doppler velocimeter

employing antiparallel-reflector in the forward direction

[NASA-CASE-ARC-10970-1] c 36 N77-25501

Optical scanner — laser Doppler velocimeters

[NASA-CASE-LAR-11711-1] c 74 N78-17866

Versatile LDV burst simulator

[NASA-CASE-LAR-11859-1] c 35 N79-14349

Laser Doppler velocity simulator — to induce frequency

shift

[NASA-CASE-LAR-12176-1] c 36 N80-16321

Direction sensitive laser velocimeter — determining the

direction of particles using a helium-neon laser

[NASA-CASE-LAR-12177-1] c 36 N81-24422

Scanning afocal laser velocimeter projection lens

system

[NASA-CASE-LAR-12328-1] c 36 N82-32712

Powder fed sheared dispersal particle generator

[NASA-CASE-LAR-12785-1] c 37 N84-16561

Auto covariance computer

[NASA-CASE-LAR-12968-1] c 60 N86-21154

Spinning disk calibration method and apparatus for laser

Doppler velocimeter

[NASA-CASE-ARC-11510-1] c 35 N86-32697

Vibration-free Raman Doppler velocimeter

[NASA-CASE-LAR-13268-1] c 35 N87-14669

Projection lens scanning laser velocimeter system

[NASA-CASE-ARC-11547-1] c 36 N87-17026

Dual mode laser velocimeter

[NASA-CASE-ARC-11634-1] c 36 N88-14350

Laser Doppler velocimeter multiplexer interface for

simultaneous measured events

[NASA-CASE-ARC-11536-1] c 33 N89-14384

Frequency domain laser velocimeter signal processor

[NASA-CASE-LAR-13552-1-CU] c 33 N89-14385

Three-dimensional laser velocimeter simultaneity

detector

[NASA-CASE-ARC-11876-1] c 36 N90-25340

Laser velocimeter for near-surface measurements

[NASA-CASE-ARC-11917-1] c 35 N91-15520

Vaporizing particle velocimeter

[NASA-CASE-LAR-14685-1] c 02 N92-34172

## LASER DRILLING

In-situ laser retorting of oil shale

[NASA-CASE-LEW-12217-1] c 43 N78-14452

## LASER FUSION

Laser surface fusion of plasma sprayed ceramic turbine

seals

[NASA-CASE-LEW-13269-1] c 18 N83-20996

## LASER GUIDANCE

Scanning afocal laser velocimeter projection lens

system

[NASA-CASE-LAR-12328-1] c 36 N82-32712

## LASER GYROSCOPES

Optical gyroscope system

[NASA-CASE-NPO-14258-1] c 35 N81-33448

Laser pulse detection method and apparatus

[NASA-CASE-NPO-16030-1] c 36 N84-25037

## LASER HEATING

Electric power generation system directory from laser

power

[NASA-CASE-NPO-13308-1] c 36 N75-30524

Method and apparatus for shaping and enhancing

acoustical levitation forces

[NASA-CASE-MFS-25050-1] c 71 N81-15767

## LASER INTERFEROMETRY

Dual-beam skin friction interferometer

[NASA-CASE-ARC-11354-1] c 74 N83-21949

## LASER MATERIALS

Laser head for simultaneous optical pumping of several

dye lasers — with single flash lamp

[NASA-CASE-LAR-11341-1] c 36 N75-19655

Solar pumped laser

[NASA-CASE-LAR-12870-1] c 36 N84-16542

## LASER MODE LOCKING

Laser system with an antiresonant optical ring

[NASA-CASE-HQN-10844-1] c 36 N75-19653

Dually mode locked Nd:YAG laser

[NASA-CASE-GSC-11746-1] c 36 N75-19654

Length controlled stabilized mode-lock Nd:YAG laser

[NASA-CASE-GSC-11571-1] c 36 N77-25499

Geodetic distance measuring apparatus

[NASA-CASE-GSC-12609-2] c 36 N83-29681

Method and circuit for controlling the evolution time

interval of a laser output pulse

[NASA-CASE-LAR-13772-1] c 36 N92-31788

## LASER MODES

Optical pump and driver system for lasers

[NASA-CASE-ERC-10283] c 16 N72-25485

Acoustically controlled distributed feedback laser

[NASA-CASE-NPO-13175-1] c 36 N75-31427

Aberration correction of unstable resonators

[NASA-CASE-NPO-18662-1-CU] c 74 N93-28428

## LASER OUTPUTS

Method and apparatus for wavelength tuning of liquid

lasers

[NASA-CASE-ERC-10187] c 16 N69-31343

Laser Doppler system for measuring three dimensional

vector velocity Patent

[NASA-CASE-MFS-20386] c 21 N71-19212

Amplitude modulated laser transmitter Patent

[NASA-CASE-XMS-04269] c 16 N71-22895

Laser fluid velocity detector Patent

[NASA-CASE-XAC-10770-1] c 16 N71-24828

Laser calibrator Patent

[NASA-CASE-XLA-03410] c 16 N71-25914

Method and apparatus for optical modulating a light

signal Patent

[NASA-CASE-GSC-10216-1] c 23 N71-26722

Laser machining apparatus Patent

[NASA-CASE-HQN-10541-2] c 15 N71-27135

Optical frequency waveguide and transmission system

Patent

[NASA-CASE-HQN-10541-4] c 16 N71-27183

Laser communication system for controlling several

functions at a location remote to the laser

[NASA-CASE-LAR-10311-1] c 16 N73-16536

Power supply for carbon dioxide lasers

[NASA-CASE-GSC-11222-1] c 16 N73-32391

Thermomagnetic recording and magneto-optic playback

system having constant intensity laser beam control

[NASA-CASE-NPO-11317-2] c 36 N74-13205

Apparatus for scanning the surface of a cylindrical

body

[NASA-CASE-NPO-11861-1] c 36 N74-20009

Optically detonated explosive device

[NASA-CASE-NPO-11743-1] c 28 N74-27425

Clear air turbulence detector

[NASA-CASE-MFS-21244-1] c 36 N75-15028

Dually mode locked Nd:YAG laser

[NASA-CASE-GSC-11746-1] c 36 N75-19654

Laser head for simultaneous optical pumping of several

dye lasers — with single flash lamp

[NASA-CASE-LAR-11341-1] c 36 N75-19655

Acoustically controlled distributed feedback laser

[NASA-CASE-NPO-13175-1] c 36 N75-31427

Optical noise suppression device and method — laser

light exposing film

[NASA-CASE-MSC-12640-1] c 74 N76-31998

Length controlled stabilized mode-lock Nd:YAG laser

[NASA-CASE-GSC-11571-1] c 36 N77-25499

Apparatus for photon excited catalysis

[NASA-CASE-NPO-13566-1] c 25 N77-32255

Method and apparatus for Doppler frequency modulation

of radiation

[NASA-CASE-NPO-14524-1] c 32 N80-24510

# SUBJECT INDEX

# LEAD (METAL)

Method and circuit for controlling the evolution time interval of a laser output pulse  
[NASA-CASE-LAR-13772-1] c 36 N92-31788

Multiplexed-grating surface-emitting lasers  
[NASA-CASE-NPO-17763-1-CU] c 36 N93-14703

Self-collimated unstable resonator semiconductor laser  
[NASA-CASE-NPO-18386-1-CU] c 36 N93-18277

Doppler shift compensation system for laser transmitters and receivers  
[NASA-CASE-GSC-13194-1] c 36 N93-18287

Burst-by-burst laser frequency monitor  
[NASA-CASE-NPO-18596-1-CU] c 36 N93-28132

**LASER PLASMAS**  
Continuous plasma laser --- method and apparatus for producing intense, coherent, monochromatic light from low temperature plasma  
[NASA-CASE-XNP-04167-3] c 36 N77-19416

**LASER POWER BEAMING**  
Long gain length solar pumped box laser  
[NASA-CASE-LAR-13256-1] c 36 N86-29204

Method for remotely powering a device such as a lunar rover  
[NASA-CASE-LAR-14789-1] c 37 N92-30388

**LASER PUMPING**  
Laser apparatus  
[NASA-CASE-GSC-12237-1] c 36 N80-14384

Large volume multiple-path nuclear pumped laser  
[NASA-CASE-LAR-12592-1] c 36 N82-13415

Solar pumped laser  
[NASA-CASE-LAR-12870-1] c 36 N84-16542

Tm,Ho:YLF laser end-pumped by a semiconductor diode laser array  
[NASA-CASE-NPO-17282-1-CU] c 36 N91-15528

Cladding for transverse-pumped solid-state laser  
[NASA-CASE-NPO-17355-1-CU] c 36 N91-17360

Tunable CW diode-pumped Tm,Ho:YLF laser operating at or near room temperature  
[NASA-CASE-NPO-18611-1-CU] c 36 N93-30415

**LASER RANGE FINDERS**  
Laser measuring system for incremental assemblies --- measuring wire-wrapped frame assemblies in spark chambers  
[NASA-CASE-GSC-12321-1] c 36 N82-16396

Range and range rate system  
[NASA-CASE-MSC-20867-1] c 36 N88-24958

**LASER RANGER/TRACKER**  
Method and apparatus for aligning a laser beam projector  
Patent  
[NASA-CASE-NPO-11087] c 23 N71-29125

**LASER SPECTROMETERS**  
Method and apparatus for enhancing laser absorption sensitivity  
[NASA-CASE-NPO-16567-1-CU] c 36 N87-28006

**LASER SPECTROSCOPY**  
Stark effect spectrophone for continuous absorption spectra monitoring --- a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c 25 N81-25159

**LASER WINDOWS**  
Optical scanner --- laser doppler velocimeters  
[NASA-CASE-LAR-11711-1] c 74 N78-17866

**LASERS**  
Laser apparatus for removing material from rotating objects Patent  
[NASA-CASE-MFS-11279] c 16 N71-20400

Laser grating interferometer Patent  
[NASA-CASE-XLA-04295] c 16 N71-24170

Optical frequency waveguide Patent  
[NASA-CASE-HQN-10541-1] c 07 N71-26291

Laser camera and diffusion filter therefore Patent  
[NASA-CASE-NPO-10417] c 16 N71-33410

Optical probing of supersonic flows with statistical correlation  
[NASA-CASE-MFS-20642] c 14 N72-21407

A technique for breaking ice in the path of a ship  
[NASA-CASE-LAR-10815-1] c 16 N72-22520

Alignment apparatus using a laser having a gravitationally sensitive cavity reflector  
[NASA-CASE-ARC-10444-1] c 16 N73-33397

Tunable cavity resonator with ramp shaped supports  
[NASA-CASE-HQN-10790-1] c 36 N74-11313

Short range laser obstacle detector --- for surface vehicles using laser diode array  
[NASA-CASE-NPO-11856-1] c 36 N74-15145

Long range laser traversing system  
[NASA-CASE-GSC-11262-1] c 36 N74-21091

Deep trap, laser activated image converting system  
[NASA-CASE-NPO-13131-1] c 36 N75-19652

Laser system with an antiresonant optical ring  
[NASA-CASE-HQN-10844-1] c 36 N75-19653

Acoustically controlled distributed feedback laser  
[NASA-CASE-NPO-13175-1] c 36 N75-31427

Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback  
[NASA-CASE-NPO-13346-1] c 36 N76-29575

Polarization compensator for optical communications  
[NASA-CASE-GSC-11782-1] c 74 N76-30053

Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c 74 N77-26942

Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c 32 N77-28346

Method and apparatus for splitting a beam of energy --- optical communication  
[NASA-CASE-GSC-12083-1] c 73 N78-32848

Shock isolator for operating a diode laser on a closed-cycle refrigerator  
[NASA-CASE-GSC-12297-1] c 37 N79-28549

Method of and apparatus for double-exposure holographic interferometry  
[NASA-CASE-MFS-25405-1] c 35 N84-22929

Method and apparatus for coating substrates using a laser  
[NASA-CASE-LEW-13526-1] c 36 N84-22944

Off-axis coherently pumped laser  
[NASA-CASE-GSC-12592-1] c 36 N84-28065

Means for phase locking the outputs of a surface emitting laser diode array  
[NASA-CASE-NPO-16542-1-CU] c 36 N87-23960

Magnetically switched power supply system for lasers  
[NASA-CASE-NPO-16402-2] c 33 N88-24862

Three-dimensional laser velocimeter simultaneously detector  
[NASA-CASE-ARC-11876-1] c 36 N90-25340

Synchronous strobe apparatus for flow visualization  
[NASA-CASE-LAR-14556-1] c 36 N91-25392

Matching optics for Gaussian beams  
[NASA-CASE-ARC-11892-1-SB] c 74 N92-16810

Laser optical disk position encoder with active heads  
[NASA-CASE-GSC-13175-1] c 74 N92-29133

Method for advanced material characterization by laser induced eddy current imaging  
[NASA-CASE-GSC-13386-1] c 38 N92-29154

Aberration correction of unstable resonators  
[NASA-CASE-NPO-18662-1-CU] c 74 N93-28428

**LASING**  
Long gain length solar pumped box laser  
[NASA-CASE-LAR-13256-1] c 36 N86-29204

Isotope separation using tuned laser and electron beam  
[NASA-CASE-NPO-16907-1-CU] c 25 N88-24732

Method and apparatus for detection and control of preloading in a Q-switched laser  
[NASA-CASE-LAR-14790-1] c 36 N93-19373

**LATCHES**  
Despin weight release Patent  
[NASA-CASE-XLA-00679] c 15 N70-38601

Helmet assembly and latch means therefor Patent  
[NASA-CASE-XMS-04935] c 05 N71-11190

Quick disconnect latch and handle combination Patent  
[NASA-CASE-MFS-11132] c 15 N71-17649

Latching mechanism Patent  
[NASA-CASE-XMS-03745] c 15 N71-21076

Latch/ejector unit Patent  
[NASA-CASE-XLA-03538] c 15 N71-24897

Latching mechanism Patent  
[NASA-CASE-MSC-15474-1] c 15 N71-26162

Latch mechanism  
[NASA-CASE-MSC-12549-1] c 37 N74-27903

Latching device  
[NASA-CASE-MFS-21606-1] c 37 N75-19685

Load regulating latch  
[NASA-CASE-MSC-19535-1] c 37 N77-32499

Helmet latching and attaching ring  
[NASA-CASE-XMS-04670] c 54 N78-17678

Low temperature latching solenoid  
[NASA-CASE-MSC-18106-1] c 33 N82-11357

CAM controlled retractable door latch  
[NASA-CASE-MSC-20304-1] c 37 N82-31690

Mechanical end joint system for structural column elements  
[NASA-CASE-LAR-12482-1] c 37 N82-32732

Hemispherical latching apparatus  
[NASA-CASE-MFS-25837-1] c 18 N85-29991

Latching mechanism for deployable/re-stowable columns useful in satellite construction  
[NASA-CASE-LAR-13169-1] c 37 N86-25791

Self indexing latch system  
[NASA-CASE-MFS-25956-1] c 37 N87-21333

Preloadable vector sensitive latch  
[NASA-CASE-MSC-20910-1] c 37 N87-25582

Toggle release  
[NASA-CASE-MSC-21354-1] c 37 N88-24969

Quick action clamp  
[NASA-CASE-LEW-14887-1] c 37 N91-27561

J-hook latching device  
[NASA-CASE-GSC-13200-1] c 37 N92-21500

Retractable tool bit having latch type catch mechanism  
[NASA-CASE-GSC-13359-1] c 37 N92-23378

Preloaded latching device  
[NASA-CASE-MSC-21730-1] c 37 N93-13417

Retractable tool bit having slider type catch mechanism  
[NASA-CASE-GSC-13358-1] c 37 N93-14710

Retractable tool bit having latch type catch mechanism  
[NASA-CASE-GSC-13359-1] c 37 N93-18286

**LATERAL CONTROL**  
Three-axis controller Patent  
[NASA-CASE-XAC-01404] c 05 N70-41581

Roll attitude star sensor system Patent  
[NASA-CASE-XNP-01307] c 21 N70-41856

High speed flight vehicle control Patent  
[NASA-CASE-XLA-08967] c 02 N71-27088

Vortex-lift roll-control device  
[NASA-CASE-LAR-11868-2] c 08 N79-14108

Leading edge flap system for aircraft control augmentation  
[NASA-CASE-LAR-12787-2] c 08 N85-19985

Swashplate control system  
[NASA-CASE-ARC-11633-1] c 08 N87-23631

**LATERAL STABILITY**  
Annular wing  
[NASA-CASE-FRC-11007-2] c 05 N82-26277

**LATEX**  
Molten salt pyrolysis of latex --- synthetic hydrocarbon fuel production using the Guayule shrub  
[NASA-CASE-NPO-14315-1] c 27 N81-17261

Process for preparation of large-particle-size monodisperse latexes  
[NASA-CASE-MFS-25000-1] c 25 N81-19242

**LATHES**  
Apparatus for machining geometric cones Patent  
[NASA-CASE-XMS-04292] c 15 N71-27222

Lathe tool bit and holder for machining fiberglass materials  
[NASA-CASE-XLA-10470] c 15 N72-21489

Universal precision sine bar attachment  
[NASA-CASE-MFS-28253-1] c 37 N89-28831

**LAUNCH ESCAPE SYSTEMS**  
Emergency escape system Patent  
[NASA-CASE-XKS-02342] c 05 N71-11199

Device for separating occupant from an ejection seat Patent  
[NASA-CASE-XMS-04625] c 05 N71-20718

**LAUNCH VEHICLE CONFIGURATIONS**  
Rotating launch device for a remotely piloted aircraft  
[NASA-CASE-ARC-10979-1] c 09 N77-19076

**LAUNCH VEHICLES**  
A support technique for vertically oriented launch vehicles  
[NASA-CASE-XLA-02704] c 11 N69-21540

Method and apparatus for detection and location of microleaks Patent  
[NASA-CASE-XMF-02307] c 14 N71-10779

Three stage rocket vehicle with parallel staging  
[NASA-CASE-MFS-25878-1] c 18 N84-27787

Earth-to-orbit vehicle providing a reusable orbital stage  
[NASA-CASE-LAR-13486-1] c 16 N90-22584

Integrated launch and emergency vehicle system  
[NASA-CASE-LAR-13780-1] c 18 N92-33013

**LAUNCHERS**  
Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-15429-1] c 18 N84-22609

Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-25429-1] c 18 N86-20469

Electromagnetic Meissner effect launcher  
[NASA-CASE-MFS-28323-1] c 14 N92-15081

**LAUNCHING PADS**  
Missile launch release system Patent  
[NASA-CASE-XMF-03198] c 30 N70-40353

Remote controlled tubular disconnect Patent  
[NASA-CASE-XLA-01396] c 03 N71-12259

Validation device for spacecraft checkout equipment Patent  
[NASA-CASE-XKS-10543] c 07 N71-26292

**LAY-UP**  
Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c 24 N81-33235

**LAYERS**  
Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-1] c 28 N78-24365

**LEACHING**  
Process for the leaching of AP from propellant  
[NASA-CASE-NPO-14109-1] c 28 N80-23471

Infusion extractor  
[NASA-CASE-MSC-20761-1] c 37 N87-15465

**LEAD (METAL)**  
Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c 44 N76-27664



- Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c 44 N81-29524  
Joining lead wires to thin platinum alloy films  
[NASA-CASE-LEW-13934-1] c 35 N83-35338

**LEAD SULFIDES**

- Integrated photo-responsive metal oxide semiconductor circuit  
[NASA-CASE-GSC-12782-1] c 33 N88-14271

**LEAD TELLURIDES**

- Bonding thermoelectric elements to nonmagnetic refractory metal electrodes  
[NASA-CASE-XGS-04554] c 15 N69-39786  
Segmenting lead telluride-silicon germanium thermoelements Patent  
[NASA-CASE-XGS-05718] c 26 N71-16037

**LEAD ZIRCONATE TITANATES**

- Enhanced fatigue and retention in ferroelectric thin film memory capacitors by post-top electrode anneal treatment  
[NASA-CASE-NPO-18551-1-CU] c 33 N93-17277

**LEADING EDGE FLAPS**

- Leading edge flap system for aircraft control augmentation  
[NASA-CASE-LAR-12787-2] c 08 N85-19985

**LEADING EDGES**

- Reentry vehicle leading edge Patent  
[NASA-CASE-XLA-00165] c 31 N70-33242  
Leading edge curvature based on convective heating Patent  
[NASA-CASE-XLA-01486] c 01 N71-23497  
Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c 24 N77-19170  
Geometries for roughness shapes in laminar flow  
[NASA-CASE-LAR-13255-1] c 02 N87-16793  
Boundary layer relaminarization device  
[NASA-CASE-LAR-14470-1] c 02 N93-11876  
Swept wing attachment line contamination fence  
[NASA-CASE-LAR-13400-1] c 02 N93-22015

**LEAKAGE**

- Rocket chamber leak test fixture  
[NASA-CASE-XFR-09479] c 14 N69-27503  
Method and apparatus for detection and location of microleaks Patent  
[NASA-CASE-XMF-02307] c 14 N71-10779  
Leak detector Patent  
[NASA-CASE-LAR-10323-1] c 12 N71-17573  
Hard space suit Patent  
[NASA-CASE-XAC-07043] c 05 N71-23161  
Method for leakage testing of tanks Patent  
[NASA-CASE-XMF-02392] c 32 N71-24285  
Leak detector wherein a probe is monitored with ultraviolet radiation Patent  
[NASA-CASE-ERC-10034] c 15 N71-24896  
Method for detecting leaks in hermetically sealed containers Patent  
[NASA-CASE-ERC-10045] c 15 N71-24910  
Method and apparatus for detecting gross leaks Patent  
[NASA-CASE-ERC-10033] c 14 N71-26672  
Orifice gross leak tester Patent  
[NASA-CASE-ERC-10150] c 14 N71-28992  
Leak detector  
[NASA-CASE-MFS-21761-1] c 35 N75-15931  
Vacuum leak detector  
[NASA-CASE-LAR-11237-1] c 35 N75-19612  
Low heat leak connector for cryogenic system  
[NASA-CASE-XLE-02367-1] c 31 N79-21225  
Carbon granule probe microphone for leak detection --- recovery boilers  
[NASA-CASE-NPO-16027-1] c 35 N85-21597  
Portable remote laser sensor for methane leak detection  
[NASA-CASE-NPO-15790-1] c 36 N85-21631  
Fluid leak indicator  
[NASA-CASE-MSC-20783-1] c 35 N86-20756  
Method of repairing hidden leaks in tubes  
[NASA-CASE-MFS-19796-1] c 37 N86-32736  
Self-compensating solenoid valve  
[NASA-CASE-ARC-11620-1] c 37 N87-25573  
High temperature flexible seal  
[NASA-CASE-LEW-14695-1] c 37 N90-23751  
Dual diaphragm tank with telltale drain  
[NASA-CASE-MSC-21703-1] c 31 N91-25305  
Valve malfunction detection apparatus  
[NASA-CASE-MFS-29904-1] c 35 N93-29503

**LEAST SQUARES METHOD**

- Modified fast frequency acquisition via adaptive least squares algorithm  
[NASA-CASE-NPO-17845-2-CU] c 61 N93-14882  
Near real-time stereo vision system  
[NASA-CASE-NPO-18593-1-CU] c 74 N93-18276

**LEG (ANATOMY)**

- Actuator device for artificial leg  
[NASA-CASE-MFS-23225-1] c 52 N77-14735

- Rotational joint assembly for the prosthetic leg  
[NASA-CASE-KSC-11004-1] c 54 N77-30749  
Mechanical energy storage device for hip disarticulation  
[NASA-CASE-ARC-10916-1] c 52 N78-10686  
Drop foot corrective device  
[NASA-CASE-LAR-12259-2] c 54 N86-22112

**LENSES**

- High temperature lens construction Patent  
[NASA-CASE-XNP-04111] c 14 N71-15622  
Image magnification adapter for cameras Patent  
[NASA-CASE-XMF-03844-1] c 14 N71-26474  
Petzval type objective including field shaping lens Patent  
[NASA-CASE-GSC-10700] c 23 N71-30027  
Method and apparatus for eliminating coherent noise in a coherent energy imaging system without destroying spatial coherence  
[NASA-CASE-GSC-11133-1] c 23 N72-11568  
Plural beam antenna  
[NASA-CASE-GSC-11013-1] c 09 N73-19234  
Spatial filter for Q-switched lasers  
[NASA-CASE-LEW-12164-1] c 36 N77-32478  
Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polymethyl methacrylate lenses  
[NASA-CASE-ARC-11039-1] c 74 N78-32854  
Chromatically corrected virtual image visual display --- reducing eye strain in flight simulators  
[NASA-CASE-LAR-12251-1] c 74 N80-27185  
Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N82-24072  
Scanning afocal laser velocimeter projection lens system  
[NASA-CASE-LAR-12328-1] c 36 N82-32712  
Interferometric angle monitor  
[NASA-CASE-GSC-12614-1] c 74 N83-32577  
Projection lens scanning laser velocimeter system  
[NASA-CASE-ARC-11547-1] c 36 N87-17026  
Dual mode laser velocimeter  
[NASA-CASE-ARC-11634-1] c 36 N88-14350  
Matching optics for Gaussian beams  
[NASA-CASE-ARC-11892-1-SB] c 74 N92-16810  
Portable dynamic fundus instrument  
[NASA-CASE-MSC-21675-1] c 52 N92-28755  
Polarization perception device  
[NASA-CASE-MSC-21915-1] c 74 N92-30027  
Large area projection liquid-crystal video display system with inherent grid pattern optically removed  
[NASA-CASE-NPO-16932-2-CU] c 74 N93-13711

**LENTICULAR BODIES**

- Space and atmospheric reentry vehicle Patent  
[NASA-CASE-XGS-00260] c 31 N70-37924

**LEVEL (HORIZONTAL)**

- Hot wire liquid level detector for cryogenic fluids Patent  
[NASA-CASE-XLE-00454] c 23 N71-17802  
Rotary leveling base platform  
[NASA-CASE-ARC-10981-1] c 37 N78-27425

**LEVEL (QUANTITY)**

- Spherical tank gauge Patent  
[NASA-CASE-XMS-06236] c 14 N71-21007  
Positive dc to positive dc converter Patent  
[NASA-CASE-XMF-14301] c 09 N71-23188

**LEVELING**

- Adjustable attitude guide device Patent  
[NASA-CASE-XLA-07911] c 15 N71-15571  
Electrical switching device Patent  
[NASA-CASE-NPO-10037] c 09 N71-19610  
Adjustable support  
[NASA-CASE-NPO-10721] c 15 N72-27484  
Automatically operable self-leveling load table  
[NASA-CASE-MFS-22039-1] c 09 N75-12968

**LEVERS**

- Preloaded latching device  
[NASA-CASE-MSC-21730-1] c 37 N93-13417  
Portable seat lift  
[NASA-CASE-MFS-28610-1] c 54 N93-17045

**LEVITATION**

- Gas levitator having fixed levitation node for containerless processing  
[NASA-CASE-MFS-25509-1] c 35 N83-24828  
Closed loop electrostatic levitation system  
[NASA-CASE-NPO-15553-1] c 33 N85-29142  
Superconducting bearings with levitation control configurations  
[NASA-CASE-GSC-13346-1] c 37 N92-29099

**LEVITATION MELTING**

- High temperature acoustic levitator  
[NASA-CASE-NPO-16022-1] c 71 N85-22105  
Sample levitation and melt in microgravity  
[NASA-CASE-NPO-17022-1-CU] c 29 N87-25489

**LIFE (DURABILITY)**

- Hollow rolling element bearings  
[NASA-CASE-LEW-11087-3] c 37 N74-21064

- Method of increasing minority carrier lifetime in silicon web or the like  
[NASA-CASE-NPO-15530-1] c 76 N83-35888  
Apparatus for disintegrating kidney stones  
[NASA-CASE-GSC-12652-1] c 52 N84-34913  
Method and apparatus for measuring minority carrier lifetime in a direct band-gap semiconductor  
[NASA-CASE-NPO-16337-1-CU] c 33 N87-22894  
Arc-textured high emittance radiator surfaces  
[NASA-CASE-LEW-14679-1] c 27 N91-25296  
Slow positron beam generator for lifetime studies  
[NASA-CASE-LAR-14250-1-SB] c 72 N91-27936  
Three-grid accelerator system for an ion propulsion engine  
[NASA-CASE-NPO-18391-1-CU] c 20 N93-28424

**LIFE DETECTORS**

- Use of the enzyme hexokinase for the reduction of inherent light levels  
[NASA-CASE-XGS-05533] c 04 N69-27487  
Lyophilized reaction mixtures Patent  
[NASA-CASE-XGS-05532] c 06 N71-17705

**LIFE RAFTS**

- Life raft Patent  
[NASA-CASE-XMS-00863] c 05 N70-34857  
Life raft stabilizer  
[NASA-CASE-MSC-12393-1] c 02 N73-26006  
Modification of one man life raft  
[NASA-CASE-LAR-10241-1] c 54 N74-14845

**LIFE SUPPORT SYSTEMS**

- Shock absorbing support and restraint means Patent  
[NASA-CASE-XMS-01240] c 05 N70-35152  
Portable environmental control system Patent  
[NASA-CASE-XMS-09632-1] c 05 N71-11203  
Extravehicular tunnel suit system Patent  
[NASA-CASE-MSC-12243-1] c 05 N71-24728  
Foreshortened convolute section for a pressurized suit Patent  
[NASA-CASE-XMS-09637-1] c 05 N71-24730  
Orbital escape device Patent  
[NASA-CASE-XMS-06162] c 31 N71-28851  
Specialized halogen generator for purification of water Patent  
[NASA-CASE-XLA-08913] c 14 N71-28933  
Life support system  
[NASA-CASE-MSC-12411-1] c 05 N72-20096  
Air removal device  
[NASA-CASE-XLA-08914] c 15 N73-12492  
Space suit  
[NASA-CASE-MSC-12609-1] c 05 N73-32012  
Catalyst cartridge for carbon dioxide reduction unit  
[NASA-CASE-LAR-10551-1] c 25 N74-12813  
Helmet feedport  
[NASA-CASE-XMS-09653] c 54 N78-17680  
Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c 54 N78-32721  
Air removal device --- life support systems  
[NASA-CASE-XLA-08914-2] c 25 N82-21269  
Suitport extra-vehicular access facility  
[NASA-CASE-ARC-11635-1] c 18 N90-16860  
Method and apparatus for bio-regenerative life support system  
[NASA-CASE-MSC-21629-1] c 54 N91-31803

**LIFT**

- Serrated trailing edges for improving lift and drag characteristics of lifting surfaces  
[NASA-CASE-LAR-13870-1-CU] c 05 N92-21587

**LIFT DEVICES**

- Device for handling heavy loads  
[NASA-CASE-XNP-04969] c 11 N69-27466  
Recoverable rocket vehicle Patent  
[NASA-CASE-XMF-00389] c 31 N70-34176  
Direct lift control system Patent  
[NASA-CASE-LAR-10249-1] c 02 N71-26110  
Ferry system  
[NASA-CASE-LAR-10574-1] c 11 N73-13257  
High lift aircraft --- with improved stability, control, performance, and noise characteristics  
[NASA-CASE-LAR-11252-1] c 05 N75-25914  
Device for installing rocket engines  
[NASA-CASE-MFS-19220-1] c 20 N76-22296  
Vortex-lift roll-control device  
[NASA-CASE-LAR-11868-2] c 08 N79-14108  
Serrated trailing edges for improving lift and drag characteristics of lifting surfaces  
[NASA-CASE-LAR-13870-1-CU] c 05 N92-21587

**LIFT DRAG RATIO**

- Ring wing tension vehicle Patent  
[NASA-CASE-XLA-04901] c 31 N71-24315  
Annular wing  
[NASA-CASE-FRC-11007-2] c 05 N82-26277  
Slotted variable camber flap  
[NASA-CASE-LAR-12541-1] c 05 N84-22551  
Over-the-wing propeller  
[NASA-CASE-LAR-13134-2] c 07 N87-16828

## LIFTING BODIES

- Recoverable rocket vehicle Patent  
[NASA-CASE-XMF-00389] c 31 N70-34176
- Lifting body Patent Application  
[NASA-CASE-FRC-10063] c 01 N71-12217
- Lift balancing device  
[NASA-CASE-LAR-10348-1] c 11 N73-12264
- Serrated trailing edges for improving lift and drag characteristics of lifting surfaces  
[NASA-CASE-LAR-13870-1-CU] c 05 N92-21587

## LIFTING REENTRY VEHICLES

- Space and atmospheric reentry vehicle Patent  
[NASA-CASE-XGS-00260] c 31 N70-37924
- Variable geometry manned orbital vehicle Patent  
[NASA-CASE-XLA-03691] c 31 N71-15674
- Flight craft Patent  
[NASA-CASE-XAC-02058] c 02 N71-16087

## LIFTING ROTORS

- High lift, low pitching moment airfoils  
[NASA-CASE-LAR-13215-1] c 02 N89-14224

## LIGANDS

- Carboranyl-methylene-substituted phosphazenes and polymers thereof  
[NASA-CASE-ARC-11370-1] c 27 N84-22750

## LIGHT (VISIBLE RADIATION)

- Anti-glare improvement for optical imaging systems Patent  
[NASA-CASE-NPO-10337] c 14 N71-15604
- Maksutov spectrograph Patent  
[NASA-CASE-XLA-10402] c 14 N71-29041
- Combustion detector  
[NASA-CASE-LAR-10739-1] c 14 N73-16484
- Light transmitting window assembly  
[NASA-CASE-MSC-18417-1] c 74 N85-29750
- Schlieren system for visualizing the flow within a pipe of circular cross-section  
[NASA-CASE-LAR-13944-1] c 35 N92-11336

## LIGHT AIRCRAFT

- Direct lift control system Patent  
[NASA-CASE-LAR-10249-1] c 02 N71-26110

## LIGHT BEAMS

- Spectroscope equipment using a slender cylindrical reflector as a substitute for a slit Patent  
[NASA-CASE-XGS-08269] c 23 N71-26206
- Multiple hologram recording and readout system Patent  
[NASA-CASE-ERC-10151] c 16 N71-29131
- Rhomboid prism pair for rotating the plane of parallel light beams  
[NASA-CASE-ARC-11311-1] c 74 N83-13978
- Collimated beam manifold with the number of output beams variable at a given output angle  
[NASA-CASE-MFS-25312-1] c 74 N83-17305
- Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629
- Double window viewing chamber assembly  
[NASA-CASE-MFS-28057-1] c 09 N87-14355
- Laser schlieren crystal monitor  
[NASA-CASE-MFS-28060-1] c 76 N87-25862
- Laser velocimeter for near-surface measurements  
[NASA-CASE-ARC-11917-1] c 35 N91-15520
- Synchronous strobe apparatus for flow visualization  
[NASA-CASE-LAR-14556-1] c 36 N91-25392
- Matching optics for Gaussian beams  
[NASA-CASE-ARC-11892-1-SB] c 74 N92-16810

## LIGHT EMISSION

- Method and apparatus for determining optical absorption and emission characteristics of a crystal or non-crystalline fiber  
[NASA-CASE-LAR-13963-1] c 76 N90-24150

## LIGHT EMITTING DIODES

- Photoelectric detection system --- manufacturing automation  
[NASA-CASE-MFS-23776-1] c 33 N82-28545
- Heads up display  
[NASA-CASE-LAR-12630-1] c 06 N84-27733
- Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c 74 N85-22139
- Means for phase locking the outputs of a surface emitting laser diode array  
[NASA-CASE-NPO-16542-1-CU] c 36 N87-23960
- Field induced gap infrared detector  
[NASA-CASE-NPO-17526-1-CU] c 35 N91-14588
- Fiber optic sensing system  
[NASA-CASE-LEW-14795-1] c 74 N91-21871

## LIGHT GAS GUNS

- Hypervelocity gun Patent  
[NASA-CASE-XAC-05902] c 11 N71-18578

## LIGHT MODULATION

- Retrodirective modulator Patent  
[NASA-CASE-GSC-10062] c 14 N71-15605
- Light intensity modulator controller Patent  
[NASA-CASE-XMS-04300] c 09 N71-19479

Method and apparatus for optical modulating a light signal Patent

- [NASA-CASE-GSC-10216-1] c 23 N71-26722
- Lamp modulator  
[NASA-CASE-KSC-10565] c 09 N72-25250
- Polarization compensator for optical communications  
[NASA-CASE-GSC-11782-1] c 74 N76-30053
- Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c 32 N80-24510
- Fluorescent radiation converter  
[NASA-CASE-GSC-12528-1] c 74 N81-24900
- Optoelectronic associative memory  
[NASA-CASE-NPO-18278-1-CU] c 74 N91-32925
- All-optical photochromic spatial light modulators based on photoinduced electron transfer in rigid matrices  
[NASA-CASE-NPO-17612-1-CU] c 74 N92-16808
- Optical inner product neural associative memory  
[NASA-CASE-NPO-18491-1-CU] c 60 N92-23546
- Real-time edge-enhanced optical correlator  
[NASA-CASE-NPO-18379-1-CU] c 74 N92-33022
- Full complex modulation using two one-parameter spatial light modulators  
[NASA-CASE-MSC-22255-1] c 74 N93-28135

## LIGHT SCATTERING

- The 2 deg/90 deg laboratory scattering photometer --- particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c 74 N78-13874
- A reference standard for bidirectional reflection distribution function and bidirectional transmission distribution function measurement  
[NASA-CASE-MFS-28183-1] c 74 N89-13253
- Real time pre-detection dynamic range compression  
[NASA-CASE-NPO-18098-1-CU] c 74 N92-33028

## LIGHT SCATTERING METERS

- System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
[NASA-CASE-MFS-23513-1] c 74 N79-11865

## LIGHT SOURCES

- Light radiation direction indicator with a baffle of two parallel grids  
[NASA-CASE-XNP-03930] c 14 N69-24331
- High intensity heat and light unit Patent  
[NASA-CASE-XLA-00141] c 09 N70-33312
- Photosensitive device to detect bearing deviation Patent  
[NASA-CASE-XNP-00438] c 21 N70-35089
- Light position locating system Patent  
[NASA-CASE-XNP-01059] c 23 N71-21821
- Optical systems having spatially invariant outputs  
[NASA-CASE-ERC-10248] c 14 N72-17323
- Ultrastable calibrated light source  
[NASA-CASE-MSC-12293-1] c 14 N72-27411
- Temperature compensated light source using a light emitting diode  
[NASA-CASE-ARC-10467-1] c 09 N73-14214
- Interferometric rotation sensor  
[NASA-CASE-ARC-10278-1] c 14 N73-25463
- Attitude sensor  
[NASA-CASE-LAR-10586-1] c 19 N74-15089
- Very high intensity light source using a cathode ray tube --- electron beams  
[NASA-CASE-XNP-01296] c 33 N75-27250
- Electric arc light source having undercut recessed anode  
[NASA-CASE-ARC-10266-1] c 33 N75-29318
- Uniform variable light source  
[NASA-CASE-NPO-11429-1] c 74 N77-21941
- Radiation sensitive area detection device and method  
[NASA-CASE-MFS-28563-1] c 35 N91-25388
- Bright light delivery system  
[NASA-CASE-MFS-28723-1] c 52 N93-17058
- Transversely polarized source cladding for an optical fiber  
[NASA-CASE-LAR-14652-1-SB] c 74 N93-22039
- A quality monitor and monitoring technique employing optically stimulated electron emission  
[NASA-CASE-LAR-15063-1] c 38 N93-30414

## LIGHT TRANSMISSION

- Hybrid holographic system using reflected and transmitted object beams simultaneously Patent  
[NASA-CASE-MFS-20074] c 16 N71-15565
- Optical characteristics measuring apparatus Patent  
[NASA-CASE-XNP-08840] c 23 N71-16365
- Optical monitor panel Patent  
[NASA-CASE-XKS-03509] c 14 N71-23175
- Solar cell panels with light transmitting plate  
[NASA-CASE-NPO-10747] c 03 N72-22042
- Optical frequency waveguide and transmission system  
[NASA-CASE-HQN-10541-3] c 23 N72-23695
- Light regulator  
[NASA-CASE-LAR-10836-1] c 26 N72-27784
- Transmitting and reflecting diffuser --- for ultraviolet light  
[NASA-CASE-LAR-10385-2] c 70 N74-13436

Optical instrument employing reticle having preselected visual response pattern formed thereon

- [NASA-CASE-ARC-10976-1] c 74 N77-22950
- Transmitting and reflecting diffuser --- using ultraviolet grade fused silica coatings  
[NASA-CASE-LAR-10385-3] c 74 N78-15879
- Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N82-24072
- Light transmitting window assembly  
[NASA-CASE-MSC-18417-1] c 74 N85-29750
- Low-loss, high-isolation, fiber-optic isolator  
[NASA-CASE-NPO-17207-1-CU] c 74 N88-25304
- Fiber optic frequency transfer link  
[NASA-CASE-NPO-17703-1-CU] c 74 N91-27957
- Polarization perception device  
[NASA-CASE-MSC-21915-1] c 74 N92-30027

## LIGHT VALVES

- Liquid crystal light valve structures  
[NASA-CASE-MSC-20036-1] c 76 N85-33826
- Wind dynamic range video camera  
[NASA-CASE-MFS-25750-1] c 32 N86-20647

## LIGHTING EQUIPMENT

- Internal work light Patent  
[NASA-CASE-XKS-05932] c 09 N71-26787
- Pressurized lighting system  
[NASA-CASE-KSC-10644] c 09 N72-27227
- Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c 33 N79-11315
- Device for removing foreign objects from anatomic organs  
[NASA-CASE-GSC-13306-1] c 52 N92-33032

## LIGHTNING

- Determining distance to lightning strokes from a single station  
[NASA-CASE-KSC-10698] c 07 N73-20175
- Lightning tracking system  
[NASA-CASE-KSC-10729-1] c 09 N73-32110
- Automatic lightning detection and photographic system  
[NASA-CASE-KSC-10728-1] c 14 N73-32319
- Lightning current measuring systems  
[NASA-CASE-KSC-10807-1] c 33 N75-26246
- Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c 33 N79-10337
- Lightning current detector  
[NASA-CASE-KSC-11057-1] c 33 N79-14305
- Lightning discharge identification system  
[NASA-CASE-KSC-11099-1] c 47 N82-24779
- Lightning discharge protection rod  
[NASA-CASE-LAR-13470-1] c 03 N88-14083
- Method and apparatus for determining return stroke polarity of distant lightning  
[NASA-CASE-MFS-26102-1-CU] c 47 N91-15661
- Method and apparatus for determining return stroke polarity of distant lightning  
[NASA-CASE-MFS-26102-2-CU] c 47 N93-10108

## LIMBS (ANATOMY)

- Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c 52 N79-26772
- Apparatus for determining changes in limb volume  
[NASA-CASE-MSC-18759-1] c 52 N83-27578

## LIMITER CIRCUITS

- Variable duration pulse integrator Patent  
[NASA-CASE-XLA-01219] c 10 N71-23084
- Noise limiter Patent  
[NASA-CASE-NPO-10169] c 10 N71-24844
- Velocity limiting safety system Patent  
[NASA-CASE-XLA-07473] c 15 N71-24895
- Low level signal limiter  
[NASA-CASE-XLE-04791] c 32 N74-22096
- Inrush current limiter  
[NASA-CASE-GSC-11789-1] c 33 N77-14333
- Measurand transient signal suppressor  
[NASA-CASE-MSC-22027-1] c 63 N93-17056

## LINE OF SIGHT

- EMU helmet mounted display  
[NASA-CASE-MSC-21460-1] c 54 N91-13879

## LINE SPECTRA

- Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c 25 N81-14015
- Optical scanner  
[NASA-CASE-GSC-12897-1] c 74 N87-21679

## LINEAR ACCELERATORS

- Linear accelerator frequency control system Patent  
[NASA-CASE-XGS-05441] c 10 N71-22962

## LINEAR ARRAYS

- Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c 43 N79-17288
- Means for phase locking the outputs of a surface emitting laser diode array  
[NASA-CASE-NPO-16542-1-CU] c 36 N87-23960

## LINEAR CIRCUITS

- Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N87-22895

LINEAR INTEGRATED CIRCUITS

Integrating IR detector imaging systems  
[NASA-CASE-NPO-15805-1] c 74 N84-28590

LINEAR POLARIZATION

Wind dynamic range video camera  
[NASA-CASE-MFS-25750-1] c 32 N86-20647  
Equal path, phase shifting, sample point interferometer  
for monitoring the configuration of surfaces  
[NASA-CASE-NPO-17913-1-CU] c 74 N92-22034

LINEAR PROGRAMMING

Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N87-22895

LINEAR RECEIVERS

Antenna array at focal plane of reflector with coupling  
network for beam switching Patent  
[NASA-CASE-GSC-10220-1] c 07 N71-27233

LINEAR SYSTEMS

Linear three-tap feedback shift register Patent  
[NASA-CASE-NPO-10351] c 08 N71-12503  
A m-ary linear feedback shift register with binary logic  
[NASA-CASE-NPO-11868] c 10 N73-20254  
Linear magnetic bearings  
[NASA-CASE-GSC-12582-2] c 37 N85-20337

LINEARITY

Semi-linear ball bearing Patent  
[NASA-CASE-XLA-02809] c 15 N71-22982  
Mechanical actuator Patent  
[NASA-CASE-XGS-04548] c 15 N71-24045  
Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c 37 N83-32067  
Linear motion valve  
[NASA-CASE-MSC-20148-1] c 37 N85-29284  
Instrumentation for sensing moisture content of material  
using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373  
Linearized traveling wave amplifier with hard limiter  
characteristics  
[NASA-CASE-LEW-13981-2] c 33 N86-21742  
Reciprocating linear motor  
[NASA-CASE-GSC-12773-2] c 33 N87-23904  
Semi-2-interpenetrating networks of high temperature  
systems  
[NASA-CASE-LAR-13450-1] c 27 N87-28657

LININGS

Fully plasma-sprayed compliant backed ceramic turbine  
seal  
[NASA-CASE-LEW-13268-1] c 27 N82-29453  
Combustor liner construction  
[NASA-CASE-LEW-14035-1] c 07 N84-24577  
Multi-path peristaltic pump  
[NASA-CASE-MSC-20907-1] c 37 N87-18818  
Tapered, tubular polyester fabric  
[NASA-CASE-MSC-21082-1] c 27 N87-29672  
Steam cooled rich-burn combustor liner  
[NASA-CASE-LEW-13609-1] c 25 N90-11824  
Internal wire guide for GTAW welding  
[NASA-CASE-MFS-29489-1] c 31 N90-23586  
Consecutive plate acoustic suppressor apparatus and  
methods  
[NASA-CASE-LEW-15430-1] c 71 N93-17051  
Reusable cryogenic liquid rocket propellant tank  
[NASA-CASE-LAR-14172-1] c 20 N93-31295

LINKAGES

Collapsible nozzle extension for rocket engines  
Patent  
[NASA-CASE-MFS-11497] c 28 N71-16224  
Adjustable force probe  
[NASA-CASE-MFS-20760] c 14 N72-33377  
Locking redundant link  
[NASA-CASE-LAR-11900-1] c 37 N79-14382  
Compensating linkage for main rotor control  
[NASA-CASE-LAR-11797-1] c 05 N81-19087  
Preloadable vector sensitive latch  
[NASA-CASE-MSC-20910-1] c 37 N87-25582  
Payload deployment method and system  
[NASA-CASE-MSC-21330-1] c 16 N88-24660  
Skin friction balance  
[NASA-CASE-LAR-13710-1] c 35 N90-17117  
Releasable clamping apparatus  
[NASA-CASE-MFS-28192-1] c 37 N90-17154  
Quick acting gimbal joint  
[NASA-CASE-MSC-21918-1] c 37 N93-23076  
Force reflecting hand controller  
[NASA-CASE-NPO-17851-1-CU] c 37 N93-23078

LIQUEFACTION

Ophthalmic liquefaction pump  
[NASA-CASE-LEW-12051-1] c 52 N75-33640

LIQUID ATOMIZATION

Constant-output atomizer --- Inhalation therapy and  
aerosol research  
[NASA-CASE-MFS-25631-1] c 34 N84-12406

LIQUID BEARINGS

High speed hybrid bearing comprising a fluid bearing  
and a rolling bearing convected in series  
[NASA-CASE-LEW-11152-1] c 15 N73-32359

Turbomachinery rotor support with damping  
[NASA-CASE-MFS-28345-1] c 37 N91-14608

LIQUID CHROMATOGRAPHY

Spillage detector for liquid chromatography systems  
[NASA-CASE-MSC-20206-1] c 25 N86-27431

LIQUID COOLING

Water cooled contactor for anode in carbon arc  
mechanism  
[NASA-CASE-XMS-03700] c 15 N69-24266  
External liquid-spray cooling of turbine blades Patent  
[NASA-CASE-XLE-00037] c 28 N70-33372  
Solenoid construction Patent  
[NASA-CASE-XNP-01951] c 09 N70-41929  
Laminar flow enhancement Patent  
[NASA-CASE-NPO-10122] c 12 N71-17631  
Space suit heat exchanger Patent  
[NASA-CASE-XMS-09571] c 05 N71-19439  
Power system with heat pipe liquid coolant lines  
Patent  
[NASA-CASE-MFS-14114-2] c 09 N71-24807  
Power system with heat pipe liquid coolant lines  
Patent  
[NASA-CASE-MFS-14114] c 33 N71-27862  
Liquid spray cooling method Patent  
[NASA-CASE-XLE-00027] c 33 N71-29152  
Automatic control of liquid cooling garment by cutaneous  
and external auditory meatus temperatures  
[NASA-CASE-MSC-13917-1] c 05 N72-15098  
Temperature controller for a fluid cooled garment  
[NASA-CASE-ARC-10599-1] c 05 N73-26071  
Heat exchanger system and method  
[NASA-CASE-LAR-10799-2] c 34 N76-17317  
Liquid cooled brassiere and method of diagnosing  
malignant tumors therewith  
[NASA-CASE-ARC-11007-1] c 52 N77-14736  
Closed loop spray cooling apparatus --- for particle  
accelerator targets  
[NASA-CASE-LEW-11981-1] c 31 N78-17237  
Low gravity exothermic heating/cooling apparatus  
[NASA-CASE-MSC-25707-1] c 35 N85-29214  
Water cooled static pressure probe  
[NASA-CASE-LAR-14340-1-CU] c 35 N92-21586

LIQUID CRYSTALS

Angular velocity and acceleration measuring apparatus  
[NASA-CASE-ERC-10292] c 14 N72-25410  
Electricity measurement devices employing liquid  
crystalline materials  
[NASA-CASE-ERC-10275] c 26 N72-25680  
Liquid crystal light valve structures  
[NASA-CASE-MSC-20036-1] c 76 N85-33826  
Method for laminar boundary layer transition visualization  
in flight  
[NASA-CASE-LAR-13554-1] c 02 N89-12551  
EMU helmet mounted display  
[NASA-CASE-MSC-21460-1] c 54 N91-13879  
Real-time edge-enhanced optical correlator  
[NASA-CASE-NPO-18379-1-CU] c 74 N92-33022  
Large area projection liquid-crystal video display system  
with inherent grid pattern optically removed  
[NASA-CASE-NPO-16932-2-CU] c 74 N93-13711  
Shear sensitive monomer-polymer laminate structure  
and method of using same  
[NASA-CASE-LAR-14654-1-CU] c 39 N93-29613

LIQUID FILLED SHELLS

Liquid rocket system Patent  
[NASA-CASE-XNP-00610] c 28 N70-36910  
Fluid sample collector Patent  
[NASA-CASE-XMS-06767-1] c 14 N71-20435  
Fluid containers and resealable septum therefor  
Patent  
[NASA-CASE-NPO-10123] c 15 N71-24835  
Omnidirectional acceleration device Patent  
[NASA-CASE-HON-10780] c 14 N71-30265  
Reusable cryogenic liquid rocket propellant tank  
[NASA-CASE-LAR-14172-1] c 20 N93-31295

LIQUID FLOW

Reduced gravity liquid configuration simulator  
[NASA-CASE-XLE-02624] c 12 N69-39988  
Liquid junction and method of fabricating the same  
Patent Application  
[NASA-CASE-NPO-10682] c 15 N70-34699  
Valve actuator Patent  
[NASA-CASE-XHQ-01208] c 15 N70-35409  
Fluid coupling Patent  
[NASA-CASE-XLE-00397] c 15 N70-36492  
Positive displacement flowmeter Patent  
[NASA-CASE-XMF-02822] c 14 N70-41994  
Liquid flow sight assembly Patent  
[NASA-CASE-XLE-02998] c 14 N70-42074  
Ablative system  
[NASA-CASE-LEW-10359-2] c 33 N73-25952  
Zero gravity liquid transfer screen  
[NASA-CASE-KSC-10626] c 14 N73-27378  
System for measuring Reynolds in a turbulently flowing  
fluid --- signal processing  
[NASA-CASE-ARC-10755-2] c 34 N76-27517

Degassifying and mixing apparatus for liquids --- potable  
water for spacecraft

[NASA-CASE-MSC-18936-1] c 35 N83-29652  
Multicolor printing plate joining  
[NASA-CASE-LEW-13598-1] c 35 N84-22930  
Polymer/riblet combination for hydrodynamic skin  
friction reduction  
[NASA-CASE-LAR-14271-1-CU] c 27 N91-13558

LIQUID HELIUM

Heat operated cryogenic electrical generator  
[NASA-CASE-NPO-13303-1] c 20 N75-24837  
Helium refrigerator  
[NASA-CASE-NPO-13435-1] c 31 N76-14284  
Cryostat system for temperatures on the order of 2 deg  
K or less  
[NASA-CASE-NPO-13459-1] c 31 N77-10229  
Multistation refrigeration system  
[NASA-CASE-NPO-13839-1] c 31 N78-25256  
Stabilization of He2(a 3 Sigma u+ molecules in liquid  
helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c 72 N79-13826  
Low cost cryostat  
[NASA-CASE-NPO-14513-1] c 35 N81-14287

LIQUID HYDROGEN

Cryogenic thermal insulation Patent  
[NASA-CASE-XMF-05046] c 33 N71-28892  
Reinforced polyquinoxaline gasket and method of  
preparing the same --- resistant to ionizing radiation and  
liquid hydrogen temperatures  
[NASA-CASE-MFS-21364-1] c 37 N74-18126  
Ten degree Kelvin hydride refrigerator  
[NASA-CASE-NPO-16393-1-CU] c 31 N87-21159  
Rotor self-lubricating axial stop  
[NASA-CASE-MFS-28273-1] c 37 N88-23974  
Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-2] c 28 N91-14495

LIQUID INJECTION

Thrust vector control apparatus Patent  
[NASA-CASE-XLE-00208] c 28 N70-34294  
Control system for rocket vehicles Patent  
[NASA-CASE-XLA-01163] c 21 N71-15582  
Injector assembly for liquid fueled rocket engines  
Patent  
[NASA-CASE-XMF-00968] c 28 N71-15660  
Sodium storage and injection system  
[NASA-CASE-NPO-14384-1] c 37 N80-10494  
Method of producing silicon --- gas phase reactor  
multiple injector liquid feed system  
[NASA-CASE-NPO-14382-1] c 31 N80-18231  
Vortex generating flow passage design for increased  
film cooling effectiveness  
[NASA-CASE-LEW-14039-1] c 34 N85-33433

LIQUID LASERS

Method and apparatus for wavelength tuning of liquid  
lasers  
[NASA-CASE-ERC-10187] c 16 N69-31343

LIQUID LEVELS

Inductive liquid level detection system Patent  
[NASA-CASE-XLE-01609] c 14 N71-10500

LIQUID METALS

Slug flow magnetohydrodynamic generator  
[NASA-CASE-XLE-02083] c 03 N69-39983  
Two-fluid magnetohydrodynamic system and method for  
thermal-electric power conversion Patent  
[NASA-CASE-XNP-00644] c 03 N70-36803  
Analytical test apparatus and method for determining  
oxide content of alkali metal Patent  
[NASA-CASE-XLE-01997] c 06 N71-23527  
Power system with heat pipe liquid coolant lines  
Patent  
[NASA-CASE-MFS-14114] c 33 N71-27862  
Fluid impervious barrier including liquid metal alloy and  
method of making same Patent  
[NASA-CASE-XNP-08881] c 17 N71-28747  
Shell side liquid metal boiler  
[NASA-CASE-NPO-10831] c 33 N72-20915  
Method for distillation of liquids  
[NASA-CASE-XNP-08124-2] c 06 N73-13129  
Electromagnetic flow rate meter --- for liquid metals  
[NASA-CASE-LEW-10981-1] c 35 N74-21018  
Process for preparing liquid metal electrical contact  
device  
[NASA-CASE-LEW-11978-1] c 33 N77-26385  
Solar driven liquid metal MHD power generator  
[NASA-CASE-LAR-12495-1] c 44 N83-28573  
Arc spray fabrication of metal matrix composite  
monotape  
[NASA-CASE-LEW-13828-1] c 24 N85-30027  
Organic cathode for a secondary battery  
[NASA-CASE-NPO-17604-1-CU] c 33 N91-14536

LIQUID NITROGEN

Cryogenic feedthrough  
[NASA-CASE-LAR-10031] c 15 N72-22484

## LIQUID OXYGEN

- Dye penetrant for surfaces subsequently contacted by liquid oxygen Patent  
 [NASA-CASE-XMF-02221] c 18 N71-27170  
 Low loss injector for liquid propellant rocket engines  
 [NASA-CASE-MFS-25989-1] c 20 N87-14420  
 Oxygen chemisorption cryogenic refrigerator  
 [NASA-CASE-NPO-16734-1-CU] c 31 N88-14223  
 Rotor self-lubricating axial stop  
 [NASA-CASE-MFS-28273-1] c 37 N88-23974

## LIQUID PHASES

- Fluid dispensing apparatus and method Patent  
 [NASA-CASE-XLE-01182] c 27 N71-15635  
 Hydraulic casting of liquid polymers Patent  
 [NASA-CASE-XNP-07659] c 06 N71-22975  
 Fluid phase analyzer Patent  
 [NASA-CASE-NPO-10691] c 14 N71-26199  
 Cryogenic liquid sensor  
 [NASA-CASE-NPO-10619-1] c 35 N77-21393  
 Pumped two-phase heat transfer loop  
 [NASA-CASE-MSC-20841-1] c 34 N87-22950  
 Solidification processing of alloys using an applied electric field  
 [NASA-CASE-MFS-26083-1-CU] c 26 N90-26940

## LIQUID PROPELLANT ROCKET ENGINES

- Annular rocket motor and nozzle configuration Patent  
 [NASA-CASE-XLE-00078] c 28 N70-33284  
 Attitude and propellant flow control system and method Patent  
 [NASA-CASE-XMF-00185] c 21 N70-34539  
 Injector for bipropellant rocket engines Patent  
 [NASA-CASE-XMF-00148] c 28 N70-38710  
 Zero gravity starting means for liquid propellant motors Patent  
 [NASA-CASE-XNP-01390] c 28 N70-41275  
 Supersonic-combustion rocket  
 [NASA-CASE-LEW-11058-1] c 20 N74-13502  
 Space vehicle  
 [NASA-CASE-MFS-22734-1] c 18 N75-19329  
 Fluid thrust control system --- for liquid propellant rocket engines  
 [NASA-CASE-XMF-05964-1] c 20 N79-21124  
 Rocket injector head  
 [NASA-CASE-XMF-04592-1] c 20 N79-21125  
 Low thrust monopropellant engine  
 [NASA-CASE-GSC-12194-2] c 20 N82-18314  
 Integrated launch and emergency vehicle system  
 [NASA-CASE-LAR-13780-1] c 18 N92-33013  
 Liquid fuel injection elements for rocket engines  
 [NASA-CASE-MFS-28547-1] c 20 N93-29847  
 Method of fabricating a rocket engine combustion chamber  
 [NASA-CASE-MFS-28569-1] c 27 N93-30565

## LIQUID ROCKET PROPELLANTS

- Rocket propellant injector Patent  
 [NASA-CASE-XLE-00103] c 28 N70-33241  
 Liquid rocket system Patent  
 [NASA-CASE-XNP-00610] c 28 N70-36910  
 Rocket motor system Patent  
 [NASA-CASE-XLE-00323] c 28 N70-38505  
 High temperature spark plug Patent  
 [NASA-CASE-XLE-00660] c 28 N70-39925  
 High pressure filter Patent  
 [NASA-CASE-XNP-00732] c 28 N70-41447  
 Liquid storage tank venting device for zero gravity environment Patent  
 [NASA-CASE-XLE-01449] c 15 N70-41646  
 Tank construction for space vehicles Patent  
 [NASA-CASE-XMF-01899] c 31 N70-41948  
 Fluid dispensing apparatus and method Patent  
 [NASA-CASE-XLE-01182] c 27 N71-15635  
 Control valve and co-axial variable injector Patent  
 [NASA-CASE-XNP-09702] c 15 N71-17654  
 Slosh alleviator Patent  
 [NASA-CASE-XLA-05749] c 15 N71-19569  
 Filler valve Patent  
 [NASA-CASE-XNP-01747] c 15 N71-23024  
 Propellant mass distribution metering apparatus Patent  
 [NASA-CASE-NPO-10185] c 10 N71-26339  
 Fluid impervious barrier including liquid metal alloy and method of making same Patent  
 [NASA-CASE-XNP-08881] c 17 N71-28747  
 Response analyzers for sensors Patent  
 [NASA-CASE-MFS-11204] c 14 N71-29134  
 Passive propellant system  
 [NASA-CASE-MFS-23642-1] c 20 N80-10278  
 Supercharged topping rocket propellant feed system  
 [NASA-CASE-XLE-02062-1] c 20 N80-14188  
 Low loss injector for liquid propellant rocket engines  
 [NASA-CASE-MFS-25989-1] c 20 N87-14420  
 Extended temperature range rocket injector  
 [NASA-CASE-LEW-14846-1] c 20 N92-10054  
 Method for providing real-time control of a gaseous propellant rocket propulsion system  
 [NASA-CASE-MSC-21542-1] c 20 N92-15122

## LIQUID SLOSHING

- Slosh suppressing device and method Patent  
 [NASA-CASE-XMF-00658] c 12 N70-38997  
 Flexible ring slosh damping baffle Patent  
 [NASA-CASE-LAR-10317-1] c 32 N71-16103  
 Buoyant anti-slosh system Patent  
 [NASA-CASE-XLA-04605] c 32 N71-16106  
 Hot wire liquid level detector for cryogenic fluids Patent  
 [NASA-CASE-XLE-00454] c 23 N71-17802  
 Slosh alleviator Patent  
 [NASA-CASE-XLA-05749] c 15 N71-19569  
 Instrument for measuring the dynamic behavior of liquids Patent  
 [NASA-CASE-XLA-05541] c 12 N71-26387

## LIQUID SODIUM

- Sodium storage and injection system  
 [NASA-CASE-NPO-14384-1] c 37 N80-10494

## LIQUID-GAS MIXTURES

- Liquid-gas separation system Patent  
 [NASA-CASE-XMS-01624] c 15 N70-40062  
 Liquid-gas separator for zero gravity environment Patent  
 [NASA-CASE-XMS-01492] c 05 N70-41297  
 Liquid storage tank venting device for zero gravity environment Patent  
 [NASA-CASE-XLE-01449] c 15 N70-41646  
 Separator Patent  
 [NASA-CASE-XLA-00415] c 15 N71-16079  
 Vapor liquid separator Patent  
 [NASA-CASE-XMF-04042] c 15 N71-23023  
 Air removal device --- life support systems  
 [NASA-CASE-XLA-08914-2] c 25 N82-21269

## LIQUID-SOLID INTERFACES

- Apparatus and procedure to detect a liquid-solid interface during crystal growth in a bridgman furnace  
 [NASA-CASE-LAR-13597-1-CU] c 25 N87-23713

## LIQUID-VAPOR INTERFACES

- Zero gravity separator Patent  
 [NASA-CASE-XLE-00586] c 15 N71-15968  
 Rotating shaft seal Patent  
 [NASA-CASE-XNP-02862-1] c 15 N71-26294  
 Response analyzers for sensors Patent  
 [NASA-CASE-MFS-11204] c 14 N71-29134  
 Acoustic bubble removal method  
 [NASA-CASE-NPO-15334-1] c 71 N83-35781

## LIQUIDS

- Liquid-gas separation system Patent  
 [NASA-CASE-XMS-01624] c 15 N70-40062  
 Electrical switching device Patent  
 [NASA-CASE-NPO-10037] c 09 N71-19610  
 Method and apparatus for distillation of liquids Patent  
 [NASA-CASE-XNP-08124] c 15 N71-27184  
 Apparatus for detecting the amount of material in a resonant cavity container Patent  
 [NASA-CASE-XNP-02500] c 18 N71-27397  
 Resonant infrasonic gauging apparatus  
 [NASA-CASE-MSC-11847-1] c 14 N72-11363  
 Ablative system  
 [NASA-CASE-LEW-10359] c 33 N72-25911  
 Liquid waste feed system  
 [NASA-CASE-LAR-10365-1] c 05 N72-27102  
 Zero gravity liquid mixer  
 [NASA-CASE-LAR-10195-1] c 15 N73-19458  
 Bimetallic fluid displacement apparatus --- for stirring and heating stored gases and liquids  
 [NASA-CASE-ARC-10441-1] c 35 N74-15126  
 Method and device for detection of surface discontinuities or defects  
 [NASA-CASE-MSC-14187-1] c 35 N74-32879  
 Automatic liquid inventory collecting and dispensing unit  
 [NASA-CASE-LAR-11071-1] c 35 N75-19611  
 Thermal energy storage system --- operating on superheating of liquids  
 [NASA-CASE-MFS-23167-1] c 44 N76-31667  
 Low gravity phase separator  
 [NASA-CASE-MSC-14773-1] c 35 N78-12390  
 Automatic fluid dispenser  
 [NASA-CASE-ARC-10820-1] c 35 N78-19466  
 Liquid-immersible electrostatic ultrasonic transducer  
 [NASA-CASE-LAR-12465-1] c 33 N82-26572  
 System for monitoring physical characteristics of fluids  
 [NASA-CASE-NPO-15400-1] c 34 N83-31993  
 Liquid thickness gauge  
 [NASA-CASE-LAR-13826-1] c 35 N88-29150  
 Tank gauging apparatus and method  
 [NASA-CASE-MSC-21059-2] c 35 N91-15511

## LITHIUM

- Lithium counterdoped silicon solar cell  
 [NASA-CASE-LEW-14177-1] c 44 N86-32875  
 Secondary Li battery incorporating 12-Crown-4 ether  
 [NASA-CASE-NPO-17922-1-CU] c 33 N92-28753  
 Anode for rechargeable ambient temperature lithium cells  
 [NASA-CASE-NPO-18580-1-CU] c 33 N93-17278

Alkali metal carbon dioxide electrochemical system for energy storage and/or conversion of carbon dioxide to oxygen

- [NASA-CASE-LEW-14973-1] c 44 N93-28974

## LITHIUM ALLOYS

- Elevated temperature aluminum alloys  
 [NASA-CASE-LAR-13632-1] c 26 N87-29650  
 Aluminum alloy  
 [NASA-CASE-LAR-13924-1-CU] c 26 N89-28621

## LITHIUM COMPOUNDS

- Novel polymers and method of preparing same  
 [NASA-CASE-NPO-10998-1] c 06 N73-32029

## LITHIUM OXIDES

- Overcharge and overdischarge protection of ambient temperature secondary lithium cells  
 [NASA-CASE-NPO-18343-1-CU] c 33 N93-11456

## LOAD DISTRIBUTION (FORCES)

- Force measuring instrument Patent  
 [NASA-CASE-XMF-00456] c 14 N70-34705  
 Multiple Belleville spring assembly Patent  
 [NASA-CASE-NPO-00840] c 15 N70-38225  
 Device for use in loading tension members --- characterized by elongated elastic body  
 [NASA-CASE-MFS-21488-1] c 14 N75-24794  
 Pneumatic load compensating or controlling system  
 [NASA-CASE-ARC-10907-1] c 37 N75-32465  
 Load positioning system with gravity compensation  
 [NASA-CASE-ARC-11525-1] c 37 N86-27629  
 Method of recertifying a loaded bearing member using a phase point  
 [NASA-CASE-LAR-14741-1] c 39 N92-11384  
 Radial spline assembly for antifriction bearings  
 [NASA-CASE-MFS-28629-1] c 37 N93-17084  
 Radial spline assembly for antifriction bearings  
 [NASA-CASE-MFS-28629-1] c 37 N93-26001

## LOAD TESTING MACHINES

- Load cell protection device Patent  
 [NASA-CASE-XMS-06782] c 32 N71-15974  
 Load relieving device Patent  
 [NASA-CASE-XMS-06329-1] c 15 N71-20441  
 Method and apparatus for tensile testing of metal foil  
 [NASA-CASE-LAR-10208-1] c 35 N76-18400  
 Fatigue failure load indicator  
 [NASA-CASE-LAR-12027-1] c 39 N79-22537  
 Portable 90 degree proof loading device  
 [NASA-CASE-MSC-20250-1] c 35 N86-19581  
 Cryogenic insulation strength and bond tester  
 [NASA-CASE-MFS-25910-1] c 39 N86-20841  
 Device for measuring hole elongation in a bolted joint  
 [NASA-CASE-LAR-13453-1] c 37 N88-14361  
 Bearing-bypass material system test  
 [NASA-CASE-LAR-13458-1] c 35 N88-23967  
 Delamination test apparatus and method  
 [NASA-CASE-LAR-13985-1] c 24 N91-14430  
 Fully articulated four-point-bend loading fixture  
 [NASA-CASE-LEW-14776-1] c 37 N91-21540  
 Apparatus for elevated temperature compression or tension testing of specimens  
 [NASA-CASE-LAR-14775-1] c 39 N92-30099  
 Method and apparatus for gripping test specimens  
 [NASA-CASE-LEW-15345-1] c 37 N93-12327  
 System for testing bearings  
 [NASA-CASE-MFS-28589-1] c 37 N93-29618

## LOAD TESTS

- Differential pressure cell Patent  
 [NASA-CASE-XAC-00042] c 14 N70-34816  
 Fatigue testing a plurality of test specimens and method  
 [NASA-CASE-MFS-28118-1] c 39 N87-25601  
 Delamination test apparatus and method  
 [NASA-CASE-LAR-13985-1] c 24 N91-14430  
 Combined load test apparatus for flat panels  
 [NASA-CASE-LAR-14698-1] c 39 N92-30028  
 Apparatus for elevated temperature compression or tension testing of specimens  
 [NASA-CASE-LAR-14775-1] c 39 N92-30099

## LOADING OPERATIONS

- Air bearing Patent  
 [NASA-CASE-XMF-01887] c 15 N71-10617  
 Shuttle car loading system  
 [NASA-CASE-NPO-15949-1] c 85 N85-34722

## LOADS (FORCES)

- Device for handling heavy loads  
 [NASA-CASE-XNP-04969] c 11 N69-27466  
 Two-plane balance Patent  
 [NASA-CASE-XAC-00073] c 14 N70-34813  
 Method of improving the reliability of a rolling element system Patent  
 [NASA-CASE-XLE-02999] c 15 N71-16052  
 Load relieving device Patent  
 [NASA-CASE-XMS-06329-1] c 15 N71-20441  
 Dual latching solenoid valve Patent  
 [NASA-CASE-XMS-05890] c 09 N71-23191  
 Transverse piezoresistance and pinch effect electromechanical transducers Patent  
 [NASA-CASE-ERC-10088] c 26 N71-25490

## LOCAL AREA NETWORKS

Turn on transient limiter Patent  
[NASA-CASE-GSC-10413] c 10 N71-26531

Synchronous dc direct drive system Patent  
[NASA-CASE-GSC-10065-1] c 10 N71-27136

Force-balanced, throttle valve Patent  
[NASA-CASE-NPO-10808] c 15 N71-27432

Energy absorption device Patent  
[NASA-CASE-XNP-01848] c 15 N71-28959

Air bearing  
[NASA-CASE-WLP-10002] c 15 N72-17451

Device for measuring bearing preload  
[NASA-CASE-MFS-20434] c 11 N72-25288

Variable direction force coupler  
[NASA-CASE-MFS-20317] c 15 N73-13463

Ergometer  
[NASA-CASE-MFS-21109-1] c 05 N73-27941

Three-axis adjustable loading structure  
[NASA-CASE-FRC-10051-1] c 35 N74-13129

Spring operated accelerator and constant force spring mechanism therefor  
[NASA-CASE-ARC-10898-1] c 35 N77-18417

Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c 35 N77-27367

Load regulating latch  
[NASA-CASE-MSC-19535-1] c 37 N77-32499

Adjustable indicating device for load position  
[NASA-CASE-MFS-28008-1] c 35 N85-20300

Aircraft rotor blade with passive tuned tab  
[NASA-CASE-ARC-11444-1] c 05 N85-29947

Tensile testing apparatus  
[NASA-CASE-LAR-13243-1] c 35 N85-34375

Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N87-21332

Fatigue testing apparatus  
[NASA-CASE-LEW-14124-1] c 35 N90-23712

Wind tunnel balance  
[NASA-CASE-ARC-11877-1-SB] c 09 N91-14357

Single element magnetic suspension actuator  
[NASA-CASE-LAR-13981-1] c 37 N91-21539

Power saw  
[NASA-CASE-MSC-21469-1] c 37 N91-31655

Dual strain gage balance system for measuring light loads  
[NASA-CASE-LAR-14419-1] c 35 N92-10185

Method of recertifying a loaded bearing member using a phase point  
[NASA-CASE-LAR-14741-1] c 39 N92-11384

Load limiting energy absorbing lightweight debris catcher  
[NASA-CASE-MSC-21562-1] c 16 N92-16007

Automatic locking orthotic knee device  
[NASA-CASE-MFS-28633-1] c 54 N92-17866

Combined load test apparatus for flat panels  
[NASA-CASE-LAR-14698-1] c 39 N92-30028

Control and augmentation of passive porosity through transpiration control  
[NASA-CASE-LAR-14682-1] c 34 N92-30387

Energy dissipator  
[NASA-CASE-MSC-21555-1] c 37 N93-23075

Methods of determining loads and fiber orientations in anisotropic non-crystalline materials using energy flux deviation  
[NASA-CASE-LAR-14399-1] c 39 N93-26102

### LOCAL AREA NETWORKS

Local area network with fault-checking, priorities, and redundant backup  
[NASA-CASE-NPO-16949-1-CU] c 62 N90-19776

### LOCATES SYSTEM

Lightning tracking system  
[NASA-CASE-KSC-10729-1] c 09 N73-32110

Position determination systems --- using orbital antenna scan of celestial bodies  
[NASA-CASE-MSC-12593-1] c 17 N76-21250

### LOCKING

Coupling device  
[NASA-CASE-XMS-07846-1] c 09 N69-21927

Self-locking mechanical center joint  
[NASA-CASE-LAR-12864-1] c 37 N85-30336

Variable length strut with longitudinal compliance and locking capability  
[NASA-CASE-MFS-25907-1] c 37 N85-34401

Self-locking telescoping manipulator arm  
[NASA-CASE-MFS-25906-1] c 37 N86-20789

Elbow and knee joint for hard space suits  
[NASA-CASE-ARC-11610-1] c 54 N86-28619

Locking hinge  
[NASA-CASE-MSC-21056-1] c 18 N88-23827

Quick connect coupling  
[NASA-CASE-MSC-21539-1] c 37 N91-14610

System for connecting fluid couplings  
[NASA-CASE-MFS-26042-1-SB] c 37 N91-14613

Quick action clamp  
[NASA-CASE-LEW-14887-1] c 37 N91-27561

Automatic locking orthotic knee device  
[NASA-CASE-MFS-28633-1] c 54 N92-17866

## SUBJECT INDEX

Roller locking brake  
[NASA-CASE-GSC-13376-1] c 37 N92-21728

Removable hand hold  
[NASA-CASE-LEW-15196-1] c 37 N92-29092

Quick application/release nut with engagement indicator  
[NASA-CASE-MSC-21799-1] c 37 N92-29150

Prosthetic elbow joint  
[NASA-CASE-MFS-28707-1] c 54 N93-30566

### LOCKS

Valve lock  
[NASA-CASE-MFS-29764-1] c 37 N93-19049

### LOCKS (FASTENERS)

Locking device with rolling detents Patent  
[NASA-CASE-XMF-01371] c 15 N70-41829

Bearing and gimbal lock mechanism and spiral flex lead module Patent  
[NASA-CASE-GSC-10556-1] c 31 N71-26537

Locking device for turbine rotor blades Patent  
[NASA-CASE-XNP-00816] c 28 N71-28928

Film feed camera having a detent means Patent  
[NASA-CASE-LAR-10686] c 14 N71-28935

Safety-type locking pin  
[NASA-CASE-MFS-18495] c 15 N72-11385

Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-1] c 54 N76-22914

Portable appliance security apparatus  
[NASA-CASE-GSC-12399-1] c 33 N81-25299

Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c 52 N81-25661

High temperature penetrator assembly with bayonet plug and ramp-activated lock  
[NASA-CASE-MSC-18526-1] c 37 N82-24494

Aircraft canopy lock  
[NASA-CASE-FRC-11065-1] c 05 N83-19737

Collet lock joint for space station truss  
[NASA-CASE-MSC-21207-1] c 37 N88-29180

### LOCOMOTION

Jet shoes  
[NASA-CASE-XLA-08491] c 05 N69-21380

Training vehicle for controlling attitude Patent  
[NASA-CASE-XMS-02977] c 11 N71-10746

Restraint torso for a pressurized suit  
[NASA-CASE-MSC-12397-1] c 05 N72-25119

Kinesimetric method and apparatus  
[NASA-CASE-MSC-18929-1] c 39 N83-20280

Treadmill for space flight  
[NASA-CASE-MSC-21752-1] c 54 N92-17910

### LOGARITHMIC RECEIVERS

Logarithmic circuit with wide dynamic range  
[NASA-CASE-GSC-12145-1] c 33 N78-32339

### LOGARITHMS

Logarithmic function generator utilizing an exponentially varying signal in an inverse manner  
[NASA-CASE-ERC-10267] c 09 N72-23173

### LOGIC CIRCUITS

A method for selective gold diffusion of monolithic silicon devices and/or circuits Patent application  
[NASA-CASE-ERC-10072] c 09 N70-11148

Relay binary circuit Patent  
[NASA-CASE-XMF-00421] c 09 N70-34502

Binary to binary-coded-decimal converter Patent  
[NASA-CASE-XNP-00432] c 08 N70-35423

Analog-to-digital conversion system Patent  
[NASA-CASE-XAC-00404] c 08 N70-40125

Data processor having multiple sections activated at different times by selective power coupling to the sections Patent  
[NASA-CASE-XGS-04767] c 08 N71-12494

Binary sequence detector Patent  
[NASA-CASE-XNP-05415] c 08 N71-12505

AC logic flip-flop circuits Patent  
[NASA-CASE-XGS-00823] c 10 N71-15910

Logic AND gate for fluid circuits Patent  
[NASA-CASE-XLA-07391] c 12 N71-17579

Ripple add and ripple subtract binary counters Patent  
[NASA-CASE-XGS-04766] c 08 N71-18602

Exclusive-Or digital logic module Patent  
[NASA-CASE-XLA-07732] c 08 N71-18751

Stepping motor control circuit Patent  
[NASA-CASE-GSC-10366-1] c 10 N71-18772

Serial digital decoder Patent  
[NASA-CASE-NPO-10150] c 08 N71-24650

BCD to decimal decoder Patent  
[NASA-CASE-XKS-06167] c 08 N71-24890

Current steering switch Patent  
[NASA-CASE-XNP-08567] c 09 N71-26000

Parallel generation of the check bits of a PN sequence Patent  
[NASA-CASE-XNP-04623] c 10 N71-26103

Adaptive system and method for signal generation Patent  
[NASA-CASE-GSC-11367] c 10 N71-26374

Fast response low power drain logic circuits  
[NASA-CASE-GSC-10878-1] c 10 N72-22236

Logical function generator  
[NASA-CASE-XLA-05099] c 09 N73-13209

A synchronous binary array divider  
[NASA-CASE-ERC-10180-1] c 60 N74-20836

Four phase logic systems --- including integrated microcircuits  
[NASA-CASE-MSC-14240-1] c 33 N75-14957

Interleaving device  
[NASA-CASE-GSC-12111-2] c 33 N81-29342

Logic-controlled occlusive cuff system  
[NASA-CASE-MSC-14836-1] c 52 N82-11770

Combinational logic for generating gate drive signals for phase control rectifiers  
[NASA-CASE-MFS-25208-1] c 33 N83-10345

Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c 33 N83-31953

Adaptive control system for line-commutated inverters  
[NASA-CASE-MFS-25209-1] c 33 N83-35227

Video processor for air traffic control beacon system  
[NASA-CASE-KSC-11155-1] c 04 N86-19304

Braille reading system  
[NASA-CASE-LAR-13306-1] c 82 N87-29372

Nanosequence digital logic controller  
[NASA-CASE-NPO-16116-2] c 60 N88-29310

Long period pseudo random number sequence generator  
[NASA-CASE-NPO-17241-1-CU] c 33 N90-23636

Dynamic resource allocation scheme for distributed heterogeneous computer systems  
[NASA-CASE-NPO-17197-1-CU] c 62 N91-25693

Control circuitry using electronic emulation of a synchro signal for accurate control of position and rate of rotation for shafts  
[NASA-CASE-MFS-28458-1] c 33 N91-26459

Reconfigurable fuzzy cell  
[NASA-CASE-MSC-21613-1] c 61 N92-10331

Auto and hetero-associative memory using a 2-D optical logic gate  
[NASA-CASE-NPO-17997-1-CU] c 60 N92-33057

### LOGIC PROGRAMMING

VLSI binary updown counter  
[NASA-CASE-NPO-17205-1-CU] c 60 N90-21525

### LONG WAVE RADIATION

INAs hole-immobilized doping superlattice long-wave-infrared detector  
[NASA-CASE-NPO-17880-1-CU] c 76 N93-11056

### LONGERONS

Latching mechanism for deployable/re-stowable columns useful in satellite construction  
[NASA-CASE-LAR-13169-1] c 37 N86-25791

Magnetic spin reduction system for free spinning objects  
[NASA-CASE-MFS-25966-1] c 16 N86-26352

Deployable geodesic truss structure  
[NASA-CASE-LAR-13113-1] c 31 N87-25492

### LONGITUDINAL CONTROL

Three-axis controller Patent  
[NASA-CASE-XAC-01404] c 05 N70-41581

Pitch attitude stabilization system utilizing engine pressure ratio feedback signals  
[NASA-CASE-LAR-12562-1] c 08 N81-26152

Remote pivot decoupler pylon: Wing/store flutter suppressor  
[NASA-CASE-LAR-13173-1] c 05 N87-14314

Swashplate control system  
[NASA-CASE-ARC-11633-1] c 08 N87-23631

### LONGITUDINAL STABILITY

Annular wing  
[NASA-CASE-FRC-11007-2] c 05 N82-26277

### LOOK ANGLES (ELECTRONICS)

Method and apparatus for contour mapping using synthetic aperture radar  
[NASA-CASE-NPO-15939-1] c 43 N86-19711

### LOOP ANTENNAS

Collapsible loop antenna for space vehicle Patent  
[NASA-CASE-XMF-00437] c 07 N70-40202

Automatic carrier acquisition system  
[NASA-CASE-NPO-11628-1] c 07 N73-30113

### LOOPS

Endless tape cartridge Patent  
[NASA-CASE-XGS-00769] c 14 N70-41647

Endless tape transport mechanism Patent  
[NASA-CASE-XGS-01223] c 07 N71-10609

Filter for third order phase locked loops  
[NASA-CASE-NPO-11941-1] c 10 N73-27171

High speed shutter --- electrically actuated ribbon loop for shuttering optical or fluid passageways  
[NASA-CASE-ARC-10516-1] c 70 N74-21300

Means for accommodating large overstrain in lead wires --- by storing extra length of wire in stretchable loop  
[NASA-CASE-LAR-10168-1] c 33 N74-22865

Closed loop spray cooling apparatus  
[NASA-CASE-LEW-11981-2] c 34 N79-20336

Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c 32 N81-15179

Pulsed phase locked loop strain monitor --- voltage controlled oscillators  
[NASA-CASE-LAR-12772-1] c 33 N83-16626

Pumped two-phase heat transfer loop  
[NASA-CASE-MSC-20841-1] c 34 N87-22950

Phase length optical phase-locked-loop sensor  
[NASA-CASE-LAR-13387-1] c 74 N88-25302

Polymeric heat pipe wick  
[NASA-CASE-GSC-13019-1] c 34 N88-29133

**LOUDNESS**  
Visual aid for the hearing impaired  
[NASA-CASE-GSC-13027-1-CU] c 35 N91-27522

**LOUVERS**  
Solar concentrator protective system  
[NASA-CASE-NPO-15662-1] c 44 N84-28204

**LOW ASPECT RATIO**  
Landing arrangement for aerial vehicles Patent  
[NASA-CASE-XLA-00142] c 02 N70-33286

Landing arrangement for aerial vehicle Patent  
[NASA-CASE-XLA-00806] c 02 N70-34858

**LOW CONDUCTIVITY**  
High temperature insulation barrier composite  
[NASA-CASE-MFS-29241-1] c 24 N90-23480

**LOW COST**  
Fabrication of polycrystalline solar cells on low-cost substrates  
[NASA-CASE-GSC-12022-1] c 44 N76-28635

Process for utilizing low-cost graphite substrates for polycrystalline solar cells  
[NASA-CASE-GSC-12022-2] c 44 N78-24609

Large TV display system  
[NASA-CASE-NPO-16932-1CU] c 33 N87-15413

Network of dedicated processors for finding lowest-cost map path  
[NASA-CASE-NPO-17716-1-CU] c 62 N92-15620

Large area projection liquid-crystal video display system with inherent grid pattern optically removed  
[NASA-CASE-NPO-16932-2-CU] c 74 N93-13711

**LOW CURRENTS**  
Low current linearization of magnetic amplifier for dc transducer  
[NASA-CASE-NPO-14617-1] c 33 N81-24338

**LOW DENSITY MATERIALS**  
Method and device for detecting voids in low density material Patent  
[NASA-CASE-MFS-20044] c 14 N71-28993

Intumescent composition, foamed product prepared therewith and process for making same  
[NASA-CASE-ARC-10304-2] c 27 N74-27037

Mixing insert for foam dispensing apparatus  
[NASA-CASE-MFS-20607-1] c 37 N76-19436

Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
[NASA-CASE-ARC-11040-2] c 24 N78-27184

Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c 24 N79-16915

Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c 25 N80-16116

Elevated temperature aluminum alloys  
[NASA-CASE-LAR-13632-1] c 26 N87-29650

**LOW FREQUENCIES**  
Seismic displacement transducer Patent  
[NASA-CASE-XMF-00479] c 14 N70-34794

Low-frequency radio navigation system  
[NASA-CASE-NPO-15264-1] c 04 N84-27713

Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N91-28184

Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N93-24598

**LOW GRAVITY MANUFACTURING**  
Method for manufacturing mirrors in zero gravity environment  
[NASA-CASE-MSC-12611-1] c 12 N76-15189

Gas levitator having fixed levitation node for containerless processing  
[NASA-CASE-MFS-25509-1] c 35 N83-24828

Method and apparatus for supercooling and solidifying substances  
[NASA-CASE-MFS-25242-1] c 35 N83-29650

Apparatus and method for quiescent containerless processing of high temperature metals and alloys in low gravity  
[NASA-CASE-MFS-28087-1] c 35 N87-23944

Sample levitation and melt in microgravity  
[NASA-CASE-NPO-17022-1-CU] c 29 N87-25489

Macromolecular crystal growing system  
[NASA-CASE-MFS-26088-1-CU] c 76 N92-25398

**LOW MOLECULAR WEIGHTS**  
Process for preparation of high-molecular-weight polyaryloxysilanes Patent  
[NASA-CASE-XMF-08674] c 06 N71-28807

**LOW NOISE**  
Low phase noise digital frequency divider  
[NASA-CASE-NPO-11569] c 10 N73-26229

Reflected-wave maser --- low noise amplifier  
[NASA-CASE-NPO-13490-1] c 36 N76-31512

Low noise tuned amplifier  
[NASA-CASE-GSC-12567-1] c 33 N84-22887

Low noise cryogenic dielectric resonator oscillator  
[NASA-CASE-NPO-17157-1-CU] c 33 N88-26596

**LOW PASS FILTERS**  
Filtering technique based on high-frequency plant modeling for high-gain control  
[NASA-CASE-LAR-12215-1] c 08 N79-23097

Smoothing filter for digital to analog conversion  
[NASA-CASE-FRC-11025-1] c 33 N82-24417

Discriminator aided phase lock acquisition for suppressed carrier signals  
[NASA-CASE-NPO-14311-1] c 33 N82-29539

Digital carrier demodulator employing components working beyond normal limits  
[NASA-CASE-NPO-17628-1-CU] c 32 N92-21712

Position-error-based force reflection and compliance control  
[NASA-CASE-NPO-18668-1-CU] c 37 N92-29765

Doppler shift compensation system for laser transmitters and receivers  
[NASA-CASE-GSC-13194-1] c 36 N93-18287

**LOW PRESSURE**  
Gas low pressure low flow rate metering system Patent  
[NASA-CASE-FRC-10022] c 12 N71-26546

Bakeable McLeod gauge  
[NASA-CASE-XGS-01293-1] c 35 N79-33450

Method and apparatus for waste collection and storage  
[NASA-CASE-MSC-21025-3] c 54 N91-26747

Low pressure process for continuous fiber reinforced polyamic acid resin matrix composite laminates  
[NASA-CASE-LAR-14954-1] c 24 N92-34214

**LOW SPEED**  
Variable geometry manned orbital vehicle Patent  
[NASA-CASE-XLA-03691] c 31 N71-15674

RC rate generator for slow speed measurement Patent  
[NASA-CASE-XMF-02966] c 10 N71-24863

Helicopter low-speed yaw control  
[NASA-CASE-LAR-14219-1] c 08 N93-25998

**LOW TEMPERATURE**  
Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c 28 N81-14103

Cellular thermosetting fluoropolymers and process for making them  
[NASA-CASE-GSC-13008-1] c 27 N88-23894

Flexible diaphragm-extreme temperature usage  
[NASA-CASE-MSC-20797-2] c 35 N91-21494

Sub-Kelvin resistance thermometer  
[NASA-CASE-GSC-13406-1] c 35 N92-33614

**LOW TEMPERATURE ENVIRONMENTS**  
Frangible electrochemical cell  
[NASA-CASE-XGS-10010] c 03 N72-15986

**LOW TEMPERATURE TESTS**  
Low temperature flexure fatigue cryostat Patent  
[NASA-CASE-XMF-02964] c 14 N71-17659

Horizontal cryostat for fatigue testing Patent  
[NASA-CASE-XMF-10968] c 14 N71-24234

Heating and cooling system --- for fatigue test specimens  
[NASA-CASE-LAR-12393-1] c 34 N83-34221

**LOW THRUST**  
Low thrust monopropellant engine  
[NASA-CASE-GSC-12194-2] c 20 N82-18314

**LOW VACUUM**  
Vibration damping system Patent  
[NASA-CASE-XMS-01620] c 23 N71-15673

**LOW VOLTAGE**  
High speed low level electrical stepping switch Patent  
[NASA-CASE-XAC-00060] c 09 N70-39915

Flexible blade antenna Patent  
[NASA-CASE-MSC-12101] c 09 N71-18720

Failure sensing and protection circuit for converter networks Patent  
[NASA-CASE-GSC-10114-1] c 10 N71-27366

**LOWER BODY NEGATIVE PRESSURE**  
Method and apparatus for simulating gravitational forces on a living organism  
[NASA-CASE-MSC-20202-1] c 54 N84-16803

**LUBRICANTS**  
Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-01765] c 18 N71-10772

Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-10337] c 15 N71-24046

Fluorinated esters of polycarboxylic acids  
[NASA-CASE-MFS-21040-1] c 06 N73-30098

Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids  
[NASA-CASE-MFS-22411-1] c 37 N74-21058

Journal bearings --- for lubricant films  
[NASA-CASE-LEW-11076-1] c 37 N74-21061

Method for milling and drilling glass  
[NASA-CASE-GSC-12636-1] c 31 N83-27058

**LUBRICATING OILS**  
Foil seal Patent  
[NASA-CASE-XLE-05130-2] c 15 N71-19570

**LUBRICATION**  
Production of hollow components for rolling element bearings by diffusion welding  
[NASA-CASE-LEW-11026-1] c 15 N73-33383

Variable resistance constant tension and lubrication device --- using oil-saturated leather wiper  
[NASA-CASE-KSC-10723-1] c 37 N75-13265

Fluid journal bearings  
[NASA-CASE-LEW-11076-4] c 37 N76-15461

Pretreatment of lubricated surfaces with sputtered cadmium oxide  
[NASA-CASE-LEW-14474-1] c 27 N91-28423

**LUBRICATION SYSTEMS**  
Hybrid lubrication system and bearing Patent  
[NASA-CASE-XNP-01641] c 15 N71-22997

Fluid lubricant system Patent  
[NASA-CASE-XNP-03972] c 15 N71-23048

Journal Bearings  
[NASA-CASE-LEW-11076-2] c 37 N74-32921

Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c 37 N78-10467

**LUGS**  
Don/doff support stand for use with rear entry space suits  
[NASA-CASE-MSC-21364-1] c 54 N89-13889

**LUMINAIRES**  
Visual target for retrofire attitude control  
[NASA-CASE-XMS-12158-1] c 31 N69-27499

Ultraviolet resonance lamp Patent  
[NASA-CASE-ARC-10030] c 09 N71-12521

Lamp modulator  
[NASA-CASE-KSC-10565] c 09 N72-25250

Driving lamps by induction  
[NASA-CASE-MFS-21214-1] c 09 N73-30181

Uniform variable light source  
[NASA-CASE-NPO-11429-1] c 74 N77-21941

Direct current ballast circuit for metal halide lamp  
[NASA-CASE-MSC-18407-1] c 33 N82-24427

**LUMINANCE**  
Television camera video level control system  
[NASA-CASE-MSC-18578-1] c 32 N85-21427

**LUMINESCENCE**  
Single layer multi-color luminescent display  
[NASA-CASE-LAR-13616-1] c 74 N91-31950

Single layer multi-color luminescent display and method of making  
[NASA-CASE-LAR-13616-3] c 74 N92-29158

A method of making a single layer multi-color luminescent display  
[NASA-CASE-LAR-14811-1] c 33 N92-30389

A method of making a single layer multi-color luminescent display  
[NASA-CASE-LAR-14811-1] c 33 N93-20119

**LUMINOSITY**  
Measurement of time differences between luminous events Patent  
[NASA-CASE-XLA-01987] c 23 N71-23976

**LUMINOUS INTENSITY**  
Motion picture camera for optical pyrometry Patent  
[NASA-CASE-XLA-00062] c 14 N70-33254

Radiant energy intensity measurement system Patent  
[NASA-CASE-XNP-06510] c 14 N71-23797

Continuous plasma laser --- method and apparatus for producing intense, coherent, monochromatic light from low temperature plasma  
[NASA-CASE-XNP-04167-3] c 36 N77-19416

Solar cell assembly --- for use under high intensity illumination  
[NASA-CASE-LEW-11549-1] c 44 N77-19571

Compact, high intensity arc lamp with internal magnetic field producing means  
[NASA-CASE-NPO-11510-1] c 33 N77-21315

System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
[NASA-CASE-MFS-23513-1] c 74 N79-11865

Wind dynamic range video camera  
[NASA-CASE-MFS-25750-1] c 32 N86-20647

Optical fiber strain sensor with improved linearity  
[NASA-CASE-LAR-14857-1-SB] c 74 N93-19374

**LUMPING**  
Acoustic agglomeration methods and apparatus  
[NASA-CASE-NPO-15466-1] c 71 N85-22104

**LUNAR BASES**  
Self-adjusting multisegment, deployable, natural circulation radiator Patent  
[NASA-CASE-XHQ-03673] c 33 N71-29046



## LUNAR COMMUNICATION

### LUNAR COMMUNICATION

- Television signal scan rate conversion system Patent  
[NASA-CASE-XMS-07168] c 07 N71-11300
- Emergency lunar communications system  
[NASA-CASE-MFS-21042] c 07 N72-25171
- LUNAR COMPOSITION**  
Lunar penetrometer Patent  
[NASA-CASE-XLA-00934] c 14 N71-22765
- LUNAR EXPLORATION**  
Backpack carrier Patent  
[NASA-CASE-LAR-10056] c 05 N71-12351
- Lunar penetrometer Patent  
[NASA-CASE-XLA-00934] c 14 N71-22765
- Personal propulsion unit Patent  
[NASA-CASE-MFS-20130] c 28 N71-27585
- Emergency lunar communications system  
[NASA-CASE-MFS-21042] c 07 N72-25171
- LUNAR GRAVITATION**  
Subgravity simulator Patent  
[NASA-CASE-XMS-04798] c 11 N71-21474
- LUNAR GRAVITY SIMULATOR**  
Impact simulator Patent  
[NASA-CASE-XLA-00493] c 11 N70-34786
- LUNAR LANDING**  
Lunar landing flight research vehicle Patent  
[NASA-CASE-XFR-00929] c 31 N70-34966
- LUNAR LOGISTICS**  
Personal propulsion unit Patent  
[NASA-CASE-MFS-20130] c 28 N71-27585
- LUNAR RESOURCES**  
Method for producing oxygen from lunar materials  
[NASA-CASE-MSC-21759-1] c 25 N93-29617
- LUNAR ROCKS**  
Sample collecting impact bit Patent  
[NASA-CASE-XNP-01412] c 15 N70-42034
- Method for producing oxygen from lunar materials  
[NASA-CASE-MSC-21759-1] c 25 N93-29617
- LUNAR ROVING VEHICLES**  
Method for remotely powering a device such as a lunar rover  
[NASA-CASE-LAR-14789-1] c 37 N92-30388
- LUNAR SCIL**  
Soil particles separator, collector and viewer Patent  
[NASA-CASE-XNP-09770] c 15 N71-20440
- Material handling device Patent  
[NASA-CASE-XNP-09770-3] c 11 N71-27036
- Self-recording portable soil penetrometer  
[NASA-CASE-MFS-20774] c 14 N73-19420
- Method for obtaining oxygen from lunar or similar soil  
[NASA-CASE-MSC-12408-1] c 46 N74-13011
- Method for producing oxygen from lunar materials  
[NASA-CASE-MSC-21759-1] c 25 N93-29617
- LUNAR SURFACE**  
Lunar radiator shade  
[NASA-CASE-MSC-21868-1] c 54 N92-21589
- LUNAR SURFACE VEHICLES**  
Deformable vehicle wheel Patent  
[NASA-CASE-MFS-20400] c 31 N71-18611
- Resilient wheel Patent  
[NASA-CASE-MFS-13929] c 15 N71-27091
- LUNGS**  
Instrument for use in performing a controlled Valsalva maneuver Patent  
[NASA-CASE-XMS-01615] c 05 N70-41329

## M

### MACH NUMBER

- Wind tunnel supplementary Mach number minimum section insert  
[NASA-CASE-LAR-12532-1] c 09 N82-11088
- Improved method and apparatus for Mach number change in wind tunnel  
[NASA-CASE-LAR-13548-1] c 09 N91-28175

### MACHINE LEARNING

- Fast temporal neural learning using teacher forcing  
[NASA-CASE-NPO-18553-1-CU] c 63 N92-30085
- Cascaded VLSI neural network architecture for on-line learning  
[NASA-CASE-NPO-18645-1-CU] c 63 N92-34240
- The adaptive neuron model: An architecture for the rapid learning of nonlinear topological transformations  
[NASA-CASE-NPO-18579-1-CU] c 63 N93-11174
- An accelerated training method for back propagation networks  
[NASA-CASE-MSC-21625-1] c 53 N93-29610

### MACHINE TOOLS

- Rock drill for recovering samples  
[NASA-CASE-XNP-07478] c 14 N69-21923
- Protective device for machine and metalworking tools Patent  
[NASA-CASE-XLE-01092] c 15 N71-22797
- Aligning and positioning device Patent  
[NASA-CASE-XMS-04178] c 15 N71-22798

- Extrusion die for refractory metals Patent  
[NASA-CASE-XLE-06773] c 15 N71-23817
- Layout tool Patent  
[NASA-CASE-FRC-10005] c 15 N71-26145
- Optical machine tool alignment indicator Patent  
[NASA-CASE-XAC-09489-1] c 15 N71-26673
- Caterpillar micro positioner  
[NASA-CASE-GSC-10780-1] c 14 N72-16283
- Geneva mechanism — including star wheel and driver  
[NASA-CASE-NPO-13281-1] c 37 N75-13266
- Zero torque gear head wrench  
[NASA-CASE-NPO-13059-1] c 37 N76-20480
- Precision alignment apparatus for cutting a workpiece  
[NASA-CASE-LAR-11658-1] c 37 N77-14478
- Toggle mechanism for pinching metal tubes  
[NASA-CASE-GSC-12274-1] c 37 N79-28550
- Method and tool for machining a transverse slot about a bore  
[NASA-CASE-LAR-11855-1] c 37 N81-14319
- Crystal glaving machine  
[NASA-CASE-GSC-12584-1] c 37 N82-32730
- Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c 37 N84-12491
- Alignment and assembly tool for very large diameter cylinders  
[NASA-CASE-MFS-28001-2] c 37 N88-14360

### MACHINERY

- Stirring apparatus for plural test tubes Patent  
[NASA-CASE-XAC-06956] c 15 N71-21177
- Precipitation detector Patent  
[NASA-CASE-XLA-02619] c 10 N71-26334
- Apparatus for forming drive belts  
[NASA-CASE-NPO-13205-1] c 31 N74-32917
- Continuous fiber thermoplastic prepreg  
[NASA-CASE-LAR-14459-1] c 24 N91-15334
- Continuous fiber thermoplastic prepreg  
[NASA-CASE-LAR-14459-1] c 24 N93-24597
- MACHINING**  
Laser machining apparatus Patent  
[NASA-CASE-HON-10541-2] c 15 N71-27135
- Lathe tool bit and holder for machining fiberglass materials  
[NASA-CASE-XLA-10470] c 15 N72-21489
- Drilled ball bearing with a one piece anti-tipping cage assembly  
[NASA-CASE-LEW-11925-1] c 37 N75-31446
- Plug-type heat flux gauge  
[NASA-CASE-LEW-14967-1] c 35 N91-31608

### MACROMOLECULES

- Macromolecular crystal growing system  
[NASA-CASE-MFS-26088-1-CU] c 76 N92-25398

### MAGNESIUM

- Nondestructive spot test method for magnesium and magnesium alloys  
[NASA-CASE-LAR-10953-1] c 17 N73-27446

### MAGNESIUM ALLOYS

- Method and apparatus for bonding a plastics sleeve onto a metallic body Patent  
[NASA-CASE-XLA-01262] c 15 N71-21404
- Nondestructive spot test method for magnesium and magnesium alloys  
[NASA-CASE-LAR-10953-1] c 17 N73-27446

### MAGNESIUM OXIDES

- Method for determining presence of OH in magnesium oxide  
[NASA-CASE-NPO-10774] c 06 N72-17095
- Edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-1-CU] c 76 N90-17456
- Method for producing edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-2-CU] c 76 N92-22040
- Edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-3-CU] c 76 N92-22041

### MAGNET COILS

- Superconducting alternator  
[NASA-CASE-XLE-02824] c 03 N69-39890
- Circuit breaker utilizing magnetic latching relays Patent  
[NASA-CASE-MSC-11277] c 09 N71-29008

### MAGNETIC AMPLIFIERS

- Low current linearization of magnetic amplifier for dc transducer  
[NASA-CASE-NPO-14617-1] c 33 N81-24338

### MAGNETIC BEARINGS

- Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c 37 N83-32067
- Linear magnetic bearings  
[NASA-CASE-GSC-12582-2] c 37 N85-20337
- Radial and torsionally controlled magnetic bearing  
[NASA-CASE-GSC-12957-1] c 37 N87-17038
- Superconducting bearings with levitation control configurations  
[NASA-CASE-GSC-13346-1] c 37 N92-29099

### MAGNETIC CHARGE DENSITY

- Electrostatic ion engine having a permanent magnetic circuit Patent  
[NASA-CASE-XLE-01124] c 28 N71-14043

### MAGNETIC CIRCUITS

- Electrostatic ion engine having a permanent magnetic circuit Patent  
[NASA-CASE-XLE-01124] c 28 N71-14043

### MAGNETIC COILS

- Time-division multiplexer Patent  
[NASA-CASE-XNP-00431] c 09 N70-38998
- Linear magnetic brake with two windings Patent  
[NASA-CASE-XLE-05079] c 15 N71-17652
- Safe-arm initiator Patent  
[NASA-CASE-LAR-10372] c 09 N71-18599
- Magnifying image intensifier  
[NASA-CASE-GSC-12010-1] c 74 N78-18905
- Radial and torsionally controlled magnetic bearing  
[NASA-CASE-GSC-12957-1] c 37 N87-17038
- Improved high power/high frequency inductor  
[NASA-CASE-NPO-17830-1-CU] c 33 N91-14539

### MAGNETIC CONTROL

- Fast opening diaphragm Patent  
[NASA-CASE-XLA-03660] c 15 N71-21060
- Magnetically controlled plasma accelerator Patent  
[NASA-CASE-XLA-00327] c 25 N71-29184
- Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c 37 N76-18459
- Magnetic bearing system  
[NASA-CASE-GSC-11978-1] c 37 N77-17464
- Low temperature latching solenoid  
[NASA-CASE-MSC-18106-1] c 33 N82-11357
- Cryogenic shutter  
[NASA-CASE-GSC-13189-2] c 37 N92-29151
- Magnetically operated check valve  
[NASA-CASE-MSC-22046-1] c 37 N93-28501

### MAGNETIC CORES

- Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00458] c 09 N70-38604
- Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00131] c 09 N70-38995
- Magnetic counter Patent  
[NASA-CASE-XNP-08836] c 09 N71-12515
- Pulse-type magnetic core memory element circuit with blocking oscillator feedback Patent  
[NASA-CASE-XGS-03303] c 08 N71-18595
- Magnetic core current steering commutator Patent  
[NASA-CASE-NPO-10201] c 08 N71-18694
- Drive circuit utilizing two cores Patent  
[NASA-CASE-XNP-01318] c 10 N71-23033
- Saturation current protection apparatus for saturable core transformers Patent  
[NASA-CASE-ERC-10075] c 09 N71-24800
- Magnetic power switch Patent  
[NASA-CASE-NPO-10242] c 09 N71-24803
- Unsaturating saturable core transformer Patent  
[NASA-CASE-ERC-10125] c 09 N71-24893
- Thermally cycled magnetometer Patent  
[NASA-CASE-XAC-03740] c 14 N71-26135
- Digital memory sense amplifying means Patent  
[NASA-CASE-XNP-01012] c 08 N71-28925
- Method of detecting impending saturation of magnetic cores  
[NASA-CASE-ERC-10089] c 23 N72-17747
- Current steering commutator  
[NASA-CASE-NPO-10743] c 08 N72-21199
- Banded transformer cores  
[NASA-CASE-NPO-11966-1] c 33 N74-17928
- Electromagnetic attachment mechanism  
[NASA-CASE-MSC-21463-1] c 37 N92-33018

### MAGNETIC DIPOLES

- Balance torque meter Patent  
[NASA-CASE-XGS-01013] c 14 N71-23725

### MAGNETIC DISKS

- Disk pack cleaning table Patent Application  
[NASA-CASE-LAR-10590-1] c 15 N70-26819

### MAGNETIC FIELD CONFIGURATIONS

- Mass spectrometer with magnetic pole pieces providing the magnetic fields for both the magnetic sector and an ion-type vacuum pump  
[NASA-CASE-NPO-13663-1] c 35 N77-14406
- Magnifying image intensifier  
[NASA-CASE-GSC-12010-1] c 74 N78-18905

### MAGNETIC FIELDS

- Electric-arc heater Patent  
[NASA-CASE-XLA-00330] c 33 N70-34540
- Means for communicating through a layer of ionized gases Patent  
[NASA-CASE-XLA-01127] c 07 N70-41372
- Liquid storage tank venting device for zero gravity environment Patent  
[NASA-CASE-XLE-01449] c 15 N70-41646
- Electrostatic ion engine having a permanent magnetic circuit Patent  
[NASA-CASE-XLE-01124] c 28 N71-14043

- Wide range linear fluxgate magnetometer Patent  
[NASA-CASE-XGS-01587] c 14 N71-15962
- Position sensing device employing misaligned magnetic field generating and detecting apparatus Patent  
[NASA-CASE-XGS-07514] c 23 N71-16099
- Nonmagnetic, explosive actuated indexing device Patent  
[NASA-CASE-XGS-02422] c 15 N71-21529
- Solar cell and circuit array and process for nullifying magnetic fields Patent  
[NASA-CASE-XGS-03390] c 03 N71-23187
- Balance torque meter Patent  
[NASA-CASE-XGS-01013] c 14 N71-23725
- Two axis fluxgate magnetometer Patent  
[NASA-CASE-GSC-10441-1] c 14 N71-27325
- Segmented superconducting magnet for a broadband traveling wave maser Patent  
[NASA-CASE-XGS-10518] c 16 N71-28554
- Magnetic position detection method and apparatus  
[NASA-CASE-ARC-10179-1] c 21 N72-22619
- Ion thruster  
[NASA-CASE-LEW-10770-1] c 28 N72-22770
- Ion thruster magnetic field control  
[NASA-CASE-LEW-10335-1] c 28 N72-22771
- Determining distance to lightning strokes from a single station  
[NASA-CASE-KSC-10698] c 07 N73-20175
- Superconductive magnetic-field-trapping device  
[NASA-CASE-XNP-01185] c 26 N73-28710
- Electron beam controller --- using magnetic field to refocus spent electron beam in microwave oscillator tube  
[NASA-CASE-LEW-11617-1] c 33 N74-10195
- Magnetometer using superconducting rotating body  
[NASA-CASE-NPO-13388-1] c 35 N76-16390
- Compact, high intensity arc lamp with internal magnetic field producing means  
[NASA-CASE-NPO-11510-1] c 33 N77-21315
- Magnetic heat pumping  
[NASA-CASE-LEW-12508-1] c 34 N78-17335
- Atomic hydrogen storage --- cryotrapping and magnetic field strength  
[NASA-CASE-LEW-12081-2] c 28 N80-20402
- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c 28 N81-14103
- Magnetic field control --- electromechanical torquing device  
[NASA-CASE-MFS-23828-1] c 33 N82-26569
- Magnetic heading reference  
[NASA-CASE-LAR-12638-1] c 04 N84-14132
- Magnetically actuated compressor  
[NASA-CASE-GSC-12799-1] c 31 N85-21404
- Reciprocating magnetic refrigerator employing tandem porous matrices within a reciprocating displacer  
[NASA-CASE-NPO-16257-1] c 31 N85-29082
- Maser cavity servo-tuning system  
[NASA-CASE-NPO-15890-1-CU] c 33 N85-29143
- Magnetic drive coupling  
[NASA-CASE-MS-C-21171-1] c 37 N88-23973
- Magnetic attachment mechanism  
[NASA-CASE-MS-C-21095-1] c 37 N89-12866
- Electromagnetic Meissner effect launcher  
[NASA-CASE-MFS-28323-1] c 14 N92-15081
- Precision measurement of magnetic characteristics of an article with nullification of external magnetic fields  
[NASA-CASE-NPO-18187-1-CU] c 70 N92-29130
- MAGNETIC FILMS**  
Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
[NASA-CASE-NPO-11336-1] c 76 N79-16678
- MAGNETIC FLUX**  
Excitation and detection circuitry for a flux responsive magnetic head  
[NASA-CASE-XNP-04183] c 09 N69-24329
- Cryogenic apparatus for measuring the intensity of magnetic fields  
[NASA-CASE-XAC-02407] c 14 N69-27423
- Flux sensing device using a tubular core with toroidal gating coil and solenoidal output coil wound thereon Patent  
[NASA-CASE-XGS-01881] c 09 N70-40123
- Hybrid lubrication system and bearing Patent  
[NASA-CASE-XNP-01641] c 15 N71-22997
- Saturation current protection apparatus for saturable core transformers Patent  
[NASA-CASE-ERC-10075] c 09 N71-24800
- Continuous magnetic flux pump  
[NASA-CASE-XNP-01187] c 15 N73-28516
- Magnetic-flux pump  
[NASA-CASE-XNP-01188] c 15 N73-32361
- Magnetic bearing --- for supplying magnetic fluxes  
[NASA-CASE-GSC-11079-1] c 37 N75-18574
- Linear magnetic motor/generator --- to generate electric energy using magnetic flux for spacecraft power supply  
[NASA-CASE-GSC-12518-1] c 33 N82-24421
- Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c 37 N83-32067
- Induction heating gun  
[NASA-CASE-LAR-13181-1] c 31 N85-29083
- Radial and torsionally controlled magnetic bearing  
[NASA-CASE-GSC-12957-1] c 37 N87-17038
- MAGNETIC FORMING**  
Magnetomotive metal working device Patent  
[NASA-CASE-XMF-03793] c 15 N71-24833
- Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-3] c 15 N71-24865
- MAGNETIC INDUCTION**  
Continuously operating induction plasma accelerator Patent  
[NASA-CASE-XLA-01354] c 25 N70-36946
- Drive circuit for minimizing power consumption in inductive load Patent  
[NASA-CASE-NPO-10716] c 09 N71-24892
- Constant frequency output two stage induction machine systems Patent  
[NASA-CASE-ERC-10065] c 09 N71-27364
- Magnetically actuated tuning method for Gunn oscillators  
[NASA-CASE-NPO-12106] c 09 N73-15235
- High speed shutter --- electrically actuated ribbon loop for shuttering optical or fluid passageways  
[NASA-CASE-ARC-10516-1] c 70 N74-21300
- Magnetic drive coupling  
[NASA-CASE-MS-C-21171-1] c 37 N88-23973
- Method and apparatus for using magneto-acoustic remanence to determine embrittlement  
[NASA-CASE-LAR-13817-5] c 39 N92-28757
- Magnetic remanence method and apparatus to test materials for embrittlement  
[NASA-CASE-LAR-13817-4] c 39 N92-29101
- Magneto acoustic emission method for testing materials for embrittlement  
[NASA-CASE-LAR-13817-2] c 39 N92-29155
- MAGNETIC LENSES**  
Quadrupole mass filter with means to generate a noise spectrum exclusive of the resonant frequency of the desired ions to deflect stable ions  
[NASA-CASE-XNP-04231] c 14 N73-32325
- MAGNETIC MATERIALS**  
Low viscosity magnetic fluid obtained by the colloidal suspension of magnetic particles Patent  
[NASA-CASE-XLE-01512] c 12 N70-40124
- Preparation of dilute magnetic semiconductor films by metalorganic chemical vapor deposition  
[NASA-CASE-NPO-17399-1-CU] c 76 N89-14120
- MAGNETIC MEASUREMENT**  
Cryogenic apparatus for measuring the intensity of magnetic fields  
[NASA-CASE-XAC-02407] c 14 N69-27423
- Wide range linear fluxgate magnetometer Patent  
[NASA-CASE-XGS-01587] c 14 N71-15962
- RC networks and amplifiers employing the same  
[NASA-CASE-XAC-05462-2] c 10 N72-17171
- Magnetometer using superconducting rotating body  
[NASA-CASE-NPO-13388-1] c 35 N76-16390
- Precision measurement of magnetic characteristics of an article with nullification of external magnetic fields  
[NASA-CASE-NPO-18187-1-CU] c 70 N92-29130
- MAGNETIC PERMEABILITY**  
Linear motion valve  
[NASA-CASE-MS-C-20148-1] c 37 N85-29284
- MAGNETIC POLES**  
Magnetohydrodynamic induction machine  
[NASA-CASE-XNP-07481] c 25 N69-21929
- Mass spectrometer with magnetic pole pieces providing the magnetic fields for both the magnetic sector and an ion-type vacuum pump  
[NASA-CASE-NPO-13663-1] c 35 N77-14406
- MAGNETIC PROPERTIES**  
Method and apparatus for using magneto-acoustic remanence to determine embrittlement  
[NASA-CASE-LAR-13817-5] c 39 N92-28757
- Precision measurement of magnetic characteristics of an article with nullification of external magnetic fields  
[NASA-CASE-NPO-18187-1-CU] c 70 N92-29130
- MAGNETIC PUMPING**  
Continuous magnetic flux pump  
[NASA-CASE-XNP-01187] c 15 N73-28516
- Magnetic-flux pump  
[NASA-CASE-XNP-01188] c 15 N73-32361
- Magnetocaloric pump --- for cryogenic fluids  
[NASA-CASE-LEW-11672-1] c 37 N74-27904
- Magnetic heat pumping  
[NASA-CASE-LEW-12508-3] c 34 N83-29625
- MAGNETIC RECORDING**  
Incremental tape recorder and data rate converter Patent  
[NASA-CASE-XNP-02778] c 08 N71-22710
- Magnetic recording head and method of making same Patent  
[NASA-CASE-GSC-10097-1] c 08 N71-27210
- Thermomagnetic recording and magneto-optic playback system  
[NASA-CASE-NPO-10872-1] c 35 N79-16246
- Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
[NASA-CASE-NPO-11336-1] c 76 N79-16678
- Disk memory device  
[NASA-CASE-GSC-13196-1] c 60 N92-29132
- MAGNETIC SIGNALS**  
Plural recorder system  
[NASA-CASE-XMS-06949] c 09 N69-21467
- MAGNETIC STORAGE**  
Binary magnetic memory device Patent  
[NASA-CASE-XGS-00174] c 08 N70-34743
- Magnetic matrix memory system Patent  
[NASA-CASE-XMF-05835] c 08 N71-12504
- Control apparatus for applying pulses of selectively predetermined duration to a sequence of loads Patent  
[NASA-CASE-XGS-04224] c 10 N71-26418
- Redundant memory organization Patent  
[NASA-CASE-GSC-10564] c 10 N71-29135
- Dual purpose momentum wheels for spacecraft with magnetic recording  
[NASA-CASE-NPO-11481] c 21 N73-13644
- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-1] c 28 N78-24365
- MAGNETIC SUSPENSION**  
Magnetic suspension and pointing system  
[NASA-CASE-LAR-11889-2] c 37 N78-27424
- Magnetic suspension and pointing system --- on a carrier vehicle  
[NASA-CASE-LAR-11889-1] c 35 N79-26372
- Magnetic bearing and motor  
[NASA-CASE-GSC-12726-1] c 37 N83-34323
- Single element magnetic suspension actuator  
[NASA-CASE-LAR-13981-1] c 37 N91-21539
- Permanent magnet flux-biased magnetic actuator with flux feedback  
[NASA-CASE-LAR-13785-1] c 70 N91-21824
- MAGNETIC SWITCHING**  
Magnetic power switch Patent  
[NASA-CASE-NPO-10242] c 09 N71-24803
- Current steering switch Patent  
[NASA-CASE-XNP-08567] c 09 N71-26000
- Magnetically switched power supply system for lasers  
[NASA-CASE-NPO-16402-2] c 33 N88-24862
- MAGNETIC TAPE TRANSPORTS**  
Reel safety brake  
[NASA-CASE-GSC-11960-1] c 37 N77-14479
- MAGNETIC TAPES**  
Endless tape cartridge Patent  
[NASA-CASE-XGS-00769] c 14 N70-41647
- Endless tape transport mechanism Patent  
[NASA-CASE-XGS-01223] c 07 N71-10609
- Low friction magnetic recording tape Patent  
[NASA-CASE-XGS-00373] c 23 N71-15978
- System for recording and reproducing pulse code modulated data Patent  
[NASA-CASE-XGS-01021] c 08 N71-21042
- Friction measuring apparatus Patent  
[NASA-CASE-XNP-08680] c 14 N71-22995
- Technique for recovery of voice data from heat damaged magnetic tape  
[NASA-CASE-MS-C-14219-1] c 32 N74-27612
- Automatic character skew and spacing checking network --- of digital tape drive systems  
[NASA-CASE-GSC-11925-1] c 33 N76-18353
- Braille reading system  
[NASA-CASE-LAR-13306-1] c 82 N87-29372
- MAGNETIC TRANSDUCERS**  
Magnetometer with a miniature transducer and automatic scanning  
[NASA-CASE-LAR-11617-2] c 35 N78-32397
- MAGNETIZATION**  
Ion engine casing construction and method of making same Patent  
[NASA-CASE-XNP-06942] c 28 N71-23293
- MAGNETO-OPTICS**  
Thermomagnetic recording and magneto-optic playback system having constant intensity laser beam control  
[NASA-CASE-NPO-11317-2] c 36 N74-13205
- MAGNETOACOUSTIC WAVES**  
Magneto acoustic emission apparatus for testing materials for embrittlement  
[NASA-CASE-LAR-13817-1] c 26 N90-21170
- MAGNETOACOUSTICS**  
Method and apparatus for using magneto-acoustic remanence to determine embrittlement  
[NASA-CASE-LAR-13817-5] c 39 N92-28757
- Magnetic remanence method and apparatus to test materials for embrittlement  
[NASA-CASE-LAR-13817-4] c 39 N92-29101

## MAGNETOHYDRODYNAMIC FLOW

- Magneto acoustic emission method for testing materials for embrittlement  
[NASA-CASE-LAR-13817-2] c 39 N92-29155
- Method of characterizing residual stress in ferromagnetic materials using a pulse histogram of acoustic emission signals  
[NASA-CASE-LAR-14239-1] c 26 N93-14705
- ### MAGNETOHYDRODYNAMIC FLOW
- Magneto-plasma-dynamic arc thruster  
[NASA-CASE-LEW-11180-1] c 25 N73-25760
- Hybrid plume plasma rocket  
[NASA-CASE-MSC-20476-2] c 20 N89-25279
- ### MAGNETOHYDRODYNAMIC GENERATORS
- Magneto-hydrodynamic induction machine  
[NASA-CASE-XNP-07481] c 25 N69-21929
- Slug flow magneto-hydrodynamic generator  
[NASA-CASE-XLE-02083] c 03 N69-39983
- Two-fluid magneto-hydrodynamic system and method for thermal-electric power conversion Patent  
[NASA-CASE-XNP-00644] c 03 N70-36803
- Crossed-field MHD plasma generator/ accelerator Patent  
[NASA-CASE-XLA-03374] c 25 N71-15562
- Solar driven liquid metal MHD power generator  
[NASA-CASE-LAR-12495-1] c 44 N83-28573
- ### MAGNETOMETERS
- Nonmagnetic thermal motor for a magnetometer  
[NASA-CASE-XAR-03786] c 09 N69-21313
- Cryogenic apparatus for measuring the intensity of magnetic fields  
[NASA-CASE-XAC-02407] c 14 N69-27423
- Flux sensing device using a tubular core with toroidal gating coil and solenoidal output coil wound thereon Patent  
[NASA-CASE-XGS-01881] c 09 N70-40123
- Wide range linear fluxgate magnetometer Patent  
[NASA-CASE-XGS-01587] c 14 N71-15962
- Optically pumped resonance magnetometer for determining vectorial components in a spatial coordinate system Patent  
[NASA-CASE-XGS-04879] c 14 N71-20428
- Thermally cycled magnetometer Patent  
[NASA-CASE-XAC-03740] c 14 N71-26135
- Two axis fluxgate magnetometer Patent  
[NASA-CASE-GSC-10441-1] c 14 N71-27325
- Hall effect magnetometer  
[NASA-CASE-LEW-11632-2] c 35 N75-13213
- Magnetometer using superconducting rotating body  
[NASA-CASE-NPO-13388-1] c 35 N76-16390
- Magnetic heading reference  
[NASA-CASE-LAR-11387-1] c 04 N76-20114
- Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c 04 N77-19056
- Magnetometer with a miniature transducer and automatic scanning  
[NASA-CASE-LAR-11617-2] c 35 N78-32397
- Low energy electron magnetometer using a monoenergetic electron beam  
[NASA-CASE-LAR-12706-1] c 35 N84-12444
- ### MAGNETOSTRICTION
- Magnetostriuctive roller drive motor  
[NASA-CASE-GSC-13369-1] c 33 N92-15331
- ### MAGNETRON SPUTTERING
- Method of producing high T(subc) superconducting NBN films  
[NASA-CASE-NPO-16681-1-CU] c 76 N88-24543
- ### MAGNETRONS
- Tuning arrangement for an electron discharge device or the like Patent  
[NASA-CASE-XNP-09771] c 09 N71-24841
- ### MAGNETS
- Magnetic electrical connectors for biomedical percutaneous implants  
[NASA-CASE-KSC-11030-1] c 52 N77-25772
- Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c 72 N80-27163
- Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c 37 N83-32067
- Shaft transducer having dc output proportional to angular velocity  
[NASA-CASE-NPO-15706-1] c 35 N84-28017
- Linear motion valve  
[NASA-CASE-MSC-20148-1] c 37 N85-29284
- ### MAGNIFICATION
- Image magnification adapter for cameras Patent  
[NASA-CASE-XMF-03844-1] c 14 N71-26474
- Magnifying scratch gage force transducer  
[NASA-CASE-LAR-10496-1] c 14 N72-22437
- Magnifying image intensifier  
[NASA-CASE-GSC-12010-1] c 74 N78-18905
- Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N82-24072
- Spectral slicing X-ray telescope with variable magnification  
[NASA-CASE-MFS-25942-1] c 74 N86-20124

- Variable magnification variable dispersion glancing incidence imaging x ray spectroscopic telescope  
[NASA-CASE-MFS-28013-3] c 89 N90-27594
- Variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-2] c 89 N91-14096
- Stereoscopic camera and viewing systems with undistorted depth presentation and reduced or eliminated erroneous acceleration and deceleration perceptions, or with perceptions produced or enhanced for special effects  
[NASA-CASE-NPO-18028-1-CU] c 74 N92-16809
- ### MAGNITUDE
- Balance torquemeter Patent  
[NASA-CASE-XGS-01013] c 14 N71-23725
- ### MAINTENANCE
- Self-testing and repairing computer Patent  
[NASA-CASE-NPO-10567] c 08 N71-24633
- Bonding or repairing process  
[NASA-CASE-MSC-12357] c 15 N73-12489
- Method of repairing discontinuity in fiberglass structures  
[NASA-CASE-LAR-10416-1] c 24 N74-30001
- System and method for refurbishing and processing parachutes --- monorial conveyor system  
[NASA-CASE-KSC-11042-2] c 02 N81-26073
- Computer circuit card puller  
[NASA-CASE-FRC-11042-1] c 60 N82-24839
- Method for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-1] c 09 N82-29330
- Method for repair of thin glass coatings --- on space shuttle orbiter tiles  
[NASA-CASE-KSC-11097-1] c 27 N82-33520
- Method of repairing surface damage to porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MSC-18736-1] c 24 N83-13172
- Method of repairing hidden leaks in tubes  
[NASA-CASE-MFS-19796-1] c 37 N86-32736
- High-pressure promoted combustion chamber  
[NASA-CASE-MSC-21470-1] c 09 N91-21157
- ### MALEATES
- Stabilized unsaturated polyesters  
[NASA-CASE-NPO-16103-1] c 27 N85-29043
- Maleimido substituted aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-1] c 23 N86-19376
- Fire and heat resistant laminating resins based on maleimido substituted aromatic cyclotriphosphazene polymer  
[NASA-CASE-ARC-11428-2] c 27 N87-16909
- ### MALFUNCTIONS
- Airplane take-off performance indicator Patent  
[NASA-CASE-XLA-00100] c 14 N70-36807
- Accelerometer method and apparatus for integral display and control functions  
[NASA-CASE-MSC-21961-1] c 35 N92-29952
- Valve malfunction detection apparatus  
[NASA-CASE-MFS-29904-1] c 35 N93-29503
- ### MAMMALS
- Spiral vane bioreactor  
[NASA-CASE-MSC-21361-1] c 51 N91-21701
- ### MAN MACHINE SYSTEMS
- User friendly joystick  
[NASA-CASE-GSC-13187-1] c 33 N92-29153
- Compliant walker  
[NASA-CASE-GSC-13348-2] c 52 N93-14708
- ### MAN-COMPUTER INTERFACE
- Force reflecting hand controller  
[NASA-CASE-NPO-17851-1-CU] c 37 N93-23078
- ### MANDRELS
- Mandrel for shaping solid propellant rocket fuel into a motor casing Patent  
[NASA-CASE-XLA-00304] c 27 N70-34783
- Rotating mandrel for assembly of inflatable devices Patent  
[NASA-CASE-XLA-04143] c 15 N71-17687
- Method of making a solid propellant rocket motor Patent  
[NASA-CASE-XLA-04126] c 28 N71-26779
- ### MANEUVERABILITY
- Sequentially deployable maneuverable tetrahedral beam  
[NASA-CASE-LAR-13098-1] c 31 N86-19479
- ### MANGANESE
- Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
[NASA-CASE-NPO-11336-1] c 76 N79-16678
- ### MANIFOLDS
- Injector for bipropellant rocket engines Patent  
[NASA-CASE-XMF-00148] c 28 N70-38710
- Active clearance control system for a turbomachine  
[NASA-CASE-LEW-12938-1] c 07 N82-32366
- Collimated beam manifold with the number of output beams variable at a given output angle  
[NASA-CASE-MFS-25312-1] c 74 N83-17305
- Extended temperature range rocket injector  
[NASA-CASE-LEW-14846-1] c 20 N92-10054

## SUBJECT INDEX

- ### MANIPULATORS
- Remote control manipulator for zero gravity environment  
[NASA-CASE-MFS-14405] c 15 N72-28495
- Orthotic arm joint --- for use in mechanical arms  
[NASA-CASE-MFS-21611-1] c 54 N75-12616
- Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
[NASA-CASE-MSC-14245-1] c 18 N75-27041
- Cooperative multi-axis sensor for teleoperation of article manipulating apparatus  
[NASA-CASE-NPO-13386-1] c 54 N75-27758
- Remotely operable articulated manipulator  
[NASA-CASE-MFS-22707-1] c 37 N76-15457
- Remote manipulator system  
[NASA-CASE-MFS-22022-1] c 37 N76-15460
- Anthropomorphic master/slave manipulator system  
[NASA-CASE-ARC-10756-1] c 54 N77-32721
- Wrist joint assembly  
[NASA-CASE-MFS-23311-1] c 54 N78-17676
- Compact artificial hand  
[NASA-CASE-NPO-13906-1] c 54 N79-24652
- Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c 37 N79-28551
- Device for coupling a first vehicle to a second vehicle  
[NASA-CASE-GSC-12429-1] c 37 N81-14320
- Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c 54 N81-26718
- Terminal guidance sensor system --- space shuttle coupling to orbiting satellites  
[NASA-CASE-NPO-14521-1] c 37 N81-27519
- Apparatus for sequentially transporting containers  
[NASA-CASE-MFS-23846-1] c 37 N82-32731
- Precision manipulator heating and cooling apparatus for use in UHV systems with sample transfer capability  
[NASA-CASE-LAR-13040-1] c 37 N85-29286
- Sequentially deployable maneuverable tetrahedral beam  
[NASA-CASE-LAR-13098-1] c 31 N86-19479
- Apparatus for adapting an end effector device remotely controlled manipulator arm  
[NASA-CASE-MFS-25949-1] c 37 N86-19603
- Self-locking telescoping manipulator arm  
[NASA-CASE-MFS-25906-1] c 37 N86-20789
- Magnetic spin reduction system for free spinning objects  
[NASA-CASE-MFS-25966-1] c 16 N86-26352
- Orbital maneuvering end effectors  
[NASA-CASE-MFS-28161-1] c 37 N87-18817
- Space spider crane  
[NASA-CASE-LAR-13411-1-SB] c 18 N88-23828
- Mobile remote manipulator system for a tetrahedral truss  
[NASA-CASE-MSC-20985-1] c 18 N88-26398
- Space station erectable manipulator placement system  
[NASA-CASE-MSC-21096-1] c 18 N89-12621
- Improved docking alignment system  
[NASA-CASE-MSC-21372-1] c 35 N89-12842
- Magnetic attachment mechanism  
[NASA-CASE-MSC-21095-1] c 37 N89-12866
- Robust high-performance control for robotic manipulators  
[NASA-CASE-NPO-17785-1-CU] c 37 N89-28846
- Distributed proximity sensor system  
[NASA-CASE-NPO-17275-1-CU] c 37 N89-29750
- Gripping device  
[NASA-CASE-MSC-21365-1] c 37 N90-20408
- Spiral lead platen robotic end effector  
[NASA-CASE-LAR-13855-1] c 37 N91-14615
- Multi-fingered robotic hand  
[NASA-CASE-NPO-15959-2] c 37 N91-14616
- Method and apparatus for configuration control of redundant robots  
[NASA-CASE-NPO-17801-1-CU] c 37 N91-21544
- Synchronized computational architecture for generalized bilateral control of robot arms  
[NASA-CASE-NPO-17401-1-CU] c 63 N91-31885
- Telerobot control system  
[NASA-CASE-NPO-18116-1-CU] c 37 N91-32509
- A generalized compliant motion primitive  
[NASA-CASE-NPO-18134-1-CU] c 37 N91-32510
- Controlling flexible robot arms using a high speed dynamics process  
[NASA-CASE-NPO-18499-1-CU] c 37 N92-24042
- Controlling under-actuated robot arms using a high speed dynamics process  
[NASA-CASE-NPO-18498-1-CU] c 37 N92-24043
- Robot serviced space facility  
[NASA-CASE-GSC-13408-1] c 18 N92-24244
- Position-error-based force reflection and compliance control  
[NASA-CASE-NPO-18668-1-CU] c 37 N92-29765
- Page turning system  
[NASA-CASE-GSC-13415-1] c 37 N92-33616

- New kinematic functions for redundancy resolution using configuration control c 63 N93-17275  
 [NASA-CASE-NPO-18608-1-CU] c 63 N93-17275  
 Extended task space control for robotic manipulators [NASA-CASE-NPO-18902-1-CU] c 37 N93-28129
- MANNED ORBITAL LABORATORIES**  
 Erectable modular space station Patent [NASA-CASE-XLA-00678] c 31 N70-34296  
 Radial module space station Patent [NASA-CASE-XMS-01906] c 31 N70-41373  
 Rotating space station simulator Patent [NASA-CASE-XLA-03127] c 11 N71-10776
- MANNED SPACE FLIGHT**  
 Transfer valve Patent [NASA-CASE-XAC-01158] c 15 N71-23051  
 Air removal device [NASA-CASE-XLA-08914] c 15 N73-12492  
 Protective helmet assembly [NASA-CASE-MSD-21842-1] c 54 N93-17088
- MANNED SPACECRAFT**  
 Space capsule Patent [NASA-CASE-XLA-00149] c 31 N70-37938  
 Variable-geometry winged reentry vehicle Patent [NASA-CASE-XLA-00241] c 31 N70-37986  
 Vehicle parachute and equipment jettison system Patent [NASA-CASE-XLA-00195] c 02 N70-38009  
 Space capsule Patent [NASA-CASE-XLA-01332] c 31 N71-15664  
 Artificial gravity spin deployment system Patent [NASA-CASE-XNP-02595] c 31 N71-21881  
 Specialized halogen generator for purification of water Patent [NASA-CASE-XLA-08913] c 14 N71-28933  
 Collapsible Apollo couch [NASA-CASE-MSD-13140] c 05 N72-11085  
 Space vehicle with artificial gravity and earth-like environment [NASA-CASE-LEW-11101-1] c 31 N73-32750  
 Hatch cover [NASA-CASE-MSD-21356-1] c 18 N90-19278
- MANOMETERS**  
 Magnetically centered liquid column float Patent [NASA-CASE-XAC-00030] c 14 N70-34820  
 Apparatus for absolute pressure measurement [NASA-CASE-LAR-10000] c 14 N73-30394
- MANUAL CONTROL**  
 Multiple circuit switch apparatus with improved pivot actuator structure Patent [NASA-CASE-XAC-03777] c 10 N71-15909  
 Null device for hand controller Patent [NASA-CASE-XLA-01808] c 15 N71-20740  
 Manually actuated heat pump [NASA-CASE-NPO-10677] c 05 N72-11084  
 Numerical computer peripheral interactive device with manual controls [NASA-CASE-NPO-11497] c 08 N73-25206  
 Solid state controller three axes controller [NASA-CASE-MSD-12394-1] c 08 N74-10942  
 G-load measuring and indicator apparatus [NASA-CASE-ARC-10806-1] c 35 N75-29381  
 Hydraulic actuator mechanism to control aircraft spoiler movements through dual input commands [NASA-CASE-LAR-12412-1] c 08 N82-24205  
 User friendly joystick [NASA-CASE-GSC-13187-1] c 33 N92-29153  
 Force reflecting hand controller [NASA-CASE-NPO-17851-1-CU] c 37 N93-23078
- MANUFACTURING**  
 A method for selective gold diffusion of monolithic silicon devices and/or circuits Patent application [NASA-CASE-ERC-10072] c 09 N70-11148  
 Indexed keyed connection Patent [NASA-CASE-XMS-02532] c 15 N70-41808  
 Method of making screen by casting Patent [NASA-CASE-XLE-00953] c 15 N71-15966  
 Space manufacturing machine Patent [NASA-CASE-MFS-20410] c 15 N71-19214  
 Fluid containers and resealable septum therefor Patent [NASA-CASE-NPO-10123] c 15 N71-24835  
 Method of making a solid propellant rocket motor Patent [NASA-CASE-XLA-04126] c 28 N71-26779  
 Method of making shielded flat cable Patent [NASA-CASE-MFS-13687] c 09 N71-28691  
 Fabrication of controlled-porosity metals Patent [NASA-CASE-XNP-04339] c 17 N71-29137  
 Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils [NASA-CASE-GSC-11367-1] c 44 N74-19692  
 Apparatus for forming drive belts [NASA-CASE-NPO-13205-1] c 31 N74-32917  
 Bonding method in the manufacture of continuous regression rate sensor devices [NASA-CASE-LAR-10337-1] c 24 N75-30260
- Process for fabricating SiC semiconductor devices [NASA-CASE-LEW-12094-1] c 76 N76-25049  
 Solar hydrogen generator [NASA-CASE-LAR-11361-1] c 44 N77-22607  
 Method of forming shrink-fit compression seal [NASA-CASE-LAR-11563-1] c 37 N77-23482  
 Method for making a hot wire anemometer and product thereof [NASA-CASE-ARC-10900-1] c 35 N77-24454  
 Aluminium or copper substrate panel for selective absorption of solar energy [NASA-CASE-MFS-23518-3] c 44 N80-16452  
 Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics [NASA-CASE-NPO-10424-1] c 27 N81-24258  
 Inorganic spark chamber frame and method of making the same [NASA-CASE-GSC-12354-1] c 35 N82-24471  
 Photoelectric detection system --- manufacturing automation [NASA-CASE-MFS-23776-1] c 33 N82-28545  
 Glass heating panels and method for preparing the same from architectural reflective glass [NASA-CASE-NPO-15753-1] c 27 N84-33589  
 The 1-((diorganoxy phosphonyl) methyl)-2,4- and -2,6-diamino benzenes and their derivatives [NASA-CASE-ARC-11425-2] c 23 N87-28605  
 Flexible heating head for induction heating apparatus and method [NASA-CASE-LAR-14679-2] c 32 N92-31150  
 Core design for use with precision composite reflectors [NASA-CASE-NPO-17858-1-CU] c 24 N93-14700  
 Method and apparatus for three dimensional braiding [NASA-CASE-LAR-14047-1] c 31 N93-19038
- MAPPING**  
 Random function tracer Patent [NASA-CASE-XLA-01401] c 15 N71-21179  
 Method and apparatus for mapping planets [NASA-CASE-NPO-11001] c 07 N72-21118  
 Seismic vibration source [NASA-CASE-NPO-14112-1] c 46 N79-22679  
 Dual aperture multispectral Schmidt objective [NASA-CASE-GSC-12756-1] c 74 N84-23248  
 Method and apparatus for contour mapping using synthetic aperture radar [NASA-CASE-NPO-15939-1] c 43 N86-19711  
 Programmable remapper with single flow architecture [NASA-CASE-MSD-21481-1] c 60 N91-13890  
 Network of dedicated processors for finding lowest-cost map path [NASA-CASE-NPO-17716-1-CU] c 62 N92-15620  
 Programmable hyperspectral image mapper with on-array processing [NASA-CASE-NPO-17794-1-CU] c 74 N92-30104
- MAPS**  
 Orbital and entry tracking accessory for globes --- to provide range requirements for reentry vehicles to any landing site [NASA-CASE-LAR-10626-1] c 19 N74-21015  
 Optical process for producing classification maps from multispectral data [NASA-CASE-MSD-14472-1] c 43 N77-10584
- MARKOV PROCESSES**  
 Hidden Markov models for fault detection in dynamic systems [NASA-CASE-NPO-18982-1-CU] c 38 N93-30413
- MARTENSITE**  
 Fastening apparatus having shape memory alloy actuator [NASA-CASE-MSD-21935-1] c 37 N93-13423
- MASERS**  
 Segmented superconducting magnet for a broadband traveling wave maser Patent [NASA-CASE-XGS-10518] c 16 N71-28554  
 Maser for frequencies in the 7-20 GHz range [NASA-CASE-NPO-11437] c 16 N72-28521  
 Reflected-wave maser --- low noise amplifier [NASA-CASE-NPO-13490-1] c 36 N76-31512  
 Multistation refrigeration system [NASA-CASE-NPO-13839-1] c 31 N78-25256  
 External bulb variable volume maser [NASA-CASE-GSC-12334-1] c 36 N79-14362  
 Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures [NASA-CASE-NPO-14254-1] c 36 N80-18372  
 Precise RF timing signal distribution to remote stations --- fiber optics [NASA-CASE-NPO-14749-1] c 32 N81-14186  
 Resonant isolator for maser amplifier [NASA-CASE-NPO-15201-1] c 36 N83-35350  
 Maser cavity servo-tuning system [NASA-CASE-NPO-15890-1-CU] c 33 N85-29143
- MASKING**  
 Masking device Patent [NASA-CASE-XNP-02092] c 15 N70-42033  
 High resolution developing of photosensitive resists Patent [NASA-CASE-XGS-04993] c 14 N71-17574  
 Low defect, high purity crystalline layers grown by selective deposition [NASA-CASE-NPO-15813-1] c 76 N85-30922  
 Method for maintaining precise suction strip porosities [NASA-CASE-LAR-13638-1] c 31 N90-19427
- MASKS**  
 Ion beam sputter etching [NASA-CASE-LEW-13899-1] c 31 N87-21160
- MASS**  
 Mass measuring system Patent [NASA-CASE-XMS-03371] c 05 N70-42000  
 Dynamic vibration absorber Patent [NASA-CASE-LAR-10083-1] c 15 N71-27006  
 Fluid mass sensor for a zero gravity environment [NASA-CASE-MSD-14653-1] c 35 N77-19385
- MASS BALANCE**  
 Two-plane balance Patent [NASA-CASE-XAC-00073] c 14 N70-34813  
 Apparatus for testing a pressure responsive instrument Patent [NASA-CASE-XMF-04134] c 14 N71-23755
- MASS DISTRIBUTION**  
 Propellant mass distribution metering apparatus Patent [NASA-CASE-NPO-10185] c 10 N71-26339
- MASS FLOW**  
 Rocket engine injector Patent [NASA-CASE-XLE-03157] c 28 N71-24736  
 Nuclear mass flowmeter [NASA-CASE-XMS-20485] c 14 N72-11365  
 Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds [NASA-CASE-LAR-10578-1] c 12 N73-25262  
 System and method for cancelling expansion waves in a wave rotor [NASA-CASE-LEW-15218-1] c 34 N93-11172
- MASS SPECTROMETERS**  
 Analytical photoionization mass spectrometer with an argon gas filter between the light source and monochromator Patent [NASA-CASE-LAR-10180-1] c 06 N71-13461  
 Time of flight mass spectrometer with feedback means from the detector to the low source and a specific counter Patent [NASA-CASE-XNP-01056] c 14 N71-23041  
 Ion microprobe mass spectrometer for analyzing fluid materials Patent [NASA-CASE-ERC-10014] c 14 N71-28863  
 Orifice gross leak tester Patent [NASA-CASE-ERC-10150] c 14 N71-28992  
 Method and apparatus for determining the contents of contained gas samples [NASA-CASE-GSC-10903-1] c 14 N73-12444  
 Quadrupole mass filter with means to generate a noise spectrum exclusive of the resonant frequency of the desired ions to deflect stable ions [NASA-CASE-XNP-04231] c 14 N73-23225  
 Fast scan control for deflection type mass spectrometers [NASA-CASE-LAR-11428-1] c 35 N74-34857  
 Mass spectrometer with magnetic pole pieces providing the magnetic fields for both the magnetic sector and an ion-type vacuum pump [NASA-CASE-NPO-13663-1] c 35 N77-14406  
 Method for fabricating a mass spectrometer inlet leak [NASA-CASE-GSC-12077-1] c 35 N77-24455  
 Dual acting slit control mechanism [NASA-CASE-LAR-11370-1] c 35 N80-28686  
 Ion mass spectrometer [NASA-CASE-NPO-15423-1] c 35 N84-28016  
 Apparatus and method for characterizing the transmission efficiency of a mass spectrometer [NASA-CASE-NPO-16989-1-CU] c 35 N91-14587
- MASS SPECTROSCOPY**  
 Moving particle composition analyzer [NASA-CASE-GSC-11889-1] c 35 N76-16393  
 Fluid sampling device [NASA-CASE-GSC-12143-1] c 35 N77-32456  
 Particle analyzing method and apparatus [NASA-CASE-NPO-15292-1] c 35 N83-27184
- MASSIVELY PARALLEL PROCESSORS**  
 Massively parallel processor computer [NASA-CASE-GSC-12223-1] c 60 N83-25378
- MATERIAL ABSORPTION**  
 Sorption vacuum trap Patent [NASA-CASE-XER-09519] c 14 N71-18483
- MATERIALS**  
 Low gravity exothermic heating/cooling apparatus [NASA-CASE-MSD-25707-1] c 35 N85-29214

## MATERIALS HANDLING

- Fluid coupling Patent  
[NASA-CASE-XLE-00397] c 15 N70-36492
- Catalyst bed removing tool Patent  
[NASA-CASE-XFR-00811] c 15 N70-36901
- Air bearing Patent  
[NASA-CASE-XMF-01887] c 15 N71-10617
- Quick attach and release fluid coupling assembly Patent  
[NASA-CASE-XKS-01985] c 15 N71-10782
- Method and apparatus for cryogenic wire stripping Patent  
[NASA-CASE-MFS-10340] c 15 N71-17628
- Apparatus for purging systems handling toxic, corrosive, noxious and other fluids Patent  
[NASA-CASE-XMS-01905] c 12 N71-21089
- Method of making foamed materials in zero gravity  
[NASA-CASE-XMF-09902] c 15 N72-11387
- Mechanically extendible telescoping boom  
[NASA-CASE-NPO-11118] c 03 N72-25021
- Apparatus for recovering matter adhered to a host surface  
[NASA-CASE-NPO-11213] c 15 N73-20514
- Apparatus and method for skin packaging articles  
[NASA-CASE-MFS-20855] c 15 N73-27405
- Apparatus for inserting and removing specimens from high temperature vacuum furnaces  
[NASA-CASE-LAR-10841-1] c 31 N74-27900
- Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c 37 N76-22540
- Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c 37 N82-12441
- Acoustic system for material transport  
[NASA-CASE-NPO-15453-1] c 71 N83-32515
- Space ultra-vacuum facility and method of operation  
[NASA-CASE-MFS-28139-1] c 29 N87-18679
- Hazardous materials emergency response mobile robot  
[NASA-CASE-NPO-18690-1-CU] c 37 N92-34205

## MATERIALS RECOVERY

- Automated system for identifying traces of organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c 25 N76-18245
- Process for the leaching of AP from propellant  
[NASA-CASE-NPO-14109-1] c 28 N80-23471
- Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c 28 N81-15119

## MATERIALS SCIENCE

- Flammability test chamber Patent  
[NASA-CASE-KSC-10126] c 11 N71-24985
- Apparatus and method for measuring the Seebeck coefficient and resistivity of materials  
[NASA-CASE-NPO-11749] c 14 N73-28486

## MATERIALS TESTS

- Thermal shock apparatus Patent  
[NASA-CASE-XLE-02024] c 14 N71-22964
- Multiple environment materials test chamber having a multiple port X-ray tube for irradiating a plurality of samples Patent  
[NASA-CASE-XMS-02930] c 11 N71-23042
- Resilience testing device Patent  
[NASA-CASE-XLA-08254] c 14 N71-26161
- Tube sealing device Patent  
[NASA-CASE-NPO-10431] c 15 N71-29132
- Burn rate testing apparatus  
[NASA-CASE-XMS-09690] c 33 N72-25913
- Multi axes vibration fixtures  
[NASA-CASE-MFS-20242] c 14 N73-19421
- Material fatigue testing system  
[NASA-CASE-MFS-20673] c 14 N73-20476
- Slow positron beam generator for lifetime studies  
[NASA-CASE-LAR-14250-1-SB] c 72 N91-27936
- Magneto acoustic emission method for testing materials for embrittlement  
[NASA-CASE-LAR-13817-2] c 39 N92-29155

## MATHEMATICAL LOGIC

- Logical function generator  
[NASA-CASE-XLA-05099] c 09 N73-13209

## MATHEMATICAL MODELS

- Discrete event simulation tool for analysis of qualitative models of continuous processing systems  
[NASA-CASE-MSC-21465-1] c 61 N91-14741
- Process for the homoepitaxial growth of single-crystal silicon carbide films on silicon carbide wafers  
[NASA-CASE-LEW-15223-1] c 76 N91-26967

## MATRICES (CIRCUITS)

- Solar cell submodule Patent  
[NASA-CASE-XNP-05821] c 03 N71-11056
- Magnetic matrix memory system Patent  
[NASA-CASE-XMF-05835] c 08 N71-12504
- Solar cell matrix Patent  
[NASA-CASE-NPO-10821] c 03 N71-19545
- Drive circuit utilizing two cores Patent  
[NASA-CASE-XNP-01318] c 10 N71-23033
- Serial digital decoder Patent  
[NASA-CASE-NPO-10150] c 08 N71-24650

- Solid state matrices  
[NASA-CASE-NPO-10591] c 03 N72-22041
- Optical shutter switching matrix  
[NASA-CASE-KSC-11392-1] c 74 N90-22383
- High speed magneto-resistive random access memory  
[NASA-CASE-NPO-17954-1-CU] c 60 N93-14704

## MATRICES (MATHEMATICS)

- Method and apparatus for second-rank tensor generation  
[NASA-CASE-NPO-17512-1-CU] c 74 N91-26918
- Neural-network dedicated processor for solving competitive assignment problems  
[NASA-CASE-NPO-17781-1-CU] c 60 N92-17884
- Neural-network dedicated processor for solving competitive assignment problems  
[NASA-CASE-NPO-17781-1-CU] c 60 N93-20116

## MATRIX MATERIALS

- Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-3] c 27 N85-21350
- Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-4] c 27 N85-21351
- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-6] c 25 N85-30039
- Polyarylene ethers with improved properties  
[NASA-CASE-LAR-13555-1] c 23 N86-32526
- Process for the manufacture of seamless metal-clad fiber-reinforced organic matrix composite structures  
[NASA-CASE-LAR-13562-2] c 24 N91-25199
- Poly 1, 2, 4-triazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14440-1] c 23 N92-10066
- Polyimide molding powder, coating, adhesive, and matrix resin  
[NASA-CASE-LAR-14163-1] c 27 N92-33014
- Low toxicity high temperature PMR polyimide  
[NASA-CASE-LAR-14639-1] c 27 N93-14709
- Poly(1,2,4-triazole) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14440-1] c 23 N93-18283
- Imide/arylene ether copolymers containing phosphine oxide groups  
[NASA-CASE-LAR-14925-1] c 27 N93-20567

## MCLEOD GAUGES

- Automatic recording McLeod gauge Patent  
[NASA-CASE-XLE-03280] c 14 N71-23093
- Bakeable McLeod gauge  
[NASA-CASE-XGS-01293-1] c 35 N79-33450

## MEAN SQUARE VALUES

- Electronic precipitator control  
[NASA-CASE-LAR-13273-2] c 33 N90-20320

## MEASURING INSTRUMENTS

- Device for determining the accuracy of the flare on a flared tube  
[NASA-CASE-XKS-03495] c 14 N69-39785
- Angular measurement system Patent  
[NASA-CASE-XMF-00447] c 14 N70-33179
- Two-plane balance Patent  
[NASA-CASE-XAC-00073] c 14 N70-34813
- Parallel motion suspension device Patent  
[NASA-CASE-XNP-01567] c 15 N70-41310
- Vibrating structure displacement measuring instrument Patent  
[NASA-CASE-XLA-03135] c 32 N71-16428
- Inspection gage for boss Patent  
[NASA-CASE-XMF-04966] c 14 N71-17658
- Vapor pressure measuring system and method Patent  
[NASA-CASE-XMS-01618] c 14 N71-20741
- Spherical tank gauge Patent  
[NASA-CASE-XMS-06236] c 14 N71-21007
- Energy absorbing device Patent  
[NASA-CASE-XMF-10040] c 15 N71-22877
- Ablation sensor Patent  
[NASA-CASE-XLA-01791] c 14 N71-22991
- Moment of inertia test fixture Patent  
[NASA-CASE-XGS-01023] c 14 N71-22992
- Electron beam instrument for measuring electric fields Patent  
[NASA-CASE-XMF-10289] c 14 N71-23699
- Floating two force component measuring device Patent  
[NASA-CASE-XAC-04885] c 14 N71-23790
- Internal flare angle gauge Patent  
[NASA-CASE-XMF-04415] c 14 N71-24693
- RC rate generator for slow speed measurement Patent  
[NASA-CASE-XMF-02966] c 10 N71-24863
- Transverse piezoresistance and pinch effect electromechanical transducers Patent  
[NASA-CASE-ERC-10088] c 26 N71-25490
- Layout tool Patent  
[NASA-CASE-FRC-10005] c 15 N71-26145

- Method and apparatus for detecting gross leaks Patent  
[NASA-CASE-ERC-10033] c 14 N71-26672
- Arbitrarily shaped model survey system Patent  
[NASA-CASE-LAR-10098] c 32 N71-26681
- Thickness measuring and injection device Patent  
[NASA-CASE-MFS-20261] c 14 N71-27005
- Resonant infrasonic gauging apparatus  
[NASA-CASE-MSC-11847-1] c 14 N72-11363
- Roll alignment detector  
[NASA-CASE-GSC-10514-1] c 14 N72-20379
- Cosmic dust sensor  
[NASA-CASE-GSC-10503-1] c 14 N72-20381
- Firefly pump-metering system  
[NASA-CASE-GSC-10218-1] c 15 N72-21465
- Capacitive tank gaging apparatus being independent of liquid distribution  
[NASA-CASE-MFS-21629] c 14 N72-22442
- Spherical measurement device  
[NASA-CASE-XLA-06683] c 14 N72-28436
- Altitude measuring system  
[NASA-CASE-ERC-10412-1] c 09 N73-12211
- Flow velocity and directional instrument  
[NASA-CASE-LAR-10855-1] c 14 N73-13415
- Multi axes vibration fixtures  
[NASA-CASE-MFS-20242] c 14 N73-19421
- Material fatigue testing system  
[NASA-CASE-MFS-20673] c 14 N73-20476
- Droplet monitoring probe  
[NASA-CASE-NPO-10985] c 14 N73-20478
- Apparatus and method for measuring the Seebeck coefficient and resistivity of materials  
[NASA-CASE-NPO-11749] c 14 N73-28486
- RF-source resistance meters  
[NASA-CASE-NPO-11291-1] c 14 N73-30388
- Apparatus for absolute pressure measurement  
[NASA-CASE-LAR-10000] c 14 N73-30394
- Holographic thin film analyzer  
[NASA-CASE-MFS-20823-1] c 16 N73-30476
- Three-axis adjustable loading structure  
[NASA-CASE-FRC-10051-1] c 35 N74-13129
- Thin film gauge --- for measuring convective heat transfer rates along test surfaces in wind tunnels  
[NASA-CASE-NPO-10617-1] c 35 N74-22095
- Apparatus and method for processing Korotkov sounds --- for blood pressure measurement  
[NASA-CASE-MSC-13999-1] c 52 N74-26626
- Electric field measuring and display system --- for cloud formations  
[NASA-CASE-KSC-10731-1] c 33 N74-27862
- Device for measuring tensile forces  
[NASA-CASE-MFS-21728-1] c 35 N74-27865
- Measuring probe position recorder  
[NASA-CASE-LAR-10806-1] c 35 N74-32877
- Meter for use in detecting tension in straps having predetermined elastic characteristics  
[NASA-CASE-MFS-22189-1] c 35 N75-19615
- Thrust measurement  
[NASA-CASE-XMS-05731] c 35 N75-29382
- Method and apparatus for measuring web material wound on a reel  
[NASA-CASE-GSC-11902-1] c 38 N77-17495
- Optical instrument employing reticle having preselected visual response pattern formed thereon  
[NASA-CASE-ARC-10976-1] c 74 N77-22950
- Direct reading inductance meter  
[NASA-CASE-NPO-13792-1] c 35 N77-32455
- Ruler for making navigational computations  
[NASA-CASE-XNP-01458] c 04 N78-17031
- Apparatus for handling micron size range particulate material  
[NASA-CASE-NPO-10151] c 37 N78-17386
- Apparatus for measuring a sorbate dispersed in a fluid stream  
[NASA-CASE-ARC-10896-1] c 35 N78-19465
- Condition sensor system and method  
[NASA-CASE-MSC-14805-1] c 54 N78-32720
- Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c 33 N79-10337
- Time domain phase measuring apparatus  
[NASA-CASE-GSC-12228-1] c 33 N79-10338
- Fluid velocity measuring device  
[NASA-CASE-LAR-11729-1] c 34 N79-12359
- Method and apparatus for measuring minority carrier lifetimes and bulk diffusion length in P-N junction solar cells  
[NASA-CASE-NPO-14100-1] c 44 N79-12541
- Lightning current detector  
[NASA-CASE-KSC-11057-1] c 33 N79-14305
- Contour measurement system  
[NASA-CASE-MFS-23726-1] c 43 N79-26439
- Borehole geological assessment  
[NASA-CASE-NPO-14231-1] c 46 N80-10709
- Displacement probes with self-contained exciting medium  
[NASA-CASE-LAR-11690-1] c 35 N80-14371

- Viscosity measuring instrument  
[NASA-CASE-NPO-14501-1] c 35 N80-18357
- Geological assessment probe  
[NASA-CASE-NPO-14558-1] c 46 N80-24906
- Method and automated apparatus for detecting coliform organisms  
[NASA-CASE-MSC-16777-1] c 51 N80-27067
- Skin friction measuring device for aircraft  
[NASA-CASE-FRC-11029-1] c 06 N81-17057
- Faraday rotation measurement method and apparatus  
[NASA-CASE-NPO-14839-1] c 35 N82-15381
- Lightning discharge identification system  
[NASA-CASE-KSC-11099-1] c 47 N82-24779
- Flow resistivity instrument  
[NASA-CASE-LAR-13053-1] c 43 N83-29783
- Non-invasive method and apparatus for measuring pressure within a pliable vessel  
[NASA-CASE-ARC-11264-2] c 52 N83-29991
- Visual accommodation trainer-tester  
[NASA-CASE-ARC-11426-1] c 09 N84-12193
- Electronic scanning pressure measuring system and transducer package  
[NASA-CASE-ARC-11361-1] c 35 N84-22934
- Apparatus for measuring charged particle beam  
[NASA-CASE-MFS-25641-1] c 72 N84-28575
- Self-charging metering and dispensing device for fluids  
[NASA-CASE-MSC-20275-1] c 35 N85-21595
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71-NPO-15494-2] c 35 N85-34373
- Temperature averaging thermal probe  
[NASA-CASE-GSC-12795-1] c 35 N86-19580
- Cylindrical surface profile and diameter measuring tool and method  
[NASA-CASE-MFS-28287-1] c 35 N88-23959
- Electrostatic discharge test apparatus  
[NASA-CASE-MSC-21094-1] c 35 N88-24941
- Ice detector  
[NASA-CASE-LAR-13776-1] c 35 N88-29149
- Liquid thickness gauge  
[NASA-CASE-LAR-13826-1] c 35 N88-29150
- Universal precision sine bar attachment  
[NASA-CASE-MFS-28253-1] c 37 N89-28831
- Skin friction balance  
[NASA-CASE-LAR-13710-1] c 35 N90-17117
- Dual cathode system for electron beam instruments  
[NASA-CASE-NPO-16678-1-CU] c 35 N90-20351
- Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-1-NP] c 52 N90-21519
- Tank gauging apparatus and method  
[NASA-CASE-MSC-21059-2] c 35 N91-15511
- Tank gauging apparatus and method  
[NASA-CASE-MSC-21059-3] c 35 N91-21495
- Plug-type heat flux gauge  
[NASA-CASE-LEW-14967-1] c 35 N91-31608
- Method of producing a plug-type heat flux gauge  
[NASA-CASE-LEW-14967-2] c 35 N92-22038
- Method and apparatus for determination of material residual stress  
[NASA-CASE-GSC-13451-1] c 39 N92-23549
- Compensated high temperature strain gage  
[NASA-CASE-LAR-14776-1] c 35 N93-12205
- Reflection type skin friction meter  
[NASA-CASE-LAR-14520-1-SB] c 02 N93-18275
- Method and apparatus for determination of material residual stress  
[NASA-CASE-GSC-13451-1] c 39 N93-20118
- Method of measuring cross-flow vortices by use of an array of hot-film sensors  
[NASA-CASE-LAR-14824-1-SB] c 34 N93-26000
- Constant frequency pulsed phase-locked loop measuring device  
[NASA-CASE-LAR-13823-1] c 35 N93-29084
- Method of continuously determining crack length  
[NASA-CASE-LAR-14480-1-CU] c 39 N93-29612
- MECHANICAL DEVICES**
- Mechanical coordinate converter Patent  
[NASA-CASE-XNP-00614] c 14 N70-36907
- Load cell protection device Patent  
[NASA-CASE-XMS-06782] c 32 N71-15974
- Satellite despin device Patent  
[NASA-CASE-XMF-08523] c 31 N71-20396
- Two force component measuring device Patent  
[NASA-CASE-XAC-04886-1] c 14 N71-20439
- Latching mechanism Patent  
[NASA-CASE-XMS-03745] c 15 N71-21076
- Stirring apparatus for plural test tubes Patent  
[NASA-CASE-XAC-06956] c 15 N71-21177
- Random function tracer Patent  
[NASA-CASE-XLA-01401] c 15 N71-21179
- Canister closing device Patent  
[NASA-CASE-XLA-01446] c 15 N71-21528
- Nonmagnetic, explosive actuated indexing device Patent  
[NASA-CASE-XGS-02422] c 15 N71-21529
- Central spar and module joint Patent  
[NASA-CASE-XNP-02341] c 15 N71-21531
- Controllers Patent  
[NASA-CASE-XMS-07487] c 15 N71-23255
- Alloys for bearings Patent  
[NASA-CASE-XLE-05033] c 15 N71-23810
- Mechanical actuator Patent  
[NASA-CASE-XGS-04548] c 15 N71-24045
- Winch having cable position and load indicators Patent  
[NASA-CASE-MSC-12052-1] c 15 N71-24599
- Redundant actuating mechanism Patent  
[NASA-CASE-XGS-08718] c 15 N71-24600
- Shock tube powder dispersing apparatus Patent  
[NASA-CASE-XLE-04946] c 17 N71-24911
- Self-lubricating gears and other mechanical parts Patent  
[NASA-CASE-MFS-14971] c 15 N71-24984
- Layout tool Patent  
[NASA-CASE-FRC-10005] c 15 N71-26145
- Thermostatic actuator  
[NASA-CASE-NPO-10637] c 15 N72-12409
- Ball screw linear actuator  
[NASA-CASE-NPO-11222] c 15 N72-25456
- Spherical measurement device  
[NASA-CASE-XLA-06683] c 14 N72-28436
- Thermal compensating structural member  
[NASA-CASE-MFS-20433] c 15 N72-28496
- Spiral groove seal  
[NASA-CASE-XLE-10326-2] c 15 N72-29488
- Solar energy powered heliotrope  
[NASA-CASE-GSC-10945-1] c 21 N72-31637
- Adjustable force probe  
[NASA-CASE-MFS-20760] c 14 N72-33377
- Rotary actuator  
[NASA-CASE-NPO-10680] c 31 N73-14855
- Collapsible structure for an antenna reflector  
[NASA-CASE-NPO-11751] c 07 N73-24176
- Foot pedal operated fluid type exercising device  
[NASA-CASE-MSC-11561-1] c 05 N73-32014
- Exposure interlock for oscilloscope cameras  
[NASA-CASE-LAR-10319-1] c 14 N73-32322
- Reefing system  
[NASA-CASE-LAR-10129-2] c 37 N74-20063
- Sprag solenoid brake --- development and operations of electrically controlled brake  
[NASA-CASE-MFS-21846-1] c 37 N74-26976
- Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c 44 N74-33379
- Automatic inoculating apparatus --- includes movable carriage, drive motor, and swabbing motor  
[NASA-CASE-LAR-11074-1] c 51 N75-13502
- Clock setter  
[NASA-CASE-LAR-11458-1] c 35 N76-16392
- Apparatus for positioning modular components on a vertical or overhead surface  
[NASA-CASE-LAR-11465-1] c 37 N76-21554
- Reel safety brake  
[NASA-CASE-GSC-11960-1] c 37 N77-14479
- Mechanical sequencer  
[NASA-CASE-MSC-19536-1] c 37 N77-22482
- Combined docking and grasping device  
[NASA-CASE-MFS-23088-1] c 37 N77-23483
- Wrist joint assembly  
[NASA-CASE-MFS-23311-1] c 54 N78-17676
- Tetherline system for orbiting satellites  
[NASA-CASE-MFS-23564-1] c 15 N78-25119
- Actuator mechanism  
[NASA-CASE-GSC-11883-2] c 37 N78-31426
- Quartz ball valve  
[NASA-CASE-NPO-14473-1] c 37 N80-23654
- Method and apparatus for holding two separate metal pieces together for welding  
[NASA-CASE-GSC-12318-1] c 37 N80-23655
- Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c 26 N80-28492
- Fire extinguishing apparatus having a slidable mass for a penetrator nozzle --- for penetrating aircraft and shuttle orbiter skin  
[NASA-CASE-KSC-11064-1] c 31 N81-14137
- Device for coupling a first vehicle to a second vehicle  
[NASA-CASE-GSC-12429-1] c 37 N81-14320
- Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c 52 N81-25661
- Reusable captive blind fastener  
[NASA-CASE-MSC-18742-1] c 37 N82-26673
- Mechanical end joint system for structural column elements  
[NASA-CASE-LAR-12482-1] c 37 N82-32732
- Compression test apparatus  
[NASA-CASE-MSC-18723-1] c 35 N83-21312
- Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MSC-18791-1] c 37 N83-36482
- Clamp-mount device  
[NASA-CASE-MFS-25510-1] c 37 N84-16560
- Method and apparatus for gripping uniaxial fibrous composite materials  
[NASA-CASE-LEW-13758-1] c 24 N84-27829
- Extended moment arm anti-spin device  
[NASA-CASE-LAR-12979-1] c 05 N85-21147
- Connection system --- insuring against loss of a tool component without using multiple tethers  
[NASA-CASE-MSC-20319-1] c 37 N85-21649
- Self indexing latch system  
[NASA-CASE-MFS-25956-1] c 37 N87-21333
- Apparatus for mounting a field emission cathode  
[NASA-CASE-LEW-14108-1] c 33 N87-28832
- Orbital debris sweeper and method  
[NASA-CASE-MSC-21534-1] c 18 N91-21222
- Alignment positioning mechanism  
[NASA-CASE-MSC-21502-1] c 37 N91-21543
- Helix translation device --- shim for precision displacements  
[NASA-CASE-GSC-13141-1] c 37 N92-23548
- Payload retention device  
[NASA-CASE-MSC-21906-1] c 37 N92-28727
- Device for applying constant pressure to a surface  
[NASA-CASE-GSC-13230-1] c 37 N92-28754
- Portable seat lift  
[NASA-CASE-MFS-28610-1] c 54 N93-17045
- Integral fill yarn insertion and beatup method using inflatable membrane  
[NASA-CASE-LAR-14046-1] c 31 N93-18857
- An apparatus for gripping test specimens  
[NASA-CASE-LEW-15345-2] c 37 N93-28127
- Service equipment for use in hostile environments  
[NASA-CASE-LEW-14906-2] c 37 N93-31314
- MECHANICAL DRIVES**
- Hydraulic drive mechanism Patent  
[NASA-CASE-XMS-03252] c 15 N71-10658
- Anti-backlash circuit for hydraulic drive system Patent  
[NASA-CASE-XNP-01020] c 03 N71-12260
- Precision stepping drive Patent  
[NASA-CASE-MFS-14772] c 15 N71-17692
- Incremental motion drive system Patent  
[NASA-CASE-XNP-08897] c 15 N71-17694
- Ratchet mechanism Patent  
[NASA-CASE-MFS-12805] c 15 N71-17805
- Welding skate with computerized control Patent  
[NASA-CASE-XMF-07069] c 15 N71-23815
- Reversible motion drive system Patent  
[NASA-CASE-NPO-10173] c 15 N71-24696
- Synchronous dc direct drive system Patent  
[NASA-CASE-GSC-10065-1] c 10 N71-27136
- Energy absorption device Patent  
[NASA-CASE-XNP-01848] c 15 N71-28959
- Boring bar drive mechanism Patent  
[NASA-CASE-XLA-03661] c 15 N71-33518
- Rotary actuator  
[NASA-CASE-NPO-10244] c 15 N72-26371
- Rotary actuator  
[NASA-CASE-NPO-10680] c 31 N73-14855
- Optically actuated two position mechanical mover  
[NASA-CASE-NPO-13105-1] c 37 N74-21060
- Two speed drive system --- mechanical device for changing speed on rotating vehicle wheel  
[NASA-CASE-MFS-20645-1] c 37 N74-23070
- Concentric differential gearing arrangement  
[NASA-CASE-ARC-10462-1] c 37 N74-27901
- Geneva mechanism --- including star wheel and driver  
[NASA-CASE-NPO-13281-1] c 37 N75-13266
- Mechanical thermal motor  
[NASA-CASE-MFS-23062-1] c 37 N77-12402
- Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking  
[NASA-CASE-MFS-23267-1] c 35 N77-20401
- Hydraulic drain means for servo-systems  
[NASA-CASE-NPO-10316-1] c 37 N77-22479
- Mechanical sequencer  
[NASA-CASE-MSC-19536-1] c 37 N77-22482
- Gas turbine engine with convertible accessories  
[NASA-CASE-LEW-12390-1] c 07 N78-17056
- Wobble gear drive mechanism --- for aerospace environments  
[NASA-CASE-WOO-00625] c 37 N78-17385
- Toggle mechanism for pinching metal tubes  
[NASA-CASE-GSC-12274-1] c 37 N79-28550
- Antenna deployment mechanism for use with a spacecraft --- extensible and retractable telescopic antenna mast  
[NASA-CASE-GSC-12331-1] c 18 N80-14183
- Redundant motor drive system  
[NASA-CASE-MFS-23777-1] c 37 N80-32716



- Belt for transmitting power from a cogged driving member to a cogged driven member  
[NASA-CASE-GSC-12289-1] c 37 N80-32717
- Base drive for paralleled inverter systems  
[NASA-CASE-NPO-14163-1] c 33 N81-14220
- Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion  
[NASA-CASE-NPO-14170-1] c 37 N81-15364
- Clutchless multiple drive source for output shaft  
[NASA-CASE-ARC-11325-1] c 37 N82-22496
- Electrical rotary joint apparatus for large space structures  
[NASA-CASE-MFS-23981-1] c 07 N83-20944
- Variable speed drive  
[NASA-CASE-GSC-12643-1] c 37 N83-26078
- Remotely operable peristaltic pump  
[NASA-CASE-MFS-28059-1] c 37 N86-32738
- Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N87-21332
- Mobile remote manipulator vehicle system  
[NASA-CASE-LAR-13393-1] c 54 N87-29118
- Bidirectional drive and brake mechanism  
[NASA-CASE-MSC-21540-1] c 37 N91-32514
- Mechanized fluid connector and assembly tool system with ball detents  
[NASA-CASE-MSC-21434-1] c 37 N92-10197
- Magnetostrictive roller drive motor  
[NASA-CASE-GSC-13369-1] c 33 N92-15331
- Retractable tool bit having latch type catch mechanism  
[NASA-CASE-GSC-13359-1] c 37 N92-23378
- Linear mass actuator  
[NASA-CASE-LAR-14352-1] c 37 N92-34173
- Retractable tool bit having slider type catch mechanism  
[NASA-CASE-GSC-13358-1] c 37 N93-14710
- MECHANICAL ENGINEERING**
- Manual actuator --- for spacecraft exercising machines  
[NASA-CASE-MFS-21481-1] c 37 N74-18127
- Shaft seal assembly for high speed and high pressure applications  
[NASA-CASE-LEW-11873-1] c 37 N79-22475
- MECHANICAL MEASUREMENT**
- Strain gage Patent Application  
[NASA-CASE-FRC-10053] c 14 N70-35587
- Apparatus for absorbing and measuring power Patent  
[NASA-CASE-XLE-00720] c 14 N70-40201
- Strain sensor for high temperatures Patent  
[NASA-CASE-XNP-09205] c 14 N71-17657
- Extensometer Patent  
[NASA-CASE-XMF-04680] c 15 N71-19489
- Hall effect transducer  
[NASA-CASE-LAR-10620-1] c 09 N72-25255
- Strain gage mounting assembly  
[NASA-CASE-NPO-13170-1] c 35 N76-14430
- Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c 39 N81-25400
- Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c 52 N82-22875
- Apparatus for checking threaded hole perpendicularity  
[NASA-CASE-LEW-15444-1] c 35 N93-14840
- MECHANICAL PROPERTIES**
- High temperature testing apparatus Patent  
[NASA-CASE-XLE-00335] c 14 N70-35368
- Fluoroether modified epoxy composites  
[NASA-CASE-ARC-11418-1] c 24 N84-11213
- Process for improving mechanical properties of epoxy resins by addition of cobalt ions  
[NASA-CASE-LAR-13230-1] c 24 N84-34571
- Elastomer toughened polyimide adhesives --- bonding metal and composite material structures for aircraft and spacecraft  
[NASA-CASE-LAR-12775-2] c 27 N85-21349
- Containerless high purity pulling process and apparatus for glass fiber  
[NASA-CASE-MFS-25905-2] c 31 N86-21718
- Polyarylene ethers with improved properties  
[NASA-CASE-LAR-13555-1] c 23 N86-32526
- Polyphenylquinoxalines containing alkylendioxy groups  
[NASA-CASE-LAR-13601-1-CU] c 27 N89-14337
- Acetylene terminated aspartimides and resins therefrom  
[NASA-CASE-LAR-14188-1] c 27 N90-23545
- A tough performance simultaneous semi-interpenetrating polymer network  
[NASA-CASE-LAR-14339-1] c 27 N90-26955
- Silicon containing electroconductive polymers and structures made therefrom  
[NASA-CASE-NPO-17826-1-CU] c 27 N92-16121
- MECHANICS (PHYSICS)**
- Gravity stabilized flying vehicle Patent  
[NASA-CASE-MSC-12111-1] c 02 N71-11039

**MECHANIZATION**

- Machine for use in monitoring fatigue life for a plurality of elastomeric specimens  
[NASA-CASE-NPO-13731-1] c 39 N78-10493

**MEDICAL ELECTRONICS**

- Circuit for detecting initial systole and diastolic notch --- for monitoring arterial pressure  
[NASA-CASE-LEW-11581-1] c 54 N75-13531
- Pocket ECG electrode  
[NASA-CASE-ARC-11258-1] c 52 N80-33081
- Subcutaneous electrode structure  
[NASA-CASE-ARC-11117-1] c 52 N81-14612

**MEDICAL EQUIPMENT**

- Biomedical electrode arrangement Patent  
[NASA-CASE-XFR-10856] c 05 N71-11189
- Method and system for respiration analysis Patent  
[NASA-CASE-XFR-08403] c 05 N71-11202
- Laser machining apparatus Patent  
[NASA-CASE-HQN-10541-2] c 15 N71-27135
- Telemetry actuated switch  
[NASA-CASE-ARC-10105] c 09 N72-17153
- Tilting table for ergometer and for other biomedical devices  
[NASA-CASE-MFS-21010-1] c 05 N73-30078
- Automatic instrument for chemical processing to detect microorganism in biological samples by measuring light reactions  
[NASA-CASE-GSC-11169-2] c 05 N73-32011
- Servo-controlled intravital microscope system  
[NASA-CASE-NPO-13214-1] c 35 N75-25123
- Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c 54 N75-27761
- Medical subject monitoring systems --- multichannel monitoring systems  
[NASA-CASE-MSC-14180-1] c 52 N76-14757
- Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-1] c 54 N76-22914
- Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c 35 N76-24525
- Corneal seal device  
[NASA-CASE-LEW-12258-1] c 52 N77-28716
- Snap-in compressible biomedical electrode  
[NASA-CASE-MSC-14623-1] c 52 N77-28717
- Tissue macerating instrument  
[NASA-CASE-LEW-12668-1] c 52 N78-14773
- Flow compensating pressure regulator  
[NASA-CASE-LEW-12718-1] c 34 N78-25351
- Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12723-1] c 52 N80-18690
- Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c 51 N81-14605
- Urine collection device  
[NASA-CASE-MSC-16433-1] c 52 N81-24711
- Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c 52 N81-25662
- Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c 52 N82-22875
- Acoustic tooth cleaner  
[NASA-CASE-LAR-12471-1] c 52 N82-29862
- Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-1] c 52 N83-21785
- System and method for moving a probe to follow movements of tissue  
[NASA-CASE-NPO-15197-1] c 52 N83-25346
- Medical clip  
[NASA-CASE-LAR-12650-1] c 52 N84-28388
- Process of making medical clip  
[NASA-CASE-LAR-12650-2] c 52 N84-28389
- Drop foot corrective device  
[NASA-CASE-LAR-12259-2] c 54 N86-22112
- Method and apparatus for characterizing reflected ultrasonic pulses  
[NASA-CASE-LAR-13966-1] c 71 N91-27914
- Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-2] c 52 N92-11621
- MEDICAL SCIENCE**
- Tissue simulating gel for medical research  
[NASA-CASE-LAR-14036-1] c 27 N91-13562
- Prosthetic helping hand  
[NASA-CASE-MFS-28430-1] c 54 N92-24044
- MELTING**
- Hot melt recharge system --- repairing damaged or missing tiles on space shuttle orbiter  
[NASA-CASE-LAR-12881-1] c 27 N84-14323
- Hot melt adhesive attachment pad  
[NASA-CASE-LAR-12894-1] c 27 N85-20125
- Method of preparing radially homogeneous mercury cadmium telluride crystals  
[NASA-CASE-MFS-25786-2] c 76 N90-20896
- Pressure rig for repetitive casting  
[NASA-CASE-LAR-14050-1] c 31 N90-21216

**MELTING POINTS**

- Mixed diamines for lower melting addition polyimide preparation and utilization  
[NASA-CASE-LAR-12054-1] c 27 N79-33316
- Low thrust monopropellant engine  
[NASA-CASE-GSC-12194-2] c 20 N82-18314
- MELTS (CRYSTAL GROWTH)**
- Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c 76 N79-23798
- Preparation of monotelect alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
[NASA-CASE-MFS-23816-1] c 26 N80-23419
- Means for growing ribbon crystals without subjecting the crystals to thermal shock-induced strains  
[NASA-CASE-NPO-14298-1] c 76 N80-32244
- Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c 33 N81-19389
- Electromigration process for the purification of molten silicon during crystal growth  
[NASA-CASE-NPO-14831-1] c 76 N82-30105
- Controlled in situ etch-back  
[NASA-CASE-NPO-15625-1] c 76 N83-20789
- Apparatus and method for heating a material in a transparent ampoule --- crystal growth  
[NASA-CASE-MFS-25436-1] c 27 N83-36220
- Process and apparatus for growing a crystal ribbon  
[NASA-CASE-NPO-15629-1] c 76 N84-35113
- Containerless high purity pulling process and apparatus for glass fiber  
[NASA-CASE-MFS-25905-2] c 31 N86-21718
- High-temperature, high-pressure optical cell  
[NASA-CASE-MFS-26000-1] c 74 N87-14971
- Total immersion crystal growth  
[NASA-CASE-NPO-15800-2] c 76 N87-23286
- Ribbon growing method and apparatus  
[NASA-CASE-NPO-16306-1-CU] c 76 N91-15898
- Device for mechanically stabilizing web ribbon buttons during growth initiation  
[NASA-CASE-NPO-17074-2-CU] c 76 N92-21499
- MEMBRANE STRUCTURES**
- Liquid junction and method of fabricating the same Patent Application  
[NASA-CASE-NPO-10682] c 15 N70-34699
- Measuring device Patent  
[NASA-CASE-XMS-01546] c 14 N70-40233
- Flexible composite membrane Patent  
[NASA-CASE-XNP-08837] c 18 N71-16210
- Fluid impervious barrier including liquid metal alloy and method of making same Patent  
[NASA-CASE-XNP-08881] c 17 N71-28747
- Meteoroid capture cell construction  
[NASA-CASE-MSC-12423-1] c 91 N76-30131
- Strong thin membrane structure --- solar sails  
[NASA-CASE-NPO-14021-2] c 27 N80-16163
- In-situ cross linking of polyvinyl alcohol --- application to battery separator films  
[NASA-CASE-LEW-13135-2] c 27 N81-24257
- Separator for alkaline batteries and method of making same  
[NASA-CASE-GSC-10350-1] c 44 N82-24642
- Separator for alkaline electric batteries and method of making  
[NASA-CASE-GSC-10018-1] c 44 N82-24644
- High temperature fiber optic microphone having a pressure-sensing reflective membrane under tensile stress  
[NASA-CASE-LAR-14402-1-CU] c 74 N92-33017
- MEMBRANES**
- Apparatus for measuring swelling characteristics of membranes  
[NASA-CASE-XGS-03865] c 14 N69-21363
- Mixture separation cell Patent  
[NASA-CASE-XMS-02952] c 18 N71-20742
- Ionene membrane separator  
[NASA-CASE-NPO-11091] c 18 N72-22567
- Dual membrane hollow fiber fuel cell and method of operating same  
[NASA-CASE-NPO-13732-1] c 44 N79-10513
- Microelectrophoretic apparatus and process  
[NASA-CASE-ARC-11121-1] c 25 N79-14169
- Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NPO-14101-1] c 52 N80-14687
- Reverse osmosis membrane of high urea rejection properties --- water purification  
[NASA-CASE-ARC-10980-1] c 27 N80-23452
- Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c 27 N81-14076
- Air removal device --- life support systems  
[NASA-CASE-XLA-08914-2] c 25 N82-21269

- Process of treating cellulosic membrane and alkaline with membrane separator  
[NASA-CASE-GSC-10019-1] c 44 N82-24641
- Aqueous alkali metal hydroxide insoluble cellulose ether membrane  
[NASA-CASE-XGS-05584-1] c 25 N82-29370
- Optical fiber tactile sensor  
[NASA-CASE-NPO-15375-1] c 74 N84-11921
- Method for the preparation of thin-skinned asymmetric reverse osmosis membranes and products thereof  
[NASA-CASE-ARC-11359-1] c 51 N84-28361
- Method of forming dynamic membrane on stainless steel support  
[NASA-CASE-MS-C-18172-3] c 31 N88-29052
- Adjustable steam producing flexible orifice independent of fluid pressure  
[NASA-CASE-NPO-17625-1-CU] c 34 N92-21724
- A method for making biocompatible polymer articles using atomic oxygen  
[NASA-CASE-MS-C-21529-1] c 27 N92-30100
- MEMORY**  
Method for making conductors for ferrite memory arrays --- from pre-formed metal conductors  
[NASA-CASE-LAR-10994-1] c 24 N75-13032
- Thermocouple for heating and cooling of memory metal actuators  
[NASA-CASE-NPO-17068-1-CU] c 35 N88-29151
- MEMORY (COMPUTERS)**  
Automatic multi-banking of memory for microprocessors  
[NASA-CASE-NPO-15295-1] c 60 N85-21992
- Real-time garbage collection for list processing  
[NASA-CASE-MS-C-20964-1] c 60 N87-14863
- Hybrid analog-digital associative neural network  
[NASA-CASE-NPO-17058-1-CU] c 62 N87-25803
- Solid state electrical switch employing materials with reversible phase transistors  
[NASA-CASE-NPO-17621-1-CU] c 33 N90-17010
- Method of up-front load balancing for local memory parallel processors  
[NASA-CASE-MS-C-21348-1] c 62 N91-14769
- Asymmetric soft-error resistant memory  
[NASA-CASE-NPO-17394-1-CU] c 60 N91-31810
- Optoelectronic associative memory  
[NASA-CASE-NPO-18278-1-CU] c 74 N91-32925
- Integrated, non-volatile, high-speed analog random access memory  
[NASA-CASE-NPO-17998-1-CU] c 60 N92-12438
- Analog hardware for delta-backpropagation neural networks  
[NASA-CASE-NPO-17564-1-CU] c 32 N92-22033
- Optical inner product neural associative memory  
[NASA-CASE-NPO-18491-1-CU] c 60 N92-23546
- System for simultaneously loading program to master computer memory devices and corresponding slave computer memory devices  
[NASA-CASE-MS-C-21387-1] c 61 N93-18855
- MENTAL PERFORMANCE**  
General method of pattern classification using the two-domain theory  
[NASA-CASE-MS-C-21737-1] c 61 N91-13911
- MERCURY (METAL)**  
Mercury capillary interrupter Patent  
[NASA-CASE-XNP-02251] c 12 N71-20896
- Method of forming ceramic to metal seal Patent  
[NASA-CASE-XNP-01263-2] c 15 N71-26312
- Feed system for an ion thruster  
[NASA-CASE-NPO-10737] c 28 N72-11709
- MERCURY CADMIUM TELLURIDES**  
Method of preparing radially homogeneous mercury cadmium telluride crystals  
[NASA-CASE-MFS-25786-2] c 76 N90-20896
- MERCURY VAPOR**  
Mercury capillary interrupter Patent  
[NASA-CASE-XNP-02251] c 12 N71-20896
- Rotating shaft seal Patent  
[NASA-CASE-XNP-02862-1] c 15 N71-26294
- MESSAGE PROCESSING**  
Method for Viterbi decoding of large constraint length convolutional codes  
[NASA-CASE-NPO-17310-1-CU] c 17 N88-28946
- MESSAGES**  
Synchronous parallel system for emulation and discrete event simulation  
[NASA-CASE-NPO-18414-1-CU] c 62 N92-24045
- METABOLIC WASTES**  
Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c 54 N78-32721
- Method and automated apparatus for detecting coliform organisms  
[NASA-CASE-MS-C-16777-1] c 51 N80-27067
- METABOLISM**  
Automated analysis of oxidative metabolites  
[NASA-CASE-ARC-10469-1] c 25 N75-12086
- Process for control of cell division  
[NASA-CASE-LAR-10773-3] c 51 N77-25769
- Metabolic rate meter and method  
[NASA-CASE-MS-C-12239-1] c 52 N79-21750
- Kinetic tetrazolium microtiter assay  
[NASA-CASE-MS-C-21979-1] c 51 N93-17049
- METAL BONDING**  
Bonding thermoelectric elements to nonmagnetic refractory metal electrodes  
[NASA-CASE-XGS-04554] c 15 N69-39786
- Method of making a diffusion bonded refractory coating Patent  
[NASA-CASE-XLE-01604-2] c 15 N71-15610
- Metal valve pintle with encapsulated elastomeric body Patent  
[NASA-CASE-MS-C-12116-1] c 15 N71-17648
- Apparatus for the determination of the existence or non-existence of a bonding between two members Patent  
[NASA-CASE-MFS-13686] c 15 N71-18132
- Soldering with solder flux which leaves corrosion resistant coating Patent  
[NASA-CASE-XNP-03459] c 15 N71-21078
- Bonded elastomeric seal for electrochemical cells Patent  
[NASA-CASE-XGS-02631] c 03 N71-23006
- Silicon solar cell with cover glass bonded to cell by metal pattern Patent  
[NASA-CASE-XLE-08569] c 03 N71-23449
- Positive contact resistance soldering unit  
[NASA-CASE-KSC-10242] c 15 N72-23497
- Bonding or repairing process  
[NASA-CASE-MS-C-12357] c 15 N73-12489
- Totally confined explosive welding --- apparatus to reduce noise level and protect personnel during explosive bonding  
[NASA-CASE-LAR-10941-1] c 37 N74-21057
- Ultrasonically bonded valve assembly  
[NASA-CASE-NPO-13360-1] c 37 N75-25185
- Bimetallic junctions  
[NASA-CASE-LEW-11573-1] c 26 N77-28265
- Heat exchanger and method of making --- bonding rocket chambers with a porous metal matrix  
[NASA-CASE-LEW-12441-1] c 34 N79-13289
- Totally confined explosive welding  
[NASA-CASE-LAR-10941-2] c 37 N79-13364
- Method and apparatus for holding two separate metal pieces together for welding  
[NASA-CASE-GSC-12318-1] c 37 N80-23655
- Heat exchanger and method of making --- rocket lining  
[NASA-CASE-LEW-12441-2] c 34 N80-24573
- Aluminum ion-containing polyimide adhesives  
[NASA-CASE-LAR-12640-1] c 27 N82-11206
- Thermal barrier coating system having improved adhesion  
[NASA-CASE-LEW-1335901] c 27 N83-31855
- Impacting device for testing insulation  
[NASA-CASE-MFS-25862-2] c 37 N84-33807
- Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N86-32550
- Composite piston  
[NASA-CASE-LAR-13435-1] c 37 N88-23981
- Apparatus and method for explosive bonding to edge of flyer plate  
[NASA-CASE-LAR-14096-1] c 31 N91-31476
- Process for bonding elastomers to metals  
[NASA-CASE-LAR-13645-1] c 27 N93-25995
- METAL COATINGS**  
Method of joining aluminum to stainless steel Patent  
[NASA-CASE-MFS-07369] c 15 N71-20443
- Soldering with solder flux which leaves corrosion resistant coating Patent  
[NASA-CASE-XNP-03459] c 15 N71-21078
- Thermal control coating Patent  
[NASA-CASE-XLA-01995] c 18 N71-23047
- Trialkyl-dihalotantalum and niobium compounds Patent  
[NASA-CASE-XNP-04023] c 06 N71-28808
- Silicide coatings for refractory metals Patent  
[NASA-CASE-XLE-10910] c 18 N71-29040
- Selective nickel deposition  
[NASA-CASE-LEW-10965-1] c 15 N72-25452
- Wide temperature range electronic device with lead attachment  
[NASA-CASE-ERC-10224-2] c 09 N73-27150
- Panel for selectively absorbing solar thermal energy and the method of producing said panel  
[NASA-CASE-MFS-22562-1] c 44 N76-14595
- Ultraviolet light reflective coating  
[NASA-CASE-GSC-11786-1] c 24 N76-24363
- Metallic hot wire anemometer --- for high speed wind tunnel tests  
[NASA-CASE-ARC-10911-1] c 35 N77-20400
- Solar cell collector  
[NASA-CASE-LEW-12552-1] c 44 N78-25527
- Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOO-00428-1] c 32 N79-19186
- Electrodes for solid state devices  
[NASA-CASE-NPO-15161-1] c 33 N84-16456
- Corrosion resistant coating  
[NASA-CASE-NPO-15928-1] c 26 N85-29005
- Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N86-32550
- Nickel base coating alloy  
[NASA-CASE-LEW-13834-1] c 26 N87-14482
- Method for forming hermetic seals  
[NASA-CASE-NPO-16423-1-CU] c 37 N87-21334
- Metallic seal for thermal barrier coating systems  
[NASA-CASE-LEW-15020-1] c 27 N91-15412
- Ceramic coatings on smooth surfaces  
[NASA-CASE-LEW-15164-1] c 27 N91-25298
- METAL COMPOUNDS**  
Phthalocyanine polymers  
[NASA-CASE-ARC-11413-1] c 27 N85-21348
- METAL CUTTING**  
Metal shearing energy absorber  
[NASA-CASE-HQN-10638-1] c 15 N73-30460
- Vee-notching device --- with adjustable carriage  
[NASA-CASE-MFS-20730-1] c 39 N74-13131
- Hole cutter --- drill bits and rotating shaft  
[NASA-CASE-MFS-22649-1] c 37 N75-25186
- Method and tool for machining a transverse slot about a bore  
[NASA-CASE-LAR-11855-1] c 37 N81-14319
- METAL FATIGUE**  
Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c 24 N81-26179
- Directional solidification of superalloys  
[NASA-CASE-MFS-28314-1] c 26 N91-14462
- High speed thin plate fatigue crack monitor  
[NASA-CASE-LAR-14816-1-SB] c 39 N93-19329
- METAL FIBERS**  
Lightweight electrically-powered flexible thermal laminate --- made of metal and nonconductive yarns  
[NASA-CASE-MS-C-12662-1] c 33 N79-12331
- METAL FILMS**  
Means and methods of depositing thin films on substrates Patent  
[NASA-CASE-XNP-00595] c 15 N70-34967
- Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-01765] c 18 N71-10772
- Bismuth-lead coatings for gas bearings used in atmospheric environments and vacuum chambers Patent  
[NASA-CASE-XGS-02011] c 15 N71-20739
- Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-10337] c 15 N71-24046
- Magnetic recording head and method of making same Patent  
[NASA-CASE-GSC-10097-1] c 08 N71-27210
- Light regulator  
[NASA-CASE-LAR-10836-1] c 26 N72-27784
- Deposition of alloy films --- on irregularly shaped metal object  
[NASA-CASE-LEW-11262-1] c 27 N74-13270
- Multitarget sequential sputtering apparatus  
[NASA-CASE-NPO-13345-1] c 37 N75-19684
- Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c 37 N78-13436
- Thin film strain transducer  
[NASA-CASE-WLP-10055-1] c 35 N84-28015
- Fire blocking systems for aircraft seat cushions  
[NASA-CASE-ARC-11423-1] c 03 N84-33394
- Glass heating panels and method for preparing the same from architectural reflective glass  
[NASA-CASE-NPO-15753-1] c 27 N84-33589
- Method for forming hermetic seals  
[NASA-CASE-NPO-16423-1-CU] c 37 N87-21334
- Composite flexible blanket insulation  
[NASA-CASE-ARC-11907-1-NP] c 24 N91-31236
- Method of intercalating large quantities of fibrous structures  
[NASA-CASE-LEW-15077-1] c 24 N92-16025
- Fabrication of nanometer single crystal metallic CoSi<sub>2</sub> structures on Si  
[NASA-CASE-NPO-17736-2-CU] c 24 N92-18561
- Method of forming a multiple layer dielectric and a hot film sensor therewith  
[NASA-CASE-LAR-13678-3] c 35 N93-14714
- METAL FINISHING**  
Selective plating of etched circuits without removing previous plating Patent  
[NASA-CASE-XGS-03120] c 15 N71-24047
- Surface finishing --- for aircraft wings  
[NASA-CASE-MS-C-12631-1] c 24 N77-28225
- METAL FLUORIDES**  
Method of making carbide/fluoride/silver composites  
[NASA-CASE-LEW-14902-1] c 24 N91-27244

## METAL FOILS

- Folding apparatus Patent  
[NASA-CASE-XLA-00137] c 15 N70-33180
- Thermal control of space vehicles Patent  
[NASA-CASE-XLA-01291] c 33 N70-36617
- Thermal radiation shielding Patent  
[NASA-CASE-XLE-03432] c 33 N71-24145
- Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils  
[NASA-CASE-GSC-11367-1] c 44 N74-19692
- Method and apparatus for tensile testing of metal foil  
[NASA-CASE-LAR-10208-1] c 35 N76-18400
- Hot foil transducer skin friction sensor  
[NASA-CASE-LAR-12321-1] c 35 N82-24470
- High temperature insulation barrier composite  
[NASA-CASE-MFS-29241-1] c 24 N90-23480
- Composite flexible blanket insulation  
[NASA-CASE-ARC-11907-1-NP] c 24 N91-31236
- Performance of blasting caps  
[NASA-CASE-LAR-13832-1] c 28 N93-18274

## METAL FUELS

- Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c 28 N74-33209

## METAL HALIDES

- Process for making anhydrous metal halides  
[NASA-CASE-LEW-11860-1] c 37 N76-18458
- Direct current ballast circuit for metal halide lamp  
[NASA-CASE-MSC-18407-1] c 33 N82-24427
- High power metallic halide laser --- amplifying a copper chloride laser  
[NASA-CASE-NPO-14782-1] c 36 N82-28616
- Method and apparatus for convection control of metallic halide vapor density in a metallic halide laser  
[NASA-CASE-NPO-15021-1] c 36 N83-10417
- Metal chloride cathode for a battery  
[NASA-CASE-NPO-17809-1-CU] c 33 N91-27478

## METAL HYDRIDES

- Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c 37 N78-13436

## METAL IONS

- Metal containing polymers from cyclic tetrameric phenylphosphonitrimides Patent  
[NASA-CASE-HQN-10364] c 06 N71-27363
- Aluminum ion-containing polyimide adhesives  
[NASA-CASE-LAR-12640-1] c 27 N82-11206
- Process for improving mechanical properties of epoxy resins by addition of cobalt ions  
[NASA-CASE-LAR-13230-1] c 24 N84-34571
- A process for preparing an assembly of an article and a soluble polyimide which resists dimensional change, delamination, and debonding when exposed to changes in temperature  
[NASA-CASE-LAR-14763-1] c 27 N92-12121
- Ion exchange polymers and method for making  
[NASA-CASE-LEW-15576-1] c 27 N93-31316

## METAL JOINTS

- Cryogenic connector for vacuum use Patent  
[NASA-CASE-XGS-02441] c 15 N70-41629
- Mechanical bonding of metal method  
[NASA-CASE-LEW-12941-1] c 26 N83-10170
- X-ray determination of parts alignment  
[NASA-CASE-MSC-20418-1] c 74 N86-20126

## METAL MATRIX COMPOSITES

- Reinforced metallic composites Patent  
[NASA-CASE-XLE-02428] c 17 N70-33288
- Process for producing dispersion strengthened nickel with aluminum Patent  
[NASA-CASE-XLE-06969] c 17 N71-24142
- Self-lubricating gears and other mechanical parts Patent  
[NASA-CASE-MFS-14971] c 15 N71-24984
- Refractory metal base alloy composites  
[NASA-CASE-XLE-03940-2] c 17 N72-28536
- Method of preparing graphite reinforced aluminum composite  
[NASA-CASE-MFS-21077-1] c 24 N75-28135
- Method of making reinforced composite structure  
[NASA-CASE-LEW-12619-1] c 24 N77-19171
- Heat exchanger and method of making --- bonding rocket chambers with a porous metal matrix  
[NASA-CASE-LEW-12441-1] c 34 N79-13289
- Preparation of monotectic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
[NASA-CASE-MFS-23816-1] c 26 N80-23419
- Heat exchanger and method of making --- rocket lining  
[NASA-CASE-LEW-12441-2] c 34 N80-24573
- Method for alleviating thermal stress damage in laminates --- metal matrix composites  
[NASA-CASE-LEW-12493-1] c 24 N81-17170
- Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c 24 N81-26179

Fuselage structure using advanced technology fiber reinforced composites

- [NASA-CASE-LAR-11688-1] c 24 N82-26384
- Metal matrix composite structural panel construction  
[NASA-CASE-LAR-12807-1] c 24 N84-11214
- Arc spray fabrication of metal matrix composite monolayer  
[NASA-CASE-LEW-13828-1] c 24 N85-30027
- Oxidation resistant coating for titanium alloys and titanium alloy matrix composites  
[NASA-CASE-LEW-15155-1] c 27 N92-29090

## METAL OXIDE SEMICONDUCTORS

- Gyrator employing field effect transistors  
[NASA-CASE-MFS-21433] c 09 N73-20232
- Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential of field effect device  
[NASA-CASE-GSC-11425-1] c 76 N75-25730
- Integrated P-channel MOS gyrator  
[NASA-CASE-MFS-22343-1] c 33 N74-34638
- Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential  
[NASA-CASE-GSC-11425-2] c 76 N75-25730
- Solar cell collector  
[NASA-CASE-LEW-12552-1] c 44 N78-25527
- Multilevel metallization method for fabricating a metal oxide semiconductor device  
[NASA-CASE-MFS-23541-1] c 76 N79-14906
- Method of making V-MOS field effect transistors utilizing a two-step anisotropic etching and ion implantation  
[NASA-CASE-GSC-12515-1] c 33 N81-26360
- Schottky barrier solar cell  
[NASA-CASE-NPO-13689-2] c 44 N81-29525
- High voltage v-groove solar cell  
[NASA-CASE-LEW-13401-2] c 44 N83-32177
- GaAs Schottky barrier photo-responsive device and method of fabrication  
[NASA-CASE-GSC-12816-1] c 76 N86-20150
- Integrated photo-responsive metal oxide semiconductor circuit  
[NASA-CASE-GSC-12782-1] c 33 N88-14271
- Method and apparatus for determining time, direction, and composition of impacting space particles  
[NASA-CASE-LAR-13392-1-CU] c 19 N91-14412
- Nonvolatile programmable neural network synaptic array  
[NASA-CASE-NPO-18578-1-CU] c 33 N92-30086

## METAL OXIDES

- Process for producing dispersion strengthened nickel with aluminum Patent  
[NASA-CASE-XLE-06969] c 17 N71-24142
- Photoetching of metal-oxide layers  
[NASA-CASE-ERC-10108] c 06 N72-21094
- Production of metal powders  
[NASA-CASE-XLE-06461] c 17 N72-22530
- Method for obtaining oxygen from lunar or similar soil  
[NASA-CASE-MSC-12408-1] c 46 N74-13011
- Method for depositing an oxide coating  
[NASA-CASE-LEW-13131-1] c 44 N83-10494
- Method of forming oxide coatings --- for solar collector heating panels  
[NASA-CASE-LEW-13132-1] c 27 N83-29388
- Absorbable-susceptor joining of ceramic surfaces  
[NASA-CASE-NPO-15640-1] c 27 N84-22748
- Thermal barrier coating system  
[NASA-CASE-LEW-13324-2] c 24 N85-21266
- Apparatus for producing oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-2] c 27 N86-32569
- Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N87-23736
- Epitaxial heterojunctions of oxide semiconductors and metals on high temperature superconductors  
[NASA-CASE-NPO-18483-1-CU] c 76 N93-15151

## METAL PARTICLES

- Slug flow magnetohydrodynamic generator  
[NASA-CASE-XLE-02083] c 03 N69-39983
- Method of making a cermet Patent  
[NASA-CASE-LEW-10219-1] c 18 N71-28729
- Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c 28 N74-33209

## METAL PLATES

- Detector panels-micrometeoroid impact Patent  
[NASA-CASE-XLA-05906] c 31 N71-16221
- Nuclear fuel elements  
[NASA-CASE-XLE-00209] c 22 N73-32528
- Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
[NASA-CASE-MSC-14182-1] c 27 N76-14264
- Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c 26 N80-28492
- Multicolor printing plate joining  
[NASA-CASE-LEW-13598-1] c 35 N84-22930
- High effectiveness contour matching contact heat exchanger  
[NASA-CASE-MSC-20840-1] c 34 N88-29132

Apparatus and method for explosive bonding to edge of flyer plate

- [NASA-CASE-LAR-14096-1] c 31 N91-31476
- High speed thin plate fatigue crack monitor  
[NASA-CASE-LAR-14816-1-SB] c 39 N93-19329

## METAL POWDER

- Method of producing refractory bodies having controlled porosity Patent  
[NASA-CASE-LEW-10393-1] c 17 N71-15468
- Sealing member and combination thereof and method of producing said sealing member Patent  
[NASA-CASE-XMS-01625] c 15 N71-23022
- Shock tube powder dispersing apparatus Patent  
[NASA-CASE-XLE-04946] c 17 N71-24911
- Preparation of high purity copper fluoride  
[NASA-CASE-LEW-10794-1] c 06 N72-17093
- Production of metal powders  
[NASA-CASE-XLE-06461] c 17 N72-22530
- Apparatus for producing metal powders  
[NASA-CASE-XLE-06461-2] c 17 N72-28535
- Peen plating  
[NASA-CASE-GSC-11163-1] c 15 N73-32360
- Electrodes for solid state devices  
[NASA-CASE-NPO-15161-1] c 33 N84-16456

## METAL SHEETS

- Light shield and infrared reflector for fatigue testing Patent  
[NASA-CASE-XLA-Q1782] c 14 N71-26136
- Method of making pressure tight seal for super alloy  
[NASA-CASE-LAR-10170-1] c 37 N74-11301
- Method of making an explosively welded scarf joint  
[NASA-CASE-LAR-11211-1] c 37 N75-12326
- Process for making sheets with parallel pores of uniform size  
[NASA-CASE-GSC-10984-1] c 37 N75-26371
- Apparatus for welding sheet material --- butt joints  
[NASA-CASE-XMS-01330] c 37 N75-27376
- Method of bonding plasticized elastomer to metal and articles produced thereby  
[NASA-CASE-MFS-25181-1] c 27 N82-24340
- Curved cap corrugated sheet  
[NASA-CASE-LAR-12884-1] c 18 N84-33450

## METAL SHELLS

- Shell tile thermal protection system  
[NASA-CASE-LAR-12862-1] c 27 N84-27886

## METAL SPINNING

- Spin forming tubular elbows Patent  
[NASA-CASE-XMF-01083] c 15 N71-22723

## METAL SPRAYING

- Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N86-32550

## METAL STRIPS

- Formed metal ribbon wrap Patent  
[NASA-CASE-XLE-00164] c 15 N70-36411
- Interconnection of solar cells Patent  
[NASA-CASE-XGS-01475] c 03 N71-11058
- Method of making tubes Patent  
[NASA-CASE-XGS-04175] c 15 N71-18579
- High speed shutter --- electrically actuated ribbon loop for shuttering optical or fluid passageways  
[NASA-CASE-ARC-10516-1] c 70 N74-21300
- Method for maintaining precise suction strip porosities  
[NASA-CASE-LAR-13638-1] c 31 N90-19427
- High temperature solder device for flat cables  
[NASA-CASE-GSC-13344-1] c 26 N92-29094

## METAL SURFACES

- Condenser - Separator  
[NASA-CASE-XLA-08645] c 15 N69-21465
- Plating nickel on aluminum castings Patent  
[NASA-CASE-XNP-04148] c 17 N71-24830
- Process for applying black coating to metals Patent  
[NASA-CASE-XLA-06199] c 15 N71-24875
- Process for reducing secondary electron emission Patent  
[NASA-CASE-XNP-09469] c 24 N71-25555
- Method of forming ceramic to metal seal Patent  
[NASA-CASE-XNP-01263-2] c 15 N71-26312
- Temperature reducing coating for metals subject to flame exposure Patent  
[NASA-CASE-XLE-00035] c 33 N71-29151
- Thin film gauge --- for measuring convective heat transfer rates along test surfaces in wind tunnels  
[NASA-CASE-NPO-10617-1] c 35 N74-22095
- Surface finishing  
[NASA-CASE-MSC-12631-3] c 27 N81-14077
- Improved refractory coatings --- sputtered coatings on substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c 26 N81-16209
- Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c 37 N81-19455
- Corrosion resistant thermal barrier coating --- protecting gas turbines and other engine parts  
[NASA-CASE-LEW-13088-1] c 26 N81-25188
- Coating with overlay metallic-cermet alloy systems  
[NASA-CASE-LEW-13639-2] c 26 N84-27855

- Method for forming hermetic seals  
[NASA-CASE-NPO-16423-1-CU] c 37 N87-21334
- Ion-beam nitriding of steels  
[NASA-CASE-LEW-14104-2] c 26 N88-14179
- Arc-textured high emittance radiator surfaces  
[NASA-CASE-LEW-14679-1] c 27 N91-25296
- Ceramic coatings on smooth surfaces  
[NASA-CASE-LEW-15164-1] c 27 N91-25298
- Metal etching composition  
[NASA-CASE-MFS-29576-1] c 25 N92-25399
- Process for bonding elastomers to metals  
[NASA-CASE-LAR-13645-1] c 27 N93-25995
- METAL VAPOR LASERS**  
High power metallic halide laser --- amplifying a copper chloride laser  
[NASA-CASE-NPO-14782-1] c 36 N82-28616
- Method and apparatus for convection control of metallic halide vapor density in a metallic halide laser  
[NASA-CASE-NPO-15021-1] c 36 N83-10417
- METAL VAPORS**  
Slug flow magnetohydrodynamic generator  
[NASA-CASE-XLE-02083] c 03 N69-39983
- Apparatus for making a metal slurry product Patent  
[NASA-CASE-XLE-00010] c 15 N70-33382
- Inert gas metallic vapor laser  
[NASA-CASE-NPO-13449-1] c 36 N75-32441
- Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c 36 N77-26477
- AMTEC vapor-vapor series connected cells  
[NASA-CASE-NPO-18667-1-CU] c 33 N93-19330
- METAL WORKING**  
Electric arc welding Patent  
[NASA-CASE-XMF-00392] c 15 N70-34814
- Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114] c 15 N71-17650
- Protective device for machine and metalworking tools Patent  
[NASA-CASE-XLE-01092] c 15 N71-22797
- Portable milling tool Patent  
[NASA-CASE-XMF-03511] c 15 N71-22799
- Extrusion die for refractory metals Patent  
[NASA-CASE-XLE-06773] c 15 N71-23817
- Magnetomotive metal working device Patent  
[NASA-CASE-XMF-03793] c 15 N71-24833
- Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-3] c 15 N71-24865
- Insert facing tool --- manually operated cutting tool for forming studs in honeycomb material  
[NASA-CASE-MFS-21485-1] c 37 N74-25968
- Apparatus for forming dished ion thruster grids  
[NASA-CASE-LEW-11694-2] c 37 N76-14461
- Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c 37 N84-12491
- METAL-METAL BONDING**  
Method of joining aluminum to stainless steel Patent  
[NASA-CASE-MFS-07369] c 15 N71-20443
- Honeycomb panel and method of making same Patent  
[NASA-CASE-XMF-01402] c 18 N71-21651
- Capillary flow weld-bonding  
[NASA-CASE-LAR-11726-1] c 37 N76-27568
- Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c 37 N81-19455
- Mechanical bonding of metal method  
[NASA-CASE-LEW-12941-1] c 26 N83-10170
- Joining lead wires to thin platinum alloy films  
[NASA-CASE-LEW-13934-1] c 35 N83-35338
- METALLIC GLASSES**  
Glass compositions with a high modulus of elasticity --- nontoxic glass fibers  
[NASA-CASE-HQN-10274-1] c 27 N82-29451
- High modulus invert analog glass compositions containing beryllia  
[NASA-CASE-HQN-10931-2] c 27 N82-29452
- METALLIZING**  
Multilevel metallization method for fabricating a metal oxide semiconductor device  
[NASA-CASE-MFS-23541-1] c 76 N79-14906
- Overlay metallic-cermet alloy coating systems  
[NASA-CASE-LEW-13639-1] c 26 N84-33555
- Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N86-32550
- Thin solar cell and lightweight array  
[NASA-CASE-LEW-14959-1] c 44 N91-27614
- Thermal treatment of silicon integrated circuit chips to prevent and heal voids in aluminum metallization  
[NASA-CASE-NPO-17678-1-CU] c 76 N91-28014
- Hybridization of detector array and integrated circuit for readout  
[NASA-CASE-NPO-18062-1-CU] c 33 N92-30542
- High energy and high power density ultracapacitors and supercapacitors  
[NASA-CASE-NPO-18568-1-CU] c 33 N93-17274
- METALLOGRAPHY**  
Method for etching copper Patent  
[NASA-CASE-XGS-06306] c 17 N71-16044
- METALLOSILOXANE POLYMER**  
Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids  
[NASA-CASE-MFS-22411-1] c 37 N74-21058
- METALLURGY**  
Induction furnace with perforated tungsten foil shielding Patent  
[NASA-CASE-XLE-04026] c 14 N71-23267
- Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c 26 N80-14229
- METALS**  
Transpiration cooled turbine blade manufactured from wires Patent  
[NASA-CASE-XLE-00020] c 15 N70-33226
- Self-lubricating fluoride metal composite materials Patent  
[NASA-CASE-XLE-08511] c 18 N71-23710
- Convoluting device for forming convolutions and the like Patent  
[NASA-CASE-XNP-05297] c 15 N71-23811
- Forming tool for ribbon or wire  
[NASA-CASE-XLA-05966] c 15 N72-12408
- Peen plating  
[NASA-CASE-GSC-11163-1] c 15 N73-32360
- Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c 37 N74-21063
- Scanning nozzle plating system --- for etching or plating metals on substrates without masking  
[NASA-CASE-NPO-11758-1] c 31 N74-23065
- Production of pure metals  
[NASA-CASE-LEW-10906-1] c 25 N74-30502
- Thermocouple tape --- developed from thermoelectrically different metals  
[NASA-CASE-LEW-11072-2] c 35 N76-15434
- Method of forming shrink-fit compression seal  
[NASA-CASE-LAR-11563-1] c 37 N77-23482
- Solar cells having integral collector grids  
[NASA-CASE-LEW-12819-1] c 44 N79-11467
- Metal phthalocyanine polymers  
[NASA-CASE-ARC-11405-1] c 27 N84-27884
- Insulation bonding test system  
[NASA-CASE-MFS-25862-1] c 27 N85-20126
- Device and method for frictionally testing materials for ignitability  
[NASA-CASE-MSC-20622-1] c 25 N86-19413
- Metal phthalocyanine intermediates for the preparation of polymers  
[NASA-CASE-ARC-11405-2] c 27 N86-19455
- Method and apparatus for rebalancing a REDOX flow cell system  
[NASA-CASE-LEW-14127-1] c 33 N86-20680
- Thermocouple for heating and cooling of memory metal actuators  
[NASA-CASE-NPO-17068-1-CU] c 35 N88-29151
- Metal etching composition  
[NASA-CASE-MFS-29576-1] c 25 N92-25399
- Guanidine based vehicle/binders for use with oxides, metals, and ceramics  
[NASA-CASE-LEW-15314-2] c 27 N93-28423
- METASTABLE STATE**  
Stabilization of He2(a 3 Sigma u+ molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c 72 N79-13826
- Modulated voltage metastable ionization detector  
[NASA-CASE-ARC-11503-1] c 35 N85-34374
- METEORITE COLLISIONS**  
Pressurized panel  
[NASA-CASE-XLA-08916-2] c 14 N73-28487
- Method of and device for determining the characteristics and flux distribution of micrometeorites --- scanning puncture holes in sheet material with photoelectric cell  
[NASA-CASE-NPO-12127-1] c 91 N74-13130
- METEORITES**  
Method of making pressurized panel Patent  
[NASA-CASE-XLA-08916] c 15 N71-29018
- METEORITIC DAMAGE**  
Meteoroid sensing apparatus having a coincidence network connected to a pair of capacitors Patent  
[NASA-CASE-XLE-01246] c 14 N71-10797
- METEOROID HAZARDS**  
Meteoroid impact position locator aid for manned space station  
[NASA-CASE-LAR-10629-1] c 35 N75-33367
- METEOROID PROTECTION**  
Aerodynamic protection for space flight vehicles Patent  
[NASA-CASE-XNP-02507] c 31 N71-17679
- Ablative shielding for hypervelocity projectiles  
[NASA-CASE-MSC-21884-1] c 27 N93-29088
- METEOROIDS**  
Apparatus for photographing meteors  
[NASA-CASE-LAR-10226-1] c 14 N73-19419
- Meteoroid capture cell construction  
[NASA-CASE-MSC-12423-1] c 91 N76-30131
- Thermally isolated deployable shield for spacecraft  
[NASA-CASE-MFS-28524-1] c 18 N91-25167
- METEOROLOGICAL BALLOONS**  
Meteorological balloon Patent  
[NASA-CASE-XMF-04163] c 02 N71-23007
- METHANE**  
Gas lubricant compositions Patent  
[NASA-CASE-XLE-00353] c 18 N70-39897
- Portable remote laser sensor for methane leak detection  
[NASA-CASE-NPO-15790-1] c 36 N85-21631
- Bis(4-(3,4-dimethylenepyrrolidyl)-phenyl) methane  
[NASA-CASE-LAR-13965-1-CU] c 23 N90-21118
- METHYL ALCOHOL**  
Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NPO-15767-1] c 23 N84-16255
- METHYL COMPOUNDS**  
Process for producing tris (n-methylamino) methylsilane  
[NASA-CASE-MFS-25721-1] c 25 N85-21280
- Polymer of phosphonylmethyl-2,4- and -2,6-diamino benzene and polyfunctional monomer  
[NASA-CASE-ARC-11506-2] c 23 N86-32525
- The 1-(diorganooxyphosphonyl)-methyl-2,4- and -2,6-diamido benzenes  
[NASA-CASE-ARC-11425-4] c 23 N90-20133
- Some 1-(diorganooxyphosphonyl)methyl-2,4- and -2,6-dinitro-benzenes  
[NASA-CASE-ARC-11425-3] c 23 N90-23475
- Methyl substituted polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-14351-1] c 27 N92-33015
- METHYLENE**  
Carboranymethylene-substituted phosphazenes and polymers thereof  
[NASA-CASE-ARC-11370-1] c 27 N84-22750
- Process for crosslinking methylene-containing aromatic polymers with ionizing radiation  
[NASA-CASE-LAR-13448-1] c 27 N90-21198
- METRIC SPACE**  
General method of pattern classification using the two-domain theory  
[NASA-CASE-MSC-21737-1] c 61 N91-13911
- MICHELSON INTERFEROMETERS**  
Interferometer direction sensor Patent  
[NASA-CASE-NPO-10320] c 14 N71-17655
- Interferometer servo system Patent  
[NASA-CASE-NPO-10300] c 14 N71-17662
- Multispectral imaging system  
[NASA-CASE-MSC-12404-1] c 23 N73-13661
- Interferometer mirror tilt correcting system  
[NASA-CASE-NPO-13687-1] c 35 N78-18391
- MICROANALYSIS**  
Plural output optometric sample cell and analysis system  
[NASA-CASE-NPO-10233-1] c 74 N78-33913
- MICROBALANCES**  
Null-type vacuum microbalance Patent  
[NASA-CASE-XAC-00472] c 15 N70-40180
- Microbalance --- for measuring particle mass  
[NASA-CASE-MSC-11242] c 35 N78-17358
- MICROBALLOONS**  
Method of forming frozen spheres in a force-free drop tower  
[NASA-CASE-NPO-14845-1] c 27 N82-28442
- Method and apparatus for producing microspheres  
[NASA-CASE-NPO-16635-1-CU] c 31 N91-32240
- MICROBIOLOGY**  
Variable angle tube holder  
[NASA-CASE-LAR-10507-1] c 11 N72-25284
- Apparatus for microbiological sampling --- including automatic swabbing  
[NASA-CASE-LAR-11069-1] c 35 N75-12272
- Automatic inoculating apparatus --- includes movable carriage, drive motor, and swabbing motor  
[NASA-CASE-LAR-11074-1] c 51 N75-13502
- Automatic microbial transfer device  
[NASA-CASE-LAR-11354-1] c 35 N75-27330
- Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c 51 N77-22794
- Electrochemical detection device --- for use in microbiology  
[NASA-CASE-LAR-11922-1] c 25 N79-24073
- Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c 51 N81-28698
- Kinetic tetrazolium microtiter assay  
[NASA-CASE-MSC-21979-1] c 51 N93-17049
- MICROCHANNELS**  
Low intensity X-ray and gamma-ray spectrometer  
[NASA-CASE-GSC-12587-1] c 35 N82-32659

## MICROCRACKS

- System for detecting substructure microfractures and method therefore  
 [NASA-CASE-NPO-14192-1] c 39 N80-10507  
 Laser surface fusion of plasma sprayed ceramic turbine seals  
 [NASA-CASE-LEW-13269-1] c 18 N83-20996  
 Semi-interpenetrating polymer network for tougher and more microcracking resistant high temperature polymers  
 [NASA-CASE-LAR-13925-2] c 27 N93-11059  
 Method and apparatus for evaluating multilayer objects for imperfections  
 [NASA-CASE-LAR-14581-1-SB] c 38 N93-12204  
 A tough high performance composite matrix  
 [NASA-CASE-LAR-14338-1] c 24 N93-13416
- MICROELECTRONICS**  
 Apparatus and method for separating a semiconductor wafer Patent  
 [NASA-CASE-ERC-10138] c 26 N71-14354  
 Vibrophonocardiograph Patent  
 [NASA-CASE-XFR-07172] c 05 N71-27234  
 Microelectronic module package Patent  
 [NASA-CASE-XMS-02182] c 10 N71-28783  
 Method of coating through-holes Patent  
 [NASA-CASE-XMF-05999] c 15 N71-29032  
 Microcircuit negative cutter  
 [NASA-CASE-XLA-09843] c 15 N72-27485  
 Screened circuit capacitors  
 [NASA-CASE-LAR-10294-1] c 26 N72-28762  
 Active tuned circuit  
 [NASA-CASE-GSC-11340-1] c 10 N72-33230  
 Automatic visual inspection system for microelectronics  
 [NASA-CASE-NPO-13282] c 38 N78-17396  
 Method and apparatus for fabricating improved solar cell modules  
 [NASA-CASE-NPO-14416-1] c 44 N81-14389  
 Method of making a high voltage V-groove solar cell  
 [NASA-CASE-LEW-13401-1] c 44 N82-29709  
 Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
 [NASA-CASE-MFS-15670-1] c 33 N82-33634  
 Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
 [NASA-CASE-MFS-256704-1] c 33 N84-22884  
 Method for anisotropic etching in the manufacture of semiconductor devices  
 [NASA-CASE-MSC-21631-1] c 75 N91-32947
- MICROFIBERS**  
 Small conductive particle sensor --- microfiber size determination  
 [NASA-CASE-LAR-12552-1] c 35 N82-11431
- MICROFILMS**  
 Apparatus for inspecting microfilm Patent  
 [NASA-CASE-MFS-20240] c 14 N71-26788
- MICROGRAVITY**  
 Reduced gravity liquid configuration simulator  
 [NASA-CASE-XLE-02624] c 12 N69-39988  
 Mass measuring system Patent  
 [NASA-CASE-XMS-03371] c 05 N70-42000  
 Reduced gravity simulator Patent  
 [NASA-CASE-XLA-01787] c 11 N71-16028  
 Restraint system for ergometer  
 [NASA-CASE-MFS-21046-1] c 14 N73-27377  
 Method of forming frozen spheres in a force-free drop tower  
 [NASA-CASE-NPO-14845-1] c 27 N82-28442  
 Spray applicator for spraying coatings and other fluids in space  
 [NASA-CASE-MSC-18852-1] c 37 N85-29283  
 Improved method and apparatus for waste collection and storage  
 [NASA-CASE-MSC-21025-1] c 31 N87-25495  
 Gas particle radiator  
 [NASA-CASE-LEW-14297-1] c 35 N89-12048  
 Don/doff support stand for use with rear entry space suits  
 [NASA-CASE-MSC-21364-1] c 54 N89-13889  
 Apparatus for mixing solutions in low gravity environments  
 [NASA-CASE-MFS-26047-1] c 29 N90-21209  
 Acoustic convective system  
 [NASA-CASE-NPO-17278-1-CU] c 31 N90-21215  
 Acoustic transducer apparatus with reduced thermal conduction  
 [NASA-CASE-NPO-17620-1-CU] c 71 N91-14808  
 Tank gauging apparatus and method  
 [NASA-CASE-MSC-21059-2] c 35 N91-15511  
 Spiral vane bioreactor  
 [NASA-CASE-MSC-21361-1] c 51 N91-21701  
 Sample positioning in microgravity  
 [NASA-CASE-NPO-18448-1-CU] c 29 N92-30083  
 Hollow fiber clinostat for simulating microgravity in cell culture  
 [NASA-CASE-MFS-28370-1] c 35 N92-31790

- Three-dimensional cell to tissue assembly process  
 [NASA-CASE-MSC-21559-1] c 51 N92-34231  
 Crystal growth in a microgravity environment  
 [NASA-CASE-MFS-28473-1] c 76 N93-14707  
 Passive zero-gravity leg restraint  
 [NASA-CASE-ARC-11882-1-CU] c 54 N93-14713  
 Sample positioning in microgravity  
 [NASA-CASE-NPO-18448-1-CU] c 29 N92-24600
- MICROGRAVITY APPLICATIONS**  
 Spiral vane bioreactor  
 [NASA-CASE-MSC-21361-1] c 51 N91-21701  
 Cooling apparatus and couplings therefor  
 [NASA-CASE-ARC-11921-1] c 34 N92-11286  
 Macromolecular crystal growing system  
 [NASA-CASE-MFS-26088-1-CU] c 76 N92-25398  
 Protein crystal growth tray assembly  
 [NASA-CASE-MFS-28507-1] c 76 N92-34171
- MICROINSTRUMENTATION**  
 Apparatus for handling micron size range particulate material  
 [NASA-CASE-NPO-10151] c 37 N78-17386
- MICROMETEORITES**  
 Method of and device for determining the characteristics and flux distribution of micrometeorites --- scanning puncture holes in sheet material with photoelectric cell  
 [NASA-CASE-NPO-12127-1] c 91 N74-13130  
 Micrometeoroid velocity and trajectory analyzer  
 [NASA-CASE-GSC-11892-1] c 35 N76-15433
- MICROMETEORITIDS**  
 Micrometeoroid velocity measuring device Patent  
 [NASA-CASE-XLA-00495] c 14 N70-14332  
 Force transducer Patent  
 [NASA-CASE-XAC-01101] c 14 N70-41957  
 Pressurized cell micrometeoroid detector Patent  
 [NASA-CASE-XLA-00936] c 14 N71-14996  
 Detector panels-micrometeoroid impact Patent  
 [NASA-CASE-XLA-05906] c 31 N71-16221  
 Rotary bead dropper and selector for testing micrometeorite detectors Patent  
 [NASA-CASE-XGS-03304] c 09 N71-22988  
 Micrometeoroid penetration measuring device Patent  
 [NASA-CASE-XLA-00941] c 14 N71-23240  
 Fabric for micrometeoroid protection garment Patent  
 [NASA-CASE-MSC-12109] c 18 N71-26285  
 Micrometeoroid analyzer  
 [NASA-CASE-ARC-10443-1] c 14 N73-20477  
 Meteoroid detector  
 [NASA-CASE-LAR-10483-1] c 14 N73-32327  
 Deployable pressurized cell structure for a micrometeoroid detector  
 [NASA-CASE-LAR-10295-1] c 35 N74-21062  
 Semiconductor projectile impact detector  
 [NASA-CASE-MFS-23008-1] c 35 N78-18390
- MICROMETERS**  
 Apparatus for handling micron size range particulate material  
 [NASA-CASE-NPO-10151] c 37 N78-17386
- MICROMINIATURIZATION**  
 Compensating radiometer  
 [NASA-CASE-XLA-04556] c 14 N69-27484
- MICROORGANISMS**  
 Bacteriostatic conformal coating and methods of application Patent  
 [NASA-CASE-GSC-10007] c 18 N71-16046  
 Vacuum probe surface sampler  
 [NASA-CASE-LAR-10623-1] c 14 N73-30395  
 Measurement of gas production of microorganisms --- using pressure sensors  
 [NASA-CASE-LAR-11326-1] c 35 N75-33368  
 Biocontamination and particulate detection system  
 [NASA-CASE-NPO-13953-1] c 35 N79-28527  
 Indirect microbial detection  
 [NASA-CASE-LAR-12520-1] c 51 N81-28698  
 Apparatus and process for microbial detection and enumeration  
 [NASA-CASE-LAR-12709-1] c 35 N82-28604  
 Production of butanol by fermentation in the presence of cocultures of clostridium  
 [NASA-CASE-NPO-16203-1] c 23 N85-35227  
 Biofilm monitoring coupon system and method of use  
 [NASA-CASE-MSC-21585-1] c 51 N91-31755  
 Regenerable biocide delivery unit  
 [NASA-CASE-MSC-21763-1-SB] c 51 N93-18351  
 Process for selectively recovering algae and protozoa  
 [NASA-CASE-MFS-26124-1-NPO] c 51 N93-29174
- MICROPARTICLES**  
 Micropacked column for a chromatographic system  
 [NASA-CASE-XNP-04816] c 06 N69-39936  
 Powder fed sheared dispersal particle generator  
 [NASA-CASE-LAR-12785-1] c 37 N84-16561
- MICROPHONES**  
 Audio signal processor Patent  
 [NASA-CASE-MSC-12223-1] c 07 N71-26181  
 Vibrophonocardiograph Patent  
 [NASA-CASE-XFR-07172] c 05 N71-27234

- Wind tunnel microphone structure Patent  
 [NASA-CASE-XNP-00250] c 11 N71-28779  
 High-temperature microphone system --- for measuring pressure fluctuations in gases at high temperature  
 [NASA-CASE-LAR-12375-1] c 32 N79-24203  
 Adapter for mounting a microphone flush with the external surface of the skin of a pressurized aircraft  
 [NASA-CASE-FRC-11072-1] c 05 N83-27975  
 Carbon granule probe microphone for leak detection --- recovery boilers  
 [NASA-CASE-NPO-16027-1] c 35 N85-21597  
 Measurement of waves in flows across a surface  
 [NASA-CASE-NPO-17479-1-CU] c 34 N91-13658  
 High temperature fiber optic microphone having a pressure-sensing reflective membrane under tensile stress  
 [NASA-CASE-LAR-14402-1-CU] c 74 N92-33017  
 Vacuum-isolation vessel and method for measurement of thermal noise in microphones  
 [NASA-CASE-LAR-14567-1-CU] c 33 N92-33021  
 Fiber optic microphone having a pressure sensing reflective membrane and a voltage source for calibration purpose  
 [NASA-CASE-LAR-14402-2-CU] c 71 N93-24602
- MICROPOROSITY**  
 Microporous structure with layered interstitial surface treatment, and method and apparatus for preparation thereof  
 [NASA-CASE-MSC-21487-1] c 25 N92-33009  
 Method for preparation of a microporous structure with layered interstitial surface treatment  
 [NASA-CASE-MSC-21487-2] c 24 N93-29023
- MICROPROCESSORS**  
 Microcomputerized electric field meter diagnostic and calibration system  
 [NASA-CASE-KSC-11035-1] c 35 N78-28411  
 Automatic multi-banking of memory for microprocessors  
 [NASA-CASE-NPO-15295-1] c 60 N85-21992  
 Predictive sensor method and apparatus  
 [NASA-CASE-SSC-00006-1] c 35 N91-13691  
 Rapidly quantifying the relative distention of a human bladder  
 [NASA-CASE-LAR-13901-2] c 52 N92-11621  
 Microprocessor control of multiple peak power tracking DC/DC converters for use with solar cell arrays  
 [NASA-CASE-GSC-13450-1] c 44 N92-23463
- MICROSCOPES**  
 Absolute focus lock for microscopes  
 [NASA-CASE-LAR-10184] c 14 N72-22445  
 Hand-held photomicroscope  
 [NASA-CASE-ARC-10468-1] c 14 N73-33361  
 Method of examining microcircuit patterns  
 [NASA-CASE-NPO-16299-1] c 33 N87-14594  
 Sample holder support for microscopes  
 [NASA-CASE-MFS-28420-1] c 37 N91-21545  
 Water window imaging x ray microscope  
 [NASA-CASE-MFS-28485-1] c 35 N92-29135
- MICROSTRIP ANTENNAS**  
 Multiple band circularly polarized microstrip antenna  
 [NASA-CASE-MSC-18334-1] c 32 N80-32604  
 Cavity-backed, micro-strip dipole antenna array  
 [NASA-CASE-MSC-18606-1] c 32 N82-11336  
 Parallel and series fed microstrip array with high efficiency and low cross polarization  
 [NASA-CASE-NPO-18678-1-CU] c 32 N93-28422  
 Planar microstrip YAGI antenna array  
 [NASA-CASE-NPO-17873-2-CU] c 32 N93-29507
- MICROSTRIP TRANSMISSION LINES**  
 Thin conformal antenna array for microwave power conversions  
 [NASA-CASE-NPO-13886-1] c 32 N78-24391  
 Cavity-backed, micro-strip dipole antenna array  
 [NASA-CASE-MSC-18606-1] c 32 N82-11336  
 Stripline feed for a microstrip array of patch elements with teardrop shaped probes  
 [NASA-CASE-NPO-17548-1-CU] c 32 N90-16104  
 Parallel and series fed microstrip array with high efficiency and low cross polarization  
 [NASA-CASE-NPO-18678-1-CU] c 32 N93-28422
- MICROSTRUCTURE**  
 Method of producing refractory composites containing tantalum carbide, hafnium carbide, and hafnium boride Patent  
 [NASA-CASE-XLE-03940] c 18 N71-26153  
 Refractory metal base alloy composites  
 [NASA-CASE-XLE-03940-2] c 17 N72-28536  
 Diffusion welding --- heat treatment of nickel alloys following single step vacuum welding process  
 [NASA-CASE-LEW-11388-2] c 37 N74-21055  
 Method of determining bond quality of power transistors attached to substrates --- X ray inspection of junction microstructure  
 [NASA-CASE-MFS-21931-1] c 37 N75-26372

- Preparation of monotectic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
[NASA-CASE-MFS-23816-1] c 26 N80-23419
- Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095
- Ion beam sputter etching  
[NASA-CASE-LEW-13899-1] c 31 N87-21160
- High temperature electric arc furnace and method  
[NASA-CASE-MFS-28281-1] c 09 N90-23415
- Solidification processing of alloys using an applied electric field  
[NASA-CASE-MFS-26083-1-CU] c 26 N90-26940
- Variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-2] c 89 N91-14096
- MICROTHRUST**  
Annular slit colloid thruster Patent  
[NASA-CASE-GSC-10709-1] c 28 N71-25213
- Heated porous plug microthruster  
[NASA-CASE-GSC-10640-1] c 28 N72-18766
- MICROWAVE AMPLIFIERS**  
Temperature-compensating means for cavity resonator of amplifier Patent  
[NASA-CASE-XNP-00449] c 14 N70-35220
- Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c 36 N83-35350
- MICROWAVE ANTENNAS**  
Microwave power receiving antenna Patent  
[NASA-CASE-MFS-20333] c 09 N71-13486
- Low noise single aperture multimode monopulse antenna feed system Patent  
[NASA-CASE-XNP-01735] c 07 N71-22750
- Omnidirectional microwave spacecraft antenna Patent  
[NASA-CASE-XLA-03114] c 09 N71-22888
- Validation device for spacecraft checkout equipment Patent  
[NASA-CASE-XKS-10543] c 07 N71-26292
- Multi-purpose antenna employing dish reflector with plural coaxial horn feeds  
[NASA-CASE-NPO-11264] c 07 N72-25174
- Omnidirectional slot antenna for mounting on cylindrical space vehicle  
[NASA-CASE-LAR-10163-1] c 09 N72-25247
- Multiple reflection conical microwave antenna  
[NASA-CASE-NPO-11661] c 07 N73-14130
- Thin conformal antenna array for microwave power conversions  
[NASA-CASE-NPO-13886-1] c 32 N78-24391
- Cavity-backed, micro-strip dipole antenna array  
[NASA-CASE-MSC-18606-1] c 32 N82-11336
- MICROWAVE CIRCUITS**  
Quasi-optical microwave component Patent  
[NASA-CASE-ERC-10011] c 07 N71-29065
- Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MFS-23845-1] c 33 N81-17348
- Laser activated MTOS microwave device  
[NASA-CASE-NPO-16112-1] c 33 N86-19516
- Universal nondestructive mm-wave integrated circuit test fixture  
[NASA-CASE-LEW-14746-1] c 33 N91-14552
- MICROWAVE COUPLING**  
Indexing microwave switch Patent  
[NASA-CASE-XNP-06507] c 09 N71-23548
- Maser cavity servo-tuning system  
[NASA-CASE-NPO-15890-1-CU] c 33 N85-29143
- MICROWAVE EQUIPMENT**  
Array phasing device Patent  
[NASA-CASE-ERC-10046] c 10 N71-18722
- Broadband microwave waveguide window Patent  
[NASA-CASE-XNP-08880] c 09 N71-24808
- Dual frequency microwave reflex feed  
[NASA-CASE-NPO-13091-1] c 09 N73-12214
- Resonant waveguide stark cell --- using microwave spectrometers  
[NASA-CASE-LAR-11352-1] c 33 N75-26245
- Refrigerated coaxial coupling --- for microwave equipment  
[NASA-CASE-NPO-13504-1] c 33 N75-30430
- Microwave dichroic plate  
[NASA-CASE-GSC-12171-1] c 33 N79-28416
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71-NPO-15494-2] c 35 N85-34373
- Three point lead screw positioning apparatus  
[NASA-CASE-LEW-15216-1] c 37 N92-17678
- MICROWAVE FILTERS**  
High power microwave power divider Patent  
[NASA-CASE-NPO-11031] c 07 N71-33606
- High-Q bandpass resonators utilizing bandstop resonator pairs  
[NASA-CASE-GSC-10990-1] c 09 N73-26195
- MICROWAVE FREQUENCIES**  
Varactor high level mixer  
[NASA-CASE-XGS-02171] c 09 N69-24324
- Voltage tunable Gunn-type microwave generator Patent  
[NASA-CASE-XER-07894] c 09 N71-18721
- Composite antenna feed  
[NASA-CASE-GSC-11046-1] c 07 N73-28013
- MICROWAVE OSCILLATORS**  
Magnetically actuated tuning method for Gunn oscillators  
[NASA-CASE-NPO-12106] c 09 N73-15235
- Electron beam controller --- using magnetic field to refocus spent electron beam in microwave oscillator tube  
[NASA-CASE-LEW-11617-1] c 33 N74-10195
- Low noise cryogenic dielectric resonator oscillator  
[NASA-CASE-NPO-17157-1-CU] c 33 N88-26596
- MICROWAVE PROBES**  
Coaxial turnstile junction  
[NASA-CASE-GSC-13422-1] c 33 N92-23462
- MICROWAVE RADIOMETERS**  
Method and means for providing an absolute power measurement capability Patent  
[NASA-CASE-ERC-11020] c 14 N71-26774
- Electromagnetic power absorber  
[NASA-CASE-NPO-13830-1] c 32 N80-14281
- Microwave limb sounder --- measuring trace gases in the upper atmosphere  
[NASA-CASE-NPO-14544-1] c 46 N82-12685
- CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c 06 N83-10040
- System for indicating fuel-efficient aircraft altitude  
[NASA-CASE-NPO-15351-2] c 06 N84-34443
- Microwave temperature profiler for clear air turbulence prediction  
[NASA-CASE-NPO-18115-1-CU] c 47 N92-29148
- Miniature modular microwave end-to-end receiver  
[NASA-CASE-NPO-18713-1-CU] c 32 N93-29087
- MICROWAVE REFLECTOMETERS**  
Reflectometer for receiver input impedance match measurement Patent  
[NASA-CASE-XNP-10843] c 07 N71-11267
- Microwave flaw detector Patent  
[NASA-CASE-ARC-10009-1] c 15 N71-17822
- MICROWAVE RESONANCE**  
Dual resonant cavity absorption cell Patent  
[NASA-CASE-LAR-10305] c 14 N71-26137
- MICROWAVE SCATTERING**  
Almond test body --- for microwave anechoic chambers  
[NASA-CASE-LAR-13747-1-CU] c 32 N89-28672
- MICROWAVE SENSORS**  
Method and apparatus for sensor fusion  
[NASA-CASE-MSC-21334-1] c 32 N91-25317
- MICROWAVE SWITCHING**  
Gyator type circuit Patent  
[NASA-CASE-XAC-10608-1] c 09 N71-12517
- Microwave switching power divider --- antenna feeds  
[NASA-CASE-GSC-12420-1] c 33 N82-16340
- MICROWAVE TRANSMISSION**  
Frequency translating phase conjugation circuit for active retrodirective antenna array --- microwave transmission  
[NASA-CASE-NPO-14536-1] c 32 N81-14185
- Waveguide cooling system  
[NASA-CASE-NPO-15401-1] c 32 N83-27085
- MICROWAVE TUBES**  
Electrostatic collector for charged particles  
[NASA-CASE-LEW-11192-1] c 09 N73-13208
- MICROWAVES**  
Parametric microwave noise generator Patent  
[NASA-CASE-XER-11019] c 09 N71-23598
- Method and apparatus for optical modulating a light signal Patent  
[NASA-CASE-GSC-10216-1] c 23 N71-26722
- Waveguide mixer  
[NASA-CASE-ERC-10179] c 07 N72-20141
- Microwave power transmission system wherein level of transmitted power is controlled by reflections from receiver  
[NASA-CASE-MFS-21470-1] c 44 N74-19870
- Wide power range microwave feedback controller  
[NASA-CASE-GSC-12146-1] c 33 N78-32340
- Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c 33 N80-18287
- Doppler radar having phase modulation of both transmitted and reflected return signals  
[NASA-CASE-MSC-18675-1] c 32 N84-22820
- Beam forming network  
[NASA-CASE-NPO-15743-1] c 32 N85-29118
- Precision tunable resonant microwave cavity  
[NASA-CASE-LEW-13935-1] c 33 N87-21234
- Microwave field effect transistor  
[NASA-CASE-GSC-12442-2] c 33 N90-20282
- Coaxial turnstile junction  
[NASA-CASE-GSC-13422-1] c 33 N92-23462
- Apparatus and method for cellulose processing using microwave pretreatment  
[NASA-CASE-MSC-21936-1-SB] c 25 N93-22036
- MIDAIR COLLISIONS**  
Apparatus for aiding a pilot in avoiding a midair collision between aircraft  
[NASA-CASE-LAR-10717-1] c 21 N73-30641
- MILLIMETER WAVES**  
Millimeter wave antenna system Patent Application  
[NASA-CASE-GSC-10949-1] c 07 N71-28965
- Millimeter wave pumped parametric amplifier  
[NASA-CASE-GSC-11617-1] c 33 N74-32660
- Millimeter-wave monolithic diode-grid frequency multiplier  
[NASA-CASE-NPO-17258-1-CU] c 33 N91-14551
- Universal nondestructive mm-wave integrated circuit test fixture  
[NASA-CASE-LEW-14746-1] c 33 N91-14552
- Whiskerless Schottky diode  
[NASA-CASE-GSC-13063-2-CU] c 33 N92-16197
- Planar varactor frequency multiplier devices with blocking barrier  
[NASA-CASE-NPO-18428-1-CU] c 33 N92-23464
- Monolithic mm-wave phase shifter using optically activated superconducting switches  
[NASA-CASE-LEW-14878-1] c 74 N92-28571
- MILLING (MACHINING)**  
Apparatus for machining geometric cones Patent  
[NASA-CASE-XMS-04292] c 15 N71-22722
- Method and tool for machining a transverse slot about a bore  
[NASA-CASE-LAR-11855-1] c 37 N81-14319
- Method for milling and drilling glass  
[NASA-CASE-GSC-12636-1] c 31 N83-27058
- MILLING MACHINES**  
Electro-optical alignment control system Patent  
[NASA-CASE-XMF-00908] c 14 N70-40238
- Portable milling tool Patent  
[NASA-CASE-XMF-03511] c 15 N71-22799
- Grinding arrangement for ball nose milling cutters  
[NASA-CASE-LAR-10450-1] c 37 N74-27905
- MIMD (COMPUTERS)**  
Special purpose parallel computer architecture for real-time control and simulation in robotic applications  
[NASA-CASE-NPO-17629-1-CU] c 60 N93-29608
- MINERAL DEPOSITS**  
Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c 43 N81-26509
- MINERAL METABOLISM**  
Method and system for in vivo measurement of bone tissue using a two level energy source  
[NASA-CASE-MSC-14276-1] c 52 N77-14737
- MINERALS**  
Active synthetic soil  
[NASA-CASE-MSC-21954-1-NP] c 51 N93-19054
- MINES (EXCAVATIONS)**  
Mining volume measurement system  
[NASA-CASE-LAR-13519-1] c 35 N88-23963
- MINIATURE ELECTRONIC EQUIPMENT**  
Miniature stress transducer Patent  
[NASA-CASE-XNP-02983] c 14 N71-21091
- Transducer circuit and catheter transducer Patent  
[NASA-CASE-ARC-10132-1] c 09 N71-24597
- Solid state television camera system Patent  
[NASA-CASE-XMF-06092] c 07 N71-24612
- Miniature ingestible telemeter devices to measure deep-body temperature  
[NASA-CASE-ARC-10583-1] c 52 N76-29894
- Miniature biaxial strain transducer  
[NASA-CASE-LAR-11648-1] c 35 N77-14407
- Miniature electrooptical air flow sensor  
[NASA-CASE-LAR-13065-1] c 35 N85-20295
- MINIATURIZATION**  
Miniature vibration isolator Patent  
[NASA-CASE-XLA-01019] c 15 N70-40156
- Counter and shift register Patent  
[NASA-CASE-XNP-01753] c 08 N71-22897
- Miniature carbon dioxide sensor and methods  
[NASA-CASE-MSC-13332-1] c 14 N72-21408
- Magnetometer with a miniature transducer and automatic scanning  
[NASA-CASE-LAR-11617-2] c 35 N78-32397
- Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c 72 N80-27163
- Thumb-actuated two-axis controller  
[NASA-CASE-ARC-11372-1] c 08 N86-27288
- Miniature traveling wave tube and method of making  
[NASA-CASE-LEW-14520-1] c 33 N90-22724
- Reflection oscillators employing series resonant crystals  
[NASA-CASE-GSC-13173-1] c 33 N90-23635



- Miniaturization of flight deflection measurement system  
[NASA-CASE-LAR-13628-1] c 35 N90-23707
- Method of making single crystal fibers  
[NASA-CASE-LEW-14921-1] c 24 N91-13502
- Laser velocimeter for near-surface measurements  
[NASA-CASE-ARC-11917-1] c 35 N91-15520
- Large area projection liquid-crystal video display system with inherent grid pattern optically removed  
[NASA-CASE-NPO-16932-2-CU] c 74 N93-13711
- Miniature modular microwave end-to-end receiver  
[NASA-CASE-NPO-18713-1-CU] c 32 N93-29087
- MINING**
- Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c 43 N80-14423
- Coal-shale interface detector  
[NASA-CASE-MFS-23720-1] c 43 N80-23711
- Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c 43 N81-26509
- Longwall shearer tracking system  
[NASA-CASE-MFS-25717-1] c 35 N84-33768
- Shuttle car loading system  
[NASA-CASE-NPO-15949-1] c 85 N85-34722
- MINORITY CARRIERS**
- Method of increasing minority carrier lifetime in silicon web or the like  
[NASA-CASE-NPO-15530-1] c 76 N83-35888
- MIRRORS**
- Pneumatic mirror support system  
[NASA-CASE-XLA-03271] c 11 N69-24321
- Electromagnetic mirror drive system  
[NASA-CASE-XLA-03724] c 14 N69-27461
- Interferometer servo system Patent  
[NASA-CASE-NPO-10300] c 14 N71-17662
- Method and apparatus for stabilizing a gaseous optical maser Patent  
[NASA-CASE-XGS-03644] c 16 N71-18614
- Optical mirror apparatus Patent  
[NASA-CASE-ERC-10001] c 23 N71-24868
- Adjustable mount for a trihedral mirror Patent  
[NASA-CASE-XNP-08907] c 23 N71-29123
- Optical range finder having nonoverlapping complete images  
[NASA-CASE-MSC-12105-1] c 14 N72-21409
- Optical system support apparatus  
[NASA-CASE-XER-07896-2] c 23 N72-22673
- Strain gauge ambiguity sensor for segmented mirror active optical system  
[NASA-CASE-MFS-25056-1] c 35 N75-12273
- Method for manufacturing mirrors in zero gravity environment  
[NASA-CASE-MSC-12611-1] c 12 N76-15189
- Method of and means for testing a glancing-incidence mirror system of an X-ray telescope  
[NASA-CASE-MFS-22409-2] c 74 N78-15880
- Interferometer mirror tilt correcting system  
[NASA-CASE-NPO-13687-1] c 35 N78-18391
- Anastigmatic three-mirror telescope  
[NASA-CASE-MFS-23675-1] c 89 N79-10969
- Dual aperture multispectral Schmidt objective  
[NASA-CASE-GSC-12756-1] c 74 N84-23248
- Spectral slicing X-ray telescope with variable magnification  
[NASA-CASE-MFS-25942-1] c 74 N86-20124
- Wide-angle flat field telescope  
[NASA-CASE-GSC-12825-1] c 74 N86-28732
- Compensation for primary reflector wavefront error  
[NASA-CASE-NPO-18689-1-CU] c 74 N86-33138
- Self-clamping arc light reflector for welding torch  
[NASA-CASE-MFS-29207-1] c 74 N87-25843
- Motion detection, novelty filtering, and target tracking using an interferometric technique with a GaAs phase conjugate mirror  
[NASA-CASE-NPO-17784-1-CU] c 74 N91-13998
- Wide acceptance angle, high concentration ratio, optical collector  
[NASA-CASE-MFS-28295-1] c 74 N91-13999
- Wide field strip-imaging optical system  
[NASA-CASE-NPO-18146-1-CU] c 74 N92-17892
- Method and apparatus for phasing segmented mirror arrays  
[NASA-CASE-NPO-18095-1-CU] c 74 N92-29122
- Water window imaging x ray microscope  
[NASA-CASE-MFS-28485-1] c 35 N92-29135
- Method for advanced material characterization by laser induced eddy current imaging  
[NASA-CASE-GSC-13386-1] c 38 N92-29154
- Multispectral variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-4] c 89 N92-33012
- Quantum well, beam deflecting surface emitting lasers  
[NASA-CASE-NPO-18243-1-CU] c 36 N93-13418
- Self-collimated unstable resonator semiconductor laser  
[NASA-CASE-NPO-18386-1-CU] c 36 N93-18277

**MIS (SEMICONDUCTORS)**

- Photocapacitive image converter  
[NASA-CASE-LAR-12513-1] c 44 N82-32841

**MISALIGNMENT**

- Alignment positioning mechanism  
[NASA-CASE-MSC-21502-1] c 37 N91-21543

**MISSILE CONTROL**

- Turnstile slot antenna  
[NASA-CASE-GSC-11428-1] c 32 N74-20864
- Rotatable non-circular forebody flow controller  
[NASA-CASE-LAR-14212-1-CU] c 05 N91-31140

**MISSILE LAUNCHERS**

- Missile launch release system Patent  
[NASA-CASE-XMF-03198] c 30 N70-40353
- Optical monitor panel Patent  
[NASA-CASE-XKS-03509] c 14 N71-23175
- Controlled release device Patent  
[NASA-CASE-XKS-03338] c 15 N71-24043

**MISSILE STRUCTURES**

- Missile rolling tail brake torque system --- simulating bearing friction on canard controlled missiles  
[NASA-CASE-LAR-12751-1] c 15 N84-16231

**MISSILES**

- Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c 15 N78-32168
- Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c 15 N79-26100

**MITOSIS**

- Process for control of cell division  
[NASA-CASE-LAR-10773-3] c 51 N77-25769

**MIXERS**

- Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c 07 N78-18067
- Planar oscillatory stirring apparatus  
[NASA-CASE-MFS-26002-1-CU] c 35 N86-26598
- Remotely controllable mixing system  
[NASA-CASE-MFS-28153-1] c 31 N86-32589
- Dual-fuel, dual-mode rocket engine  
[NASA-CASE-LAR-13773-1] c 20 N90-19298
- Drop deployment system for crystal growth apparatus  
[NASA-CASE-MFS-28422-1] c 29 N91-17250

**MIXING**

- Remotely controllable mixing system  
[NASA-CASE-MFS-28153-1] c 31 N86-32589
- Cellular thermosetting fluorodiepoxide polymers  
[NASA-CASE-GSC-13008-2] c 27 N90-16949
- Apparatus for mixing solutions in low gravity environments  
[NASA-CASE-MFS-26047-1] c 29 N90-21209

**MIXING CIRCUITS**

- Varactor high level mixer  
[NASA-CASE-XGS-02171] c 09 N69-24324
- Waveguide mixer  
[NASA-CASE-ERC-10179] c 07 N72-20141

**MIXING LAYERS (FLUIDS)**

- Jet mixer noise suppressor using acoustic feedback  
[NASA-CASE-LEW-15170-1] c 71 N93-28953

**MIXTURES**

- Low gravity phase separator  
[NASA-CASE-MSC-14773-1] c 35 N78-12390
- Process for producing tris (n-methylamino) methylsilane  
[NASA-CASE-MFS-25721-1] c 25 N85-21280
- Preparing composite materials from matrices of processable aromatic polyimide thermoplastic blends  
[NASA-CASE-LAR-14107-1] c 24 N91-25200
- Ethynyl terminated imidothioethers and resins therefrom  
[NASA-CASE-LAR-13910-2-CU] c 27 N91-31307

**MOBILE COMMUNICATION SYSTEMS**

- Ground plane interference elimination by passive element  
[NASA-CASE-NPO-16632-1-CU] c 32 N87-15390

**MOBILITY**

- Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility  
[NASA-CASE-HQN-10069] c 33 N75-27251
- Mobile sampler for use in acquiring samples of terrestrial atmospheric gases  
[NASA-CASE-NPO-15220-1] c 45 N83-25217
- Mobile remote manipulator vehicle system  
[NASA-CASE-LAR-13393-1] c 54 N87-29118
- Controlled method of reducing electrophoretic mobility of various substances  
[NASA-CASE-MFS-26049-1-NP] c 25 N89-28603
- Polymer-coated surfaces to control surface zeta potential  
[NASA-CASE-MFS-26050-1] c 27 N92-25397
- Controlled method of reducing electrophoretic mobility of macromolecules, particles, or cells  
[NASA-CASE-MFS-26049-2-NP] c 25 N92-28728

**MODE TRANSFORMERS**

- Transient-compensated SCR inverter  
[NASA-CASE-XLA-08507] c 09 N69-39984

- Dual waveguide mode source having control means for adjusting the relative amplitude of two modes Patent  
[NASA-CASE-XNP-03134] c 07 N71-10676

**MODELS**

- Direct current transformer  
[NASA-CASE-MFS-23659-1] c 33 N79-17133

**MODES**

- Dual strain gage balance system for measuring light loads  
[NASA-CASE-LAR-14419-1] c 35 N92-10185

**MODEMS**

- Charge storage diode modulators and demodulators  
[NASA-CASE-NPO-10189-1] c 33 N77-21314

**MODES (STANDING WAVES)**

- Acoustic levitation methods and apparatus  
[NASA-CASE-NPO-15562-1] c 71 N82-27086

**MODULATION**

- Demodulator for carrier transducers  
[NASA-CASE-NUC-10107-1] c 33 N74-17930
- Faraday rotation measurement method and apparatus  
[NASA-CASE-NPO-14839-1] c 35 N82-15381
- Air modulation apparatus  
[NASA-CASE-LEW-13524-1] c 07 N84-33410
- Modulated voltage metastable ionization detector  
[NASA-CASE-ARC-11503-1] c 35 N85-34374
- Doppler radar with multiphase modulation of transmitted and reflected signal  
[NASA-CASE-MSC-18808-1] c 32 N90-20280

**MODULATORS**

- Retrodirective optical system  
[NASA-CASE-XGS-04480] c 16 N69-27491
- Retrodirective modulator Patent  
[NASA-CASE-GSC-10062] c 14 N71-15605
- Laser calibrator Patent  
[NASA-CASE-XLA-03410] c 16 N71-25914
- Full wave modulator-demodulator amplifier apparatus --- for generating rectified output signal  
[NASA-CASE-FRC-10072-1] c 33 N74-14939
- Charge storage diode modulators and demodulators  
[NASA-CASE-NPO-10189-1] c 33 N77-21314
- Coherently pulsed laser source  
[NASA-CASE-NPO-15111-1] c 36 N82-29589
- Navigation system and method  
[NASA-CASE-GSC-12508-1] c 04 N84-22546
- Solar energy modulator  
[NASA-CASE-NPO-15388-1] c 44 N84-28203
- Electro-optic resonant phase modulator  
[NASA-CASE-NPO-18702-1-CU] c 74 N92-23551
- Non-mechanical optical path switching and its application to dual beam spectroscopy including gas filter correlation radiometry  
[NASA-CASE-LAR-14588-1-CU] c 74 N92-29117
- Method for advanced material characterization by laser induced eddy current imaging  
[NASA-CASE-GSC-13386-1] c 38 N92-29154
- Full complex modulation using two one-parameter spatial light modulators  
[NASA-CASE-MSC-22255-1] c 74 N93-28135

**MODULES**

- Modular encoder  
[NASA-CASE-NPO-10629] c 08 N72-18184
- Solar cell module assembly jig  
[NASA-CASE-XGS-00829-1] c 44 N79-19447
- Method of fabricating a photovoltaic module of a substantially transparent construction  
[NASA-CASE-NPO-14303-1] c 44 N80-18550
- Shuttle-launch triangular space station  
[NASA-CASE-MSC-20676-1] c 18 N86-24729
- Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-2] c 18 N89-25266
- System for simultaneously loading program to master computer memory devices and corresponding slave computer memory devices  
[NASA-CASE-MSC-21387-1] c 61 N93-18855

**MODULUS OF ELASTICITY**

- Glass compositions with a high modulus of elasticity --- nontoxic glass fibers  
[NASA-CASE-HQN-10274-1] c 27 N82-29451
- High modulus invert analog glass compositions containing beryllia  
[NASA-CASE-HQN-10931-2] c 27 N82-29452
- Non-toxic invert analog glass compositions of high modulus  
[NASA-CASE-HQN-10328-2] c 27 N82-29454
- High modulus rare earth and beryllium containing silicate glass compositions --- for glass reinforcing fibers  
[NASA-CASE-HQN-10595-1] c 27 N82-29455
- High resistance and raised modulus carbon fibers  
[NASA-TM-76884] c 24 N85-25436

**MOIRE EFFECTS**

- Three dimensional moire pattern alignment  
[NASA-CASE-MSC-21416-1] c 74 N91-32922

**MOISTURE**

- Gas purged dry box glove Patent  
[NASA-CASE-XLE-02531] c 05 N71-23080

Trace water sensor  
[NASA-CASE-NPO-15722-1] c 35 N85-29212

**MOISTURE CONTENT**  
Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-1] c 35 N82-25484  
Moisture content and gas sampling device  
[NASA-CASE-MSC-18866-1] c 35 N85-29213  
Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA 1.71:NPO-15494-2] c 35 N85-34373  
Wet atmospheric generation apparatus  
[NASA-CASE-MFS-28177-1] c 35 N91-21496

**MOISTURE METERS**  
Method of evaluating moisture barrier properties of encapsulating materials Patent  
[NASA-CASE-NPO-10051] c 18 N71-24934  
Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-1] c 35 N82-25484  
Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA 1.71:NPO-15494-2] c 35 N85-34373

**MOISTURE RESISTANCE**  
Process for improving moisture resistance of epoxy resins by addition of chromium ions  
[NASA-CASE-LAR-13226-1] c 27 N85-34282

**MOLDING MATERIALS**  
Method for molding compounds Patent  
[NASA-CASE-XLA-01091] c 15 N71-10672  
Method of making a molded connector Patent  
[NASA-CASE-XMF-03498] c 15 N71-15986  
Hydraulic casting of liquid polymers Patent  
[NASA-CASE-XNP-07659] c 06 N71-22975  
Hydroforming techniques using epoxy molds Patent  
[NASA-CASE-XLE-05641-1] c 15 N71-26346  
Molding process for imidazopyrrolone polymers  
[NASA-CASE-LAR-10547-1] c 31 N74-13177  
Evacuated displacement compression molding  
[NASA-CASE-LAR-10782-1] c 31 N74-14133  
Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c 20 N78-24275  
Method of making a rocket nozzle  
[NASA-CASE-XMF-06884-1] c 20 N79-21123  
Improved ceramic slip casting technique --- application to aircraft model fabrication  
[NASA-CASE-LAR-14471-1] c 27 N93-20041

**MOLDS**  
Apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917-2] c 15 N71-24836  
Technique of duplicating fragile core  
[NASA-CASE-XLA-07829] c 15 N72-16329  
Evacuated displacement compression molding  
[NASA-CASE-LAR-10782-1] c 31 N74-14133  
Molding apparatus --- for thermosetting plastic compositions  
[NASA-CASE-LAR-10489-2] c 31 N74-32920  
Evacuated, displacement compression mold --- of tubular bodies from thermosetting plastics  
[NASA-CASE-LAR-10782-2] c 31 N75-13111  
Method of making an apertured casting --- using duplicate mold  
[NASA-CASE-LEW-11169-1] c 37 N76-23570

**MOLECULAR BEAM EPITAXY**  
MBE growth technology for high quality strained III-V layers  
[NASA-CASE-NPO-17723-1-CU] c 76 N90-26685  
Method of forming three-dimensional semiconductor structures  
[NASA-CASE-NPO-17835-1-CU] c 76 N90-27518  
Method of fabricating germanium and gallium arsenide devices  
[NASA-CASE-GSC-13265-1] c 76 N91-14066  
Fabrication of nanometer single crystal metallic CoSi<sub>2</sub> structures on Si  
[NASA-CASE-NPO-17736-2-CU] c 24 N92-18561  
Growth of III-V films by control of MBE growth front stoichiometry  
[NASA-CASE-NPO-17724-1-CU] c 76 N92-22035  
Method of forming silicon structures with selectable optical characteristics  
[NASA-CASE-NPO-18625-1-CU] c 76 N92-30102  
INAS hole-immobilized doping superlattice  
[NASA-CASE-NPO-17880-1-CU] c 76 N93-11056

**MOLECULAR BEAMS**  
Molecular beam velocity selector Patent  
[NASA-CASE-XLE-01533] c 11 N71-10777  
Sputtering holes with ion beamlets  
[NASA-CASE-LEW-11646-1] c 20 N74-31269

**MOLECULAR CHAINS**  
Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c 27 N81-15104

Ladder polymers for use as high temperature stable resins or coatings  
[NASA-CASE-LEW-14203-1] c 27 N91-15402

**MOLECULAR GASES**  
Compact hydrogenator  
[NASA-CASE-NPO-11682-1] c 35 N74-15127

**MOLECULAR PUMPS**  
Omni-directional anisotropic molecular trap Patent  
[NASA-CASE-XGS-00783] c 30 N71-17788  
Rotating shaft seal Patent  
[NASA-CASE-NPO-02862-1] c 15 N71-26294

**MOLECULAR RELAXATION**  
Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NPO-14657-1] c 74 N81-17887

**MOLECULAR ROTATION**  
Diatomic infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c 36 N75-31426

**MOLECULAR SPECTRA**  
Correlation spectrometer having high resolution and multiplexing capability  
[NASA-CASE-NPO-15558-1] c 35 N84-34705

**MOLECULAR SPECTROSCOPY**  
Dual resonant cavity absorption cell Patent  
[NASA-CASE-LAR-10305] c 14 N71-26137

**MOLECULAR STRUCTURE**  
Light weight polymer matrix composite material  
[NASA-CASE-LEW-14734-1] c 24 N89-23623  
Aromatic polyimides containing a dimethylsilane-linked dianhydride  
[NASA-CASE-LAR-14198-1] c 27 N90-26956

**MOLECULAR WEIGHT**  
Process of end-capping a polyimide system  
[NASA-CASE-LAR-13135-1] c 27 N86-19456  
Process for crosslinking and extending conjugated diene-containing polymers  
[NASA-CASE-LAR-13452-1] c 27 N87-22848  
Aromatic polyimides containing a dimethylsilane-linked dianhydride  
[NASA-CASE-LAR-14198-1] c 27 N90-26956  
Addition polyimides with enhanced processability  
[NASA-CASE-LEW-15043-1] c 27 N91-32230  
Processing for maximizing the level of crystallinity in linear aromatic polyimides  
[NASA-CASE-LAR-14481-1] c 25 N92-16043  
Vinyl capped addition polyimides  
[NASA-CASE-LEW-15027-2] c 27 N92-24053  
Polyimidoazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14145-1] c 27 N92-28751  
Polyimide molding powder, coating, adhesive, and matrix resin  
[NASA-CASE-LAR-14163-1] c 27 N92-33014  
Polybenzoxazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14606-1-CU] c 23 N93-23077  
Polyimides containing the cyclobutene-3,4-dione moiety  
[NASA-CASE-LAR-14753-1] c 27 N93-25999

**MOLECULES**  
Stabilization of He2(a 3 Sigma u+ molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c 72 N79-13826  
Controlled method of reducing electrophoretic mobility of various substances  
[NASA-CASE-MFS-26049-1-NP] c 25 N89-28603  
Molecules with enhanced electronic polarizabilities based on defect-like states in conjugated polymers  
[NASA-CASE-NPO-17633-1-CU] c 27 N91-23732  
Controlled method of reducing electrophoretic mobility of macromolecules, particles, or cells  
[NASA-CASE-MFS-26049-2-NP] c 25 N92-28728

**MOLTEN SALT ELECTROLYTES**  
Combined electrolysis device and fuel cell and method of operation Patent  
[NASA-CASE-XLE-01645] c 03 N71-20904  
Zinc-halide battery with molten electrolyte  
[NASA-CASE-NPO-11961-1] c 44 N76-18643

**MOLTEN SALTS**  
Molten salt pyrolysis of latex --- synthetic hydrocarbon fuel production using the Guayule shrub  
[NASA-CASE-NPO-14315-1] c 27 N81-17261  
Organic cathode for a secondary battery  
[NASA-CASE-NPO-17604-1-CU] c 33 N91-14536

**MOLYBDENUM**  
Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c 35 N79-14346

**MOLYBDENUM ALLOYS**  
High temperature creep and oxidation resistant chromium silicide matrix alloy containing molybdenum  
[NASA-CASE-LEW-15697-1] c 26 N93-29172

**MOLYBDENUM CARBIDES**  
Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00302] c 15 N71-16077

**MOLYBDENUM DISULFIDES**  
Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c 28 N81-14103

**MOMENTS OF INERTIA**  
Moment of inertia test fixture Patent  
[NASA-CASE-XGS-01023] c 14 N71-22992

**MOMENTUM**  
Attitude control and damping system for spacecraft Patent  
[NASA-CASE-XLA-02551] c 21 N71-21708  
Particle detection apparatus including a ballistic pendulum Patent  
[NASA-CASE-XMS-04201] c 14 N71-22990

**MOMENTUM TRANSFER**  
Fluid-loop reaction system  
[NASA-CASE-NPO-17204-1-CU] c 34 N91-25380

**MONATOMIC GASES**  
Atomic hydrogen storage --- cryotrapping and magnetic field strength  
[NASA-CASE-LEW-12081-2] c 28 N80-20402

**MONITORS**  
Leak detector Patent  
[NASA-CASE-XLA-10323-1] c 12 N71-17573  
Reduced bandwidth video communication system utilizing sampling techniques Patent  
[NASA-CASE-XNP-02791] c 07 N71-23026  
Optical monitor panel Patent  
[NASA-CASE-XKS-03509] c 14 N71-23175  
Peak polarity selector Patent  
[NASA-CASE-FRC-10010] c 10 N71-24862  
Ripple indicator  
[NASA-CASE-KSC-10162] c 09 N72-11225  
Droplet monitoring probe  
[NASA-CASE-NPO-10985] c 14 N73-20478  
Automatic lightning detection and photographic system  
[NASA-CASE-KSC-10728-1] c 14 N73-32319  
Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c 74 N74-21304  
Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c 33 N79-11315  
Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c 33 N79-18193  
Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c 51 N81-28698  
Scanning seismic intrusion detection method and apparatus --- monitoring unwanted subterranean entry and departure  
[NASA-CASE-ARC-11317-1] c 35 N83-34272  
Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c 74 N85-22139  
Retinally stabilized differential resolution television display  
[NASA-CASE-NPO-15432-1] c 32 N85-29117  
Optical distance measuring instrument  
[NASA-CASE-GSC-12761-1] c 74 N86-32266  
Laser schlieren crystal monitor  
[NASA-CASE-MFS-28060-1] c 76 N87-25862  
Welding monitoring system  
[NASA-CASE-MFS-29177-1] c 37 N88-14362  
Radio Frequency (RF) strain monitor  
[NASA-CASE-LAR-13705-1] c 39 N88-25011  
Television monitor field shifter and an opto-electronic method for obtaining a stereo image of optical depth resolution and reduced depth distortion on a single screen  
[NASA-CASE-NPO-17249-1-CU] c 32 N89-28676  
Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13734-1-CU] c 09 N90-20096  
Nonintrusive method and apparatus for monitoring the cure of polymeric materials  
[NASA-CASE-LAR-13465-1] c 27 N90-23544  
Method and apparatus for characterizing reflected ultrasonic pulses  
[NASA-CASE-LAR-13966-1] c 71 N91-27914  
Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13854-1-CU] c 04 N91-31120  
Biofilm monitoring coupon system and method of use  
[NASA-CASE-MSC-21585-1] c 51 N91-31755  
Accelerometer method and apparatus for integral display and control functions  
[NASA-CASE-MSC-21961-1] c 35 N92-29952  
Passive fetal monitoring sensor  
[NASA-CASE-LAR-14088-1-CU] c 35 N92-33016  
Operator-tailored adjustable control station with movable monitors and cameras for viewing systems in robotics and teleoperations  
[NASA-CASE-NPO-17837-1-CU] c 74 N93-17273

# MONOCHROMATIC RADIATION

# SUBJECT INDEX

## MONOCHROMATIC RADIATION

- Continuous plasma light source  
[NASA-CASE-XNP-04167-2] c 25 N72-24753
- Laser extensometer  
[NASA-CASE-MFS-19259-1] c 36 N78-14380
- Multiprism collimator  
[NASA-CASE-GSC-12608-1] c 74 N83-10900
- MONOCHROMATORS**  
Analytical photoionization mass spectrometer with an argon gas filter between the light source and monochromator Patent  
[NASA-CASE-LAR-10180-1] c 06 N71-13461
- Color television system  
[NASA-CASE-MSC-12146-1] c 07 N72-17109
- X-ray monochromator  
[NASA-CASE-MFS-28492-1] c 74 N93-14711

## MONOMERS

- Pressure transducer --- using a monomeric charge transfer complex sensor  
[NASA-CASE-NPO-11150] c 35 N78-17359
- Bifunctional monomers having terminal oxime and cyano or amidine groups  
[NASA-CASE-ARC-11253-3] c 27 N81-24256
- Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13101-2] c 23 N81-29160
- Preparation of crosslinked 1,2,4-oxadiazole polymer  
[NASA-CASE-ARC-11253-2] c 27 N82-24338
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c 27 N83-31854
- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-1] c 27 N84-27885
- Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-31727
- Ethynyl terminated ester oligomers and polymers therefrom  
[NASA-CASE-LAR-13118-2] c 27 N87-16907
- Substituted 1,1,1-Triaryl-2,2,2-Trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-1] c 23 N88-26404
- Polyphenylquinoxalines containing alkylendioxy groups  
[NASA-CASE-LAR-13601-1-CU] c 27 N89-14337
- New Condensation polyimides containing 1,1,1-triaryl-2,2,2-trifluoroethane structures  
[NASA-CASE-LEW-14346-1] c 23 N90-19300
- Addition polyimides with enhanced processability  
[NASA-CASE-LEW-15043-1] c 27 N91-32230
- Poly 1, 2, 4-triazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14440-1] c 23 N92-10066
- Polybenzimidazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14643-1] c 27 N92-29953
- Poly(1,2,4-triazole) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14440-1] c 23 N93-18283
- High temperature polymer from maleimide-acetylene terminated monomers  
[NASA-CASE-LAR-14475-1] c 27 N93-19327
- Polyimides with improved compression moldability  
[NASA-CASE-LAR-14457-1] c 27 N93-25997
- Shear sensitive monomer-polymer laminate structure and method of using same  
[NASA-CASE-LAR-14654-1-CU] c 39 N93-29613

## MONOPULSE ANTENNAS

- Antenna system using parasitic elements and two driven elements at 90 deg angle fed 180 deg out of phase Patent  
[NASA-CASE-XLA-00414] c 07 N70-38200
- Flexible blade antenna Patent  
[NASA-CASE-MSC-12101] c 09 N71-18720

## MONOPROPELLANTS

- Ignition system for monopropellant combustion devices Patent  
[NASA-CASE-XNP-00249] c 28 N70-38249
- Ignition means for monopropellant Patent  
[NASA-CASE-XNP-00876] c 28 N70-41311
- Low thrust monopropellant engine  
[NASA-CASE-GSC-12194-2] c 20 N82-18314

## MONOPULSE ANTENNAS

- Monopulse system with an electronic scanner  
[NASA-CASE-XGS-05582] c 07 N69-27460
- Low noise single aperture multimode monopulse antenna feed system Patent  
[NASA-CASE-XNP-01735] c 07 N71-22750
- Electronic scanning of 2-channel monopulse patterns Patent  
[NASA-CASE-GSC-10299-1] c 09 N71-24804
- Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c 33 N76-27472

## MONOPULSE RADAR

- Polarization diversity monopulse tracking receiver Patent  
[NASA-CASE-XGS-03501] c 09 N71-20864
- Monopulse tracking system Patent  
[NASA-CASE-XGS-01155] c 10 N71-21483

## MONOSTABLE MULTIVIBRATORS

- Resettable monostable pulse generator Patent  
[NASA-CASE-GSC-11139] c 09 N71-27016
- Monostable multivibrator with complementary NOR gates Patent  
[NASA-CASE-MSC-13492-1] c 10 N71-28860

## MORPHOLOGY

- Method for growth of crystals by pressure reduction of supercritical or subcritical solution  
[NASA-CASE-NPO-15772-1] c 76 N85-29800

## MOSSBAUER EFFECT

- Mossbauer spectrometer radiation detector  
[NASA-CASE-LAR-11155-1] c 35 N74-15091
- Method and apparatus for vibration analysis utilizing the Mossbauer effect  
[NASA-CASE-XMF-05882] c 35 N75-27329

## MOTION

- Quick attach mechanism Patent  
[NASA-CASE-XFR-05421] c 15 N71-22994

## MOTION PICTURES

- Real time moving scene holographic camera system  
[NASA-CASE-MFS-21087-1] c 35 N74-17153
- Real time, large volume, moving scene holographic camera system  
[NASA-CASE-MFS-22537-1] c 35 N75-27328

## MOTION SICKNESS

- Intranasal scopolamine preparation and method  
[NASA-CASE-MSC-21858-1] c 52 N92-11628

## MOTION SIMULATORS

- Kinesthetic control simulator --- for pilot training  
[NASA-CASE-LAR-10276-1] c 09 N75-15662
- Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c 54 N81-27806

## MOTION STABILITY

- Hydraulic drive mechanism Patent  
[NASA-CASE-XMS-03252] c 15 N71-10658

## MOTORS

- Nonmagnetic thermal motor for a magnetometer  
[NASA-CASE-XAR-03786] c 09 N69-21313
- System for maintaining a motor at a predetermined speed utilizing digital feedback means Patent  
[NASA-CASE-XMF-06892] c 09 N71-24805
- Mechanical thermal motor  
[NASA-CASE-MFS-23062-1] c 37 N77-12402
- Redundant motor drive system  
[NASA-CASE-MFS-23777-1] c 37 N80-32716

## MOUNTING

- Thermobulb mount Patent  
[NASA-CASE-NPO-10158] c 33 N71-16356
- Mount for thermal control system Patent  
[NASA-CASE-NPO-10138] c 33 N71-16357
- Clamping assembly for inertial components Patent  
[NASA-CASE-XMS-02184] c 15 N71-20813
- Circuit board package with wedge shaped covers  
[NASA-CASE-MFS-21919-1] c 10 N73-25243
- Lubricated journal bearing  
[NASA-CASE-LEW-11076-3] c 37 N75-30562
- Translatory shock absorber for attitude sensors  
[NASA-CASE-MFS-22905-1] c 19 N76-22284
- Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c 37 N77-32500
- Impact absorbing blade mounts for variable pitch blades  
[NASA-CASE-LEW-12313-1] c 37 N78-10468
- Attaching of strain gages to substrates  
[NASA-CASE-FRC-10093-1] c 35 N80-20560
- Adapter for mounting a microphone flush with the external surface of the skin of a pressurized aircraft  
[NASA-CASE-FRC-11072-1] c 05 N83-27975
- Inflatable device for installing strain gage bridges  
[NASA-CASE-FRC-11068-1] c 35 N84-12443
- Clamp-mount device  
[NASA-CASE-MFS-25510-1] c 37 N84-16560
- Model mount system for testing flutter  
[NASA-CASE-LAR-12950-1] c 09 N84-34448
- Adjustable mount for electro-optic transducers in an evacuated cryogenic system  
[NASA-CASE-LAR-13100-1] c 37 N87-23982
- Airfoil flutter model suspension system  
[NASA-CASE-LAR-13522-1-SB] c 09 N87-25334
- Almond test body --- for microwave anechoic chambers  
[NASA-CASE-LAR-13747-1-CU] c 32 N89-28672
- Thermal compensating mount  
[NASA-CASE-LAR-14207-1] c 35 N91-14590
- Post clamp  
[NASA-CASE-LEW-14862-1] c 37 N91-14617
- Alignment positioning mechanism  
[NASA-CASE-MSC-21502-1] c 37 N91-21543

- Double face sealing device  
[NASA-CASE-MFS-28521-1] c 37 N91-26542
- Flexible thermal apparatus for mounting of thermoelectric cooler  
[NASA-CASE-NPO-17806-1-CU] c 31 N91-27385
- Biofilm monitoring coupon system and method of use  
[NASA-CASE-MSC-21585-1] c 51 N91-31755
- Removable hand hold  
[NASA-CASE-LEW-15196-1] c 37 N92-29092
- Flush mounting of thin film sensors  
[NASA-CASE-LAR-14446-1] c 31 N92-33020

## MOUTH

- Page turning system  
[NASA-CASE-GSC-13415-1] c 37 N92-33616

## MOVING TARGET INDICATORS

- Automatic vehicle location system  
[NASA-CASE-NPO-11850-1] c 32 N74-12912
- Interferometric locating system  
[NASA-CASE-NPO-14173-1] c 04 N80-32359

## MULLITES

- Production of mullite fibers  
[NASA-CASE-MFS-28431-1] c 24 N92-17870

## MULTIBEAM ANTENNAS

- Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c 32 N83-31918
- Switched steerable multiple beam antenna system  
[NASA-CASE-MSC-20873-1-SB] c 32 N89-11961

## MULTICHANNEL COMMUNICATION

- Tape guidance system and apparatus for the provision thereof Patent  
[NASA-CASE-XNP-09453] c 08 N71-19420
- Phase quadrature-plural channel data transmission system Patent  
[NASA-CASE-XAC-06302] c 08 N71-19763
- Receiver with an improved phase lock loop in a multichannel telemetry system with suppressed carrier  
[NASA-CASE-NPO-11593-1] c 07 N73-28012
- Miniature multichannel biotelemetry system  
[NASA-CASE-NPO-13065-1] c 52 N74-26625
- Medical subject monitoring systems --- multichannel monitoring systems  
[NASA-CASE-MSC-14180-1] c 52 N76-14757
- Multi-channel rotating optical interface for data transmission  
[NASA-CASE-NPO-14066-1] c 74 N79-34011

## MULTILAYER INSULATION

- Sealing member and combination thereof and method of producing said sealing member Patent  
[NASA-CASE-XMS-01625] c 15 N71-23022
- Panelized high performance multilayer insulation Patent  
[NASA-CASE-MFS-14023] c 33 N71-25351
- Electrical apparatus for detection of thermal decomposition of insulation Patent  
[NASA-CASE-XMF-03968] c 14 N71-27186
- Method of making an insulation foil  
[NASA-CASE-LEW-11484-1] c 24 N75-33181
- Multilayer thermal protection system  
[NASA-CASE-LAR-12620-1] c 24 N82-32417
- Composite flexible blanket insulation  
[NASA-CASE-ARC-11907-1-NP] c 24 N91-31236

## MULTIPACTOR DISCHARGES

- High power RF coaxial switch  
[NASA-CASE-NPO-14229-1] c 33 N80-18285

## MULTIPATH TRANSMISSION

- Anti-multipath digital signal detector  
[NASA-CASE-LAR-11827-1] c 32 N77-10392
- Large volume multiple-path nuclear pumped laser  
[NASA-CASE-LAR-12592-1] c 36 N82-13415
- Multipath noise reduction spread spectrum signals  
[NASA-CASE-NPO-18970-1-CU] c 32 N93-28126

## MULTIPLE BEAM INTERVAL SCANNERS

- Tracking antenna system Patent  
[NASA-CASE-GSC-10553-1] c 07 N71-19854
- Variable beamwidth antenna --- with multiple beam, variable feed system  
[NASA-CASE-GSC-11862-1] c 32 N76-18295

## MULTIPLE DOCKING ADAPTERS

- Expanding center probe and drogue Patent  
[NASA-CASE-XMS-03613] c 31 N71-16346

## MULTIPLE OUTPUT PROGRAMS

- Multi-computer multiple data path hardware exchange system  
[NASA-CASE-NPO-13422-1] c 60 N76-14818

## MULTIPLEXING

- Doppler frequency spread correction device for multiplex transmissions  
[NASA-CASE-XGS-02749] c 07 N69-39978
- Elimination of frequency shift in a multiplex communication system Patent  
[NASA-CASE-XNP-01306] c 07 N71-20814
- Satellite interface synchronization system  
[NASA-CASE-GSC-10390-1] c 07 N72-11149

- Method and apparatus for data compression by a decreasing slope threshold test  
[NASA-CASE-NPO-10769] c 08 N72-11171
- Data multiplexer using tree switching configuration  
[NASA-CASE-NPO-11333] c 08 N72-22162
- Television multiplexing system  
[NASA-CASE-KSC-10654-1] c 07 N73-30115
- Asynchronous, multiplexing, single line transmission and recovery data system --- for satellite use  
[NASA-CASE-NPO-13321-1] c 32 N75-26195
- Correlation type phase detector --- with time correlation integrator for frequency multiplexed signals  
[NASA-CASE-GSC-11744-1] c 33 N75-26243
- System for producing chroma signals  
[NASA-CASE-MSC-14683-1] c 74 N77-18893
- Fiber optic multiplex optical transmission system  
[NASA-CASE-KSC-11047-1] c 74 N78-14889
- System for a displaying at a remote station data generated at a central station and for powering the remote station from the central station  
[NASA-CASE-GSC-12411-1] c 33 N81-14221
- Multifrequency broadband polarized horn antenna  
[NASA-CASE-NPO-14588-1] c 32 N81-25278
- High-speed multiplexing of keyboard data inputs  
[NASA-CASE-NPO-14554-1] c 60 N81-27814
- Multi-channel temperature measurement amplification system --- solar heating systems  
[NASA-CASE-MFS-23775-1] c 44 N82-16474
- Integrating IR detector imaging systems  
[NASA-CASE-NPO-15805-1] c 74 N84-28590
- Correlation spectrometer having high resolution and multiplexing capability  
[NASA-CASE-NPO-15558-1] c 35 N84-34705
- Laser Doppler velocimeter multiplexer interface for simultaneous measured events  
[NASA-CASE-ARC-11536-1] c 33 N89-14384
- Fault tolerant hypercube computer system architecture  
[NASA-CASE-NPO-16859-1-CU] c 60 N90-21527
- Adaptive data acquisition multiplexing system and method  
[NASA-CASE-MSC-21170-1] c 17 N91-14371
- Closed-loop motor control using high-speed fiber optics  
[NASA-CASE-MSC-21806-1] c 74 N92-17863
- Double-loop frequency-selected surfaces for multifrequency division multiplexing in a dual-reflector antenna  
[NASA-CASE-NPO-18701-1-CU] c 32 N92-30391
- Acceleration recorder and playback module  
[NASA-CASE-MSC-22008-1] c 35 N93-17077
- MULTIPLIERS**  
Pulse-width modulation multiplier Patent  
[NASA-CASE-XER-09213] c 07 N71-12390
- Variable pulse width multiplier Patent  
[NASA-CASE-XLA-02850] c 09 N71-20447
- Capacitance multiplier and filter synthesizing network  
[NASA-CASE-NPO-11948-1] c 33 N74-32712
- Regulated high efficiency, lightweight capacitor-diode multiplier dc to dc converter  
[NASA-CASE-LEW-12791-1] c 33 N78-32341
- VLSI architecture for a Reed-Solomon decoder  
[NASA-CASE-NPO-17897-1-CU] c 33 N92-33011
- MULTIPROCESSING (COMPUTERS)**  
Fault tolerant hypercube computer system architecture  
[NASA-CASE-NPO-16859-1-CU] c 60 N90-21527
- A universal computer control system for motors  
[NASA-CASE-NPO-17134-1-CU] c 33 N91-31528
- MULTISENSOR APPLICATIONS**  
Method of measuring cross-flow vortices by use of an array of hot-film sensors  
[NASA-CASE-LAR-14824-1-SB] c 34 N93-26000
- Phase discriminating capacitive array sensor system  
[NASA-CASE-GSC-13460-1] c 33 N93-26104
- MULTISPECTRAL BAND SCANNERS**  
Optical process for producing classification maps from multispectral data  
[NASA-CASE-MSC-14472-1] c 43 N77-10584
- Interactive color display for multispectral imagery using correlation clustering  
[NASA-CASE-MSC-16253-1] c 32 N79-20297
- Multispectral scanner optical system  
[NASA-CASE-MSC-18255-1] c 74 N80-33210
- Medical diagnosis system and method with multispectral imaging --- depth of burns and optical density of the skin  
[NASA-CASE-NPO-14402-1] c 52 N81-27783
- Dual aperture multispectral Schmidt objective  
[NASA-CASE-GSC-12756-1] c 74 N84-23248
- MULTISPECTRAL LINEAR ARRAYS**  
Time delay and integration detectors using charge transfer devices  
[NASA-CASE-GSC-12324-1] c 33 N81-33403
- Multispectral linear array multiband selection device  
[NASA-CASE-GSC-12911-1] c 74 N86-29650
- MULTISPECTRAL PHOTOGRAPHY**  
Multispectral imaging system  
[NASA-CASE-MSC-12404-1] c 23 N73-13661
- Optical process for producing classification maps from multispectral data  
[NASA-CASE-MSC-14472-1] c 43 N77-10584
- Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c 43 N79-17288
- Interactive color display for multispectral imagery using correlation clustering  
[NASA-CASE-MSC-16253-1] c 32 N79-20297
- MULTISPECTRAL TRACKING TELESCOPES**  
Multispectral glancing incidence X-ray telescope  
[NASA-CASE-MFS-28013-1] c 89 N86-22459
- MULTISTAGE ROCKET VEHICLES**  
Recoverable rocket vehicle Patent  
[NASA-CASE-XMF-00389] c 31 N70-34176
- Steerable solid propellant rocket motor Patent  
[NASA-CASE-XNP-00234] c 28 N70-38645
- Multi-mission module Patent  
[NASA-CASE-XMF-01543] c 31 N71-17730
- Single action separation mechanism Patent  
[NASA-CASE-XLA-00188] c 15 N71-22874
- Lateral displacement system for separated rocket stages Patent  
[NASA-CASE-XLA-04804] c 31 N71-23008
- Frangible link  
[NASA-CASE-MSC-11849-1] c 15 N72-22488
- Three stage rocket vehicle with parallel staging  
[NASA-CASE-MFS-25878-1] c 18 N84-27787
- MULTISTATIC RADAR**  
Method for providing a polarization filter for processing synthetic aperture radar image data  
[NASA-CASE-NPO-17904-1-CU] c 32 N91-13594
- MULTIVIBRATORS**  
Ultra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit Patent  
[NASA-CASE-XGS-00381] c 09 N70-34819
- Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00458] c 09 N70-38604
- Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00131] c 09 N70-38995
- High efficiency multivibrator Patent  
[NASA-CASE-XAC-00942] c 10 N71-16042
- A dc-coupled noninverting one-shot Patent  
[NASA-CASE-XNP-09450] c 10 N71-18723
- Multivibrator circuit with means to prevent false triggering from supply voltage fluctuations Patent  
[NASA-CASE-ARC-10137-1] c 09 N71-28468
- Digital demodulator  
[NASA-CASE-LAR-12659-1] c 33 N82-26570
- MUSCLES**  
Subminiature insertable force transducer --- including a strain gage to measure forces in muscles  
[NASA-CASE-NPO-13423-1] c 33 N75-31329
- Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c 52 N81-20703
- Control system and method for prosthetic devices  
[NASA-CASE-MSC-21941-1] c 54 N93-17087
- MUSCULAR FUNCTION**  
Miniature muscle displacement transducer  
[NASA-CASE-NPO-13519-1] c 33 N76-19338
- Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c 52 N80-27072
- MUSCULOSKELETAL SYSTEM**  
Skeletal stressing method and apparatus Patent  
[NASA-CASE-ARC-10100-1] c 05 N71-24738
- MYOCARDIUM**  
Myocardium wall thickness transducer and measuring method  
[NASA-CASE-NPO-13644-1] c 52 N76-29895
- Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c 52 N80-27072
- MYOELECTRICITY**  
Control system and method for prosthetic devices  
[NASA-CASE-MSC-21941-1] c 54 N93-17087
- MYOPIA**  
Visual accommodation trainer-tester  
[NASA-CASE-ARC-11426-1] c 09 N84-12193
- N**
- N-TYPE SEMICONDUCTORS**  
Complementary DMOS-VMOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c 33 N79-12321
- Formation of self-aligned guard rings for monolithic Schottky-barrier diode arrays  
[NASA-CASE-NPO-17734-1-CU] c 33 N92-10146
- NACELLES**  
Inlet deflector for jet engines Patent  
[NASA-CASE-XLE-00388] c 28 N70-34788
- Nacelle afterbody for jet engines Patent  
[NASA-CASE-XLA-10450] c 28 N71-21493
- Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-2] c 07 N78-18066
- Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-3] c 07 N79-14096
- NAPHTHALENE**  
Multi-colored layers for visualizing aerodynamic flow effects  
[NASA-CASE-LAR-13742-1] c 02 N92-21588
- NARROWBAND**  
Selective emitters  
[NASA-CASE-LEW-14731-1] c 44 N92-22037
- Integrated filter and detector array for spectral imaging  
[NASA-CASE-NPO-18317-1-CU] c 74 N93-13419
- NASA PROGRAMS**  
Retractable environmental seal  
[NASA-CASE-MFS-23646-1] c 37 N79-22474
- NAVIGATION**  
Thumb-actuated two-axis controller  
[NASA-CASE-ARC-11372-1] c 08 N86-27288
- NAVIGATION AIDS**  
Magnetic heading reference  
[NASA-CASE-LAR-11387-1] c 04 N76-20114
- Ruler for making navigational computations  
[NASA-CASE-XNP-01458] c 04 N78-17031
- System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c 06 N82-16075
- Magnetic heading reference  
[NASA-CASE-LAR-12638-1] c 04 N84-14132
- Low-frequency radio navigation system  
[NASA-CASE-NPO-15264-1] c 04 N84-27713
- NAVIGATION INSTRUMENTS**  
Sun angle calculator  
[NASA-CASE-MSC-12617-1] c 35 N76-29552
- NAVIGATION SATELLITES**  
Satellite aided vehicle avoidance system Patent  
[NASA-CASE-ERC-10090] c 21 N71-24948
- System and method for measuring ocean surface currents at locations remote from land masses using synthetic aperture radar  
[NASA-CASE-NPO-17937-1-CU] c 43 N91-21621
- NEAR INFRARED RADIATION**  
Collimator of multiple plates with axially aligned identical random arrays of apertures  
[NASA-CASE-MFS-20546-2] c 14 N73-30389
- NEEDLES**  
Sharps container  
[NASA-CASE-MSC-21776-1] c 31 N92-33612
- NEGATIVE FEEDBACK**  
Complementary regenerative switch Patent  
[NASA-CASE-XGS-02751] c 09 N71-23015
- Solid-state current transformer  
[NASA-CASE-MFS-22560-1] c 33 N77-14335
- NEGATIVE IONS**  
Generation of intense negative ion beams  
[NASA-CASE-NPO-16061-1-CU] c 72 N87-21660
- NEODYMIUM LASERS**  
Length controlled stabilized mode-lock ND:YAG laser  
[NASA-CASE-GSC-11571-1] c 36 N77-25499
- NERVES**  
Implantable electrical device  
[NASA-CASE-GSC-12560-1] c 52 N82-29863
- NETS**  
Load limiting energy absorbing lightweight debris catcher  
[NASA-CASE-MSC-21562-1] c 16 N92-16007
- NETWORK SYNTHESIS**  
Electromagnetic polarization systems and methods Patent  
[NASA-CASE-GSC-10021-1] c 09 N71-24595
- High speed phase detector Patent  
[NASA-CASE-XNP-01306-2] c 09 N71-24596
- Tuned analog network  
[NASA-CASE-GSC-12650-1] c 33 N84-14421
- NEURAL NETS**  
Hybrid analog-digital associative neural network  
[NASA-CASE-NPO-17058-1-CU] c 62 N87-25803
- Method of up-front load balancing for local memory parallel processors  
[NASA-CASE-MSC-21348-1] c 62 N91-14769
- High-gain AlGaAs/GaAs double heterojunction Darlington phototransistors for optical neural networks  
[NASA-CASE-NPO-18101-1-CU] c 74 N91-25841
- Analog hardware for learning neural networks  
[NASA-CASE-NPO-17664-1-CU] c 62 N91-32852
- Neural-network dedicated processor for solving competitive assignment problems  
[NASA-CASE-NPO-17781-1-CU] c 60 N92-17884
- Analog hardware for delta-backpropagation neural networks  
[NASA-CASE-NPO-17564-1-CU] c 32 N92-22033
- Optical inner product neural associative memory  
[NASA-CASE-NPO-18491-1-CU] c 60 N92-23546

- Method and apparatus for predicting the direction of movement in machine vision  
[NASA-CASE-NPO-17552-1-CU] c 54 N92-29129
- Electronic neural network for solving traveling salesman and similar global optimization problems  
[NASA-CASE-NPO-17807-2-CU] c 63 N92-29955
- Fast temporal neural learning using teacher forcing  
[NASA-CASE-NPO-18553-1-CU] c 63 N92-30085
- Nonvolatile programmable neural network synaptic array  
[NASA-CASE-NPO-18578-1-CU] c 33 N92-30086
- A space-time neural network for processing both spatial and temporal data  
[NASA-CASE-MS-C-21874-1] c 63 N92-30314
- Cascaded VLSI neural network architecture for on-line learning  
[NASA-CASE-NPO-18645-1-CU] c 63 N92-34240
- The adaptive neuron model: An architecture for the rapid learning of nonlinear topological transformations  
[NASA-CASE-NPO-18579-1-CU] c 63 N93-11174
- Neural network training by integration of adjoint systems of equations forward in time  
[NASA-CASE-NPO-18586-1-CU] c 63 N93-17276
- Neural-network dedicated processor for solving competitive assignment problems  
[NASA-CASE-NPO-17781-1-CU] c 60 N93-20116
- An accelerated training method for back propagation networks  
[NASA-CASE-MS-C-21625-1] c 53 N93-29610
- NEUROGLIA**  
Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c 52 N77-14738
- NEUROLOGY**  
Implantable electrical device  
[NASA-CASE-GSC-12560-1] c 52 N82-29863
- NEURONS**  
The adaptive neuron model: An architecture for the rapid learning of nonlinear topological transformations  
[NASA-CASE-NPO-18579-1-CU] c 63 N93-11174
- NEUTRALIZERS**  
Method and apparatus for neutralizing potentials induced on spacecraft surfaces  
[NASA-CASE-GSC-11963-1] c 33 N77-10429
- Method of neutralizing the corrosive surface of amine-cured epoxy resins  
[NASA-CASE-GSC-12686-1] c 27 N83-34039
- NEUTRON EMISSION**  
Deuterium pass through target --- neutron emitting target  
[NASA-CASE-LEW-11866-1] c 72 N76-15860
- NICKEL**  
Process for producing dispersion strengthened nickel with aluminum Patent  
[NASA-CASE-XLE-06969] c 17 N71-24142
- Selective nickel deposition  
[NASA-CASE-LEW-10965-1] c 15 N72-25452
- Brazing alloy composition  
[NASA-CASE-XMF-06053] c 26 N75-27126
- Method of making reinforced composite structure  
[NASA-CASE-LEW-12619-1] c 24 N77-19171
- Directionally solidified eutectic gamma-gamma nickel-base superalloys  
[NASA-CASE-LEW-12905-1] c 26 N78-18183
- Method of making a light weight battery plaque  
[NASA-CASE-LEW-13349-1] c 26 N84-22734
- Metal (2) 4,4',4'' phthalocyanine tetraamines as curing agents for epoxy resins  
[NASA-CASE-ARC-11424-1] c 27 N85-34281
- Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267
- NICKEL ALLOYS**  
High temperature nickel-base alloy Patent  
[NASA-CASE-XLE-00151] c 17 N70-33283
- Nickel-base alloy Patent  
[NASA-CASE-XLE-00283] c 17 N70-36616
- Nickel-base alloy containing Mo-W-Al-Cr-Ta-Zr-C-Nb-B Patent  
[NASA-CASE-XLE-02082] c 17 N71-16026
- Nickel base alloy  
[NASA-CASE-LEW-10874-1] c 17 N72-22535
- Diffusion welding --- heat treatment of nickel alloys following single step vacuum welding process  
[NASA-CASE-LEW-11388-2] c 37 N74-21055
- Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c 26 N75-29236
- Zirconium modified nickel-copper alloy  
[NASA-CASE-LEW-12245-1] c 26 N77-20201
- Directionally solidified eutectic gamma plus beta nickel-base superalloys  
[NASA-CASE-LEW-12906-1] c 26 N77-32279
- Nickel base alloy --- for gas turbine engine stator vanes  
[NASA-CASE-LEW-12270-1] c 26 N77-32280
- Nical ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LEW-13339-1] c 26 N82-31505
- Nickel base coating alloy  
[NASA-CASE-LEW-13834-1] c 26 N87-14482
- Heat treatment for superalloy  
[NASA-CASE-LEW-14262-1] c 26 N87-28647
- NICKEL CADMIUM BATTERIES**  
Heat flow calorimeter --- measures output of Ni-Cd batteries  
[NASA-CASE-GSC-11434-1] c 34 N74-27859
- Method and apparatus for conditioning of nickel-cadmium batteries  
[NASA-CASE-MFS-23270-1] c 44 N78-25531
- NICKEL COATINGS**  
Nickel aluminate coated low alloy stainless steel  
[NASA-CASE-LEW-11267-1] c 17 N73-32414
- Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c 44 N78-19599
- NICKEL COMPOUNDS**  
Didymium hydrate additive to nickel hydroxide electrodes Patent  
[NASA-CASE-XGS-03505] c 03 N71-10608
- Brazing alloy  
[NASA-CASE-XNP-03878] c 26 N75-27127
- NICKEL HYDROGEN BATTERIES**  
Oxygen recombination in individual pressure vessel nickel-hydrogen batteries  
[NASA-CASE-LEW-13822-1] c 44 N86-25874
- NICKEL PLATE**  
Plating nickel on aluminum castings Patent  
[NASA-CASE-XNP-04148] c 17 N71-24830
- NICKEL ZINC BATTERIES**  
Additive for zinc electrodes --- electric automobiles  
[NASA-CASE-LEW-13286-1] c 33 N84-14422
- NIObIUM**  
Trialkyl-dihalotantalum and niobium compounds Patent  
[NASA-CASE-XNP-04023] c 06 N71-28808
- Method for producing edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-2-CU] c 76 N92-22040
- Edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-3-CU] c 76 N92-22041
- NIObIUM COMPOUNDS**  
Method of producing high T(subc) superconducting NBN films  
[NASA-CASE-NPO-16681-1-CU] c 76 N88-24543
- Edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-1-CU] c 76 N90-17456
- NITINOL ALLOYS**  
Coupling device with improved thermal interface  
[NASA-CASE-GSC-13251-1] c 37 N92-29120
- Device for removing foreign objects from anatomic organs  
[NASA-CASE-GSC-13306-1] c 52 N92-33032
- NITRAMINE PROPELLANTS**  
Nitramine propellants --- gun propellant burning rate  
[NASA-CASE-NPO-14103-1] c 28 N78-31255
- NITRATION**  
The 1-(diorganooxyphosphonyl)-methyl-2,4- and -2,6-diamido benzenes  
[NASA-CASE-ARC-11425-4] c 23 N90-20133
- Some 1-(diorganooxyphosphonyl)methyl-2,4- and -2,6-dinitro-benzenes  
[NASA-CASE-ARC-11425-3] c 23 N90-23475
- NITRIC OXIDE**  
Reduction of nitric oxide emissions from a combustor  
[NASA-CASE-ARC-10814-2] c 07 N80-26298
- NITRIDES**  
Refractory coatings and method of producing the same  
[NASA-CASE-LEW-13169-1] c 26 N82-29415
- Method of producing high T(subc) superconducting NBN films  
[NASA-CASE-NPO-16681-1-CU] c 76 N88-24543
- Edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-1-CU] c 76 N90-17456
- NITRIDING**  
Ion-beam nitriding of steels  
[NASA-CASE-LEW-14104-2] c 26 N88-14179
- NITRILES**  
Intumescent paint containing nitrile rubber  
[NASA-CASE-ARC-10196-1] c 18 N73-13562
- Trimerization of aromatic nitriles  
[NASA-CASE-LEW-12053-1] c 27 N78-15276
- Process for preparing phthalocyanine polymer from imide containing bisphthalonitrile  
[NASA-CASE-ARC-11511-2] c 27 N87-21112
- NITRO COMPOUNDS**  
Intumescent coatings containing 4,4'-dinitrosulfanilide  
[NASA-CASE-ARC-11042-1] c 24 N78-14096
- NITROAMINES**  
Intumescent paints Patent  
[NASA-CASE-ARC-10099-1] c 18 N71-15469
- Polymeric vehicles as carriers for sulfonic acid salt of nitrosubstituted aromatic amines  
[NASA-CASE-ARC-10325] c 06 N72-25147
- NITROGEN**  
III-V photocathode with nitrogen doping for increased quantum efficiency  
[NASA-CASE-NPO-12134-1] c 33 N76-31409
- NITROGEN COMPOUNDS**  
Method for preparing addition type polyimide prepreps  
[NASA-CASE-LAR-12054-2] c 27 N81-14078
- NITROGEN OXIDES**  
Combustion engine --- for air pollution control  
[NASA-CASE-NPO-13671-1] c 37 N77-31497
- Combustor --- low nitrogen oxide formation  
[NASA-CASE-NPO-13958-1] c 25 N79-11151
- NITROGEN TETROXIDE**  
Procedure and apparatus for determination of water in nitrogen tetroxide  
[NASA-CASE-NPO-10234] c 06 N72-17094
- NITROGENATION**  
Poly(1,3,4-oxadiazoles) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14427-1] c 23 N92-29141
- NITROGUANIDINE**  
Hydrazinium nitroformate propellant stabilized with nitroguanidine  
[NASA-CASE-NPO-12000] c 27 N72-25699
- NOBLE METALS**  
GaAs Schottky barrier photo-responsive device and method of fabrication  
[NASA-CASE-GSC-12816-1] c 76 N86-20150
- Process for making a noble metal on tin oxide catalyst  
[NASA-CASE-LAR-13741-1-SB] c 25 N90-20180
- NODES (STANDING WAVES)**  
System for controlled acoustic rotation of objects  
[NASA-CASE-NPO-15522-1] c 71 N83-32516
- NOISE GENERATORS**  
Pseudo-noise test set for communication system evaluation --- test signals  
[NASA-CASE-MFS-22671-1] c 35 N75-21582
- Method of and means for testing a tape record/playback system  
[NASA-CASE-MFS-22671-2] c 35 N77-17426
- NOISE MEASUREMENT**  
Vacuum-isolation vessel and method for measurement of thermal noise in microphones  
[NASA-CASE-LAR-14567-1-CU] c 33 N92-33021
- NOISE METERS**  
Instrumentation for measurement of aircraft noise and sonic boom  
[NASA-CASE-LAR-11173-1] c 35 N75-19614
- Differential sound level meter  
[NASA-CASE-LAR-12106-1] c 71 N78-14867
- Ride quality meter  
[NASA-CASE-LAR-12882-1] c 35 N84-12445
- NOISE REDUCTION**  
Jet aircraft configuration Patent  
[NASA-CASE-XLA-00087] c 02 N70-33332
- Cassegrainian antenna subreflector flange for suppressing ground noise Patent  
[NASA-CASE-XNP-00683] c 09 N70-35425
- Device for suppressing sound and heat produced by high-velocity exhaust jets Patent  
[NASA-CASE-XMF-01813] c 28 N70-41582
- Variable time constant smoothing circuit Patent  
[NASA-CASE-XGS-01983] c 10 N70-41964
- Digital telemetry system Patent  
[NASA-CASE-XGS-01812] c 07 N71-23001
- Audio signal processor Patent  
[NASA-CASE-MS-C-12223-1] c 07 N71-26181
- Variable frequency nuclear magnetic resonance spectrometer Patent  
[NASA-CASE-XNP-09830] c 14 N71-26266
- Method and apparatus for eliminating coherent noise in a coherent energy imaging system without destroying spatial coherence  
[NASA-CASE-GSC-11133-1] c 23 N72-11568
- Audio system with means for reducing noise effects  
[NASA-CASE-NPO-11631] c 10 N73-12244
- Gas turbine exhaust nozzle --- for noise reduction  
[NASA-CASE-LEW-11569-1] c 07 N74-15453
- Totally confined explosive welding --- apparatus to reduce noise level and protect personnel during explosive bonding  
[NASA-CASE-LAR-10941-1] c 37 N74-21057
- Jet exhaust noise suppressor  
[NASA-CASE-LEW-11286-1] c 07 N74-27490
- Supersonic fan blading --- noise reduction in turbofan engines  
[NASA-CASE-LEW-11402-1] c 07 N74-28226
- Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c 07 N74-31270

- Noise suppressor --- for turbofan engine by incorporating annular acoustically porous elements in exhaust and inlet ducts  
[NASA-CASE-LAR-11141-1] c 07 N74-32418
- Abating exhaust noises in jet engines  
[NASA-CASE-ARC-10712-1] c 07 N74-33218
- Television noise reduction device  
[NASA-CASE-MSC-12607-1] c 32 N75-21485
- Cascade plug nozzle --- for jet noise reduction  
[NASA-CASE-LAR-11674-1] c 07 N76-18117
- Apparatus for reducing aerodynamic noise in a wind tunnel  
[NASA-CASE-MFS-23099-1] c 09 N76-23273
- Optical noise suppression device and method --- laser light exposing film  
[NASA-CASE-MSC-12640-1] c 74 N76-31998
- Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c 07 N78-17055
- Magneto-optic detection system with noise cancellation  
[NASA-CASE-NPO-11954-1] c 35 N78-29421
- Totally confined explosive welding  
[NASA-CASE-LAR-10941-2] c 37 N79-13364
- Sound-suppressing structure with thermal relief  
[NASA-CASE-LEW-12658-1] c 71 N79-14871
- Acoustically swept rotor --- helicopter noise reduction  
[NASA-CASE-ARC-11106-1] c 05 N80-14107
- Support assembly for cryogenically coolable low-noise choke waveguide  
[NASA-CASE-NPO-14253-1] c 32 N80-32605
- Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c 07 N81-14999
- Multiple pure tone elimination strut assembly --- air breathing engines  
[NASA-CASE-FRC-11062-1] c 71 N82-16800
- Sound shield  
[NASA-CASE-LAR-12883-1] c 71 N83-17235
- Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c 07 N83-33884
- Apparatus and method for jet noise suppression  
[NASA-CASE-LAR-11903-2] c 71 N84-14873
- Phase sensitive guidance sensor for wire-following vehicles  
[NASA-CASE-NPO-15341-1] c 35 N84-33769
- Comparator with noise suppression  
[NASA-CASE-LAR-13151-1] c 33 N87-21235
- Low-noise nozzle valve  
[NASA-CASE-MFS-28383-1] c 34 N91-14563
- Sound attenuation apparatus  
[NASA-CASE-LAR-13968-1] c 71 N91-27913
- Consecutive plate acoustic suppressor apparatus and methods  
[NASA-CASE-LEW-15430-1] c 71 N93-17051
- Multipath noise reduction spread spectrum signals  
[NASA-CASE-NPO-18970-1-CU] c 32 N93-28126
- Jet mixer noise suppressor using acoustic feedback  
[NASA-CASE-LEW-15170-1] c 71 N93-28953
- NOISE TEMPERATURE**  
Method and means for providing an absolute power measurement capability Patent  
[NASA-CASE-ERC-11020] c 14 N71-26774
- NOISE THRESHOLD**  
Frequency modulation demodulator threshold extension device Patent  
[NASA-CASE-MSC-12165-1] c 07 N71-33696
- NONADIABATIC CONDITIONS**  
Direct heating surface combustor  
[NASA-CASE-LEW-11877-1] c 34 N78-27357
- NONDESTRUCTIVE TESTS**  
Determination of spot weld quality Patent  
[NASA-CASE-XNP-02588] c 15 N71-18613
- Space simulator Patent  
[NASA-CASE-NPO-10141] c 11 N71-24964
- Apparatus for inspecting microfilm Patent  
[NASA-CASE-MFS-20240] c 14 N71-26788
- Dye penetrant for surfaces subsequently contacted by liquid oxygen Patent  
[NASA-CASE-XMF-02221] c 18 N71-27170
- Method and device for detecting voids in low density material Patent  
[NASA-CASE-MFS-20044] c 14 N71-28993
- Holographic system for nondestructive testing  
[NASA-CASE-MFS-21704-1] c 35 N75-25124
- Method and apparatus for nondestructive testing of pressure vessels  
[NASA-CASE-NPO-12142-1] c 38 N76-28563
- Non-destructive method for applying and removing instrumentation on helicopter rotor blades  
[NASA-CASE-LAR-11201-1] c 35 N78-24515
- Hybrid holographic non-destructive test system  
[NASA-CASE-MFS-23114-1] c 38 N78-32447
- Insulation bonding test system  
[NASA-CASE-MFS-25862-1] c 27 N85-20126
- Method and apparatus for mapping the distribution of chemical elements in an extended medium  
[NASA-CASE-GSC-12808-1] c 25 N85-21279
- Ultrasonic angle beam standard reflector --- ultrasonic nondestructive inspection  
[NASA-CASE-LAR-13153-1] c 71 N86-21276
- Method and apparatus for measuring minority carrier lifetime in a direct band-gap semiconductor  
[NASA-CASE-NPO-16337-1-CU] c 33 N87-22894
- Acoustic emission frequency discrimination  
[NASA-CASE-MSC-20467-1] c 35 N88-23966
- Magneto acoustic emission apparatus for testing materials for embrittlement  
[NASA-CASE-LAR-13817-1] c 26 N90-21170
- Method of radiographic inspection of wooden members  
[NASA-CASE-LAR-13724-1] c 38 N90-23756
- Universal nondestructive mm-wave integrated circuit test fixture  
[NASA-CASE-LEW-14746-1] c 33 N91-14552
- A method and apparatus for indicating disbonds in joint regions  
[NASA-CASE-LAR-14626-1] c 38 N92-17859
- Method for non-destructive estimation of waveguide directional coupler dimensions  
[NASA-CASE-NPO-18454-1-CU] c 33 N92-17865
- Method and apparatus for determination of material residual stress  
[NASA-CASE-GSC-13451-1] c 39 N92-23549
- Magnetic remanence method and apparatus to test materials for embrittlement  
[NASA-CASE-LAR-13817-4] c 39 N92-29101
- Method for advanced material characterization by laser induced eddy current imaging  
[NASA-CASE-GSC-13386-1] c 38 N92-29154
- Magneto acoustic emission method for testing materials for embrittlement  
[NASA-CASE-LAR-13817-2] c 39 N92-29155
- Method and apparatus for thermographically and quantitatively analyzing a structure for disbonds and/or inclusions  
[NASA-CASE-LAR-14559-1] c 38 N92-29829
- Method and apparatus for evaluating multilayer objects for imperfections  
[NASA-CASE-LAR-14581-1-SB] c 38 N93-12204
- Rapid detection and quantification of features such as damage or flaws in composite and metallic structures  
[NASA-CASE-LAR-14850-1-CU] c 38 N93-17048
- Method for non-destructive estimation of waveguide directional coupler dimensions  
[NASA-CASE-NPO-18454-1-CU] c 33 N93-18285
- Spectroscopic wear detector  
[NASA-CASE-LEW-15200-1] c 20 N93-18856
- High speed thin plate fatigue crack monitor  
[NASA-CASE-LAR-14816-1-SB] c 39 N93-19329
- Method and apparatus for determination of material residual stress  
[NASA-CASE-GSC-13451-1] c 39 N93-20118
- NONEQUILIBRIUM CONDITIONS**  
Condition sensor system and method  
[NASA-CASE-MSC-14805-1] c 54 N78-32720
- NONEQUILIBRIUM PLASMAS**  
Probes having ring and primary sensor at same potential to prevent collection of stray wall currents in ionized gases  
[NASA-CASE-XLE-00690] c 25 N69-39884
- NONEQUILIBRIUM RADIATION**  
Non-equilibrium radiation nuclear reactor  
[NASA-CASE-HQN-10841-1] c 73 N78-19920
- NONFLAMMABLE MATERIALS**  
Intumescent paint containing nitrile rubber  
[NASA-CASE-ARC-10196-1] c 18 N73-13562
- Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c 27 N76-24405
- NONLINEAR FEEDBACK**  
Coherent receiver employing nonlinear coherence detection for carrier tracking  
[NASA-CASE-NPO-11921-1] c 32 N74-30523
- Nonlinear nonsingular feedback shift registers  
[NASA-CASE-NPO-13451-1] c 33 N76-14373
- Terminal slider control of nonlinear robotic systems  
[NASA-CASE-NPO-18584-1-CU] c 37 N93-11177
- NONLINEAR FILTERS**  
Apparatus for damping operator induced oscillations of a controlled system --- flight control  
[NASA-CASE-FRC-11041-1] c 33 N82-18493
- NONLINEAR OPTICS**  
Molecules with enhanced electronic polarizabilities based on defect-like states in conjugated polymers  
[NASA-CASE-NPO-17633-1-CU] c 27 N91-27372
- NONLINEAR SYSTEMS**  
Phase detector assembly Patent  
[NASA-CASE-XMF-00701] c 09 N70-40272
- Nonlinear analog-to-digital converter Patent  
[NASA-CASE-XAC-04031] c 08 N71-18594
- Split range transducer  
[NASA-CASE-XLA-11189] c 10 N72-20222
- Contour measurement system  
[NASA-CASE-MFS-23726-1] c 43 N79-26439
- Terminal slider control of nonlinear robotic systems  
[NASA-CASE-NPO-18584-1-CU] c 37 N93-11177
- NONLINEARITY**  
Stereoscopic camera and viewing systems with undistorted depth presentation and reduced or eliminated erroneous acceleration and deceleration perceptions, or with perceptions produced or enhanced for special effects  
[NASA-CASE-NPO-18028-1-CU] c 74 N92-16809
- The adaptive neuron model: An architecture for the rapid learning of nonlinear topological transformations  
[NASA-CASE-NPO-18579-1-CU] c 63 N93-11174
- NORMAL DENSITY FUNCTIONS**  
Ultrasonic transducer with Gaussian radial pressure distribution  
[NASA-CASE-LAR-12967-1] c 35 N84-22932
- NOSE CONES**  
Automatically deploying nozzle exit cone extension Patent  
[NASA-CASE-XLE-01640] c 31 N71-15637
- Nose cone mounted heat resistant antenna Patent  
[NASA-CASE-XMS-04312] c 07 N71-22984
- NOSE WHEELS**  
Nose gear steering system for vehicle with main skids Patent  
[NASA-CASE-XLA-01804] c 02 N70-34160
- NOSES (FOREBODIES)**  
Rotatable non-circular forebody flow controller  
[NASA-CASE-LAR-14212-1-CU] c 05 N91-31140
- NOTCH STRENGTH**  
Active notch filter network with variable notch depth, width and frequency  
[NASA-CASE-FRC-11055-1] c 33 N80-29583
- NOTCH TESTS**  
Vee-notching device --- with adjustable carriage  
[NASA-CASE-MFS-20730-1] c 39 N74-13131
- Notch filter  
[NASA-CASE-MFS-23303-1] c 32 N77-18307
- NOTCHES**  
Notch filter  
[NASA-CASE-MFS-23303-1] c 32 N77-18307
- NOZZLE DESIGN**  
Annular rocket motor and nozzle configuration Patent  
[NASA-CASE-XLE-00078] c 28 N70-33284
- Penshape exhaust nozzle for supersonic engine Patent  
[NASA-CASE-XLE-00057] c 28 N70-38711
- Telescoping-spike supersonic inlet for aircraft engines Patent  
[NASA-CASE-XLE-00005] c 28 N70-39899
- Automatically deploying nozzle exit cone extension Patent  
[NASA-CASE-XLE-01640] c 31 N71-15637
- Injector assembly for liquid fueled rocket engines Patent  
[NASA-CASE-XMF-00968] c 28 N71-15660
- Collapsible nozzle extension for rocket engines Patent  
[NASA-CASE-MFS-11497] c 28 N71-16224
- Gas turbine combustion apparatus Patent  
[NASA-CASE-XLE-103477-1] c 28 N71-20330
- Prestressed refractory structure Patent  
[NASA-CASE-XNP-02888] c 18 N71-21068
- Scanning nozzle plating system --- for etching or plating metals on substrates without masking  
[NASA-CASE-NPO-11758-1] c 31 N74-23065
- Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c 07 N78-17055
- Variable area exhaust nozzle  
[NASA-CASE-LEW-12378-1] c 07 N79-14097
- Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c 07 N80-32392
- Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c 37 N81-25371
- Controlled overspray spray nozzle  
[NASA-CASE-MFS-25139-1] c 34 N82-13376
- Low-noise nozzle valve  
[NASA-CASE-MFS-28383-1] c 34 N91-14563
- Nozzle fabrication technique  
[NASA-CASE-MSC-21299-2] c 37 N91-32508
- Rocket engine nozzle attenuator  
[NASA-CASE-MFS-28739-1] c 20 N93-28324
- Altitude compensating ablative stiffening band for rocket motor nozzles  
[NASA-CASE-MFS-28728-1] c 20 N93-28950
- NOZZLE FLOW**  
Control system for rocket vehicles Patent  
[NASA-CASE-XLA-01163] c 21 N71-15582



Aerodynamic spike nozzle Patent  
[NASA-CASE-XGS-01143] c 31 N71-15647

Propellant mass distribution metering apparatus Patent  
[NASA-CASE-NPO-10185] c 10 N71-26339

Tertiary flow injection thrust vectoring system Patent  
[NASA-CASE-MFS-20831] c 28 N71-29153

Multi-purpose wind tunnel reaction control model block  
[NASA-CASE-MSC-19706-1] c 09 N78-31129

Adjustable steam producing flexible orifice independent of fluid pressure  
[NASA-CASE-NPO-17625-1-CU] c 34 N92-21724

**NOZZLE GEOMETRY**

Method of making a rocket nozzle  
[NASA-CASE-XMF-06884-1] c 20 N79-21123

Nozzle fabrication technique  
[NASA-CASE-MSC-21299-1] c 20 N88-24684

Altitude compensating ablative stiffening band for rocket motor nozzles  
[NASA-CASE-MFS-28728-1] c 20 N93-28950

**NOZZLE INSERTS**

Self-sealing, unbonded, rocket motor nozzle closure Patent  
[NASA-CASE-XLA-02651] c 28 N70-41967

Wind tunnel supplementary Mach number minimum section insert  
[NASA-CASE-LAR-12532-1] c 09 N82-11088

**NUCLEAR EXPLOSION EFFECT**

Method and construction for protecting heat sensitive bodies from thermal radiation and convective heat Patent  
[NASA-CASE-XNP-01310] c 33 N71-28852

**NUCLEAR FUEL ELEMENTS**

Nuclear fuel elements  
[NASA-CASE-XLE-00209] c 22 N73-32528

**NUCLEAR MAGNETIC RESONANCE**

Variable frequency nuclear magnetic resonance spectrometer Patent  
[NASA-CASE-XNP-09830] c 14 N71-26266

**NUCLEAR POWER PLANTS**

Self-adjusting multisegment, deployable, natural circulation radiator Patent  
[NASA-CASE-XHQ-03673] c 33 N71-29046

**NUCLEAR PUMPED LASERS**

Volumetric direct nuclear pumped laser  
[NASA-CASE-LAR-12183-1] c 36 N79-18307

**NUCLEAR PUMPING**

Large volume multiple-path nuclear pumped laser  
[NASA-CASE-LAR-12592-1] c 36 N82-13415

**NUCLEAR REACTOR CONTROL**

Gaseous control system for nuclear reactors  
[NASA-CASE-XLE-04599] c 22 N72-20597

Control for nuclear thermionic power source  
[NASA-CASE-NPO-13114-2] c 73 N78-28913

**NUCLEAR REACTORS**

Nuclear thermionic converter --- tungsten-thorium oxide rods  
[NASA-CASE-NPO-13121-1] c 73 N77-18891

High thermal power density heat transfer apparatus providing electrical isolation at high temperature using heat pipes  
[NASA-CASE-LEW-12950-2] c 34 N85-29179

Jet pump-drive system for heat removal  
[NASA-CASE-NPO-16494-1-CU] c 34 N85-29182

Method for remotely powering a device such as a lunar rover  
[NASA-CASE-LAR-14789-1] c 37 N92-30388

**NUCLEATE BOILING**

Method of improving heat transfer characteristics in a nucleate boiling process Patent  
[NASA-CASE-XMS-04268] c 33 N71-16277

**NUCLEATION**

Crystal growth in a microgravity environment  
[NASA-CASE-MFS-28473-1] c 76 N93-14707

**NUCLEOPHILES**

Polyphenylquinoxalines via aromatic nucleophilic displacement  
[NASA-CASE-LAR-13988-1] c 23 N89-11814

Phenylethynyl endcapping reagents and reactive diluents  
[NASA-CASE-LAR-14796-1] c 25 N93-31459

**NULL ZONES**

Null device for hand controller Patent  
[NASA-CASE-XLA-01808] c 15 N71-20740

**NUMBER THEORY**

Binary concatenated coding system  
[NASA-CASE-MSC-14082-1] c 60 N76-23850

**NUMERICAL ANALYSIS**

Method of and apparatus for generating an interstitial point in a data stream having an even number of data points  
[NASA-CASE-MFS-25319-1] c 60 N85-33701

**NUMERICAL CONTROL**

Fringe counter for interferometers Patent  
[NASA-CASE-LAR-10204] c 14 N71-27215

Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c 33 N81-17349

Controller for computer control of brushless dc motors --- automobile engines  
[NASA-CASE-NPO-13970-1] c 33 N81-20352

Reconfiguring redundancy management  
[NASA-CASE-MSC-18498-1] c 60 N82-29013

Brushless DC motor control system responsive to control signals generated by a computer or the like  
[NASA-CASE-NPO-16420-1] c 33 N86-20681

Variable friction secondary seal for face seals  
[NASA-CASE-LEW-14170-1] c 37 N86-25790

Spacecraft component heater control system  
[NASA-CASE-MFS-28327-1] c 18 N89-28556

A digitally controlled system for effecting and presenting a selected electrical resistance  
[NASA-CASE-MFS-29149-1] c 33 N90-19492

Computer access security code system  
[NASA-CASE-NPO-17525-1-CU] c 60 N90-25583

Smart tunnel: Docking mechanism  
[NASA-CASE-MSC-21360-1] c 18 N91-14374

A universal computer control system for motors  
[NASA-CASE-NPO-17134-1-CU] c 33 N91-31528

Microprocessor control of multiple peak power tracking DC/DC converters for use with solar cell arrays  
[NASA-CASE-GSC-13450-1] c 44 N92-23463

System for simultaneously loading program to master computer memory devices and corresponding slave computer memory devices  
[NASA-CASE-MSC-21387-1] c 61 N93-18855

Numerical control fabrication technique for dynamic composite models  
[NASA-CASE-LAR-14004-1] c 63 N93-19024

Valve malfunction detection apparatus  
[NASA-CASE-MFS-29904-1] c 35 N93-29503

**NUMERICAL INTEGRATION**

Apparatus for computing square roots Patent  
[NASA-CASE-XGS-04768] c 08 N71-19437

**NUSTATION**

Method and means for damping nutation in a satellite Patent  
[NASA-CASE-XMF-00442] c 31 N71-10747

Nutation damper  
[NASA-CASE-GSC-11205-1] c 15 N73-25513

**NUSTATION DAMPERS**

Active nutation controller  
[NASA-CASE-GSC-12273-1] c 35 N80-21719

Method of damping nutation motion with minimum spin axis attitude disturbance  
[NASA-CASE-GSC-12551-1] c 18 N83-28064

**NUTRIENTS**

Active synthetic soil  
[NASA-CASE-MSC-21954-1-NP] c 51 N93-19054

**NUTRITION**

Slow-release fertilizer  
[NASA-CASE-MSC-21953-1-NP] c 37 N93-17271

**NUTS (FASTENERS)**

Separation nut Patent  
[NASA-CASE-XGS-01971] c 15 N71-15922

Split nut separation system Patent  
[NASA-CASE-XNP-06914] c 15 N71-21489

Fastener stretcher  
[NASA-CASE-GSC-11149-1] c 15 N73-30457

High-torque open-end wrench  
[NASA-CASE-NPO-13541-1] c 37 N79-14383

Floating nut retention system  
[NASA-CASE-MSC-16938-1] c 37 N80-23653

Daze fasteners  
[NASA-CASE-LAR-13009-2] c 37 N87-22976

Tube coupling device  
[NASA-CASE-MFS-25964-2] c 37 N87-22977

Quick application/release nut with engagement indicator  
[NASA-CASE-MSC-21799-1] c 37 N92-29150

Slip joint connector  
[NASA-CASE-MFS-28659-1] c 37 N93-17080

## O

## O RING SEALS

High pressure four-way valve Patent  
[NASA-CASE-XNP-00214] c 15 N70-36908

Self-stabilizing radial face seal  
[NASA-CASE-LEW-12991-1] c 37 N81-24442

Circumferential shaft seal  
[NASA-CASE-LEW-12119-2] c 37 N81-26447

Modified spiral wound retaining ring  
[NASA-CASE-LAR-12361-1] c 37 N83-19091

Resilient seal ring assembly with spring means applying force to wedge member --- cryogenic applications  
[NASA-CASE-MFS-25678-1] c 37 N84-11497

Variable friction secondary seal for face seals  
[NASA-CASE-LEW-14170-1] c 37 N86-25790

O-ring gasket test fixture  
[NASA-CASE-MFS-28376-1] c 14 N91-21175

Check valve with poppet dashpot/frictional damping mechanism  
[NASA-CASE-MSC-21950-1] c 37 N92-34242

**OBLIQUE WINGS**

Oblique-wing supersonic aircraft  
[NASA-CASE-ARC-10470-3] c 05 N76-29217

**OBSERVATION**

Method for investigating the formation of crystals in a transparent material  
[NASA-CASE-MFS-26008-1-CU] c 76 N88-14835

**OBSTACLE AVOIDANCE**

Method and apparatus for configuration control of redundant robots  
[NASA-CASE-NPO-17801-1-CU] c 37 N91-21544

Obstacle avoidance for redundant robots using configuration control  
[NASA-CASE-NPO-17852-1-CU] c 63 N92-33019

**OCCCLUSION**

Prosthetic occlusive device for an internal passageway  
[NASA-CASE-MFS-25740-1] c 52 N84-11744

**OCEAN CURRENTS**

Method and apparatus for Delta Kappa synthetic aperture radar measurement of ocean current  
[NASA-CASE-NPO-15704-1] c 32 N85-34327

**OCEAN DATA ACQUISITIONS SYSTEMS**

Oceanic wave measurement system  
[NASA-CASE-MFS-23862-1] c 48 N80-18667

Method of measuring sea surface water temperature with a satellite including wideband passive synthetic-aperture multichannel receiver  
[NASA-CASE-NPO-15651-1] c 43 N85-21723

**OCEAN SURFACE**

Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c 35 N79-10391

Oceanic wave measurement system  
[NASA-CASE-MFS-23862-1] c 48 N80-18667

System and method for measuring ocean surface currents at locations remote from land masses using synthetic aperture radar  
[NASA-CASE-NPO-17937-1-CU] c 43 N91-21621

**OCEAN THERMAL ENERGY CONVERSION**

Ocean thermal plant  
[NASA-CASE-KSC-11034-1] c 44 N78-32542

**ODORS**

Vapor fragrances  
[NASA-CASE-LAR-13680-1] c 35 N87-25561

**OFFGASSING**

Protective helmet assembly  
[NASA-CASE-MSC-21842-1] c 54 N93-17088

**OFFSHORE PLATFORMS**

Ocean thermal plant  
[NASA-CASE-KSC-11034-1] c 44 N78-32542

**OHMMETERS**

Positive contact resistance soldering unit  
[NASA-CASE-KSC-10242] c 15 N72-23497

Four-terminal electrical testing device --- initiator bridgeway resistance  
[NASA-CASE-MSC-21166-1] c 35 N87-25555

**OIL EXPLORATION**

Underwater seismic source --- for petroleum exploration  
[NASA-CASE-NPO-14255-1] c 46 N79-23555

Borehole geological assessment  
[NASA-CASE-NPO-14231-1] c 46 N80-10709

**OIL RECOVERY**

Oil and fat absorbing polymers  
[NASA-CASE-NPO-11609-2] c 27 N77-31308

In-situ laser retorting of oil shale  
[NASA-CASE-LEW-12217-1] c 43 N78-14452

Crude oil desulfurization  
[NASA-CASE-NPO-14542-1] c 25 N82-23282

Solar heated oil shale pyrolysis process  
[NASA-CASE-NPO-16392-1] c 25 N86-25428

**OILS**

Method of recording a gas flow pattern Patent  
[NASA-CASE-XMF-01779] c 12 N71-20815

Oil and fat absorbing polymers  
[NASA-CASE-NPO-11609-2] c 27 N77-31308

**OLIGOMERS**

N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14188-2] c 23 N91-14419

Phenylethynyl endcapping reagents and reactive diluents  
[NASA-CASE-LAR-14796-1] c 25 N93-31459

**OMNIDIRECTIONAL ANTENNAS**

Omnidirectional microwave spacecraft antenna Patent  
[NASA-CASE-XLA-03114] c 09 N71-22888

Stacked array of omnidirectional antennas  
[NASA-CASE-LAR-10545-1] c 09 N72-21244

Omnidirectional slot antenna for mounting on cylindrical space vehicle  
[NASA-CASE-LAR-10163-1] c 09 N72-25247

## ON-LINE SYSTEMS

- Cascaded VLSI neural network architecture for on-line learning  
[NASA-CASE-NPO-18645-1-CU] c 63 N92-34240  
Self-checking on-line testable static RAM  
[NASA-CASE-NPO-17939-1-CU] c 60 N93-22032

## ONBOARD EQUIPMENT

- Survival couch Patent  
[NASA-CASE-XLA-00118] c 05 N70-33285  
Cryogenic storage system Patent  
[NASA-CASE-XMS-04390] c 31 N70-41871  
Fiber optic vibration transducer and analyzer Patent  
[NASA-CASE-XMF-02433] c 14 N71-10616  
Satellite appendage tie down cord Patent  
[NASA-CASE-XGS-02554] c 31 N71-21064  
Satellite aided vehicle avoidance system Patent  
[NASA-CASE-ERC-10090] c 21 N71-24948  
A dc servosystem including an ac motor Patent  
[NASA-CASE-NPO-10700] c 07 N71-33613  
Collapsible Apollo couch  
[NASA-CASE-MS-C-13140] c 05 N72-11085  
Monostable multivibrator  
[NASA-CASE-GSC-10082-1] c 10 N72-20221  
Delayed simultaneous release mechanism  
[NASA-CASE-GSC-10814-1] c 03 N73-20039  
Electronic strain-level counter  
[NASA-CASE-LAR-10756-1] c 32 N73-26910  
Magnetic heading reference  
[NASA-CASE-LAR-11387-1] c 04 N76-20114

## OPEN CHANNEL FLOW

- Monogroove heat pipe design: Insulated liquid channel with bridging wick  
[NASA-CASE-MS-C-20497-1] c 34 N85-29180

## OPENINGS

- Double face sealing device  
[NASA-CASE-MFS-28521-1] c 37 N91-26542

## OPERATING TEMPERATURE

- Solar cell having improved back surface reflector  
[NASA-CASE-LEW-13620-1] c 44 N83-13579

## OPERATIONAL AMPLIFIERS

- Digital automatic gain amplifier  
[NASA-CASE-KSC-11008-1] c 33 N79-22373  
Automatic level control circuit  
[NASA-CASE-KSC-11170-1] c 33 N83-36356  
Phase detector for three-phase power factor controller  
[NASA-CASE-MFS-25854-1] c 33 N84-27975  
Temperature sensitive oscillator  
[NASA-CASE-GSC-12958-1] c 33 N86-32624

## OPHTHALMOLOGY

- Ophthalmic method and apparatus  
[NASA-CASE-LEW-11669-1] c 05 N73-27062  
Ophthalmic liquification pump  
[NASA-CASE-LEW-12051-1] c 52 N75-33640

## OPTICAL ACTIVITY

- Monolithic mm-wave phase shifter using optically activated superconducting switches  
[NASA-CASE-LEW-14878-1] c 74 N92-28571

## OPTICAL COMMUNICATION

- Retrodirective optical system  
[NASA-CASE-XGS-04480] c 16 N69-27491  
Optical communications system Patent  
[NASA-CASE-XLA-01090] c 07 N71-12389  
Optical frequency waveguide and transmission system Patent  
[NASA-CASE-HQN-10541-4] c 16 N71-27183  
High pulse rate high resolution optical radar system  
[NASA-CASE-NPO-11426] c 07 N73-26119  
Apparatus for simulating optical transmission links  
[NASA-CASE-GSC-11877-1] c 74 N76-18913  
Fiber distributed feedback laser  
[NASA-CASE-NPO-13531-1] c 36 N76-24553  
Polarization compensator for optical communications  
[NASA-CASE-GSC-11782-1] c 74 N76-30053  
Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c 74 N77-26942  
Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c 32 N77-28346  
Fiber optic multiplex optical transmission system  
[NASA-CASE-KSC-11047-1] c 74 N78-14889  
Fiber optic crossbar switch for automatically patching optical signals  
[NASA-CASE-KSC-11104-1] c 74 N83-29032  
Synchronization tracking in pulse position modulation receiver  
[NASA-CASE-NPO-16256-1] c 32 N87-21267  
Optical shutter switching matrix  
[NASA-CASE-KSC-11392-1] c 74 N90-22383  
Dual frequency optical carrier technique for transmission of reference frequencies in dispersive media  
[NASA-CASE-NPO-18007-1-CU] c 74 N92-11791  
Closed-loop motor control using high-speed fiber optics  
[NASA-CASE-MS-C-21806-1] c 74 N92-17863  
Electro-optic resonant phase modulator  
[NASA-CASE-NPO-18702-1-CU] c 74 N92-23551

## OPTICAL CORRELATORS

- Optical joint correlator for real-time image tracking and retinal surgery  
[NASA-CASE-MS-C-21509-1] c 74 N91-25840  
Real-time edge-enhanced optical correlator  
[NASA-CASE-NPO-18379-1-CU] c 74 N92-33022  
Real-time edge-enhanced optical correlator  
[NASA-CASE-NPO-18521-1-CU] c 74 N93-14404  
Motion-sensitive optical correlator  
[NASA-CASE-NPO-18769-1-CU] c 74 N93-28133

## OPTICAL COUPLING

- Automatic quadrature control and measuring system --- using optical coupling circuitry  
[NASA-CASE-MFS-21660-1] c 35 N74-21017  
Optical fiber coupling method and apparatus  
[NASA-CASE-NPO-15464-1] c 74 N85-29749

## OPTICAL DATA PROCESSING

- Optical data processing using paraboloidal mirror segments  
[NASA-CASE-GSC-11296-1] c 23 N73-30666  
Recorder/processor apparatus --- for optical data processing  
[NASA-CASE-GSC-11553-1] c 35 N74-15831  
Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-1] c 32 N79-19195  
Interleaving device  
[NASA-CASE-GSC-12111-2] c 33 N81-29342  
Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c 32 N82-12297  
Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c 32 N83-31918  
Optical stereo video signal processor  
[NASA-CASE-MFS-25752-1] c 74 N86-21348  
Remotely controllable real-time optical processor  
[NASA-CASE-NPO-16750-1-CU] c 74 N89-14078

## OPTICAL DENSITY

- Medical diagnosis system and method with multispectral imaging --- depth of burns and optical density of the skin  
[NASA-CASE-NPO-14402-1] c 52 N81-27783  
Laser schlieren crystal monitor  
[NASA-CASE-MFS-28060-1] c 76 N87-25862

## OPTICAL DISKS

- Laser optical disk position encoder with active heads  
[NASA-CASE-GSC-13175-1] c 74 N92-29133

## OPTICAL EMISSION SPECTROSCOPY

- Maksutov spectrograph Patent  
[NASA-CASE-XLA-10402] c 14 N71-29041  
Method and apparatus for determining optical absorption and emission characteristics of a crystal or non-crystalline fiber  
[NASA-CASE-LAR-13963-1] c 76 N90-24150

## OPTICAL EQUIPMENT

- Light detection instrument Patent  
[NASA-CASE-XGS-05534] c 23 N71-16355  
Optical characteristics measuring apparatus Patent  
[NASA-CASE-XNP-08840] c 23 N71-16365  
Combined optical attitude and altitude indicating instrument Patent  
[NASA-CASE-XLA-01907] c 14 N71-23268  
Laser grating interferometer Patent  
[NASA-CASE-XLA-04295] c 16 N71-24170  
Optical mirror apparatus Patent  
[NASA-CASE-ERC-10001] c 23 N71-24868  
Method for generating ultra-precise angles Patent  
[NASA-CASE-XGS-04173] c 19 N71-26674  
Petzval type objective including field shaping lens Patent  
[NASA-CASE-GSC-10700] c 23 N71-30027  
Compact spectroradiometer  
[NASA-CASE-HQN-10683] c 14 N71-34389  
Fine adjustment mount  
[NASA-CASE-MFS-20249] c 15 N72-11386  
Method of coating solar cell with borosilicate glass and resultant product  
[NASA-CASE-GSC-11514-1] c 03 N72-24037  
Light sensor  
[NASA-CASE-NPO-11311] c 14 N72-25414  
Boreoscope with variable angle scope  
[NASA-CASE-MFS-15162] c 14 N72-32452  
Cyclically operable optical shutter  
[NASA-CASE-NPO-10758] c 14 N73-14427  
Star tracking reticles and process for the production thereof  
[NASA-CASE-GSC-11188-2] c 21 N73-19630  
Infrared horizon locator  
[NASA-CASE-LAR-10726-1] c 14 N73-20475  
Multiple pass reimaging optical system  
[NASA-CASE-ARC-10194-1] c 23 N73-20741  
Attitude sensor  
[NASA-CASE-LAR-10586-1] c 19 N74-15089  
Formation of star tracking reticles  
[NASA-CASE-GSC-11188-3] c 74 N74-20008

- Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c 74 N74-21304  
Single reflector interference spectrometer and drive system therefor  
[NASA-CASE-NPO-11932-1] c 35 N74-23040  
Strain gauge ambiguity sensor for segmented mirror active optical system  
[NASA-CASE-MFS-20506-1] c 35 N75-12273  
Optical alignment device  
[NASA-CASE-ARC-10932-1] c 74 N76-22993  
Visual examination apparatus  
[US-PATENT-RE-28,921] c 52 N76-30793  
Optical instrument employing reticle having preselected visual response pattern formed thereon  
[NASA-CASE-ARC-10976-1] c 74 N77-22950  
Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c 35 N77-27366  
Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c 74 N77-28932  
Method of treating the surface of a glass member  
[NASA-CASE-GSC-12110-1] c 27 N77-32308  
Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polymethyl methacrylate lenses  
[NASA-CASE-ARC-11039-1] c 74 N78-32854  
Water system virus detection  
[NASA-CASE-MS-C-16098-1] c 51 N79-10693  
Method of forming a sharp edge on an optical device  
[NASA-CASE-GSC-12348-1] c 74 N80-24149  
Rhomboid prism pair for rotating the plane of parallel light beams  
[NASA-CASE-ARC-11311-1] c 74 N83-13978  
High speed multi focal plane optical system  
[NASA-CASE-GSC-12683-1] c 74 N83-36898  
Optical system  
[NASA-CASE-NPO-15801-1] c 74 N85-23396  
High-temperature, high-pressure optical cell  
[NASA-CASE-MFS-26000-1] c 74 N87-14971  
Feedback controlled optics with wavefront compensation  
[NASA-CASE-NPO-18194-1-CU] c 74 N91-32924  
Apparatus for precision focussing and positioning of a beam waist on a target  
[NASA-CASE-ARC-11916-1-SB] c 74 N92-16811  
Dynamic aperture fringe discriminator  
[NASA-CASE-NPO-18478-1-CU] c 74 N92-30084

## OPTICAL FIBERS

- Method and apparatus for determining optical absorption and emission characteristics of a crystal or non-crystalline fiber  
[NASA-CASE-LAR-13963-1] c 76 N90-24150  
Radiation sensitive area detection device and method  
[NASA-CASE-MFS-28563-1] c 35 N91-25388  
Apparatus for precision focussing and positioning of a beam waist on a target  
[NASA-CASE-ARC-11916-1-SB] c 74 N92-16811  
Wide field strip-imaging optical system  
[NASA-CASE-NPO-18146-1-CU] c 74 N92-17892  
Optical fiber sensor having an active core  
[NASA-CASE-LAR-14607-1-SB] c 74 N92-30029  
High temperature fiber optic microphone having a pressure-sensing reflective membrane under tensile stress  
[NASA-CASE-LAR-14402-1-CU] c 74 N92-33017  
An interferometer having fused optical fibers, and apparatus and method using the interferometer  
[NASA-CASE-LAR-14640-1-CU] c 74 N93-17052  
Optical fiber strain sensor with improved linearity  
[NASA-CASE-LAR-14857-1-SB] c 74 N93-19374  
Discrete optical fiber strain sensor  
[NASA-CASE-LAR-14810-1-SB] c 35 N93-19492  
Optical fiber fluorosensor  
[NASA-CASE-LAR-14525-1-CU] c 74 N93-22008  
Transversely polarized source cladding for an optical fiber  
[NASA-CASE-LAR-14652-1-SB] c 74 N93-22039

## OPTICAL FILTERS

- High temperature lens construction Patent  
[NASA-CASE-XNP-04111] c 14 N71-15622  
Method and apparatus for eliminating coherent noise in a coherent energy imaging system without destroying spatial coherence  
[NASA-CASE-GSC-11133-1] c 23 N72-11568  
Optical noise suppression device and method --- laser light exposing film  
[NASA-CASE-MS-C-12640-1] c 74 N76-31998  
System for producing chroma signals  
[NASA-CASE-MS-C-14683-1] c 74 N77-18893  
Optical conversion method --- for spacecraft television  
[NASA-CASE-MS-C-12618-1] c 74 N78-17865  
Partial polarizer filter  
[NASA-CASE-GSC-12225-1] c 74 N79-14891

- Portable reflectance spectrometer  
[NASA-CASE-NPO-13556-1] c 35 N84-33766
- Multispectral linear array multiband selection device  
[NASA-CASE-GSC-12911-1] c 74 N86-29650
- Method and apparatus for making an optical element having a dielectric film  
[NASA-CASE-ARC-11611-1] c 74 N87-28416
- Integrated filter and detector array for spectral imaging  
[NASA-CASE-NPO-18317-1-CU] c 74 N93-13419
- OPTICAL GYROSCOPES**
- Optical gyroscope system  
[NASA-CASE-NPO-14258-1] c 35 N81-33448
- Laser pulse detection method and apparatus  
[NASA-CASE-NPO-16030-1] c 36 N84-25037
- Closed loop fiber optic rotation sensor  
[NASA-CASE-NPO-16558-1-CU] c 74 N87-23259
- OPTICAL HETERODYNING**
- Multispectral imaging system  
[NASA-CASE-MS-C-12404-1] c 23 N73-13661
- Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c 74 N77-26942
- Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c 32 N77-28346
- OPTICAL MATERIALS**
- Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polymethyl methacrylate lenses  
[NASA-CASE-ARC-11039-1] c 74 N78-32854
- Containerless high purity pulling process and apparatus for glass fiber  
[NASA-CASE-MFS-25905-2] c 31 N86-21718
- OPTICAL MEASUREMENT**
- Passive optical wind and turbulence detection system Patent  
[NASA-CASE-XMF-14032] c 20 N71-16340
- Ellipsoidal mirror reflectometer including means for averaging the radiation reflected from the sample Patent  
[NASA-CASE-XGS-05291] c 23 N71-16341
- Single reflector interference spectrometer and drive system therefor  
[NASA-CASE-NPO-11932-1] c 35 N74-23040
- Hybrid holographic non-destructive test system  
[NASA-CASE-MFS-23114-1] c 38 N78-32447
- Plural output optimum sample cell and analysis system  
[NASA-CASE-NPO-10233-1] c 74 N78-33913
- Film advance indicator  
[NASA-CASE-LAR-12474-1] c 35 N82-26628
- Interferometric angle monitor  
[NASA-CASE-GSC-12614-1] c 74 N83-32577
- Rotary target V-block  
[NASA-CASE-LAR-12007-3] c 35 N84-16523
- Portable reflectance spectrometer  
[NASA-CASE-NPO-13556-1] c 35 N84-33766
- Optical multiple sample vacuum integrating sphere  
[NASA-CASE-GSC-12849-1] c 74 N86-26190
- Reflection type skin friction meter  
[NASA-CASE-LAR-14520-1-SB] c 02 N93-18275
- OPTICAL MEASURING INSTRUMENTS**
- Optically pumped resonance magnetometer for determining vectorial components in a spatial coordinate system Patent  
[NASA-CASE-XGS-04879] c 14 N71-20428
- Optical machine tool alignment indicator Patent  
[NASA-CASE-XAC-09489-1] c 15 N71-26673
- Optical systems having spatially invariant outputs  
[NASA-CASE-ERC-10248] c 14 N72-17323
- Optical probing of supersonic flows with statistical correlation  
[NASA-CASE-MFS-20642] c 14 N72-21407
- Multiparameter vision testing apparatus  
[NASA-CASE-MSC-13601-2] c 54 N75-27759
- Noncontacting method for measuring angular deflection  
[NASA-CASE-LAR-12178-1] c 74 N80-21138
- Visible and infrared polarization ratio spectroradiometer  
[NASA-CASE-LAR-12285-1] c 35 N80-28687
- Interferometer  
[NASA-CASE-NPO-14502-1] c 74 N81-17888
- Optical crystal temperature gauge with fiber optic connections  
[NASA-CASE-MSC-18627-1] c 74 N82-30071
- Optical fiber tactile sensor  
[NASA-CASE-NPO-15375-1] c 74 N84-11921
- Optical distance measuring instrument  
[NASA-CASE-GSC-12761-1] c 74 N86-32266
- Vibration-free Raman Doppler velocimeter  
[NASA-CASE-LAR-13268-1] c 35 N87-14669
- Phase length optical phase-locked-loop sensor  
[NASA-CASE-LAR-13387-1] c 74 N88-25302
- OPTICAL MEMORY (DATA STORAGE)**
- Real-time dynamic holographic image storage device  
[NASA-CASE-ERC-13989-1] c 35 N91-13694
- Optoelectronic associative memory  
[NASA-CASE-NPO-18278-1-CU] c 74 N91-32925
- Optical inner product neural associative memory  
[NASA-CASE-NPO-18491-1-CU] c 60 N92-23546
- Disk memory device  
[NASA-CASE-GSC-13196-1] c 60 N92-29132
- Auto and hetero-associative memory using a 2-D optical logic gate  
[NASA-CASE-NPO-17997-1-CU] c 60 N92-33057
- OPTICAL PATHS**
- Optical instruments  
[NASA-CASE-MSC-14096-1] c 74 N74-15095
- Large volume multiple-path nuclear pumped laser  
[NASA-CASE-LAR-12592-1] c 36 N82-13415
- Phase length optical phase-locked-loop sensor  
[NASA-CASE-LAR-13387-1] c 74 N88-25302
- Optical shutter switching matrix  
[NASA-CASE-KSC-11392-1] c 74 N90-22383
- Motion detection, novelty filtering, and target tracking using an interferometric technique with a GaAs phase conjugate mirror  
[NASA-CASE-NPO-17784-1-CU] c 74 N91-13998
- Non-mechanical optical path switching and its application to dual beam spectroscopy including gas filter correlation radiometry  
[NASA-CASE-LAR-14588-1-CU] c 74 N92-29117
- OPTICAL POLARIZATION**
- Real-time image difference detection using a polarization rotation spatial light modulator  
[NASA-CASE-NPO-17144-1-CU] c 74 N88-25305
- Polarization perception device  
[NASA-CASE-MSC-21915-1] c 74 N92-30027
- OPTICAL PROPERTIES**
- Optical torque meter Patent  
[NASA-CASE-XLE-00503] c 14 N70-34818
- Quasi-optical microwave component Patent  
[NASA-CASE-ERC-10011] c 07 N71-29065
- Light sensor  
[NASA-CASE-NPO-11311] c 14 N72-25414
- Light direction sensor  
[NASA-CASE-NPO-11201] c 14 N72-27409
- Device and method for determining X ray reflection efficiency of optical surfaces  
[NASA-CASE-MFS-20243] c 23 N73-13662
- Formation of star tracking reticles  
[NASA-CASE-GSC-11188-3] c 74 N74-20008
- Optically actuated two position mechanical mover  
[NASA-CASE-NPO-13105-1] c 37 N74-21060
- Modification of the electrical and optical properties of polymers --- ion irradiation to create texture  
[NASA-CASE-LEW-13027-1] c 27 N80-24437
- Method of forming silicon structures with selectable optical characteristics  
[NASA-CASE-NPO-18625-1-CU] c 76 N92-30102
- Real time pre-detection dynamic range compression  
[NASA-CASE-NPO-18098-1-CU] c 74 N92-33028
- OPTICAL PUMPING**
- Optical pump and driver system for lasers  
[NASA-CASE-ERC-10283] c 16 N72-25485
- Laser head for simultaneous optical pumping of several dye lasers --- with single flash lamp  
[NASA-CASE-LAR-11341-1] c 36 N75-19655
- Stabilization of He2(a 3 Sigma u+) molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c 72 N79-13826
- Active lamp pulse driver circuit --- optical pumping of laser media  
[NASA-CASE-GSC-12566-1] c 33 N83-34189
- Off-axis coherently pumped laser  
[NASA-CASE-GSC-12592-1] c 36 N84-28065
- OPTICAL PYROMETERS**
- Motion picture camera for optical pyrometry Patent  
[NASA-CASE-XLA-00062] c 14 N70-33254
- Multiwavelength pyrometer for gray and non-gray surfaces in the presence of interfering radiation  
[NASA-CASE-LEW-15250-1] c 35 N93-17060
- OPTICAL RADAR**
- Acquisition and tracking system for optical radar  
[NASA-CASE-MFS-20125] c 16 N72-13437
- Burst-by-burst laser frequency monitor  
[NASA-CASE-NPO-18598-1-CU] c 36 N93-28132
- OPTICAL RANGE FINDERS**
- Altitude sensing device  
[NASA-CASE-XMS-01994-1] c 14 N72-17326
- Optical range finder having nonoverlapping complete images  
[NASA-CASE-MSC-12105-1] c 14 N72-21409
- OPTICAL REFLECTION**
- Hybrid holographic system using reflected and transmitted object beams simultaneously Patent  
[NASA-CASE-MFS-20074] c 16 N71-15565
- Method for generating ultra-precise angles Patent  
[NASA-CASE-XGS-04173] c 19 N71-26674
- Illumination system including a virtual light source Patent  
[NASA-CASE-HQN-10781] c 23 N71-30292
- Diffuse reflective coating  
[NASA-CASE-GSC-11214-1] c 06 N73-13128
- Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c 74 N77-26942
- Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c 74 N77-28933
- Method and apparatus for splitting a beam of energy --- optical communication  
[NASA-CASE-GSC-12083-1] c 73 N78-32848
- Apparatus for and method of compensating dynamic unbalance  
[NASA-CASE-GSC-12550-1] c 37 N84-28082
- Phase length optical phase-locked-loop sensor  
[NASA-CASE-LAR-13387-1] c 74 N88-25302
- Reflection type skin friction meter  
[NASA-CASE-LAR-14520-1-SB] c 02 N93-18275
- OPTICAL RESONANCE**
- Optically pumped resonance magnetometer for determining vectorial components in a spatial coordinate system Patent  
[NASA-CASE-XGS-04879] c 14 N71-20428
- Laser system with an antiresonant optical ring  
[NASA-CASE-HQN-10844-1] c 36 N75-19653
- OPTICAL SCANNERS**
- Optical spin compensator  
[NASA-CASE-XGS-02401] c 14 N69-27485
- Optical inspection apparatus Patent  
[NASA-CASE-XMF-00462] c 14 N70-34298
- Electro-optical scanning apparatus Patent Application  
[NASA-CASE-NPO-11106] c 14 N70-34697
- Multi-lobe scan horizon sensor Patent  
[NASA-CASE-XGS-00809] c 21 N70-35427
- Optical binocular scanning apparatus  
[NASA-CASE-NPO-11002] c 14 N72-22441
- Spacecraft attitude sensor  
[NASA-CASE-GSC-10890-1] c 21 N73-30640
- Optical instruments  
[NASA-CASE-MSC-14096-1] c 74 N74-15095
- Dual digital video switcher  
[NASA-CASE-KSC-10782-1] c 33 N75-30431
- Traffic survey system --- using optical scanners  
[NASA-CASE-MFS-22631-1] c 66 N76-19888
- Optical scanner --- laser doppler velocimeters  
[NASA-CASE-LAR-11711-1] c 74 N78-17866
- Device for measuring the contour of a surface  
[NASA-CASE-LAR-11869-1] c 74 N78-27904
- Velocity servo for continuous scan Fourier interference spectrometer  
[NASA-CASE-NPO-14093-1] c 35 N80-20563
- Method of growing a ribbon crystal particularly suited for facilitating automated control of ribbon width  
[NASA-CASE-NPO-14295-1] c 76 N80-32245
- Scanning afocal laser velocimeter projection lens system  
[NASA-CASE-LAR-12328-1] c 36 N82-32712
- Optical scanner  
[NASA-CASE-GSC-12897-1] c 74 N87-21679
- Induction-type metal detector with increased scanning area capability  
[NASA-CASE-KSC-11386-1] c 35 N90-22023
- OPTICAL SWITCHING**
- Optical shutter switching matrix  
[NASA-CASE-KSC-11392-1] c 74 N90-22383
- GaAs-based optoelectronic neurons  
[NASA-CASE-NPO-18497-1-CU] c 63 N92-24245
- Non-mechanical optical path switching and its application to dual beam spectroscopy including gas filter correlation radiometry  
[NASA-CASE-LAR-14588-1-CU] c 74 N92-29117
- Cascaded transformerless DC-DC voltage amplifier with optically isolated switching devices  
[NASA-CASE-NPO-17994-1-CU] c 33 N93-18278
- GaAs-based optoelectronic neurons  
[NASA-CASE-NPO-18497-1-CU] c 63 N93-24599
- OPTICAL TRACKING**
- Sun tracker with rotatable plane-parallel plate and two photocells Patent  
[NASA-CASE-XGS-01159] c 21 N71-10678
- Optical tracker having overlapping reticles on parallel axes Patent  
[NASA-CASE-XGS-05715] c 23 N71-16100
- Optical tracking motion Patent  
[NASA-CASE-MFS-14017] c 14 N71-26627
- Solar tracking system  
[NASA-CASE-MFS-23999-1] c 44 N81-24520
- Longwall shearer tracking system  
[NASA-CASE-MFS-25717-1] c 35 N84-33768
- Retinally stabilized differential resolution television display  
[NASA-CASE-NPO-15432-1] c 32 N85-29117
- Optical stereo video signal processor  
[NASA-CASE-MFS-25752-1] c 74 N86-21348
- Real-time optical multiple object recognition and tracking system and method  
[NASA-CASE-NPO-17139-1-CU] c 74 N88-25301

**OPTICAL TRANSFER FUNCTION**

Electronic optical transfer function analyzer  
[NASA-CASE-MFS-21672-1] c 74 N76-19935

**OPTICAL WAVEGUIDES**

Fiber optic transmission line stabilization apparatus and method  
[NASA-CASE-NPO-15036-1] c 74 N82-19029

**OPTIMIZATION**

Maximum power point tracker Patent  
[NASA-CASE-GSC-10376-1] c 14 N71-27407  
Aerodynamic design optimization using sensitivity analysis and computational fluid dynamics  
[NASA-CASE-LAR-14815-1-CU] c 34 N92-29830

**OPTOELECTRONIC DEVICES**

Television monitor field shifter and an opto-electronic method for obtaining a stereo image of optimal depth resolution and reduced depth distortion on a single screen  
[NASA-CASE-NPO-17249-1-CU] c 32 N89-28676  
Optoelectronic associative memory  
[NASA-CASE-NPO-18278-1-CU] c 74 N91-32925  
Cascaded transformerless DC-DC voltage amplifier with optically isolated switching devices  
[NASA-CASE-NPO-17994-1-CU] c 33 N93-18278

**OPTOGALVANIC SPECTROSCOPY**

Discharge cell for optogalvanic spectroscopy having orthogonal relationship between the probe laser and discharge axis  
[NASA-CASE-NPO-16271-1] c 35 N86-25753  
Acoustic tooth cleaner  
[NASA-CASE-LAR-12471-1] c 52 N82-29862

**ORBIT TRANSFER VEHICLES**

Tanker orbit transfer vehicle and method  
[NASA-CASE-MSC-20543-1] c 18 N84-22610

**ORBITAL ASSEMBLY**

Structural members, method and apparatus  
[NASA-CASE-MSC-16217-1] c 31 N81-27323  
Beam connector apparatus and assembly  
[NASA-CASE-MFS-25134-1] c 31 N83-31895  
Space spider crane  
[NASA-CASE-LAR-13411-1-SB] c 18 N88-23828  
Bi-stem gripping apparatus  
[NASA-CASE-MFS-28185-1] c 37 N88-23979  
Mobile remote manipulator system for a tetrahedral truss  
[NASA-CASE-MSC-20985-1] c 18 N88-26398  
Mechanical end joint system for connecting structural column elements  
[NASA-CASE-LAR-14465-1] c 37 N91-14614  
Synchronously deployable double fold beam and planar truss structure  
[NASA-CASE-LAR-13490-1] c 18 N91-27199  
High reliability robot friendly ORU interface  
[NASA-CASE-GSC-13360-1] c 37 N92-23377  
Robot-friendly connector --- space truss structures  
[NASA-CASE-MSC-21864-1] c 37 N92-23544  
Quick application/release nut with engagement indicator  
[NASA-CASE-MSC-21799-1] c 37 N92-29150  
Pre-integrated truss space station and method of assembly  
[NASA-CASE-MSC-22015-1] c 18 N93-20042  
Robot-friendly connector --- space truss structures  
[NASA-CASE-MSC-21864-1] c 37 N93-20117

**ORBITAL LAUNCHING**

Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-25429-1] c 18 N86-20469

**ORBITAL MANEUVERING VEHICLES**

Orbital maneuvering end effectors  
[NASA-CASE-MFS-28161-1] c 37 N87-18817  
Mobile remote manipulator vehicle system  
[NASA-CASE-LAR-13393-1] c 54 N87-29118

**ORBITAL MANEUVERS**

Passive propellant system  
[NASA-CASE-MFS-23642-1] c 20 N80-10278

**ORBITAL MECHANICS**

A method of delivering a vehicle to earth orbit and returning the reusable portion thereof to earth  
[NASA-CASE-MSC-12391] c 30 N73-12884

**ORBITAL SERVICING**

Electrical self-aligning connector --- orbital servicer vehicles  
[NASA-CASE-MFS-25211-2] c 33 N84-14423  
Tanker orbit transfer vehicle and method  
[NASA-CASE-MSC-20543-1] c 18 N84-22610  
Shuttle-launch triangular space station  
[NASA-CASE-MSC-20676-1] c 18 N86-24729  
Mobile remote manipulator vehicle system  
[NASA-CASE-LAR-13393-1] c 54 N87-29118  
Quick-disconnect inflatable seal assembly  
[NASA-CASE-KSC-11368-1] c 37 N89-13786  
System for connecting fluid couplings  
[NASA-CASE-MFS-26042-1-SB] c 37 N91-14613

Robot serviced space facility  
[NASA-CASE-GSC-13408-1] c 18 N92-24244  
Automatic system for installation and replacement of Space Station components  
[NASA-CASE-LEW-14906-1] c 37 N93-12203

**ORDNANCE**

Timing control system  
[NASA-CASE-NPO-16882-1-CU] c 33 N88-24863

**ORGANIC BORON COMPOUNDS**

Boron-carbon-silicon polymers and ceramic and a process for the production thereof  
[NASA-CASE-ARC-11891-2-SB] c 27 N92-34160

**ORGANIC CHEMISTRY**

Process for interfacial polymerization of pyromellitic dianhydride and 1,2,4, 5-tetraamino-benzene Patent  
[NASA-CASE-XLA-03104] c 06 N71-11235  
Amino acid analysis  
[NASA-CASE-NPO-12130-1] c 25 N75-14844  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-3] c 23 N91-17141

**ORGANIC COMPOUNDS**

Process for preparation of dianilinosilanes Patent  
[NASA-CASE-XMF-06409] c 06 N71-23230  
Dicyanooacetylene polymers Patent  
[NASA-CASE-XNP-03250] c 06 N71-23500  
Epoxy-aziridine polymer product Patent  
[NASA-CASE-NPO-10701] c 06 N71-28620  
Diffuse reflective coating  
[NASA-CASE-GSC-11214-1] c 06 N73-13128  
Automated system for identifying traces of organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c 25 N76-18245  
Analysis of volatile organic compounds --- trace amounts of organic volatiles in gas samples  
[NASA-CASE-MSC-14428-1] c 23 N77-17161  
Electrophotolysis oxidation system for measurement of organic concentration in water  
[NASA-CASE-MSC-16497-1] c 25 N82-12166  
Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-2] c 27 N84-22746  
Amine terminated bisaspartamide polymer  
[NASA-CASE-ARC-11421-2] c 27 N86-31726  
The 1-((diorganooxy phosphonyl) methyl)-2,4- and -2,6-diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-2] c 23 N87-28605  
Guanidine based vehicle/binders for use with oxides, metals, and ceramics  
[NASA-CASE-LEW-15314-2] c 27 N93-28423  
Method for retarding oxidation of an organic substrate  
[NASA-CASE-LEW-15306-2] c 27 N93-28425

**ORGANIC MATERIALS**

Process for crosslinking methylene-containing aromatic polymers with ionizing radiation  
[NASA-CASE-LAR-13448-1] c 27 N90-21198

**ORGANIC SILICON COMPOUNDS**

Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers  
[NASA-CASE-ARC-10915-2] c 27 N79-18052  
Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-1-SB] c 27 N88-29040  
Boron-carbon-silicon polymers and ceramic and a process for the production thereof  
[NASA-CASE-ARC-11891-2-SB] c 27 N92-34160

**ORGANIC SULFUR COMPOUNDS**

Coal desulfurization --- using iron pentacarbonyl  
[NASA-CASE-NPO-14272-1] c 25 N81-33246  
Process to prepare 1,3-diamino-5-pentafluorosulfanylbenzene  
[NASA-CASE-LAR-14773-2-CU] c 25 N93-29506

**ORGANOMETALLIC COMPOUNDS**

Ammonium perchlorate composite propellant containing an organic transitional metal chelate catalytic additive Patent  
[NASA-CASE-LAR-10173-1] c 27 N71-14090  
Trialkyl-dihalotantalum and niobium compounds Patent  
[NASA-CASE-XNP-04023] c 06 N71-28808  
Carboranyl-methylene-substituted phosphazenes and polymers thereof  
[NASA-CASE-ARC-11370-1] c 27 N84-22750  
Method for forming hermetic seals  
[NASA-CASE-NPO-16423-1-CU] c 37 N87-21334

**ORGANOMETALLIC POLYMERS**

Metal containing polymers from cyclic tetrameric phenylphosphonitriamides Patent  
[NASA-CASE-HQN-10364] c 06 N71-27363  
Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids  
[NASA-CASE-MFS-22411-1] c 37 N74-21058  
A process for preparing an assembly of an article and a soluble polyimide which resists dimensional change, delamination, and debonding when exposed to changes in temperature  
[NASA-CASE-LAR-14763-1] c 27 N92-12121

**ORGANS**

Device for removing foreign objects from anatomic organs  
[NASA-CASE-GSC-13306-1] c 52 N92-33032

**ORIENTATION**

Apparatus for checking threaded hole perpendicularity  
[NASA-CASE-LEW-15444-1] c 35 N93-14840

**ORIFICE FLOW**

Relief valve  
[NASA-CASE-XMS-05894-1] c 15 N69-21924  
Variable orifice flow regulator  
[NASA-CASE-MSC-21549-1] c 34 N91-27504

**ORIFICES**

Rocket engine injector Patent  
[NASA-CASE-XLE-03157] c 28 N71-24736  
Liquid seeding atomizer  
[NASA-CASE-ARC-11631-1] c 34 N87-21255  
Variable orifice flow regulator  
[NASA-CASE-MSC-21549-1] c 34 N91-27504  
Adjustable steam producing flexible orifice independent of fluid pressure  
[NASA-CASE-NPO-17625-1-CU] c 34 N92-21724  
Arc/gas electrode  
[NASA-CASE-MSC-29766-1] c 33 N92-33030

**ORTHO HYDROGEN**

Cooling by conversion of para to ortho-hydrogen  
[NASA-CASE-GSC-12770-1] c 25 N83-29324

**ORTHO PARA CONVERSION**

Cooling by conversion of para to ortho-hydrogen  
[NASA-CASE-GSC-12770-1] c 25 N83-29324

**ORTHOGONAL MULTIPLEXING THEORY**

Minimal logic block encoder Patent  
[NASA-CASE-NPO-10595] c 10 N71-25917

**ORTHOGONALITY**

Floating two force component measuring device Patent  
[NASA-CASE-XAC-04885] c 14 N71-23790  
Geometries for roughness shapes in laminar flow  
[NASA-CASE-LAR-13255-1] c 02 N87-16793

**ORTHOPEDICS**

Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-1] c 54 N76-22914  
Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c 52 N81-25661

**ORTHOTROPIC CYLINDERS**

Method of making a rocket motor casing Patent  
[NASA-CASE-XLE-00409] c 28 N71-15658  
Rocket motor casing Patent  
[NASA-CASE-XLE-05689] c 28 N71-15659

**OSCILLATING FLOW**

Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-1] c 34 N92-28752  
Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-2] c 34 N92-30024

**OSCILLATION DAMPERS**

Viscous-pendulum-damper Patent  
[NASA-CASE-XLA-02079] c 12 N71-16894  
Stabilization of gravity oriented satellites Patent  
[NASA-CASE-XAC-01591] c 31 N71-17729  
Suspended mass impact damper Patent  
[NASA-CASE-LAR-10193-1] c 15 N71-27146  
Wind tunnel model damper Patent  
[NASA-CASE-XLA-09480] c 11 N71-33612  
Apparatus for damping operator induced oscillations of a controlled system --- flight control  
[NASA-CASE-FRC-11041-1] c 33 N82-18493  
Method of damping nutation motion with minimum spin axis attitude disturbance  
[NASA-CASE-GSC-12551-1] c 18 N83-28064  
Variable force, eddy-current or magnetic damper  
[NASA-CASE-LEW-13717-1] c 37 N85-30333

**OSCILLATIONS**

Parasitic suppressing circuit  
[NASA-CASE-ERC-10403-1] c 10 N73-26228  
Stabilization and oscillation of an acoustically levitated object  
[NASA-CASE-NPO-16896-1-CU] c 71 N89-13236

**OSCILLATORS**

Electromagnetic mirror drive system  
[NASA-CASE-XLA-03724] c 14 N69-27461  
Frequency control network for a current feedback oscillator Patent  
[NASA-CASE-GSC-10041-1] c 10 N71-19418  
Static inverter Patent  
[NASA-CASE-XGS-05289] c 09 N71-19470  
Signal ratio system utilizing voltage controlled oscillators Patent  
[NASA-CASE-XMF-04367] c 09 N71-23545  
Pneumatic oscillator Patent  
[NASA-CASE-LEW-10345-1] c 10 N71-25899  
Wideband VCO with high phase stability Patent  
[NASA-CASE-XLA-03893] c 10 N71-27271  
Variable frequency oscillator with temperature compensation Patent  
[NASA-CASE-XNP-03916] c 09 N71-28810

## OSCILLOSCOPES

- Inverter oscillator with voltage feedback  
[NASA-CASE-NPO-10760] c 09 N72-25254
- Controlled oscillator system with a time dependent output frequency  
[NASA-CASE-NPO-11962-1] c 33 N74-10194
- Ultra-stable oscillator with complementary transistors  
[NASA-CASE-GSC-11513-1] c 33 N74-20862
- LC-oscillator with automatic stabilized amplitude via bias current control --- power supply circuit for transducers  
[NASA-CASE-MFS-21698-1] c 33 N74-26732
- Frequency modulated oscillator  
[NASA-CASE-MFS-23181-1] c 33 N77-17351
- Distributed feedback acoustic surface wave oscillator  
[NASA-CASE-NPO-13673-1] c 71 N77-26919
- Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c 33 N81-17349
- Laser Resonator  
[NASA-CASE-GSC-12565-1] c 36 N84-14509
- Ladder supported ring bar circuit  
[NASA-CASE-LEW-13350-1] c 33 N84-16452
- Dielectric based submillimeter backward wave oscillator circuit  
[NASA-CASE-LEW-13736-1] c 33 N84-27974
- JFET reflection oscillator  
[NASA-CASE-GSC-12555-1] c 33 N86-19515
- Temperature sensitive oscillator  
[NASA-CASE-GSC-12958-1] c 33 N86-32624
- Low phase noise oscillator using two parallel connected amplifiers  
[NASA-CASE-GSC-13018-1] c 33 N87-21232
- Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N87-22895
- Water-absorbing capacitor system for measuring relative humidity  
[NASA-CASE-NPO-16544-1-CU] c 35 N87-22953
- Reflection oscillators employing series resonant crystals  
[NASA-CASE-GSC-13173-1] c 33 N90-23635
- Constant frequency pulsed phase-locked loop measuring device  
[NASA-CASE-LAR-13823-1] c 35 N93-29084

## OSCILLOSCOPES

- Waveform simulator Patent  
[NASA-CASE-NPO-10251] c 10 N71-27365
- Method and apparatus for mapping the sensitivity of the face of a photodetector specifically a PMT  
[NASA-CASE-LAR-10320-1] c 09 N72-23172
- Exposure interlock for oscilloscope cameras  
[NASA-CASE-LAR-10319-1] c 14 N73-32322
- X-Y alphanumeric character generator for oscilloscopes  
[NASA-CASE-GSC-11582-1] c 33 N75-19517

## OSMOSIS

- Polymer-coated surfaces to control surface zeta potential  
[NASA-CASE-MFS-26050-1] c 27 N92-25397

## OUTER PLANETS EXPLORERS

- Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c 35 N75-19613

## OUTGASSING

- Optical characteristics measuring apparatus Patent  
[NASA-CASE-XNP-08840] c 23 N71-16365
- Process for glass coating an ion accelerator grid Patent  
[NASA-CASE-LEW-10278-1] c 15 N71-28582
- Low outgassing polydimethylsiloxane material and preparation thereof  
[NASA-CASE-GSC-11358-1] c 06 N73-26100
- Process for HIP canning of composites  
[NASA-CASE-LEW-14990-1-CU] c 24 N91-17145

## OUTLET FLOW

- Amplified wind turbine apparatus  
[NASA-CASE-MFS-23830-1] c 44 N82-24639
- Continuous laminar smoke generator  
[NASA-CASE-LAR-13014-1] c 09 N85-21178
- Gas storage and recovery system  
[NASA-CASE-MSC-22091-1] c 31 N93-28136

## OUTPUT

- Nonlinear nonsingular feedback shift registers  
[NASA-CASE-NPO-13451-1] c 33 N76-14373
- Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N87-22895

## Ovens

- Heat shield oven  
[NASA-CASE-XMS-04318] c 15 N69-27871
- Thermocouple, multiple junction reference oven  
[NASA-CASE-FRC-10112-1] c 35 N81-26431

## OVERPRESSURE

- Method and apparatus for suppressing ignition overpressure in solid rocket propulsion systems  
[NASA-CASE-MFS-25843-1] c 20 N83-17588

## OVERVOLTAGE

- Protective circuit of the spark gap type  
[NASA-CASE-XAC-08981] c 09 N69-39897
- Power responsive overload sensing circuit Patent  
[NASA-CASE-GSC-10667-1] c 10 N71-33129

- Overvoltage protection network  
[NASA-CASE-ARC-10197-1] c 33 N74-17929
- Overload protection system for power inverter  
[NASA-CASE-NPO-13872-1] c 33 N78-10377

## OXAZOLE

- Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c 27 N79-22300
- The 1,2,4-oxadiazole elastomers --- heat resistant polymers  
[NASA-CASE-ARC-11253-1] c 27 N81-17262
- Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c 23 N82-28353

## OXIDATION

- Silicic coatings for refractory metals Patent  
[NASA-CASE-XLE-10910] c 18 N71-29040
- Automated analysis of oxidative metabolites  
[NASA-CASE-ARC-10469-1] c 25 N75-12086
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13464-2] c 44 N76-29704
- Process of forming catalytic surfaces for wet oxidation reactions  
[NASA-CASE-MSC-14831-1] c 25 N78-10225
- Compound oxidized styrylphosphine --- flame resistant vinyl polymers  
[NASA-CASE-MSC-14903-2] c 27 N80-10358
- Overlay metallic-cermet alloy coating systems  
[NASA-CASE-LEW-13639-1] c 26 N84-33555
- Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-1] c 27 N86-19458
- Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N87-23736
- Novel polyimide compositions based on 4,4': isophthaloyldiphenyl anhydride (IDPA)  
[NASA-CASE-LAR-14194-1] c 24 N90-15148
- Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-1-SB] c 25 N90-23517
- Vinyl capped addition polyimides  
[NASA-CASE-LEW-15027-1] c 27 N91-13566
- Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-2-SB] c 25 N91-21270
- Low cost, formable, high T(sub c) superconducting wire  
[NASA-CASE-LEW-14676-1] c 33 N91-31529
- Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-6] c 23 N92-17882
- Oxidation resistant coating for titanium alloys and titanium alloy matrix composites  
[NASA-CASE-LEW-15155-1] c 27 N92-29090

## OXIDATION RESISTANCE

- Nickel-base alloy containing Mo-W-Al-Cr-Ta-Zr-C-Nb-B Patent  
[NASA-CASE-XLE-02082] c 17 N71-16026
- Method of protecting the surface of a substrate --- by applying aluminide coating  
[NASA-CASE-LEW-11696-1] c 37 N75-13261
- Duplex aluminized coatings  
[NASA-CASE-LEW-11696-2] c 26 N75-19408
- High temperature oxidation resistant cermet compositions  
[NASA-CASE-NPO-13666-1] c 27 N77-13217
- High temperature resistant cermet and ceramic compositions  
[NASA-CASE-NPO-13690-2] c 27 N79-14213
- Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications  
[NASA-CASE-LEW-11930-4] c 24 N79-17916
- Nical ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LEW-13339-1] c 26 N82-31505
- Thermal barrier coating system  
[NASA-CASE-LEW-14057-1] c 24 N85-35233
- High temperature resistant polyimide from tetra ester, diamine, diester and N-arylnadimide  
[NASA-CASE-LEW-13864-1] c 27 N86-19457
- Apparatus for producing oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-2] c 27 N86-32569
- Nickel base coating alloy  
[NASA-CASE-LEW-13834-1] c 26 N87-14482
- Oxygen diffusion barrier coating  
[NASA-CASE-LAR-13474-1-SB] c 26 N87-25455
- High temperature insulation barrier composite  
[NASA-CASE-MFS-29241-1] c 24 N90-23480
- Polyimides containing amide and perfluoroisopropyl connecting groups  
[NASA-CASE-LAR-14608-1] c 27 N92-17676
- Oxidation resistant coating for titanium alloys and titanium alloy matrix composites  
[NASA-CASE-LEW-15155-1] c 27 N92-29090
- Oxidation resistant overlay coatings for low expansion substrates  
[NASA-CASE-LEW-15154-1] c 27 N93-19332

- Atomic oxygen protective coating with resistance to undercutting at defect sites  
[NASA-CASE-LEW-15306-1] c 27 N93-20566
- Imide/arylene ether copolymers containing phosphine oxide groups  
[NASA-CASE-LAR-14925-1] c 27 N93-20567
- Method for retarding oxidation of an organic substrate  
[NASA-CASE-LEW-15306-2] c 27 N93-28425
- High temperature creep and oxidation resistant chromium silicide matrix alloy containing molybdenum  
[NASA-CASE-LEW-15697-1] c 26 N93-29172
- High temperature, oxidation resistant noble metal-Al alloy thermocouple  
[NASA-CASE-LEW-15515-1] c 35 N93-31298
- Oxidation resistant overlay coatings for low expansion substrates  
[NASA-CASE-LEW-15154-2] c 27 N93-31300

## OXIDATION-REDUCTION REACTIONS

- Electrochemical cell for rebalancing REDOX flow system  
[NASA-CASE-LEW-13150-1] c 44 N79-26474
- Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c 33 N80-20487
- Method of making formulated plastic separators for soluble electrode cells  
[NASA-CASE-LEW-12358-2] c 25 N82-21268

## OXIDE FILMS

- Method of forming oxide coatings --- for solar collector heating panels  
[NASA-CASE-LEW-13132-1] c 27 N83-29388
- Thermal barrier coating system  
[NASA-CASE-LEW-14057-1] c 24 N85-35233
- Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-1] c 27 N86-19458
- Apparatus for producing oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-2] c 27 N86-32569
- Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N87-23736

## OXIDES

- Novel polymers and method of preparing same  
[NASA-CASE-NPO-10998-1] c 06 N73-32029
- Pretreatment of lubricated surfaces with sputtered cadmium oxide  
[NASA-CASE-LEW-14474-1] c 27 N91-28423
- Solid lubricants on pretreated surfaces  
[NASA-CASE-LEW-14474-2] c 27 N92-11186
- Guanidine based vehicle/binders for use with oxides, metals, and ceramics  
[NASA-CASE-LEW-15314-2] c 27 N93-28423

## OXIDIZERS

- Electrolytically regenerative hydrogen-oxygen fuel cell Patent  
[NASA-CASE-XLE-04526] c 03 N71-11052
- Injection head for delivering liquid fuel and oxidizers  
[NASA-CASE-NPO-10046] c 28 N72-17843
- Device and method for frictionally testing materials for ignitability  
[NASA-CASE-MSC-20622-1] c 25 N86-19413

## OXIMETRY

- Method and apparatus for continuously monitoring blood oxygenation, blood pressure, pulse rate and the pressure pulse curve utilizing an ear oximeter as transducer Patent  
[NASA-CASE-XAC-05422] c 04 N71-23185

## OXYGEN

- Analytical test apparatus and method for determining oxide content of alkali metal Patent  
[NASA-CASE-XLE-01997] c 06 N71-23527
- Method for removing oxygen impurities from cesium Patent  
[NASA-CASE-XNP-04262-2] c 17 N71-26773
- Method of detecting oxygen in a gas  
[NASA-CASE-LAR-10668-1] c 06 N73-16106
- Method for obtaining oxygen from lunar or similar soil  
[NASA-CASE-MSC-12408-1] c 46 N74-13011
- Nonflammable coating compositions --- for use in high oxygen environments  
[NASA-CASE-MFS-20486-2] c 27 N74-17283
- A system for controlling the oxygen content of a gas produced by combustion  
[NASA-CASE-LAR-13257-1] c 25 N84-32447
- Technique for measuring gas conversion factors  
[NASA-CASE-LAR-13220-1] c 34 N86-12547
- Oxygen recombination in individual pressure vessel nickel-hydrogen batteries  
[NASA-CASE-LEW-13822-1] c 44 N86-25874
- Method and apparatus for maintaining thermal control in plasma conditions  
[NASA-CASE-MFS-28368-1] c 75 N90-10717
- Device for quickly sensing the amount of O<sub>2</sub> in a combustion product gas  
[NASA-CASE-LAR-13816-1] c 35 N90-22025
- Static feed water electrolysis subsystem development  
[NASA-CASE-MSC-21577-1-SB] c 25 N91-23271

## SUBJECT INDEX

- Converting a CO<sub>2</sub> atmosphere to a high-purity O<sub>2</sub> supply  
[NASA-CASE-LAR-14398-1] c 25 N92-30098  
High-temperature, high-pressure oxygen metering valve  
[NASA-CASE-MSC-21823-1] c 37 N93-14843  
High temperature sorbents for oxygen  
[NASA-CASE-NPO-18409-1-CU] c 25 N93-19025

**OXYGEN ATOMS**

- Variable energy, high flux, ground-state atomic oxygen source  
[NASA-CASE-NPO-16640-1-CU] c 72 N87-21661  
Method for anisotropic etching in the manufacture of semiconductor devices  
[NASA-CASE-MSC-21631-1] c 75 N91-32947  
Converting a CO<sub>2</sub> atmosphere to a high-purity O<sub>2</sub> supply  
[NASA-CASE-LAR-14398-1] c 25 N92-30098  
A method for making biocompatible polymer articles using atomic oxygen  
[NASA-CASE-MSC-21529-1] c 27 N92-30100  
Method and apparatus for producing a thermal atomic oxygen beam  
[NASA-CASE-LEW-15614-1] c 72 N93-19026  
Atomic oxygen protective coating with resistance to undercutting at defect sites  
[NASA-CASE-LEW-15306-1] c 27 N93-20566  
Method for retarding oxidation of an organic substrate  
[NASA-CASE-LEW-15306-2] c 27 N93-28425  
Method for preparation of a microporous structure with layered interstitial surface treatment  
[NASA-CASE-MSC-21487-2] c 24 N93-29023

**OXYGEN CONSUMPTION**

- Method and system for respiration analysis Patent  
[NASA-CASE-XFR-08403] c 05 N71-11202

**OXYGEN FLUORIDES**

- Utilization of oxygen difluoride for syntheses of fluoropolymers  
[NASA-CASE-NPO-12061-1] c 27 N76-16228

**OXYGEN ISOTOPES**

- Isotope exchange in oxide-containing catalyst  
[NASA-CASE-LAR-13542-2-SB] c 25 N90-20154

**OXYGEN METABOLISM**

- Metabolic analyzer --- for measuring metabolic rate and breathing dynamics of human beings  
[NASA-CASE-MFS-21415-1] c 52 N74-20728

**OXYGEN PLASMA**

- Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers  
[NASA-CASE-ARC-10915-2] c 27 N79-18052

**OXYGEN PRODUCTION**

- Alkali metal carbon dioxide electrochemical system for energy storage and/or conversion of carbon dioxide to oxygen  
[NASA-CASE-LEW-14973-1] c 44 N93-28974  
Method for producing oxygen from lunar materials  
[NASA-CASE-MSC-21759-1] c 25 N93-29617

**OXYGEN REGULATORS**

- Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c 44 N76-27664

**OXYGEN SUPPLY EQUIPMENT**

- Self-contained breathing apparatus  
[NASA-CASE-MSC-14733-1] c 54 N76-24900  
Slow opening valve --- valve design for shuttle portable oxygen system  
[NASA-CASE-MSC-20112-1] c 37 N85-20338

**OZONE**

- Thermoluminescent aerosol analysis  
[NASA-CASE-LAR-12046-1] c 25 N78-15210  
Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c 45 N80-14579  
Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same  
[NASA-CASE-NPO-13137-1] c 27 N80-32514

**P****P-I-N JUNCTIONS**

- High voltage v-groove solar cell  
[NASA-CASE-LEW-13401-2] c 44 N83-32177

**P-N JUNCTIONS**

- Thin window, drifted silicon, charged particle detector  
[NASA-CASE-XLE-10529] c 14 N69-23191  
Semiconductor p-n junction stress and strain sensor  
[NASA-CASE-XLA-04980] c 09 N69-27422  
Radiation resistant silicon semiconductor devices Patent  
[NASA-CASE-XGS-07801] c 09 N71-12513  
Biomedical radiation detecting probe Patent  
[NASA-CASE-XMS-01177] c 05 N71-19440  
Method of making electrical contact on silicon solar cell and resultant product Patent  
[NASA-CASE-XLE-04787] c 03 N71-20492

- Method of changing the conductivity of vapor deposited gallium arsenide by the introduction of water into the vapor deposition atmosphere Patent

- [NASA-CASE-XNP-01961] c 26 N71-29156  
Method of making semiconductor p-n junction stress and strain sensor  
[NASA-CASE-XLA-04980-2] c 14 N72-28438  
Semiconductor surface protection material  
[NASA-CASE-ERC-10339-1] c 18 N73-30532  
Method and apparatus for measuring minority carrier lifetimes and bulk diffusion length in P-N junction solar cells  
[NASA-CASE-NPO-14100-1] c 44 N79-12541  
Back wall solar cell  
[NASA-CASE-LEW-12236-2] c 44 N79-14528

**P-TYPE SEMICONDUCTORS**

- Semiconductor material and method of making same Patent  
[NASA-CASE-XLE-02798] c 26 N71-23654  
Integrated P-channel MOS gyrator  
[NASA-CASE-MFS-22343-1] c 33 N74-34638  
Method of Fabricating Schottky Barrier solar cell  
[NASA-CASE-NPO-13689-4] c 44 N82-28780  
Formation of self-aligned guard rings for monolithic Schottky-barrier diode arrays  
[NASA-CASE-NPO-17734-1-CU] c 33 N92-10146

**PACKAGES**

- Impact testing machine Patent  
[NASA-CASE-XNP-04817] c 14 N71-23225  
One hand backpack harness  
[NASA-CASE-LAR-10102-1] c 05 N72-23085

**PACKAGING**

- Folding apparatus Patent  
[NASA-CASE-XLA-00137] c 15 N70-33180  
Reflector space satellite Patent  
[NASA-CASE-XLA-00138] c 31 N70-37981  
Apparatus and method for skin packaging articles  
[NASA-CASE-MFS-20855] c 15 N73-27405  
Double-sided solar cell package  
[NASA-CASE-NPO-14199-1] c 44 N79-25482

**PACKET TRANSMISSION**

- Multicomputer communication system  
[NASA-CASE-NPO-15433-1] c 32 N85-21428

**PACKING DENSITY**

- Micropacked column for a chromatographic system  
[NASA-CASE-XNP-04816] c 06 N69-39936  
High density tape casting system  
[NASA-CASE-NPO-16901-1-CU] c 31 N90-19425

**PACKINGS (SEALS)**

- Fluid seal for rotating shafts  
[NASA-CASE-LEW-11676-1] c 37 N76-22541

**PAD**

- Lubricated journal bearing  
[NASA-CASE-LEW-11076-3] c 37 N75-30562

**PAINTS**

- Intumescent paints Patent  
[NASA-CASE-ARC-10099-1] c 18 N71-15469  
Alkali metal silicate protective coating Patent  
[NASA-CASE-XGS-04799] c 18 N71-24183  
Inorganic thermal control pigment Patent  
[NASA-CASE-XNP-02139] c 18 N71-24184  
Diffusely reflecting paints including polytetrafluoroethylene and method of manufacture  
[NASA-CASE-GSC-12883-1] c 27 N85-29044

**PALLADIUM**

- Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c 25 N82-26396

**PALLADIUM COMPOUNDS**

- Prevention of pressure build-up in electrochemical cells Patent  
[NASA-CASE-XGS-01419] c 03 N70-41864  
Process for separation of dissolved hydrogen from water by use of palladium and process for coating palladium with palladium black  
[NASA-CASE-MSC-13335-1] c 06 N72-31140

**PANELS**

- All-directional fastener Patent  
[NASA-CASE-XLA-01807] c 15 N71-10799  
Panelized high performance multilayer insulation Patent  
[NASA-CASE-MFS-14023] c 33 N71-25351  
Solar panel fabrication Patent  
[NASA-CASE-XNP-03413] c 03 N71-26726  
Method of making pressurized panel Patent  
[NASA-CASE-XLA-08916] c 15 N71-29018  
Honeycomb panels formed of minimal surface periodic tubule layers  
[NASA-CASE-ERC-10364] c 18 N72-25540  
Pressurized panel  
[NASA-CASE-XLA-08916-2] c 14 N73-28487  
Ultrasonic scanner for radial and flat panels  
[NASA-CASE-MFS-20335-1] c 35 N74-10415  
Folding structure fabricated of rigid panels  
[NASA-CASE-XHQ-02146] c 18 N75-27040

- Method of making a composite sandwich lattice structure

- [NASA-CASE-LAR-11898-2] c 24 N78-17149  
Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c 44 N78-19599  
Hexagon solar power panel  
[NASA-CASE-NPO-12148-1] c 44 N78-27515  
Aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-3] c 44 N80-16452  
Structural wood panels with improved fire resistance  
[NASA-CASE-ARC-11174-1] c 24 N81-13999  
Method of forming oxide coatings --- for solar collector heating panels  
[NASA-CASE-LEW-13132-1] c 27 N83-29388  
Combustor liner construction  
[NASA-CASE-LEW-14035-1] c 07 N84-24577  
Saltless solar pond  
[NASA-CASE-NPO-15808-1] c 44 N84-34792  
Structural panels  
[NASA-CASE-ARC-11429-2-CU] c 27 N87-22845  
Truss-core corrugation for compressive loads  
[NASA-CASE-LAR-13438-1] c 31 N89-12786  
Reusable high-temperature heat pipes and heat pipe panels  
[NASA-CASE-LAR-13761-1] c 34 N90-20323  
High temperature flexible seal  
[NASA-CASE-LEW-14695-1] c 37 N90-23751  
Orbital debris sweeper and method  
[NASA-CASE-MSC-21534-1] c 18 N91-21222  
Thermally isolated deployable shield for spacecraft  
[NASA-CASE-MFS-28524-1] c 18 N91-25167  
Combined load test apparatus for flat panels  
[NASA-CASE-LAR-14698-1] c 39 N92-30028  
Real-time edge-enhanced optical correlator  
[NASA-CASE-NPO-18379-1-CU] c 74 N92-33022  
Sandwiched structural panel having a bi-directional core structure  
[NASA-CASE-MFS-28796-1] c 24 N93-19022

**PANORAMIC SCANNING**

- Atmospheric autorotating imaging device  
[NASA-CASE-NPO-17390-1-CU] c 35 N90-22769

**PAPER (MATERIAL)**

- Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c 85 N79-17747

**PAPERS**

- Guide for a typewriter  
[NASA-CASE-MFS-15218-1] c 37 N77-19457

**PARA HYDROGEN**

- Cooling by conversion of para to ortho-hydrogen  
[NASA-CASE-GSC-12770-1] c 25 N83-29324

**PARABOLIC ANTENNAS**

- Antenna beam-shaping apparatus Patent  
[NASA-CASE-XNP-00611] c 09 N70-35219  
Reversible motion drive system Patent  
[NASA-CASE-NPO-10173] c 15 N71-24696  
Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c 33 N76-27472  
Telescoping columns --- parabolic antenna support  
[NASA-CASE-LAR-12195-1] c 31 N81-27324  
Focal axis resolver for offset reflector antennas  
[NASA-CASE-GSC-12630-1] c 33 N83-36355  
Antenna surface contour control system  
[NASA-CASE-LAR-13798-1] c 32 N89-25363

**PARABOLIC REFLECTORS**

- Parabolic reflector horn feed with spillover correction Patent  
[NASA-CASE-XNP-00540] c 09 N70-35382  
Foldable solar concentrator Patent  
[NASA-CASE-XLA-04622] c 03 N70-41580  
Collapsible reflector Patent  
[NASA-CASE-XMS-03454] c 09 N71-20658  
Plural beam antenna  
[NASA-CASE-GSC-11013-1] c 09 N73-19234  
Composite antenna feed  
[NASA-CASE-GSC-11046-1] c 07 N73-28013  
Single frequency, two feed dish antenna having switchable beamwidth  
[NASA-CASE-GSC-11968-1] c 32 N76-15329  
Sun tracking solar energy collector  
[NASA-CASE-NPO-13921-1] c 44 N79-14526  
Horizontally mounted solar collector  
[NASA-CASE-MFS-23349-1] c 44 N79-23481  
Solar concentrator  
[NASA-CASE-MFS-23727-1] c 44 N80-14473  
Apparatus for and method of compensating dynamic unbalance  
[NASA-CASE-GSC-12550-1] c 37 N84-28082  
Antenna surface contour control system  
[NASA-CASE-LAR-13798-1] c 32 N89-25363  
A satellite-tracking millimeter-wave reflector antenna system for mobile satellite-tracking  
[NASA-CASE-NPO-18772-1-CU] c 32 N93-28955



## PARABOLOID MIRRORS

Optical data processing using paraboloidal mirror segments  
[NASA-CASE-GSC-11296-1] c 23 N73-30666  
Three mirror glancing incidence system for X-ray telescope

[NASA-CASE-MFS-21372-1] c 74 N74-27866

## PARACHUTE DESCENT

Parachute glider Patent

[NASA-CASE-XLA-00898] c 02 N70-36804

Vehicle parachute and equipment jettison system Patent

[NASA-CASE-XLA-00195] c 02 N70-38009

Line cutter Patent

[NASA-CASE-XMS-04072] c 15 N70-42017

Vortex breech high pressure gas generator

[NASA-CASE-LAR-10549-1] c 31 N73-13898

## PARACHUTE FABRICS

Lightweight, variable solidity knitted parachute fabric --- for aerodynamic decelerators

[NASA-CASE-LAR-10776-1] c 02 N74-10034

Method for refurbishing and processing parachutes

[NASA-CASE-KSC-11042-1] c 09 N82-29330

## PARACHUTES

System for stabilizing torque between a balloon and gondola

[NASA-CASE-GSC-11077-1] c 02 N73-13008

Deploy/release system --- model aircraft flight control

[NASA-CASE-LAR-11575-1] c 02 N76-16014

System and method for refurbishing and processing parachutes --- monorial conveyor system

[NASA-CASE-KSC-11042-2] c 02 N81-26073

Method for refurbishing and processing parachutes

[NASA-CASE-KSC-11042-1] c 09 N82-29330

Dual towline spin-recovery device

[NASA-CASE-LAR-13076-1] c 08 N85-35200

## PARAGLIDERS

Parachute glider Patent

[NASA-CASE-XLA-00898] c 02 N70-36804

## PARALLAX

Projection system for display of parallax and perspective

[NASA-CASE-MFS-23194-1] c 35 N78-17357

Ranging system which compares an object reflected component of a light beam to a reference component of the light beam

[NASA-CASE-NPO-15865-1] c 74 N85-34629

## PARALLEL COMPUTERS

Special purpose parallel computer architecture for real-time control and simulation in robotic applications

[NASA-CASE-NPO-17629-1-CU] c 60 N93-29608

## PARALLEL PLATES

Parallel plate viscometer Patent

[NASA-CASE-XNP-09462] c 14 N71-17584

Dynamic capacitor having a peripherally driven element and system incorporating the same

[NASA-CASE-XNP-02899-1] c 33 N79-21265

Multiple plate hydrostatic viscous damper

[NASA-CASE-LEW-12445-1] c 37 N81-22360

Method and apparatus for controlling protein crystallization

[NASA-CASE-MFS-28688-1] c 76 N93-17043

Consecutive plate acoustic suppressor apparatus and methods

[NASA-CASE-LEW-15430-1] c 71 N93-17051

## PARALLEL PROCESSING (COMPUTERS)

Digital data reformatter/deserializer

[NASA-CASE-NPO-13676-1] c 60 N79-20751

Massively parallel processor computer

[NASA-CASE-GSC-12223-1] c 60 N83-25378

Memory-based parallel data output controller

[NASA-CASE-GSC-12447-2] c 60 N84-28491

Programmable remapper with single flow architecture

[NASA-CASE-MSC-21481-1] c 60 N91-13890

Method of up-front load balancing for local memory parallel processors

[NASA-CASE-MSC-21348-1] c 62 N91-14769

Highly parallel computer architecture for robotic computation

[NASA-CASE-NPO-17632-1-CU] c 60 N91-32805

Analog hardware for learning neural networks

[NASA-CASE-NPO-17664-1-CU] c 62 N91-32852

Analog hardware for delta-backpropagation neural networks

[NASA-CASE-NPO-17564-1-CU] c 32 N92-22033

Synchronous parallel system for emulation and discrete event simulation

[NASA-CASE-NPO-18414-1-CU] c 62 N92-24045

Digital parallel processor array for optimum path planning

[NASA-CASE-NPO-18727-1-CU] c 62 N93-28427

Special purpose parallel computer architecture for real-time control and simulation in robotic applications

[NASA-CASE-NPO-17629-1-CU] c 60 N93-29608

## PARAMETER IDENTIFICATION

Efficient detection and signal parameter estimation with application to high dynamic GPS receiver

[NASA-CASE-NPO-17820-1-CU] c 04 N91-14321

## PARAMETRIC AMPLIFIERS

Parametric amplifiers with idler circuit feedback

[NASA-CASE-LAR-10253-1] c 09 N72-25258

Millimeter wave pumped parametric amplifier

[NASA-CASE-GSC-11617-1] c 33 N74-32660

## PARAMETRIC FREQUENCY CONVERTERS

Method and apparatus for quadriphase-shift-key and linear phase modulation

[NASA-CASE-NPO-14444-1] c 33 N81-15192

## PARASITIC ELEMENTS (ANTENNAS)

Antenna system using parasitic elements and two driven elements at 90 deg angle fed 180 deg out of phase

Patent

[NASA-CASE-XLA-00414] c 07 N70-38200

## PARAWINGS

Wing deployment method and apparatus Patent

[NASA-CASE-XMS-00907] c 02 N70-41630

## PARKING

Automated multi-level vehicle parking system

[NASA-CASE-NPO-13058-1] c 37 N77-22480

## PARTIAL PRESSURE

Vapor pressure measuring system and method Patent

[NASA-CASE-XMS-01618] c 14 N71-20741

Converting a CO<sub>2</sub> atmosphere to a high-purity O<sub>2</sub> supply

[NASA-CASE-LAR-14398-1] c 25 N92-30098

## PARTICLE ACCELERATION

Molecular beam velocity selector Patent

[NASA-CASE-XLE-01533] c 11 N71-10777

Dust particle injector for hypervelocity accelerators

Patent

[NASA-CASE-XGS-06628] c 24 N71-16213

## PARTICLE ACCELERATOR TARGETS

Dispensing targets for ion beam particle generators

[NASA-CASE-NPO-13112-1] c 73 N74-26767

Deuterium pass through target --- neutron emitting target

[NASA-CASE-LEW-11866-1] c 72 N76-15860

Closed loop spray cooling apparatus --- for particle accelerator targets

[NASA-CASE-LEW-11981-1] c 31 N78-17237

## PARTICLE BEAMS

Particle beam measurement apparatus using beam kinetic energy to change the heat sensitive resistance of the detection probe Patent

[NASA-CASE-XLE-00243] c 14 N70-38602

Doppler shift system --- system for measuring velocities of radiating particles

[NASA-CASE-HQN-10740-1] c 72 N74-19310

Apparatus for measuring charged particle beam

[NASA-CASE-MFS-25641-1] c 72 N84-28575

Slow positron beam generator for lifetime studies

[NASA-CASE-LAR-14250-1-SB] c 72 N91-27936

## PARTICLE COLLISIONS

Particle detection apparatus including a ballistic pendulum Patent

[NASA-CASE-XMS-04201] c 14 N71-22990

Ion generator and ion application system

[NASA-CASE-MFS-28122-1] c 72 N88-24253

## PARTICLE DENSITY (CONCENTRATION)

Micrometeoroid velocity measuring device Patent

[NASA-CASE-XLA-00495] c 14 N70-41332

## PARTICLE EMISSION

Extended area semiconductor radiation detectors and a novel readout arrangement Patent

[NASA-CASE-XGS-03230] c 14 N71-23401

Coincidence apparatus for detecting particles

[NASA-CASE-XLA-07813] c 14 N72-17328

## PARTICLE ENERGY

Particle detection apparatus Patent

[NASA-CASE-XLA-00135] c 14 N70-33322

Particulate and aerosol detector

[NASA-CASE-LAR-11434-1] c 35 N76-22509

## PARTICLE INTERACTIONS

Surface modification using low energy ground state ion beams

[NASA-CASE-NPO-17498-1-CU] c 72 N91-14813

## PARTICLE MASS

Cosmic dust analyzer

[NASA-CASE-MSC-13802-2] c 35 N76-15431

Microbalance --- for measuring particle mass

[NASA-CASE-MSC-11242] c 35 N78-17358

## PARTICLE MOTION

Moving particle composition analyzer

[NASA-CASE-GSC-11889-1] c 35 N76-16393

Method and apparatus for determining time, direction, and composition of impacting space particles

[NASA-CASE-LAR-13392-1-CU] c 19 N91-14412

Vaporizing particle velocimeter

[NASA-CASE-LAR-14685-1] c 02 N92-34172

## PARTICLE PRODUCTION

Production of I-123

[NASA-CASE-LEW-11390-3] c 25 N76-29379

## PARTICLE SIZE DISTRIBUTION

Micropacked column for a chromatographic system

[NASA-CASE-XNP-04816] c 06 N69-39936

Apparatus for making a metal slurry product Patent

[NASA-CASE-XLE-00010] c 15 N70-33382

Method of producing refractory composites containing tantalum carbide, hafnium carbide, and hafnium boride

Patent

[NASA-CASE-XLE-03940] c 18 N71-26153

Grain refinement control in TiG arc welding

[NASA-CASE-MSC-19095-1] c 37 N75-19683

Apparatus for handling micron size range particulate material

[NASA-CASE-NPO-10151] c 37 N78-17386

Frequency-scanning particle size spectrometer

[NASA-CASE-NPO-13606-2] c 35 N80-18364

Process for preparation of large-particle-size monodisperse latexes

[NASA-CASE-MFS-25000-1] c 25 N81-19242

Polyvinyl alcohol battery separator containing inert filler --- alkaline batteries

[NASA-CASE-LEW-13556-1] c 44 N81-27615

Powder fed sheared dispersal particle generator

[NASA-CASE-LAR-12785-1] c 37 N84-16561

Method of evaporation

[NASA-CASE-NPO-15609-2] c 25 N88-23846

Hypervelocity impact shield

[NASA-CASE-MSC-21420-1] c 18 N92-15114

## PARTICLE TRACKS

Detection of multiple-bit errors from single-ion tracks in integrated circuits

[NASA-CASE-NPO-18075-1-CU] c 33 N91-13622

## PARTICLE TRAJECTORIES

Micrometeoroid velocity and trajectory analyzer

[NASA-CASE-GSC-11892-1] c 35 N76-15433

Direction sensitive laser velocimeter --- determining the direction of particles using a helium-neon laser

[NASA-CASE-LAR-12177-1] c 36 N81-24422

## PARTICLES

Soil particles separator, collector and viewer Patent

[NASA-CASE-XNP-09770] c 15 N71-20440

Apparatus for producing metal powders

[NASA-CASE-XLE-06461-2] c 17 N72-28535

Particle parameter analyzing system --- x-y plotter circuits and display

[NASA-CASE-XLE-06094] c 33 N78-17293

Surfactant-assisted liquefaction of particulate carbonaceous substances

[NASA-CASE-NPO-13904-1] c 25 N79-11152

Acoustic particle separation

[NASA-CASE-NPO-15559-1] c 71 N85-30765

Solar heated oil shale pyrolysis process

[NASA-CASE-NPO-16392-1] c 25 N86-25428

Controlled method of reducing electrophoretic mobility of various substances

[NASA-CASE-MFS-26049-1-NP] c 25 N89-28603

Controlled method of reducing electrophoretic mobility of macromolecules, particles, or cells

[NASA-CASE-MFS-26049-2-NP] c 25 N92-28728

## PARTICULATE SAMPLING

Apparatus for sampling particulates in gases

[NASA-CASE-HQN-10037-1] c 14 N73-27376

Electrophoretic sample insertion --- device for uniformly distributing samples in flow path

[NASA-CASE-MFS-21395-1] c 25 N74-26948

Sampler of gas borne particles

[NASA-CASE-NPO-13396-1] c 35 N76-18401

Fine particulate capture device

[NASA-CASE-LEW-11583-1] c 35 N79-17192

Biocontamination and particulate detection system

[NASA-CASE-NPO-13953-1] c 35 N79-28527

Particle analyzing method and apparatus

[NASA-CASE-NPO-15292-1] c 35 N83-27184

Sample holder support for microscopes

[NASA-CASE-MFS-28420-1] c 37 N91-21545

High velocity gas particulate sampling system

[NASA-CASE-MSC-21729-1] c 34 N92-16241

## PARTICULATES

Apparatus for sampling particulates in gases

[NASA-CASE-HQN-10037-1] c 14 N73-27376

High velocity gas particulate sampling system

[NASA-CASE-MSC-21729-1] c 34 N92-16241

Fluid separator

[NASA-CASE-MFS-28658-1] c 34 N93-17039

## PASSAGEWAYS

Inflatable tether Patent

[NASA-CASE-XMS-10993] c 15 N71-28936

Apparatus for mixing solutions in low gravity environments

[NASA-CASE-MFS-26047-1] c 29 N90-21209

## PASSENGERS

R

## PASSIVE SATELLITES

- Passive communication satellite Patent  
[NASA-CASE-XLA-00210] c 30 N70-40309  
Method and apparatus for determining electromagnetic characteristics of large surface area passive reflectors Patent  
[NASA-CASE-XGS-02608] c 07 N70-41678  
Method of making an inflatable panel Patent  
[NASA-CASE-XLA-03497] c 15 N71-23052

## PASSIVITY

- Passivation of high temperature superconductors  
[NASA-CASE-NPO-17949-1-CU] c 76 N92-10681

## PASTES

- Whole body cleaning agent containing N-acyltaurate  
[NASA-CASE-MSC-21589-1] c 54 N92-29137

## PATENTS

- Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N82-24072  
Method for depositing an oxide coating  
[NASA-CASE-LEW-13131-1] c 44 N83-10494  
High stability amplifier  
[NASA-CASE-GSC-12646-1] c 33 N83-34191

## PATIENTS

- Stretcher Patent  
[NASA-CASE-XMF-06589] c 05 N71-23159  
Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-1-NP] c 52 N90-21519

## PATTERN RECOGNITION

- Surface roughness detector Patent  
[NASA-CASE-XLA-00203] c 14 N70-34161  
Auditory display for the blind  
[NASA-CASE-HQN-10832-1] c 71 N74-21014  
Real-time optical multiple object recognition and tracking system and method  
[NASA-CASE-NPO-17139-1-CU] c 74 N88-25301  
Remotely controllable real-time optical processor  
[NASA-CASE-NPO-16750-1-CU] c 74 N89-14078  
Programmable pipelined image processor  
[NASA-CASE-NPO-16461-1CU] c 60 N89-26400  
General method of pattern classification using the two-domain theory  
[NASA-CASE-MSC-21737-1] c 61 N91-13911  
Method and apparatus for sensor fusion  
[NASA-CASE-MSC-21334-1] c 32 N91-25317  
Method and apparatus for predicting the direction of movement in machine vision  
[NASA-CASE-NPO-17552-1-CU] c 54 N92-29129  
General method of pattern classification using the two-domain theory  
[NASA-CASE-MSC-21737-1] c 61 N93-18282  
Hidden Markov models for fault detection in dynamic systems  
[NASA-CASE-NPO-18982-1-CU] c 38 N93-30413

## PATTERN REGISTRATION

- Digital data registration and differencing compression system  
[NASA-CASE-SSC-00010-1] c 82 N91-23976

## PAYLOAD DELIVERY (STS)

- Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-25429-1] c 18 N86-20469

## PAYLOAD DEPLOYMENT &amp; RETRIEVAL SYSTEM

- Payload deployment method and system  
[NASA-CASE-MSC-21330-1] c 16 N88-24660

## PAYLOAD RETRIEVAL (STS)

- Simulator method and apparatus for practicing the mating of an observer-controlled object with a target  
[NASA-CASE-MFS-23052-2] c 74 N79-13855  
Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c 18 N83-29303

## PAYLOADS

- Foam generator Patent  
[NASA-CASE-XLA-00838] c 03 N70-36778  
Spacecraft separation system for spinning vehicles and/or payloads Patent  
[NASA-CASE-XLA-02132] c 31 N71-10582  
Payload/burned-out motor case separation system Patent  
[NASA-CASE-XLA-05369] c 31 N71-15687  
Velocity package Patent  
[NASA-CASE-XLA-01339] c 31 N71-15692  
Omnidirectional multiple impact landing system Patent  
[NASA-CASE-XLA-09881] c 31 N71-16085  
Zero gravity apparatus Patent  
[NASA-CASE-XMF-06515] c 14 N71-23227  
Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-15429-1] c 18 N84-22609  
Payload retention device  
[NASA-CASE-MSC-21906-1] c 37 N92-28727  
Rotating-unbalanced-mass devices and methods for scanning balloon-borne-experiments, free-flying spacecraft, and space shuttle/space station attached experiments  
[NASA-CASE-MFS-28425-1] c 35 N92-33010

- Integrated launch and emergency vehicle system  
[NASA-CASE-LAR-13780-1] c 18 N92-33013

## PCM TELEMETRY

- Variable time constant smoothing circuit Patent  
[NASA-CASE-XGS-01983] c 10 N70-41964  
Data transfer system Patent  
[NASA-CASE-NPO-12107] c 08 N71-27255  
High speed direct binary-to-binary coded decimal converter  
[NASA-CASE-KSC-10326] c 08 N72-21197

## PEELING

- Wire stripper  
[NASA-CASE-FRC-10111-1] c 37 N79-10419

## PEENING

- Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N86-32550

## PELLETS

- Support structure for irradiated elements Patent  
[NASA-CASE-XNP-06031] c 15 N71-15606  
Contactless pellet fabrication  
[NASA-CASE-NPO-15592-1] c 71 N84-16940

## PELTIER EFFECTS

- Protection for energy conversion systems  
[NASA-CASE-XGS-04808] c 03 N69-25146  
Memory metal actuator  
[NASA-CASE-NPO-15960-1] c 37 N86-19604

## PELVIS

- Shoulder and hip joints for hard space suits and the like  
[NASA-CASE-ARC-11534-1] c 54 N86-29507

## PENETRANTS

- Dye penetrant for surfaces subsequently contacted by liquid oxygen Patent  
[NASA-CASE-XMF-02221] c 18 N71-27170

## PENETRATION

- Method and device for detection of surface discontinuities or defects  
[NASA-CASE-MSC-14187-1] c 35 N74-32879  
Fire extinguishing apparatus having a slidable mass for a penetrator nozzle --- for penetrating aircraft and shuttle orbiter skin  
[NASA-CASE-KSC-11064-1] c 31 N81-14137

## PENETROMETERS

- Lunar penetrometer Patent  
[NASA-CASE-XLA-00934] c 14 N71-22765  
Self-recording portable soil penetrometer  
[NASA-CASE-MFS-20774] c 14 N73-19420  
Soil penetrometer  
[NASA-CASE-XNP-05530] c 14 N73-32321  
Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c 35 N77-27367  
Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c 43 N79-25443

## PERCEPTION

- Method for measuring cutaneous sensory perception  
[NASA-CASE-MSC-13609-1] c 05 N72-25122

## PERFLUORO COMPOUNDS

- Hydroxy terminated perfluoro ethers Patent  
[NASA-CASE-NPO-10768] c 06 N71-27254  
Perfluoro polyether acyl fluorides  
[NASA-CASE-NPO-10765] c 06 N72-20121  
Reaction of fluorine with polyperfluoropolyenes  
[NASA-CASE-NPO-10862] c 06 N72-22107  
Silphenylenesiloxane polymers having in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20979] c 06 N72-25151  
Polymers of perfluorobutadiene and method of manufacture  
[NASA-CASE-NPO-10863-2] c 06 N72-25152  
Polyurethane resins from hydroxy terminated perfluoro ethers  
[NASA-CASE-NPO-10768-2] c 06 N72-27144  
Polymerizable disilanol having in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20979-2] c 06 N73-32030  
Perfluoro alkylene dioxy-bis-(4-phthalic anhydrides and oxy-bis(perfluoroalkyleneoxyphthalic anhydrides  
[NASA-CASE-MFS-22356-1] c 23 N75-30256  
Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c 23 N82-28353  
High performance channel injection sealant invention abstract  
[NASA-CASE-ARC-14408-1] c 27 N82-33523  
Fluoroether modified epoxy composites  
[NASA-CASE-ARC-11418-1] c 24 N84-11213  
Process for preparing perfluorotriazine elastomers and precursors thereof  
[NASA-CASE-ARC-11402-1] c 27 N84-22744  
Perfluoro (imidoylamidine) diamidines  
[NASA-CASE-ARC-11402-3] c 23 N86-21582  
Polyimides containing amide and perfluoroisopropyl connecting groups  
[NASA-CASE-LAR-14608-1] c 27 N92-17676

## PERFLUOROALKANE

- Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c 27 N79-22300

## PERFORATED PLATES

- Process for glass coating an ion accelerator grid Patent  
[NASA-CASE-LEW-10278-1] c 15 N71-28582

## PERFORATED SHELLS

- Method of fabricating an article with cavities --- with thin bottom walls  
[NASA-CASE-LAR-10318-1] c 31 N74-18089

## PERFORMANCE PREDICTION

- Failure detection and control means for improved drift performance of a gimbal platform system  
[NASA-CASE-MFS-23551-1] c 04 N76-26175  
Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13734-1-CU] c 09 N90-20096

## PERFORMANCE TESTS

- Frangible electrochemical cell  
[NASA-CASE-XGS-10010] c 03 N72-15986  
Solar cell assembly test method  
[NASA-CASE-NPO-10401-1] c 03 N72-20033  
Linear explosive comparison  
[NASA-CASE-LAR-10800-1] c 33 N72-27959  
Split-cross-bridge resistor for testing for proper fabrication of integrated circuits  
[NASA-CASE-NPO-16021-1] c 33 N85-30187  
Integrated circuit reliability testing  
[NASA-CASE-NPO-17393-1-CU] c 33 N89-29679  
O-ring gasket test fixture  
[NASA-CASE-MFS-28376-1] c 14 N91-21175  
Torsional suspension system for testing space structures  
[NASA-CASE-LAR-14149-1-SB] c 14 N91-21176

## PERIODIC VARIATIONS

- Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking  
[NASA-CASE-MFS-23267-1] c 35 N77-20401

## PERIPHERAL EQUIPMENT (COMPUTERS)

- Digital interface for bi-directional communication between a computer and a peripheral device  
[NASA-CASE-MSC-20258-1] c 60 N84-28492

## PERISCOPES

- Welding monitoring system  
[NASA-CASE-MFS-29177-1] c 37 N88-14362

## PERMANENT MAGNETS

- Permanent magnet flux-biased magnetic actuator with flux feedback  
[NASA-CASE-LAR-13785-1] c 70 N91-21824

## PERMEABILITY

- Ionene membrane separator  
[NASA-CASE-NPO-11091] c 18 N72-22567  
System for detecting substructure microfractures and method therefore  
[NASA-CASE-NPO-14192-1] c 39 N80-10507  
Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NPO-14101-1] c 52 N80-14687  
Geological assessment probe  
[NASA-CASE-NPO-14558-1] c 46 N80-24906

## PERMITTIVITY

- Process for lowering the dielectric constant of polyimides using diamic acid additives  
[NASA-CASE-LAR-13902-1] c 27 N90-23546

## PEROXIDES

- Method of polymerizing perfluorobutadiene Patent application  
[NASA-CASE-NPO-10447] c 06 N70-11252

## PERSONAL COMPUTERS

- Printer port interface  
[NASA-CASE-LAR-13950-1] c 60 N92-30541

## PERSPIRATION

- Method of making a perspiration resistant biopotential electrode  
[NASA-CASE-MSC-90153-2] c 05 N72-25120  
Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c 52 N81-29763

## PERTURBATION

- Gaseous control system for nuclear reactors  
[NASA-CASE-XLE-04599] c 22 N72-20597  
Measurement of waves in flows across a surface  
[NASA-CASE-NPO-17479-1-CU] c 34 N91-13658  
Passive laminar flow control of crossflow vorticity  
[NASA-CASE-LAR-13563-1] c 34 N91-23410

## PERTURBATION THEORY

- Dual wavelength scanning Doppler velocimeter --- without perturbation of flow fields  
[NASA-CASE-ARC-10637-1] c 35 N75-16783

## PH FACTOR

- Method for determining the point of zero zeta potential of semiconductor  
[NASA-CASE-LAR-12893-1] c 76 N85-30923

## PHASE COHERENCE

### PHASE COHERENCE

- Signal phase estimator  
[NASA-CASE-NPO-11203] c 10 N72-20224  
Coherent receiver employing nonlinear coherence  
detection for carrier tracking  
[NASA-CASE-NPO-11921-1] c 32 N74-30523

### PHASE CONJUGATION

- Motion detection, novelty filtering, and target tracking  
using an interferometric technique with a GaAs phase  
conjugate mirror  
[NASA-CASE-NPO-17784-1-CU] c 74 N91-13998

### PHASE CONTRAST

- Laser pulse detection method and apparatus  
[NASA-CASE-NPO-16030-1] c 36 N84-25037

### PHASE CONTROL

- Rapid sync acquisition system Patent  
[NASA-CASE-NPO-10214] c 10 N71-26577  
Wideband VCO with high phase stability Patent  
[NASA-CASE-XLA-03893] c 10 N71-27271  
Induction motor control system with voltage controlled  
oscillator circuit  
[NASA-CASE-MFS-21465-1] c 10 N73-32145  
System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c 33 N75-19519  
Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c 33 N81-17349  
Combinational logic for generating gate drive signals for  
phase control rectifiers  
[NASA-CASE-MFS-25208-1] c 33 N83-10345  
System for controlled acoustic rotation of objects  
[NASA-CASE-NPO-15522-1] c 71 N83-32516  
Method and apparatus for self-calibration and phasing  
of array antenna  
[NASA-CASE-NPO-15920-1] c 33 N85-21493  
Phase discriminating capacitive array sensor system  
[NASA-CASE-GSC-13460-1] c 33 N93-26104

### PHASE DEMODULATORS

- Phase demodulation system with two phase locked loops  
Patent  
[NASA-CASE-XNP-00777] c 10 N71-19469  
Linear phase demodulator including a phase locked loop  
with auxiliary feedback loop  
[NASA-CASE-GSC-12018-1] c 33 N77-14334

### PHASE DETECTORS

- Phase detector assembly Patent  
[NASA-CASE-XMF-00701] c 09 N70-40272  
Bi-polar phase detector and corrector for split phase  
PCM data signals Patent  
[NASA-CASE-XGS-01590] c 07 N71-12392  
High speed phase detector Patent  
[NASA-CASE-XNP-01306-2] c 09 N71-24596  
Phase protection system for ac power lines  
[NASA-CASE-MSC-17832-1] c 33 N74-14956  
Low distortion automatic phase control circuit --- voltage  
controlled phase shifter  
[NASA-CASE-MFS-21671-1] c 33 N74-22885  
Correlation type phase detector --- with time correlation  
integrator for frequency multiplexed signals  
[NASA-CASE-GSC-11744-1] c 33 N75-26243  
Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c 35 N75-27331  
Frequency discriminator and phase detector circuit  
[NASA-CASE-NPO-11515-1] c 33 N77-13315  
Phase substitution of spare converter for a failed one  
of parallel phase staggered converters  
[NASA-CASE-NPO-13812-1] c 33 N77-30365  
Apparatus and method for stabilized phase detection  
for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c 33 N79-11313  
High stability buffered phase comparator  
[NASA-CASE-GSC-12645-1] c 33 N84-16454  
Three phase power factor controller  
[NASA-CASE-MFS-25535-2] c 33 N84-22885  
Method and apparatus for receiving and tracking phase  
modulated signals  
[NASA-CASE-MSC-16170-2] c 32 N84-27952  
Phase detector for three-phase power factor controller  
[NASA-CASE-MFS-25854-1] c 33 N84-27975  
Maser cavity servo-tuning system  
[NASA-CASE-NPO-15890-1-CU] c 33 N85-29143  
Double reference pulsed phase locked loop  
[NASA-CASE-LAR-13310-1] c 32 N87-14559  
Method and apparatus for measuring frequency and  
phase difference  
[NASA-CASE-MSC-20865-1] c 32 N87-18692  
Zero-G phase detector and separator  
[NASA-CASE-LEW-14844-1] c 35 N90-22024

### PHASE DEVIATION

- System for stabilizing cable phase delay utilizing a  
coaxial cable under pressure  
[NASA-CASE-NPO-13138-1] c 33 N74-17927

### PHASE ERROR

- Modified fast frequency acquisition via adaptive least  
squares algorithm  
[NASA-CASE-NPO-17845-2-CU] c 61 N93-14882

### PHASE LOCK DEMODULATORS

- Compensating bandwidth switching transients in an  
amplifier circuit Patent  
[NASA-CASE-XNP-01107] c 10 N71-28859  
Phase ambiguity resolution for offset QPSK modulation  
systems  
[NASA-CASE-NPO-17853-1-CU] c 32 N91-25318

### PHASE LOCKED SYSTEMS

- Automatic acquisition system for phase-locked loop  
[NASA-CASE-XGS-04994] c 09 N69-21543  
Phase-locked loop with sideband rejecting properties  
Patent  
[NASA-CASE-XNP-02723] c 07 N70-41680  
Automatic frequency discriminators and control for a  
phase-locked loop providing frequency preset capabilities  
Patent  
[NASA-CASE-XMF-08665] c 10 N71-19467  
Burst synchronization detection system Patent  
[NASA-CASE-XMS-05605-1] c 10 N71-19468  
Phase demodulation system with two phase locked loops  
Patent  
[NASA-CASE-XNP-00777] c 10 N71-19469  
Diversity receiving system with diversity phase lock  
Patent  
[NASA-CASE-XGS-01222] c 10 N71-20841  
Phase locked phase modulator including a voltage  
controlled oscillator Patent  
[NASA-CASE-XNP-05382] c 10 N71-23544  
Video sync processor Patent  
[NASA-CASE-KSC-10002] c 10 N71-25865  
Transition tracking bit synchronization system  
[NASA-CASE-NPO-10844] c 07 N72-20140  
Data-aided carrier tracking loops  
[NASA-CASE-NPO-11282] c 10 N73-16205  
Filter for third order phase locked loops  
[NASA-CASE-NPO-11941-1] c 10 N73-27171  
Receiver with an improved phase lock loop in a  
multichannel telemetry system with suppressed carrier  
[NASA-CASE-NPO-11593-1] c 07 N73-28012  
Automatic carrier acquisition system  
[NASA-CASE-NPO-11628-1] c 07 N73-30113  
Digital second-order phase-locked loop  
[NASA-CASE-NPO-11905-1] c 33 N74-12887  
Phase-locked servo system --- for synchronizing the  
rotation of slip ring assembly  
[NASA-CASE-MFS-22073-1] c 33 N75-13139  
Low speed phaselock speed control system --- for  
brushless dc motor  
[NASA-CASE-GSC-11127-1] c 09 N75-24758  
Digital phase-locked loop  
[NASA-CASE-GSC-11623-1] c 33 N75-25040  
Telemetry synchronizer  
[NASA-CASE-GSC-11868-1] c 17 N76-22245  
Linear phase demodulator including a phase locked loop  
with auxiliary feedback loop  
[NASA-CASE-GSC-12018-1] c 33 N77-14334  
Frequency translating phase conjugation circuit for  
active retrodirective antenna array --- microwave  
transmission  
[NASA-CASE-NPO-14536-1] c 32 N81-14185  
PN lock indicator for dithered PN code tracking loop  
[NASA-CASE-NPO-14435-1] c 33 N81-33405  
Discriminator aided phase lock acquisition for  
suppressed carrier signals  
[NASA-CASE-NPO-14311-1] c 33 N82-29539  
Pulsed phase locked loop strain monitor --- voltage  
controlled oscillators  
[NASA-CASE-LAR-12772-1] c 33 N83-16626  
Double reference pulsed phase locked loop  
[NASA-CASE-LAR-13310-1] c 32 N87-14559  
Means for phase locking the outputs of a surface emitting  
laser diode array  
[NASA-CASE-NPO-16542-1-CU] c 36 N87-23960  
Processing circuit with asymmetry corrector and  
convolutional encoder for digital data  
[NASA-CASE-MSC-20187-1] c 33 N87-25531  
Phase length optical phase-locked-loop sensor  
[NASA-CASE-LAR-13387-1] c 74 N88-25302  
Digital phase-locked loop having an estimator and predictor  
of error  
[NASA-CASE-NPO-17196-1-CU] c 32 N88-29076  
Method of recertifying a loaded bearing member using  
a phase point  
[NASA-CASE-LAR-14741-1] c 39 N92-11384  
Method of recertifying a loaded bearing member  
[NASA-CASE-LAR-14168-1] c 39 N92-34174  
Real-time edge-enhanced optical correlator  
[NASA-CASE-NPO-18521-1-CU] c 74 N93-14404  
Constant frequency pulsed phase-locked loop  
measuring device  
[NASA-CASE-LAR-13823-1] c 35 N93-29084

### PHASE MODULATION

- Phase quadrature-plural channel data transmission  
system Patent  
[NASA-CASE-XAC-06302] c 08 N71-19763

## SUBJECT INDEX

- Adaptive tracking notch filter system Patent  
[NASA-CASE-XMF-01892] c 10 N71-22986  
Phase locked phase modulator including a voltage  
controlled oscillator Patent  
[NASA-CASE-XNP-05382] c 10 N71-23544  
Phase multiplying electronic scanning system Patent  
[NASA-CASE-NPO-10302] c 10 N71-26142  
Phase modulator Patent  
[NASA-CASE-MSC-13201-1] c 07 N71-28429  
Two carrier communication system with single  
transmitter  
[NASA-CASE-NPO-11548] c 07 N73-26118  
Decision feedback loop for tracking a polyphase  
modulated carrier  
[NASA-CASE-NPO-13103-1] c 32 N74-20811  
Modulator for tone and binary signals --- phase of  
modulation of tone and binary signals on carrier waves  
in communication systems  
[NASA-CASE-GSC-11743-1] c 32 N75-24981  
Phase modulating with odd and even finite power series  
of a modulating signal  
[NASA-CASE-LAR-11607-1] c 32 N77-14292  
Swept group delay measurement  
[NASA-CASE-NPO-13909-1] c 33 N78-25319  
Quadrature demodulation  
[NASA-CASE-GSC-12137-1] c 33 N78-32338  
Closed Loop solar array-ion thruster system with power  
control circuitry  
[NASA-CASE-LEW-12780-1] c 20 N79-20179  
Baseband signal combiner for large aperture antenna  
array  
[NASA-CASE-NPO-14641-1] c 32 N81-29308  
Doppler radar having phase modulation of both  
transmitted and reflected return signals  
[NASA-CASE-MSC-18675-1] c 32 N84-22820  
Method and apparatus for receiving and tracking phase  
modulated signals  
[NASA-CASE-MSC-16170-2] c 32 N84-27952  
Integrating IR detector imaging systems  
[NASA-CASE-NPO-15805-1] c 74 N84-28590  
Electro-optic resonant phase modulator  
[NASA-CASE-NPO-18702-1-CU] c 74 N92-23551
- PHASE SHIFT**  
Bi-polar phase detector and corrector for split phase  
PCM data signals Patent  
[NASA-CASE-XGS-01590] c 07 N71-12392  
Electromagnetic polarization systems and methods  
Patent  
[NASA-CASE-GSC-10021-1] c 09 N71-24595  
Method and apparatus for frequency-division multiplex  
communications by digital phase shift of carrier  
[NASA-CASE-NPO-11338] c 08 N72-25208  
Time domain phase measuring apparatus  
[NASA-CASE-GSC-12228-1] c 33 N79-10338  
Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c 37 N81-17432  
JFET reflection oscillator  
[NASA-CASE-GSC-12555-1] c 33 N86-19515  
Double reference pulsed phase locked loop  
[NASA-CASE-LAR-13310-1] c 32 N87-14559  
Ground plane interference elimination by passive  
element  
[NASA-CASE-NPO-16632-1-CU] c 32 N87-15390  
Method and apparatus for measuring minority carrier  
lifetime in a direct band-gap semiconductor  
[NASA-CASE-NPO-16337-1-CU] c 33 N87-22894  
Doppler radar with multiphase modulation of transmitted  
and reflected signal  
[NASA-CASE-MSC-18808-1] c 32 N90-20280  
Monolithic mm-wave phase shifter using optically  
activated superconducting switches  
[NASA-CASE-LEW-14878-1] c 74 N92-28571  
Phase-stepping fiber-optic projected fringe system for  
surface topography measurements  
[NASA-CASE-LEW-14996-1] c 74 N93-11058  
Constant frequency pulsed phase-locked loop  
measuring device  
[NASA-CASE-LAR-13823-1] c 35 N93-29084
- PHASE SHIFT CIRCUITS**  
Gyrator type circuit Patent  
[NASA-CASE-XAC-10608-1] c 09 N71-12517  
Phase shift circuit apparatus  
[NASA-CASE-ARC-10269-1] c 10 N72-16172  
Continuously variable voltage controlled phase shifter  
[NASA-CASE-NPO-11129] c 09 N72-33204  
Induction motor control system with voltage controlled  
oscillator circuit  
[NASA-CASE-MFS-21465-1] c 10 N73-32145  
Low distortion automatic phase control circuit --- voltage  
controlled phase shifter  
[NASA-CASE-MFS-21671-1] c 33 N74-22885  
Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c 32 N81-15179  
Fiber optic transmission line stabilization apparatus and  
method  
[NASA-CASE-NPO-15036-1] c 74 N82-19029

## PHASE SHIFT KEYING

- Decision feedback loop for tracking a polyphase modulated carrier  
[NASA-CASE-NPO-13103-1] c 32 N74-20811
- Differential phase shift keyed communication system  
[NASA-CASE-MSC-14065-1] c 32 N74-26654
- Differential phase shift keyed signal resolver  
[NASA-CASE-MSC-14066-1] c 33 N74-27705
- Unbalanced quadruphase demodulator  
[NASA-CASE-MSC-14840-1] c 32 N77-24331
- Method and apparatus for quadruphase-shift-key and linear phase modulation  
[NASA-CASE-NPO-14444-1] c 33 N81-15192
- Digital demodulator  
[NASA-CASE-LAR-12659-1] c 33 N82-26570
- Trellis coded modulation for transmission over fading mobile satellite channel  
[NASA-CASE-NPO-16904-2-CU] c 32 N91-14523
- Doppler-corrected differential detection system  
[NASA-CASE-NPO-16987-1-CU] c 32 N91-25316
- Phase ambiguity resolution for offset QPSK modulation systems  
[NASA-CASE-NPO-17853-1-CU] c 32 N91-25318
- Multiple symbol differential detection  
[NASA-CASE-NPO-17896-1-CU] c 32 N91-27439

## PHASE STABILITY (MATERIALS)

- Sintering silicon nitride  
[NASA-CASE-LEW-15489-1] c 27 N93-17062

## PHASE SWITCHING INTERFEROMETERS

- Radar antenna system for acquisition and tracking  
Patent  
[NASA-CASE-XMS-09610] c 07 N71-24625

## PHASE TRANSFORMATIONS

- Slug flow magnetohydrodynamic generator  
[NASA-CASE-XLE-02083] c 03 N69-39983
- Fluid dispensing apparatus and method Patent  
[NASA-CASE-XLE-01182] c 27 N71-15635
- Ten degree Kelvin hydride refrigerator  
[NASA-CASE-NPO-16393-1-CU] c 31 N87-21159

## PHASE VELOCITY

- Ultrasonic calibration device --- for producing changes in acoustic attenuation and phase velocity  
[NASA-CASE-LAR-11435-1] c 35 N76-15432
- Constant frequency pulsed phase-locked loop measuring device  
[NASA-CASE-LAR-13823-1] c 35 N93-29084

## PHASED ARRAYS

- Phase control circuits using frequency multiplications for phased array antennas  
[NASA-CASE-ERC-10285] c 10 N73-16206
- Phased array antenna control  
[NASA-CASE-MSC-14939-1] c 32 N79-11264
- Phase conjugation method and apparatus for an active retrodirective antenna array  
[NASA-CASE-NPO-13641-1] c 32 N79-24210
- Coaxial phased array antenna  
[NASA-CASE-MSC-16800-1] c 32 N81-14187
- Spiral slotted phased antenna array  
[NASA-CASE-MSC-18532-1] c 32 N82-27558
- Method and apparatus for self-calibration and phasing of array antenna  
[NASA-CASE-NPO-15920-1] c 33 N85-21493
- Ground plane interference elimination by passive element  
[NASA-CASE-NPO-16632-1-CU] c 32 N87-15390
- Millimeter-wave monolithic diode-grid frequency multiplier  
[NASA-CASE-NPO-17258-1-CU] c 33 N91-14551

## PHENOLIC RESINS

- Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c 24 N75-30260
- Fire and heat resistant laminating resins based on maleimido substituted aromatic cyclotriphosphazene polymer  
[NASA-CASE-ARC-11428-2] c 27 N87-16909

## PHENOLS

- Novel polymers and method of preparing same  
[NASA-CASE-NPO-10998-1] c 06 N73-32029
- Method and device for the detection of phenol and related compounds --- in an electrochemical cell  
[NASA-CASE-LEW-12513-1] c 25 N79-22235

## PHENYLS

- The 1,1,1-triaryl-2,2,2-trifluoroethanes and process for their synthesis  
[NASA-CASE-ARC-11097-1] c 25 N82-24312
- Bis(4-(3,4-dimethylenepyrrolidyl)-phenyl) methane  
[NASA-CASE-LAR-13965-1-CU] c 23 N90-21118
- Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-2-SB] c 27 N90-21177
- Acetylene terminated aspartimides and resins therefrom  
[NASA-CASE-LAR-14188-1] c 27 N90-23545
- Bis (4-(3,4-dimethylene-pyrrolidyl)-phenyl) methane  
[NASA-CASE-LAR-13965-2-CU] c 23 N91-14418

- Poly(1,3,4-oxadiazoles) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14427-1] c 23 N92-29141
- Polybenzimidazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14643-1] c 27 N92-29953

## PHONOCARDIOGRAPHY

- Phonocardiogram simulator Patent  
[NASA-CASE-XKS-10804] c 05 N71-24606
- Vibrophonocardiograph Patent  
[NASA-CASE-XFR-07172] c 05 N71-27234

## PHOSPHATES

- Thermal control coating Patent  
[NASA-CASE-XLA-01995] c 18 N71-23047

## PHOSPHAZENE

- Process for the preparation of polycarbonylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c 27 N81-27271
- Carbonylcyclotriphosphazenes and their polymers --- thermal insulation  
[NASA-CASE-ARC-11176-1] c 27 N82-18389
- Carbonylmethylene-substituted phosphazenes and polymers thereof  
[NASA-CASE-ARC-11370-1] c 27 N84-22750
- Maleimido substituted aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-1] c 23 N86-19376
- Fire and heat resistant laminating resins based on maleimido substituted aromatic cyclotriphosphazene polymer  
[NASA-CASE-ARC-11428-2] c 27 N87-16909
- Aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-3] c 23 N88-24692

## PHOSPHINES

- Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-1] c 27 N78-32256
- Compound oxidized styrylphosphine --- flame resistant vinyl polymers  
[NASA-CASE-MSC-14903-2] c 27 N80-10358
- Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-3] c 27 N80-24438
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c 27 N83-31854
- Elastomer-modified phosphorus-containing imide resins  
[NASA-CASE-ARC-11400-1] c 27 N84-14322
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-2] c 27 N85-21347
- Imide/arylene ether copolymers containing phosphine oxide groups  
[NASA-CASE-LAR-14925-1] c 27 N93-20567

## PHOSPHONITRILES

- Metal containing polymers from cyclic tetrameric phenylphosphonitrimides Patent  
[NASA-CASE-HQN-10364] c 06 N71-27363

## PHOSPHORS

- High contrast cathode ray tube  
[NASA-CASE-ERC-10468] c 09 N72-20206
- Thin wire pointing method  
[NASA-CASE-NPO-15789-1] c 31 N83-19947
- Flat-panel, full-color, electroluminescent display  
[NASA-CASE-LAR-13407-1] c 33 N87-28831
- X ray sensitive area detection device  
[NASA-CASE-MFS-28232-1] c 74 N91-14835
- Radiation sensitive area detection device and method  
[NASA-CASE-MFS-28563-1] c 35 N91-25388
- Single layer multi-color luminescent display  
[NASA-CASE-LAR-13616-1] c 74 N91-31950
- Single layer multi-color luminescent display and method of making  
[NASA-CASE-LAR-13616-3] c 74 N92-29158
- A method of making a single layer multi-color luminescent display  
[NASA-CASE-LAR-14811-1] c 33 N92-30389
- A method of making a single layer multi-color luminescent display  
[NASA-CASE-LAR-14811-1] c 33 N93-20119

## PHOSPHORUS

- Photoelectrochemical cells including chalcogenophosphate photoelectrodes  
[NASA-CASE-LAR-12958-1] c 44 N84-23019
- Fire-resistant phosphorus containing polyimides and copolyimides  
[NASA-CASE-ARC-11522-2] c 27 N85-34280
- The 1-((diorganoxyphosphonyl)-methyl)-2,4- and -2,6-diamino benzenes  
[NASA-CASE-ARC-11425-4] c 23 N90-20133
- Some 1-((diorganoxyphosphonyl)methyl)-2,4- and -2,6-dinitro-benzenes  
[NASA-CASE-ARC-11425-3] c 23 N90-23475

## PHOSPHORUS COMPOUNDS

- Phosphorus-containing bisimide resins  
[NASA-CASE-ARC-11321-1] c 27 N81-27272
- Polymer of phosphorylmethyl-2,4- and -2,6-diamino benzene and polyfunctional monomer  
[NASA-CASE-ARC-11506-2] c 23 N86-32525

- The 1-((diorganoxy phosphonyl) methyl)-2,4- and -2,6-diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-2] c 23 N87-28605

## PHOSPHORUS POLYMERS

- Process for the preparation of polycarbonylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c 27 N81-27271
- Carbonylcyclotriphosphazenes and their polymers --- thermal insulation  
[NASA-CASE-ARC-11176-1] c 27 N82-18389
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-2] c 27 N85-21347

## PHOTOABSORPTION

- Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c 39 N81-25400

## PHOTOCATHODES

- Photoelectric energy spectrometer Patent  
[NASA-CASE-XNP-04161] c 14 N71-15599
- III-V photocathode with nitrogen doping for increased quantum efficiency  
[NASA-CASE-NPO-12134-1] c 33 N76-31409

## PHOTOCHEMICAL REACTIONS

- Apparatus for photon excited catalysis  
[NASA-CASE-NPO-13566-1] c 25 N77-32255
- Apparatus for extraction and separation of a preferentially photo-dissociated molecular isotope into positive and negative ions by means of an electric field  
[NASA-CASE-LEW-12465-1] c 25 N78-25148
- Vitro-violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments  
[NASA-CASE-MSC-16074-1] c 27 N80-26446
- Real-time dynamic holographic image storage device  
[NASA-CASE-LAR-13989-1] c 35 N91-13694
- Solid lubricants on pretreated surfaces  
[NASA-CASE-LEW-14474-2] c 27 N92-11186

## PHOTOCHROMISM

- All-optical photochromic spatial light modulators based on photoinduced electron transfer in rigid matrices  
[NASA-CASE-NPO-17612-1-CU] c 74 N92-16808

## PHOTOCONDUCTIVE CELLS

- Two-dimensional radiant energy array computers and computing devices  
[NASA-CASE-GSC-11839-1] c 60 N77-14751
- Plural output optometric sample cell and analysis system  
[NASA-CASE-NPO-10233-1] c 74 N78-33913
- Photocapacitive image converter  
[NASA-CASE-LAR-12513-1] c 44 N82-32841

## PHOTOCONDUCTIVITY

- Photoetching of metal-oxide layers  
[NASA-CASE-ERC-10108] c 06 N72-21094

## PHOTOCONDUCTORS

- Electronic divider and multiplier using photocells  
Patent  
[NASA-CASE-XFR-05637] c 09 N71-19480
- Etching method for photoresists or polymers  
[NASA-CASE-ARC-11873-2] c 25 N91-31258

## PHOTODIODES

- Shock isolator for operating a diode laser on a closed-cycle refrigerator  
[NASA-CASE-GSC-12297-1] c 37 N79-28549
- Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c 74 N85-22139

## PHOTODISSOCIATION

- Apparatus for extraction and separation of a preferentially photo-dissociated molecular isotope into positive and negative ions by means of an electric field  
[NASA-CASE-LEW-12465-1] c 25 N78-25148

## PHOTOELECTRIC CELLS

- Sun tracker with rotatable plane-parallel plate and two photocells Patent  
[NASA-CASE-XGS-01159] c 21 N71-10678
- Method of and device for determining the characteristics and flux distribution of micrometeorites --- scanning puncture holes in sheet material with photoelectric cell  
[NASA-CASE-NPO-12127-1] c 91 N74-13130
- Noncontacting method for measuring angular deflection  
[NASA-CASE-LAR-12178-1] c 74 N80-21138
- Photoelectric detection system --- manufacturing automation  
[NASA-CASE-MFS-23776-1] c 33 N82-28545

## PHOTOELECTRIC EFFECT

- Photoelectric energy spectrometer Patent  
[NASA-CASE-XNP-04161] c 14 N71-15599

## PHOTOELECTRIC EMISSION

- High resolution threshold photoelectron spectroscopy by electron attachment  
[NASA-CASE-NPO-14078-1] c 72 N80-14877

## PHOTOELECTRIC MATERIALS

- Light radiation direction indicator with a baffle of two parallel grids  
[NASA-CASE-XNP-03930] c 14 N69-24331
- Use of thin film light detector  
[NASA-CASE-NPO-11432-2] c 35 N74-15090

- Photoelectrochemical cells including chalcogenophosphate photoelectrodes [NASA-CASE-LAR-12958-1] c 44 N84-23019
- Increased voltage photovoltaic cell [NASA-CASE-NPO-16155-1] c 44 N85-30475
- PHOTOELECTRICITY**
- Photoelectrochemical cells including chalcogenophosphate photoelectrodes [NASA-CASE-LAR-12958-1] c 44 N84-23019
- PHOTOELECTROCHEMICAL DEVICES**
- Photoelectrochemical electrodes [NASA-CASE-NPO-15458-1] c 25 N84-12262
- Method for determining the point of zero zeta potential of semiconductor [NASA-CASE-LAR-12893-1] c 76 N85-30923
- PHOTOELECTRON SPECTROSCOPY**
- Photoelectron spectrometer with means for stabilizing sample surface potential [NASA-CASE-NPO-13772-1] c 35 N78-10429
- High resolution threshold photoelectron spectroscopy by electron attachment [NASA-CASE-NPO-14078-1] c 72 N80-14877
- Low intensity X-ray and gamma-ray spectrometer [NASA-CASE-GSC-12587-1] c 35 N82-32659
- PHOTOELECTRONS**
- A quality monitor and monitoring technique employing optically stimulated electron emission [NASA-CASE-LAR-15063-1] c 38 N93-30414
- PHOTOGRAPHIC EMULSIONS**
- Method for applying photographic resists to otherwise incompatible substrates [NASA-CASE-MSC-18107-1] c 27 N81-25209
- Method for retarding dye fading during archival storage of developed color photographic film --- inert atmosphere [NASA-CASE-MFS-23250-1] c 35 N82-11432
- PHOTOGRAPHIC EQUIPMENT**
- Apparatus and method for protecting a photographic device Patent [NASA-CASE-NPO-10174] c 14 N71-18465
- Method of treating the surface of a glass member [NASA-CASE-GSC-12110-1] c 27 N77-32308
- System for forming a quadrified image comprising angularly related fields of view of a three dimensional object [NASA-CASE-NPO-14219-1] c 74 N81-17886
- PHOTOGRAPHIC FILM**
- Film feed camera having a detent means Patent [NASA-CASE-LAR-10686] c 14 N71-28935
- Exposure interlock for oscilloscope cameras [NASA-CASE-LAR-10319-1] c 14 N73-32322
- Optical noise suppression device and method --- laser light exposing film [NASA-CASE-MSC-12640-1] c 74 N76-31998
- Selective image area control of X-ray film exposure density [NASA-CASE-NPO-13808-1] c 35 N78-15461
- Method for retarding dye fading during archival storage of developed color photographic film --- inert atmosphere [NASA-CASE-MFS-23250-1] c 35 N82-11432
- Method and apparatus for making an optical element having a dielectric film [NASA-CASE-ARC-11611-1] c 74 N87-28416
- Variable magnification glancing incidence x ray telescope [NASA-CASE-MFS-28013-2] c 89 N91-14096
- PHOTOGRAPHIC MEASUREMENT**
- Means and method of measuring viscoelastic strain Patent [NASA-CASE-XNP-01153] c 32 N71-17645
- Impact measuring technique [NASA-CASE-LAR-10913] c 14 N72-16282
- TV fatigue crack monitoring system [NASA-CASE-LAR-11490-1] c 39 N78-16387
- PHOTOGRAPHIC PROCESSING**
- Method and apparatus for producing an image from a transparent object [NASA-CASE-GSC-11989-1] c 74 N77-28932
- Method of obtaining intensified image from developed photographic films and plates [NASA-CASE-MFS-23461-1] c 35 N79-10389
- PHOTOGRAPHIC PROCESSING EQUIPMENT**
- Drying apparatus for photographic sheet material [NASA-CASE-GSC-11074-1] c 14 N73-28489
- PHOTOGRAPHIC RECORDING**
- Method of obtaining permanent record of surface flow phenomena Patent [NASA-CASE-XLA-01353] c 14 N70-41366
- Focused image holography with extended sources Patent [NASA-CASE-ERC-10019] c 16 N71-15551
- Recording and reconstructing focused image holograms Patent [NASA-CASE-ERC-10017] c 16 N71-15567

- Method and means for recording and reconstructing holograms without use of a reference beam Patent [NASA-CASE-ERC-10020] c 16 N71-26154
- Multiple image storing system for high speed projectile holography [NASA-CASE-MFS-20596] c 14 N72-17324
- Phototropic composition of matter [NASA-CASE-XGS-03736] c 14 N72-22443
- Method for determining thermo-physical properties of specimens --- photographic recording of changes in thin film phase-change temperature indicating material in wind tunnel [NASA-CASE-LAR-11053-1] c 25 N74-18551
- PHOTOGRAPHY**
- System for forming a quadrified image comprising angularly related fields of view of a three dimensional object [NASA-CASE-NPO-14219-1] c 74 N81-17886
- Photorefractor ocular screening system [NASA-CASE-MFS-26011-1-SB] c 52 N87-24874
- PHOTOIONIZATION**
- A multichannel photoionization chamber for absorption analysis Patent [NASA-CASE-ERC-10044-1] c 14 N71-27090
- PHOTOLYSIS**
- Solar photolysis of water [NASA-CASE-NPO-13675-1] c 44 N77-32580
- Solar photolysis of water [NASA-CASE-NPO-14126-1] c 44 N79-11470
- PHOTOMAPPING**
- Window defect planar mapping technique [NASA-CASE-MSC-19442-1] c 74 N77-10899
- PHOTOMASKS**
- Method for applying photographic resists to otherwise incompatible substrates [NASA-CASE-MSC-18107-1] c 27 N81-25209
- PHOTOMECHANICAL EFFECT**
- Photomechanical transducer [NASA-CASE-NPO-14363-1] c 39 N81-25400
- PHOTOMETERS**
- Interferometer direction sensor Patent [NASA-CASE-NPO-10320] c 14 N71-17655
- Method and device for determining battery state of charge Patent [NASA-CASE-NPO-10194] c 03 N71-20407
- Light position locating system Patent [NASA-CASE-XNP-01059] c 23 N71-21821
- Fluid flow meter with comparator reference means Patent [NASA-CASE-XGS-01331] c 14 N71-22996
- Two color horizon sensor [NASA-CASE-ERC-10174] c 14 N72-25409
- Infrared detectors [NASA-CASE-LAR-10728-1] c 14 N73-12445
- Chromato-fluorographic drug detector --- device for detecting and recording fluorescent properties of materials [NASA-CASE-ARC-10633-1] c 25 N74-26947
- The 2 deg/90 deg laboratory scattering photometer --- particulate refractivity in hydrosols [NASA-CASE-GSC-12088-1] c 74 N78-13874
- Magneto-optic detection system with noise cancellation [NASA-CASE-NPO-11954-1] c 35 N78-29421
- Alternating gradient photodetector [NASA-CASE-NPO-17235-1-CU] c 35 N90-21358
- Phase-stepping fiber-optic projected fringe system for surface topography measurements [NASA-CASE-LEW-14996-1] c 74 N93-11058
- Integrated filter and detector array for spectral imaging [NASA-CASE-NPO-18317-1-CU] c 74 N93-13419
- PHOTOMICROGRAPHY**
- Stereo photomicrography system [NASA-CASE-LAR-10176-1] c 14 N72-20380
- Hand-held photomicroscope [NASA-CASE-ARC-10468-1] c 14 N73-33361
- Method of examining microcircuit patterns [NASA-CASE-NPO-16299-1] c 33 N87-14594
- PHOTOMULTIPLIER TUBES**
- Canopus detector including automotive gain control of photomultiplier tube Patent [NASA-CASE-XNP-03914] c 21 N71-10771
- Electronic divider and multiplier using photocells Patent [NASA-CASE-XFR-05637] c 09 N71-19480
- Coincidence apparatus for detecting particles [NASA-CASE-XLA-07813] c 14 N72-17328
- Method and apparatus for mapping the sensitivity of the face of a photodetector specifically a PMT [NASA-CASE-LAR-10320-1] c 09 N72-23172
- Light direction sensor [NASA-CASE-NPO-11201] c 14 N72-27409
- Photomultiplier circuit including means for rapidly reducing the sensitivity thereof --- and protection from radiation damage [NASA-CASE-ARC-10593-1] c 33 N74-27682

**PHOTON BEAMS**

- Apparatus for photon excited catalysis [NASA-CASE-NPO-13566-1] c 25 N77-32255

**PHOTON-ELECTRON INTERACTION**

- Means and method for calibrating a photon detector utilizing electron-photon coincidence [NASA-CASE-NPO-15644-1] c 35 N84-33767

**PHOTONS**

- Solar cell collector [NASA-CASE-LEW-12552-1] c 44 N78-25527
- Means and method for calibrating a photon detector utilizing electron-photon coincidence [NASA-CASE-NPO-15644-1] c 35 N84-33767
- Double photon excitation of high-Rydberg atoms as a long-lived submillimeter detector [NASA-CASE-NPO-16372-1] c 72 N86-33127

**PHOTOSENSITIVITY**

- Photosensitive device to detect bearing deviation Patent [NASA-CASE-XNP-00438] c 21 N70-35089
- Solar optical telescope dome control system Patent [NASA-CASE-MSC-10966] c 14 N71-19568
- Method and apparatus for mapping the sensitivity of the face of a photodetector specifically a PMT [NASA-CASE-LAR-10320-1] c 09 N72-23172
- Holography utilizing surface plasmon resonances [NASA-CASE-MFS-22040-1] c 35 N74-26946
- Apparatus for calibrating an image disector tube [NASA-CASE-MFS-22208-1] c 33 N75-26244
- Photoelectrochemical cells including chalcogenophosphate photoelectrodes [NASA-CASE-LAR-12958-1] c 44 N84-23019
- Liquid crystal light valve structures [NASA-CASE-MSC-20036-1] c 76 N85-33826
- Dynamic range compression/expansion of light beams by photorefractive crystals [NASA-CASE-NPO-17140-1-CU] c 74 N89-14077

**PHOTOTHERMAL CONVERSION**

- Predictive aging of polymers [NASA-CASE-NPO-17524-1-CU] c 27 N90-10261

**PHOTOTRANSISTORS**

- Phototransistor imaging system [NASA-CASE-MFS-20809] c 23 N73-13660
- Phototransistor [NASA-CASE-MFS-20407] c 09 N73-19235
- Distributed proximity sensor system [NASA-CASE-NPO-17275-1-CU] c 37 N89-29750
- High-gain AlGaAs/GaAs double heterojunction Darlington phototransistors for optical neural networks [NASA-CASE-NPO-18101-1-CU] c 74 N91-25841
- GaAs-based optoelectronic neurons [NASA-CASE-NPO-18497-1-CU] c 63 N92-24245
- GaAs-based optoelectronic neurons [NASA-CASE-NPO-18497-1-CU] c 63 N93-24599

**PHOTOTROPISM**

- Phototropic composition of matter [NASA-CASE-XGS-03736] c 14 N72-22443

**PHOTOVISCOELASTICITY**

- Means and method of measuring viscoelastic strain Patent [NASA-CASE-XNP-01153] c 32 N71-17645

**PHOTOVOLTAIC CELLS**

- Plurality of photosensitive cells on a pyramidal base for planetary trackers [NASA-CASE-XNP-04180] c 07 N69-39736
- Light sensitive digital aspect sensor Patent [NASA-CASE-XGS-00359] c 14 N70-34158
- Method of using photovoltaic cell using poly-N-vinylcarbazole complex Patent [NASA-CASE-NPO-10373] c 03 N71-18698
- Use of thin film light detector [NASA-CASE-NPO-11432-2] c 35 N74-15090
- Photovoltaic cell array [NASA-CASE-MFS-22458-1] c 44 N77-10635
- Solar cells having integral collector grids [NASA-CASE-LEW-12819-1] c 44 N79-11467
- Double-sided solar cell package [NASA-CASE-NPO-14199-1] c 44 N79-25482
- Method of construction of a multi-cell solar array [NASA-CASE-MFS-23540-1] c 44 N79-26475
- Solar cell with improved N-region contact and method of forming the same [NASA-CASE-NPO-14205-1] c 44 N79-31752
- Method of fabricating a photovoltaic module of a substantially transparent construction [NASA-CASE-NPO-14303-1] c 44 N80-18550
- Copper doped polycrystalline silicon solar cell [NASA-CASE-NPO-14670-1] c 44 N81-19558
- Efficiency of silicon solar cells containing chromium [NASA-CASE-NPO-15179-1] c 44 N82-26777
- Method of making a high voltage V-groove solar cell [NASA-CASE-LEW-13401-1] c 44 N82-29709
- High voltage planar multijunction solar cell [NASA-CASE-LEW-13400-1] c 44 N82-31764

Heat transparent high intensity high efficiency solar cell  
[NASA-CASE-LEW-12892-1] c 44 N83-14692

Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c 35 N83-21311

Cloud cover sensor  
[NASA-CASE-NPO-14936-1] c 47 N83-32232

Process and apparatus for growing a crystal ribbon  
[NASA-CASE-NPO-15629-1] c 76 N84-35113

Increased voltage photovoltaic cell  
[NASA-CASE-NPO-16155-1] c 44 N85-30475

Thermionic photovoltaic energy converter  
[NASA-CASE-LEW-14077-1] c 44 N85-34441

GaAs Schottky barrier photo-responsive device and method of fabrication  
[NASA-CASE-GSC-12816-1] c 76 N86-20150

Method of making macrocrystalline or single crystal semiconductor material  
[NASA-CASE-NPO-15904-1] c 76 N86-28760

Selective emitters  
[NASA-CASE-LEW-14731-1] c 44 N92-22037

Self-deploying photovoltaic power system  
[NASA-CASE-LEW-15308-1] c 44 N92-24057

**PHOTOVOLTAIC CONVERSION**  
Photoelectrochemical cells including chalcogenophosphate photoelectrodes  
[NASA-CASE-LAR-12958-1] c 44 N84-23019

**PHOTOVOLTAIC EFFECT**  
System for improving signal-to-noise ratio of a communication signal Patent Application  
[NASA-CASE-MSC-12259-1] c 07 N70-12616

Use of thin film light detector  
[NASA-CASE-NPO-11432-2] c 35 N74-15090

Thermionic photovoltaic energy converter  
[NASA-CASE-LEW-14077-1] c 44 N85-34441

**PHTHALATES**  
Stabilized unsaturated polyesters  
[NASA-CASE-NPO-16103-1] c 27 N85-29043

**PHTHALOCYANIN**  
Metal phthalocyanine polymers  
[NASA-CASE-ARC-11405-1] c 27 N84-27884

Phthalocyanine polymers  
[NASA-CASE-ARC-11413-1] c 27 N85-21348

Metal (2,4,4',4'') phthalocyanine tetraamines as curing agents for epoxy resins  
[NASA-CASE-ARC-11424-1] c 27 N85-34281

Metal phthalocyanine intermediates for the preparation of polymers  
[NASA-CASE-ARC-11405-2] c 27 N86-19455

Process for preparing phthalocyanine polymer from imide containing bisphthalonitrile  
[NASA-CASE-ARC-11511-2] c 27 N87-21112

**PHYSICAL EXERCISE**  
Restraint system for ergometer  
[NASA-CASE-MFS-21046-1] c 14 N73-27377

Tilting table for ergometer and for other biomedical devices  
[NASA-CASE-MFS-21010-1] c 05 N73-30078

Manual actuator --- for spacecraft exercising machines  
[NASA-CASE-MFS-21481-1] c 37 N74-18127

Therapeutic hand exerciser  
[NASA-CASE-LAR-11667-1] c 52 N76-19785

**PHYSICAL OPTICS**  
Matching optics for Gaussian beams  
[NASA-CASE-ARC-11892-1-SB] c 74 N92-16810

**PHYSICAL PROPERTIES**  
Polyurethanes of fluorine containing polycarbonates  
[NASA-CASE-MFS-10512] c 06 N73-30099

System for monitoring physical characteristics of fluids  
[NASA-CASE-NPO-15400-1] c 34 N83-31993

**PHYSICAL WORK**  
Treadmill for space flight  
[NASA-CASE-MSC-21752-1] c 54 N92-17910

**PHYSIOLOGICAL EFFECTS**  
Restraint torso for a pressurized suit  
[NASA-CASE-MSC-12397-1] c 05 N72-25119

Extra-corporeal blood access, sensing, and radiation methods and apparatuses  
[NASA-CASE-MSC-21775-1] c 52 N92-11627

**PHYSIOLOGICAL TESTS**  
Vibrocardiograph Patent  
[NASA-CASE-XFR-07172] c 05 N71-27234

Medical subject monitoring systems --- multichannel monitoring systems  
[NASA-CASE-MSC-14180-1] c 52 N76-14757

**PHYSIOLOGY**  
Phonocardiograph transducer Patent  
[NASA-CASE-XMS-05365] c 14 N71-22993

Method of detecting and counting bacteria  
[NASA-CASE-GSC-11917-2] c 51 N76-29891

Dual physiological rate measurement instrument  
[NASA-CASE-MSC-20078-3] c 52 N91-14709

**PHYTONS**  
Protein crystal growth tray assembly  
[NASA-CASE-MFS-28507-1] c 76 N92-34171

**PIERCING**

Pressurized cell micrometeoroid detector Patent  
[NASA-CASE-XLA-00936] c 14 N71-14996

Hypervelocity impact shield  
[NASA-CASE-MSC-21420-1] c 18 N92-15114

**PIEZOELECTRIC CRYSTALS**

Miniature stress transducer Patent  
[NASA-CASE-XNP-02983] c 14 N71-21091

Ultra-stable oscillator with complementary transistors  
[NASA-CASE-GSC-11513-1] c 33 N74-20862

CDS solid state phase insensitive ultrasonic transducer --- annealing dadmium sulfide crystals  
[NASA-CASE-LAR-12304-1] c 35 N80-20559

**PIEZOELECTRIC GAGES**

Torque sensor having a spoked sensor element support structure  
[NASA-CASE-NPO-17461-1-CU] c 35 N91-17350

**PIEZOELECTRIC TRANSDUCERS**

Force transducer Patent  
[NASA-CASE-XAC-01101] c 14 N70-41957

Microbalance including crystal oscillators for measuring contaminants in a gas system Patent  
[NASA-CASE-NPO-10144] c 14 N71-17701

Phonocardiograph transducer Patent  
[NASA-CASE-XMS-05365] c 14 N71-22993

Semiconductor transducer device  
[NASA-CASE-ERC-10087-2] c 14 N72-31446

Length mode piezoelectric ultrasonic transducer for inspection of solid objects  
[NASA-CASE-MSC-19672-1] c 38 N79-14398

Piezoelectric deicing device  
[NASA-CASE-LEW-13773-2] c 33 N86-20671

**PIEZOELECTRICITY**

Missile stage separation indicator and stage initiator Patent  
[NASA-CASE-XLA-00791] c 03 N70-39930

Piezoelectric pump Patent  
[NASA-CASE-XNP-05429] c 26 N71-21824

Pressure sensitive transducers Patent  
[NASA-CASE-ERC-10087] c 14 N71-27334

Piezoelectric composite materials  
[NASA-CASE-LEW-12582-1] c 76 N83-34796

Piezoelectrostatic generator  
[NASA-CASE-MFS-28298-1] c 76 N91-14872

Passive fetal monitoring sensor  
[NASA-CASE-LAR-14088-1-CU] c 35 N92-33016

**PIEZORESISTIVE TRANSDUCERS**

Miniature stress transducer Patent  
[NASA-CASE-XNP-02983] c 14 N71-21091

Transverse piezoresistance and pinch effect electromechanical transducers Patent  
[NASA-CASE-ERC-10088] c 26 N71-25490

**PIGMENTS**

Stabilized zinc oxide coating compositions Patent  
[NASA-CASE-XMF-07770-2] c 18 N71-26772

**PILOT TRAINING**

Controlled visibility device for an aircraft Patent  
[NASA-CASE-XFR-04147] c 11 N71-10748

Kinesthetic control simulator --- for pilot training  
[NASA-CASE-LAR-10276-1] c 09 N75-15662

**PILOTS (PERSONNEL)**

System for indicating direction of intruder aircraft  
[NASA-CASE-ERC-10226-1] c 14 N73-16483

**PINCH EFFECT**

Toggle mechanism for pinching metal tubes  
[NASA-CASE-GSC-12274-1] c 37 N79-28550

**PINHOLE CAMERAS**

Three-dimensional and tomographic imaging device for X-ray and gamma-ray emitting objects  
[NASA-CASE-GSC-12851-1] c 35 N85-30281

**PINS**

Fatigue-resistant shear pin  
[NASA-CASE-XLA-09122] c 15 N69-27505

Turbo-machine blade vibration damper Patent  
[NASA-CASE-XLE-00155] c 28 N71-29154

Safety-type locking pin  
[NASA-CASE-MFS-18495] c 15 N72-11385

Self-locking double retention redundant full pin release  
[NASA-CASE-NPO-16233-1] c 37 N86-20801

Method and apparatus for releasably connecting first and second objects  
[NASA-CASE-MSC-21517-1] c 31 N92-16161

Coupling device with improved thermal interface  
[NASA-CASE-GSC-13251-1] c 37 N92-29120

**PINTLES**

Metal valve pintle with encapsulated elastomeric body Patent  
[NASA-CASE-MSC-12116-1] c 15 N71-17648

**PIPE FLOW**

Flat-plate heat pipe  
[NASA-CASE-GSC-11998-1] c 34 N77-32413

Monogroove heat pipe design: Insulated liquid channel with bridging wick  
[NASA-CASE-MSC-20497-1] c 34 N85-29180

Energy efficient continuous flow ash lockhopper  
[NASA-CASE-NPO-16985-1-CU] c 31 N91-15423

Schlieren system for visualizing the flow within a pipe of circular cross-section  
[NASA-CASE-LAR-13944-1] c 35 N92-11336

**PIPELINES**

Spherical shield Patent  
[NASA-CASE-XNP-01855] c 15 N71-28937

Mechanized fluid connector and assembly tool system with ball detents  
[NASA-CASE-MSC-21434-1] c 37 N92-10197

**PIPELINING (COMPUTERS)**

Pipelined digital SAR azimuth correlator using hybrid FFT-transversal filter  
[NASA-CASE-NPO-15519-1] c 32 N84-34651

Neighborhood comparison operator  
[NASA-CASE-NPO-16464-1-CU] c 60 N86-24224

Real time pipelined system for forming the sum of products in the processing of video data  
[NASA-CASE-NPO-16462-1-CU] c 60 N88-24169

Programmable pipelined image processor  
[NASA-CASE-NPO-16461-1-CU] c 60 N89-26400

Pipeline synthetic aperture radar data compression utilizing systolic binary tree-searched architecture for vector quantization  
[NASA-CASE-NPO-17941-1-CU] c 32 N91-13595

Highly parallel computer architecture for robotic computation  
[NASA-CASE-NPO-17632-1-CU] c 60 N91-32805

**PIPES (TUBES)**

Device for determining the accuracy of the flare on a flared tube  
[NASA-CASE-XKS-03495] c 14 N69-39785

Piping arrangement through a double chamber structure  
[NASA-CASE-XNP-08882] c 15 N69-39935

Foldable conduit Patent  
[NASA-CASE-XLE-00620] c 32 N70-41579

Thermobulb mount Patent  
[NASA-CASE-NPO-10158] c 33 N71-16356

Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114] c 15 N71-17650

Sealed separable connection Patent  
[NASA-CASE-NPO-10064] c 15 N71-17693

Electrical switching device Patent  
[NASA-CASE-NPO-10037] c 09 N71-19610

Tube dimpling tool Patent  
[NASA-CASE-XMS-06876] c 15 N71-21536

Plasma device feed system Patent  
[NASA-CASE-XLE-02902] c 25 N71-21694

Spin forming tubular elbows Patent  
[NASA-CASE-XMF-01083] c 15 N71-22723

Portable milling tool Patent  
[NASA-CASE-XMF-03511] c 15 N71-22799

Internal flare angle gauge Patent  
[NASA-CASE-XMF-04415] c 14 N71-24693

Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-3] c 15 N71-24865

Weld preparation machine Patent  
[NASA-CASE-XKS-07953] c 15 N71-26134

Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-2] c 15 N71-26148

Collapsible antenna boom and transmission line Patent  
[NASA-CASE-MFS-20068] c 07 N71-27191

Tube fabricating process  
[NASA-CASE-LAR-10203-1] c 15 N72-16330

Torsional disconnect unit  
[NASA-CASE-NPO-10704] c 15 N72-20445

Open type urine receptacle  
[NASA-CASE-MSC-12324-1] c 05 N72-22093

Method for measuring cutaneous sensory perception  
[NASA-CASE-MSC-13609-1] c 05 N72-25122

Low mass truss structure  
[NASA-CASE-LAR-10546-1] c 11 N72-25287

Honeycomb panels formed of minimal surface periodic tubule layers  
[NASA-CASE-ERC-10364] c 18 N72-25540

Honeycomb core structures of minimal surface tubule sections  
[NASA-CASE-ERC-10363] c 18 N72-25541

Method for distillation of liquids  
[NASA-CASE-XNP-08124-2] c 06 N73-13129

Cable restraint  
[NASA-CASE-LAR-10129-1] c 15 N73-25512

Method of fabricating a twisted composite superconductor  
[NASA-CASE-LEW-11015] c 26 N73-32571

Open tube guideway for high speed air cushioned vehicles  
[NASA-CASE-LAR-10256-1] c 85 N74-34672

Method for fabricating a mass spectrometer inlet leak  
[NASA-CASE-GSC-12077-1] c 35 N77-24455

Precision heat forming of tetrafluoroethylene tubing  
[NASA-CASE-MSC-18430-1] c 37 N82-24491



# PISTON ENGINES

# SUBJECT INDEX

Open ended tubing cutters  
[NASA-CASE-MSC-18538-1] c 37 N82-26672  
Method of making an ion beam sputter-etched  
ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095  
Tubing and cable cutting tool  
[NASA-CASE-LAR-12786-1] c 37 N84-28085  
Fluid leak indicator  
[NASA-CASE-MSC-20783-1] c 35 N86-20756  
Method of repairing hidden leaks in tubes  
[NASA-CASE-MFS-19796-1] c 37 N86-32736  
Self-contained, single-use hose and tubing cleaning  
module  
[NASA-CASE-MSC-20857-1] c 37 N87-17035  
Liquid seeding atomizer  
[NASA-CASE-ARC-11631-1] c 34 N87-21255  
Tube coupling device  
[NASA-CASE-MFS-25964-2] c 37 N87-22977  
Tapered, tubular polyester fabric  
[NASA-CASE-MSC-21082-1] c 27 N87-29672  
Tool and process for miniature explosive joining of  
tubes  
[NASA-CASE-LAR-13662-1] c 37 N88-14359  
Quick connect coupling  
[NASA-CASE-MSC-21539-1] c 37 N91-14610  
Valve malfunction detection apparatus  
[NASA-CASE-MFS-29904-1] c 35 N93-29503

## PISTON ENGINES

Stirling cycle engine and refrigeration systems  
[NASA-CASE-NPO-13613-1] c 37 N76-29590  
Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c 37 N81-25370  
Solar engine  
[NASA-CASE-LAR-12148-1] c 44 N82-24640  
Stirling cycle cryogenic cooler  
[US-PATENT-4,389,849] c 44 N83-28574

## PISTONS

Automatic pump Patent  
[NASA-CASE-XNP-04731] c 15 N71-24042  
Firefly pump-metering system  
[NASA-CASE-GSC-10218-1] c 15 N72-21465  
Collapsible pistons  
[NASA-CASE-MSC-13789-1] c 11 N73-32152  
Airflow control system for supersonic inlets  
[NASA-CASE-LEW-11188-1] c 02 N74-20646  
Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c 37 N80-31790  
Power control for hot gas engines  
[NASA-CASE-NPO-14220-1] c 37 N81-14318  
Multiple plate hydrostatic viscous damper  
[NASA-CASE-LEW-12445-1] c 37 N81-22360  
Gas-to-hydraulic power converter  
[NASA-CASE-MSC-18794-1] c 44 N83-14693  
Centrifugal-reciprocating compressor  
[NASA-CASE-NPO-14597-2] c 37 N84-28081  
Lightweight piston  
[NASA-CASE-LAR-13150-1] c 24 N87-27742  
Composite piston  
[NASA-CASE-LAR-13435-1] c 37 N88-23981  
Lightweight piston architecture  
[NASA-CASE-LAR-13926-1] c 37 N90-22042  
Method and apparatus for waste collection and  
storage  
[NASA-CASE-MSC-21025-3] c 54 N91-26747  
Cooled spool piston compressor  
[NASA-CASE-MSC-22020-1] c 37 N93-19331

## PITCH (INCLINATION)

Reverse pitch fan with divided splitter  
[NASA-CASE-LEW-12760-1] c 07 N77-17059  
Velocity vector control system augmented with direct  
lift control  
[NASA-CASE-LAR-12268-1] c 08 N81-24106  
Pitch attitude stabilization system utilizing engine  
pressure ratio feedback signals  
[NASA-CASE-LAR-12562-1] c 08 N81-26152  
Swashplate control system  
[NASA-CASE-LAR-11633-1] c 08 N87-23631

## PITCHING MOMENTS

High lift, low pitching moment airfoils  
[NASA-CASE-LAR-13215-1] c 02 N89-14224

## PITOT TUBES

Pitot-pressure probe for measuring pressure in a  
hypersonic wind tunnel  
[NASA-CASE-LAR-14232-1] c 09 N92-34213

## PIVOTS

Tension measurement device Patent  
[NASA-CASE-XMS-04545] c 15 N71-22878  
Unidirectional flexural pivot  
[NASA-CASE-GSC-12622-1] c 37 N84-12492  
Joint for deployable structures  
[NASA-CASE-NPO-16038-1] c 37 N86-19605  
Thumb-actuated two-axis controller  
[NASA-CASE-ARC-11372-1] c 08 N86-27288  
Bladder operated robotic joint  
[NASA-CASE-MFS-28682-1] c 27 N92-29831

Flexible robotic arm  
[NASA-CASE-GSC-13161-1] c 37 N92-33634

## PIXELS

Programmable remapper with single flow architecture  
[NASA-CASE-MSC-21481-1] c 60 N91-13890

## PLANAR STRUCTURES

Window defect planar mapping technique  
[NASA-CASE-MSC-19442-1] c 74 N77-10899  
Method and apparatus for preparing multiconductor  
cable with flat conductors  
[NASA-CASE-MFS-10946-1] c 31 N79-21226  
High voltage planar multijunction solar cell  
[NASA-CASE-LEW-13400-1] c 44 N82-31764  
Dual cathode system for electron beam instruments  
[NASA-CASE-NPO-16878-1-CU] c 35 N90-20351  
Coaxial turnstile junction  
[NASA-CASE-GSC-13422-1] c 33 N92-23462  
Planar microstrip YAGI antenna array  
[NASA-CASE-NPO-17873-2-CU] c 32 N93-29507

## PLANE WAVES

Multiple reflection conical microwave antenna  
[NASA-CASE-NPO-11661-1] c 07 N73-14130

## PLANETARY ATMOSPHERES

Method of planetary atmospheric investigation using a  
split-trajectory dual flyby mode Patent  
[NASA-CASE-XAC-08494] c 30 N71-15990  
Flow field simulation Patent  
[NASA-CASE-LAR-11138] c 12 N71-20436  
Ablation sensor Patent  
[NASA-CASE-XLA-01791] c 14 N71-22991

## PLANETARY GRAVITATION

Impact simulator Patent  
[NASA-CASE-XLA-00493] c 11 N70-34786  
Means for visually indicating flight paths of vehicles  
between the Earth, Venus, and Mercury Patent  
[NASA-CASE-XNP-00708] c 14 N70-35394

## PLANETARY LANDING

Parachute glider Patent  
[NASA-CASE-XLA-00898] c 02 N70-36804  
Omnidirectional multiple impact landing system Patent  
[NASA-CASE-XLA-09881] c 31 N71-16085

## PLANETARY MAPPING

Method for detecting surface motions and mapping small  
terrestrial or planetary surface deformations with synthetic  
aperture radar  
[NASA-CASE-NPO-17831-1-CU] c 43 N91-14642

## PLANETARY ORBITS

Flexible foam erectable space structures Patent  
[NASA-CASE-XLA-00686] c 31 N70-34135  
Erectable modular space station Patent  
[NASA-CASE-XLA-00678] c 31 N70-34296

## PLANETARY RADIATION

Attitude sensor for space vehicles Patent  
[NASA-CASE-XLA-00793] c 21 N71-22880

## PLANETARY SURFACES

Method and apparatus for mapping planets  
[NASA-CASE-NPO-11001] c 07 N72-21118  
Method for detecting surface motions and mapping small  
terrestrial or planetary surface deformations with synthetic  
aperture radar  
[NASA-CASE-NPO-17831-1-CU] c 43 N91-14642

## PLANTS (BOTANY)

Rotary plant growth accelerating apparatus ---  
weightlessness  
[NASA-CASE-ARC-10722-1] c 51 N75-25503  
Molten salt pyrolysis of latex --- synthetic hydrocarbon  
fuel production using the Guayule shrub  
[NASA-CASE-NPO-14315-1] c 27 N81-17261  
Enhancement of in vitro guayule propagation  
[NASA-CASE-NPO-15213-1] c 51 N83-17045  
Method and apparatus for bio-regenerative life support  
system  
[NASA-CASE-MSC-21629-1] c 54 N91-31803

## PLASMA ACCELERATION

Apparatus for increasing ion engine beam density  
Patent  
[NASA-CASE-XLE-00519] c 28 N70-41576  
Coaxial high density, hypervelocity plasma generator and  
accelerator with ionizable metal disc  
[NASA-CASE-MFS-20589] c 25 N72-32688

## PLASMA ACCELERATORS

Plasma accelerator Patent  
[NASA-CASE-XLA-00675] c 25 N70-33267  
Continuously operating induction plasma accelerator  
Patent  
[NASA-CASE-XLA-01354] c 25 N70-36946  
Crossed-field MHD plasma generator/ accelerator  
Patent  
[NASA-CASE-XLA-03374] c 25 N71-15562  
Self-repeating plasma generator having communicating  
annular and linear arc discharge passages Patent  
[NASA-CASE-XLA-03103] c 25 N71-21693  
Magnetically controlled plasma accelerator Patent  
[NASA-CASE-XLA-00327] c 25 N71-29184  
Two stage light gas-plasma projectile accelerator  
[NASA-CASE-MFS-22287-1] c 75 N76-14931

## PLASMA ARC WELDING

ARC length control for plasma welding  
[NASA-CASE-MSC-20900-1] c 37 N88-30131  
Gas arc constriction for plasma arc welding  
[NASA-CASE-MFS-28844-1] c 37 N93-31292

## PLASMA CONTROL

Superconductive magnetic-field-trapping device  
[NASA-CASE-XNP-01185] c 26 N73-28710  
Self-energized plasma compressor --- for compressing  
plasma discharged from coaxial plasma generator  
[NASA-CASE-MFS-22145-1] c 75 N75-13625

## PLASMA CYLINDERS

Plasma fluidic hybrid display Patent  
[NASA-CASE-ERC-10100] c 09 N71-33519

## PLASMA DENSITY

Focussing system for an ion source having apertured  
electrodes Patent  
[NASA-CASE-XNP-03332] c 09 N71-10616  
Measurement of plasma temperature and density using  
radiation absorption  
[NASA-CASE-ARC-10598-1] c 75 N74-30156  
Hollow cathode apparatus  
[NASA-CASE-NPO-15560-1] c 33 N85-21491

## PLASMA DIAGNOSTICS

Probes having ring and primary sensor at same potential  
to prevent collection of stray wall currents in ionized  
gases  
[NASA-CASE-XLE-00690] c 25 N69-39884  
Apparatus for measuring conductivity and velocity of  
plasma utilizing a plurality of sensing coils positioned in  
the plasma Patent  
[NASA-CASE-XAC-05695] c 25 N71-16073  
Measurement of plasma temperature and density using  
radiation absorption  
[NASA-CASE-ARC-10598-1] c 75 N74-30156  
Trochoidal analysis of scattered electrons in a merged  
electron-ion beam geometry  
[NASA-CASE-NPO-16789-1-CU] c 72 N89-29169

## PLASMA DYNAMICS

Apparatus for measuring conductivity and velocity of  
plasma utilizing a plurality of sensing coils positioned in  
the plasma Patent  
[NASA-CASE-XAC-05695] c 25 N71-16073  
Self-energized plasma compressor --- for compressing  
plasma discharged from coaxial plasma generator  
[NASA-CASE-MFS-22145-1] c 75 N75-13625

## PLASMA ENGINES

Plasma device feed system Patent  
[NASA-CASE-XLE-02902] c 25 N71-21694  
Hybrid plume plasma rocket  
[NASA-CASE-MSC-20476-2] c 20 N89-25279  
High temperature refractory member with radiation  
emissive overcoat  
[NASA-CASE-NPO-17122-1-CU] c 27 N91-14489

## PLASMA GENERATORS

Method and apparatus for producing a plasma Patent  
[NASA-CASE-XLA-00147] c 25 N70-34661  
Crossed-field MHD plasma generator/ accelerator  
Patent  
[NASA-CASE-XLA-03374] c 25 N71-15562  
Coaxial high density, hypervelocity plasma generator and  
accelerator with ionizable metal disc  
[NASA-CASE-MFS-20589] c 25 N72-32688  
Self-energized plasma compressor --- for compressing  
plasma discharged from coaxial plasma generator  
[NASA-CASE-MFS-22145-1] c 75 N75-13625  
Self-energized plasma compressor  
[NASA-CASE-MFS-22145-2] c 75 N76-17951  
Continuous plasma laser --- method and apparatus for  
producing intense, coherent, monochromatic light from low  
temperature plasma  
[NASA-CASE-XNP-04167-3] c 36 N77-19416

## PLASMA GUNS

Method of making a diffusion bonded refractory coating  
Patent  
[NASA-CASE-XLE-01604-2] c 15 N71-15610  
Plasma gun with coaxial powder feed and adjustable  
cathode  
[NASA-CASE-LEW-14901-1] c 75 N91-25875

## PLASMA JETS

Method of preparing water purification membranes ---  
polymerization of allyl amine as thin films in plasma  
discharge  
[NASA-CASE-ARC-10643-1] c 25 N75-12087  
Combination automatic-starting electrical plasma torch  
and gas shutoff valve --- for satellite attitude control  
[NASA-CASE-XLE-10717] c 37 N75-29426  
Plasma cleaning device --- designed for high vacuum  
environments  
[NASA-CASE-MFS-22906-1] c 75 N78-27913  
Etching method for photoresists or polymers  
[NASA-CASE-ARC-11873-2] c 25 N91-31258

## PLASMA LAYERS

Electrostatic plasma modulator for space vehicle  
re-entry communication Patent  
[NASA-CASE-XLA-01400] c 07 N70-41331

- Means for communicating through a layer of ionized gases Patent  
[NASA-CASE-XLA-01127] c 07 N70-41372
- Reentry communication by material addition Patent  
[NASA-CASE-XLA-01552] c 07 N71-11284
- Plasma sprayed ceramic thermal barrier coating for NiAl-based intermetallic alloys  
[NASA-CASE-LEW-15535-1] c 26 N93-31294
- PLASMA POTENTIALS**  
Method and apparatus for neutralizing potentials induced on spacecraft surfaces  
[NASA-CASE-GSC-11963-1] c 33 N77-10429
- PLASMA PROBES**  
Probes having ring and primary sensor at same potential to prevent collection of stray wall currents in ionized gases  
[NASA-CASE-XLE-00690] c 25 N69-39884
- Small plasma probe Patent  
[NASA-CASE-XLE-02578] c 25 N71-20747
- PLASMA PROPULSION**  
Method of making dished ion thruster grids  
[NASA-CASE-LEW-11694-1] c 20 N75-18310
- Ring-cusp ion thruster with shell anode  
[NASA-CASE-LEW-13881-1] c 20 N85-21256
- Hybrid plume plasma rocket  
[NASA-CASE-MSC-20476-2] c 20 N89-25279
- PLASMA RADIATION**  
Means for measuring the electron density gradients of the plasma sheath formed around a space vehicle Patent  
[NASA-CASE-XLA-06232] c 25 N71-20563
- Continuous plasma light source  
[NASA-CASE-XNP-04167-2] c 25 N72-24753
- Method and apparatus for producing a thermal atomic oxygen beam  
[NASA-CASE-LEW-15614-1] c 72 N93-19026
- PLASMA SHEATHS**  
Apparatus for measuring electric field strength on the surface of a model vehicle Patent  
[NASA-CASE-XLE-02038] c 09 N71-16086
- Means for measuring the electron density gradients of the plasma sheath formed around a space vehicle Patent  
[NASA-CASE-XLA-06232] c 25 N71-20563
- PLASMA SPRAYING**  
Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00302] c 15 N71-16077
- Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-2] c 37 N82-26674
- Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c 27 N82-29453
- Thermal barrier coating system  
[NASA-CASE-LEW-14057-1] c 24 N85-35233
- Process for HIP canning of composites  
[NASA-CASE-LEW-14990-1-CU] c 24 N91-17145
- Plasma gun with coaxial powder feed and adjustable cathode  
[NASA-CASE-LEW-14901-1] c 75 N91-25875
- Composite thermal barrier coating  
[NASA-CASE-LEW-14999-1] c 24 N92-21725
- Method of fabricating a rocket engine combustion chamber  
[NASA-CASE-MFS-28569-1] c 27 N93-30565
- Plasma sprayed ceramic thermal barrier coating for NiAl-based intermetallic alloys  
[NASA-CASE-LEW-15535-1] c 26 N93-31294
- Turntable mechanism  
[NASA-CASE-MFS-28522-1] c 37 N93-31313
- PLASMA TEMPERATURE**  
Measurement of plasma temperature and density using radiation absorption  
[NASA-CASE-ARC-10598-1] c 75 N74-30156
- PLASMA-ELECTROMAGNETIC INTERACTION**  
Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c 37 N79-11405
- PLASMAS (PHYSICS)**  
Apparatus for measuring conductivity and velocity of plasma utilizing a plurality of sensing coils positioned in the plasma Patent  
[NASA-CASE-XAC-05695] c 25 N71-16073
- Hollow cathode apparatus  
[NASA-CASE-NPO-15560-1] c 33 N85-21491
- Method and apparatus for maintaining thermal control in plasma conditions  
[NASA-CASE-MFS-28368-1] c 75 N90-10717
- Ceramic coatings on smooth surfaces  
[NASA-CASE-LEW-15164-1] c 27 N91-25298
- PLASMONS**  
Inelastic tunnel diodes  
[NASA-CASE-LEW-13833-1] c 33 N85-21492
- Solar energy converter using surface plasma waves  
[NASA-CASE-LEW-13827-1] c 44 N85-21768
- PLASTIC COATINGS**  
Coating process  
[NASA-CASE-XNP-06508] c 18 N69-39895
- Apparatus and method for skin packaging articles  
[NASA-CASE-MFS-20855] c 15 N73-27405
- Silicon nitride coated, plastic covered solar cell  
[NASA-CASE-LEW-11496-1] c 44 N77-14580
- Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers  
[NASA-CASE-ARC-10915-2] c 27 N79-18052
- Advanced inorganic separators for alkaline batteries  
[NASA-CASE-LEW-13171-1] c 44 N82-29708
- Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-31727
- PLASTIC DEFORMATION**  
Light intensity strain analysis  
[NASA-CASE-LAR-10765-1] c 32 N73-20740
- Mechanical bonding of metal method  
[NASA-CASE-LEW-12941-1] c 26 N83-10170
- PLASTIC FLOW**  
Polyimide processing additives  
[NASA-CASE-LAR-13669-1] c 27 N92-29157
- PLASTIC PROPERTIES**  
Polyimides with improved compression moldability  
[NASA-CASE-LAR-14457-1] c 27 N93-25997
- PLASTIC TAPES**  
Thermocouple tape  
[NASA-CASE-LEW-11072-1] c 14 N73-24472
- PLASTICIZERS**  
Inorganic-organic liquidators for alkaline batteries  
[NASA-CASE-LEW-12649-1] c 44 N78-25530
- Tackifier for addition polyimides containing monoethylphthalate  
[NASA-CASE-LAR-12642-1] c 27 N81-29229
- Method of bonding plasticized elastomer to metal and articles produced thereby  
[NASA-CASE-MFS-25181-1] c 27 N82-24340
- Advanced inorganic separators for alkaline batteries  
[NASA-CASE-LEW-13171-1] c 44 N82-29708
- PLASTICS**  
Method for forming plastic materials Patent  
[NASA-CASE-XMS-05516] c 15 N71-17803
- Method of making inflatable honeycomb Patent  
[NASA-CASE-XLA-03492] c 15 N71-22713
- Sealing member and combination thereof and method of producing said sealing member Patent  
[NASA-CASE-XMS-01625] c 15 N71-23022
- Dielectric molding apparatus Patent  
[NASA-CASE-LAR-10121-1] c 15 N71-26721
- Radar calibration sphere  
[NASA-CASE-XLA-11154] c 07 N72-21117
- Molding apparatus for thermosetting plastic compositions  
[NASA-CASE-LAR-10489-2] c 31 N74-32920
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c 27 N76-32315
- Polyimide processing additives  
[NASA-CASE-LAR-13669-1] c 27 N92-29157
- Mold bolt and means for achieving close tolerances between bolts and bolt holes  
[NASA-CASE-MFS-28720-1] c 37 N93-30567
- PLATENS**  
Compression test apparatus  
[NASA-CASE-MSC-18723-1] c 35 N83-21312
- PLATES**  
Pressurized bellows flat contact heat exchanger interface  
[NASA-CASE-MSC-21271-1] c 34 N90-21999
- Fully articulated four-point-bend loading fixture  
[NASA-CASE-LEW-14776-1] c 37 N91-21540
- PLATES (STRUCTURAL MEMBERS)**  
Foil seal  
[NASA-CASE-XLE-05130] c 15 N69-21362
- Fifth wheel  
[NASA-CASE-FRC-10081-1] c 37 N77-14477
- Microwave dichroic plate  
[NASA-CASE-GSC-12171-1] c 33 N79-28416
- Floating nut retention system  
[NASA-CASE-MSC-16938-1] c 37 N80-23653
- Optimized bolted joint  
[NASA-CASE-LAR-13250-1] c 37 N86-27630
- Method and apparatus for making an optical element having a dielectric film  
[NASA-CASE-ARC-11611-1] c 74 N87-28416
- Three point lead screw positioning apparatus  
[NASA-CASE-LEW-15216-1] c 37 N92-17678
- PLATFORMS**  
Expandable pallet for space station interface attachments  
[NASA-CASE-MSC-21117-2] c 18 N89-28554
- PLATING**  
Selective plating of etched circuits without removing previous plating Patent  
[NASA-CASE-XGS-03120] c 15 N71-24047
- Peen plating  
[NASA-CASE-GSC-11163-1] c 15 N73-32360
- Scanning nozzle plating system for etching or plating metals on substrates without masking  
[NASA-CASE-NPO-11758-1] c 31 N74-23065
- Method for depositing an oxide coating  
[NASA-CASE-LEW-13131-1] c 44 N83-10494
- PLATINUM**  
Electrolytic cell structure  
[NASA-CASE-LAR-11042-1] c 33 N75-27252
- Platinum resistance thermometer circuit  
[NASA-CASE-MSC-12327-1] c 35 N77-27368
- Guanidine based vehicle/binders for use with oxides, metals, and ceramics  
[NASA-CASE-LEW-15314-1] c 27 N92-23461
- High temperature sorbents for oxygen  
[NASA-CASE-NPO-18409-1-CU] c 25 N93-19025
- PLATINUM ALLOYS**  
Joining lead wires to thin platinum alloy films  
[NASA-CASE-LEW-13934-1] c 35 N83-35338
- PLAYBACKS**  
Method of and means for testing a tape record/playback system  
[NASA-CASE-MFS-22671-2] c 35 N77-17426
- Thermomagnetic recording and magnetic-optic playback system  
[NASA-CASE-NPO-10872-1] c 35 N79-16246
- Disk memory device  
[NASA-CASE-GSC-13196-1] c 60 N92-29132
- PLENUM CHAMBERS**  
Air cushion lift pad Patent  
[NASA-CASE-MFS-14685] c 31 N71-15689
- Gas filter mounting structure  
[NASA-CASE-MSC-12297] c 14 N72-23457
- Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c 51 N81-14605
- Sonic levitation apparatus  
[NASA-CASE-MFS-25828-1] c 71 N84-28568
- Gas arc constriction for plasma arc welding  
[NASA-CASE-MFS-28844-1] c 37 N93-31292
- PLETHYSMOGRAPHY**  
Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c 35 N76-24525
- Apparatus for determining changes in limb volume  
[NASA-CASE-MSC-18759-1] c 52 N83-27578
- PLOTTERS**  
Automated equipotential plotter  
[NASA-CASE-NPO-11134] c 09 N72-21246
- Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c 32 N81-27341
- PLOTTING**  
Instrument for measuring potentials on two dimensional electric field plots Patent  
[NASA-CASE-XLA-08493] c 10 N71-19421
- PLUG NOZZLES**  
Cascade plug nozzle for jet noise reduction  
[NASA-CASE-LAR-11674-1] c 07 N76-18117
- Apparatus and method for jet noise suppression  
[NASA-CASE-LAR-11903-2] c 71 N84-14873
- PLUGS**  
Rocket chamber leak test fixture  
[NASA-CASE-XFR-09479] c 14 N69-27503
- Fatigue-resistant shear pin  
[NASA-CASE-XLA-09122] c 15 N69-27505
- Gas regulator Patent  
[NASA-CASE-NPO-10298] c 12 N71-17661
- Heated porous plug microthruster  
[NASA-CASE-GSC-10640-1] c 28 N72-18766
- High temperature penetrator assembly with bayonet plug and ramp-activated lock  
[NASA-CASE-MSC-18526-1] c 37 N82-24494
- Rotor self-lubricating axial stop  
[NASA-CASE-MFS-28273-1] c 37 N88-23974
- Porous plug for reducing orifice induced pressure error in airfoils  
[NASA-CASE-LAR-13569-1] c 35 N89-12841
- Method of producing a plug-type heat flux gauge  
[NASA-CASE-LEW-14967-2] c 35 N92-22038
- Thruster sealing system and apparatus  
[NASA-CASE-MSC-21898-1] c 37 N93-14702
- PLUMES**  
Hypervelocity impact shield  
[NASA-CASE-MSC-21420-1] c 18 N92-15114
- PLUNGERS**  
Method and apparatus for releasably connecting first and second objects  
[NASA-CASE-MSC-21517-1] c 31 N92-16161
- Check valve with poppet dashpot/frictional damping mechanism  
[NASA-CASE-MSC-21950-1] c 37 N92-34242
- PNEUMATIC CONTROL**  
Pneumatic system for controlling and actuating pneumatic cyclic devices  
[NASA-CASE-XMS-04843] c 03 N69-21469

# PNEUMATIC EQUIPMENT

# SUBJECT INDEX

Pneumatic mirror support system  
[NASA-CASE-XLA-03271] c 11 N69-24321  
Valve actuator Patent  
[NASA-CASE-XHQ-01208] c 15 N70-35409  
Quick release hook tape Patent  
[NASA-CASE-XMS-10660-1] c 15 N71-25975  
Foot pedal operated fluid type exercising device  
[NASA-CASE-MSC-11561-1] c 05 N73-32014  
Pneumatic load compensating or controlling system  
[NASA-CASE-ARC-10907-1] c 37 N75-32465

## PNEUMATIC EQUIPMENT

High pressure air valve Patent  
[NASA-CASE-MSC-11010] c 15 N71-19485  
Inflatable support structure Patent  
[NASA-CASE-XLA-01731] c 32 N71-21045  
Apparatus for purging systems handling toxic, corrosive, noxious and other fluids Patent  
[NASA-CASE-XMS-01905] c 12 N71-21089  
Zero gravity apparatus Patent  
[NASA-CASE-XMF-06515] c 14 N71-23227  
Pneumatic amplifier Patent  
[NASA-CASE-MSC-12121-1] c 15 N71-27147  
Life raft stabilizer  
[NASA-CASE-MSC-12393-1] c 02 N73-26006  
Airlock  
[NASA-CASE-MFS-20922-1] c 18 N74-22136  
Pneumatic load compensating or controlling system  
[NASA-CASE-ARC-10907-1] c 37 N75-32465  
Gas-to-hydraulic power converter  
[NASA-CASE-MSC-18794-1] c 44 N83-14693  
System and method for moving a probe to follow movements of tissue  
[NASA-CASE-NPO-15197-1] c 52 N83-25346  
Apparatus for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-1] c 07 N83-36029  
Inflatable device for installing strain gage bridges  
[NASA-CASE-FRC-11068-1] c 35 N84-12443  
Method for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-2] c 07 N86-20389  
Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-25429-1] c 18 N86-20469

## POINT SOURCES

Electronic background suppression method and apparatus for a field scanning sensor  
[NASA-CASE-XGS-05211] c 07 N69-39980  
X-ray reflection collimator adapted to focus X-radiation directly on a detector Patent  
[NASA-CASE-XHQ-04106] c 14 N70-40240  
Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c 32 N81-27341

## POINTING CONTROL SYSTEMS

Rotable accurate reflector system for telescopes Patent  
[NASA-CASE-NPO-10468] c 23 N71-33229  
All sky pointing attitude control system  
[NASA-CASE-ARC-10716-1] c 35 N77-20399  
Magnetic suspension and pointing system  
[NASA-CASE-LAR-11889-2] c 37 N78-27424  
Magnetic suspension and pointing system --- on a carrier vehicle  
[NASA-CASE-LAR-11889-1] c 35 N79-26372  
Solar tracking system  
[NASA-CASE-MFS-23999-1] c 44 N81-24520  
Balanced bridge feedback control system  
[NASA-CASE-NPO-17430-1-CU] c 33 N90-21951

## POINTS (MATHEMATICS)

Method of and apparatus for generating an interstitial point in a data stream having an even number of data points  
[NASA-CASE-MFS-25319-1] c 60 N85-33701

## POLAR ORBITS

Cartwheel satellite synchronization system Patent  
[NASA-CASE-XGS-05579] c 31 N71-15676

## POLARIMETERS

Polarimeter for transient measurement Patent  
[NASA-CASE-XNP-08883] c 23 N71-16101  
Interferometer-polarimeter  
[NASA-CASE-NPO-11239] c 14 N73-12446

## POLARIMETRY

Data volume reduction for imaging radar polarimetry  
[NASA-CASE-NPO-17184-1-CU] c 32 N88-26541  
Method for providing a polarization filter for processing synthetic aperture radar image data  
[NASA-CASE-NPO-17904-1-CU] c 32 N91-13594

## POLARITY

Positive dc to negative dc converter Patent  
[NASA-CASE-XMF-08217] c 03 N71-23239  
Peak polarity selector Patent  
[NASA-CASE-FRC-10010] c 10 N71-24862  
Precision rectifier with FET switching means Patent  
[NASA-CASE-ARC-10101-1] c 09 N71-33109

Method and apparatus for determining return stroke polarity of distant lightning  
[NASA-CASE-MFS-26102-1-CU] c 47 N91-15661

Electrorepulsive actuator  
[NASA-CASE-NPO-17684-1-CU] c 33 N92-22042

Method and apparatus for determining return stroke polarity of distant lightning  
[NASA-CASE-MFS-26102-2-CU] c 47 N93-10108

## POLARIZATION (WAVES)

System for interference signal nulling by polarization adjustment  
[NASA-CASE-NPO-13140-1] c 32 N75-24982  
Multifrequency broadband polarized horn antenna  
[NASA-CASE-NPO-14588-1] c 32 N81-25278  
Faraday rotation measurement method and apparatus  
[NASA-CASE-NPO-14839-1] c 35 N82-15381

## POLARIZED ELECTROMAGNETIC RADIATION

Antenna beam-shaping apparatus Patent  
[NASA-CASE-XNP-00611] c 09 N70-35219  
Parabolic reflector horn feed with spillover correction Patent  
[NASA-CASE-XNP-00540] c 09 N70-35382  
Antenna feed system for receiving circular polarization and transmitting linear polarization  
[NASA-CASE-NPO-14362-1] c 32 N80-16261  
Coaxial phased array antenna  
[NASA-CASE-MSC-16800-1] c 32 N81-14187  
Reciprocating linear motor  
[NASA-CASE-GSC-12773-2] c 33 N87-23904

## POLARIZED LIGHT

Polarization compensator for optical communications  
[NASA-CASE-GSC-11782-1] c 74 N76-30053  
Visible and infrared polarization ratio spectrophotometer  
[NASA-CASE-LAR-12285-1] c 35 N80-28687  
Polarization perception device  
[NASA-CASE-MSC-21915-1] c 74 N92-30027

## POLARIZED RADIATION

Microwave limb sounder --- measuring trace gases in the upper atmosphere  
[NASA-CASE-NPO-14544-1] c 46 N82-12685

## POLARIZERS

Partial polarizer filter  
[NASA-CASE-GSC-12225-1] c 74 N79-14891  
Wind dynamic range video camera  
[NASA-CASE-MFS-25750-1] c 32 N86-20647  
Non-mechanical optical path switching and its application to dual beam spectroscopy including gas filter correlation radiometry  
[NASA-CASE-LAR-14588-1-CU] c 74 N92-29117

## POLES

Radial and torsionally controlled magnetic bearing  
[NASA-CASE-GSC-12957-1] c 37 N87-17038

## POLISHING

Conforming polisher for aspheric surface of revolution Patent  
[NASA-CASE-XGS-02884] c 15 N71-22705  
Method of forming a sharp edge on an optical device  
[NASA-CASE-GSC-12348-1] c 74 N80-24149

## POLLUTION CONTROL

System for minimizing internal combustion engine pollution emission  
[NASA-CASE-NPO-13402-1] c 37 N76-18457  
Combustion engine --- for air pollution control  
[NASA-CASE-NPO-13671-1] c 37 N77-31497  
Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c 07 N81-29129  
Apparatus and method for destructive removal of particles contained in flowing fluid  
[NASA-CASE-NPO-15426-1] c 35 N84-17555  
Combined air and water pollution control system  
[NASA-CASE-NST-00007-1] c 45 N91-14662

## POLLUTION MONITORING

Fluorescence detector for monitoring atmospheric pollutants  
[NASA-CASE-NPO-13231-1] c 45 N75-27585  
Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c 45 N76-17656  
Indicator providing continuous indication of the presence of a specific pollutant in air  
[NASA-CASE-NPO-13474-1] c 45 N76-21742  
Method for detecting pollutants --- through chemical reactions and heat treatment  
[NASA-CASE-LAR-11405-1] c 45 N76-31714  
Automated syringe sampler --- remote sampling of air and water  
[NASA-CASE-LAR-12308-1] c 35 N81-29407

## POLYAMIDE RESINS

Vitro-violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments  
[NASA-CASE-MSC-16074-1] c 27 N80-26446  
Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-2] c 27 N84-22746

Heat resistant protective hand covering  
[NASA-CASE-MSC-20261-1] c 54 N84-28484  
Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups

[NASA-CASE-LAR-12723-1] c 27 N85-20123  
Process for preparing highly optically transparent/colorless aromatic polyimide film

[NASA-CASE-LAR-13351-1] c 27 N86-31727  
Fire and heat resistant laminating resins based on maleimide and citraconimide substituted 1,2,4- and -2,6-diaminobenzenes

[NASA-CASE-ARC-11533-1] c 27 N87-23751  
Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14162-1] c 27 N90-15259

A process for preparing 1,3-diamino-5-pentafluorosulfanylbenzene and polymers therefrom  
[NASA-CASE-LAR-14773-1-CU] c'27 N92-10105

Processing for maximizing the level of crystallinity in linear aromatic polyimides  
[NASA-CASE-LAR-14481-1] c 25 N92-16043

Polyimides with improved compression moldability  
[NASA-CASE-LAR-14457-1] c 27 N93-25997

Process to prepare 1,3-diamino-5-pentafluorosulfanylbenzene  
[NASA-CASE-LAR-14773-2-CU] c 25 N93-29506

## POLYBENZIMIDAZOLE

Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c 27 N78-31232  
Polybenzimidazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14643-1] c 27 N92-29953

## POLYBUTADIENE

New polymers of perfluorobutadiene and method of manufacture Patent application  
[NASA-CASE-NPO-10863] c 06 N70-11251  
Method of polymerizing perfluorobutadiene Patent application  
[NASA-CASE-NPO-10447] c 06 N70-11252  
Inhibited solid propellant composition containing beryllium hydride  
[NASA-CASE-NPO-10866-1] c 28 N79-14228

## POLYCARBONATES

Helmet assembly and latch means therefor Patent  
[NASA-CASE-XMS-04935] c 05 N71-11190  
Poly(carbonate-mide) polymer  
[NASA-CASE-LAR-13292-1] c 27 N86-24841  
Helmet of a laminate construction of polycarbonate and polysulfone polymeric material  
[NASA-CASE-MSC-21503-1] c 27 N92-10091

## POLYCRYSTALS

Fabrication of polycrystalline solar cells on low-cost substrates  
[NASA-CASE-GSC-12022-1] c 44 N76-28635  
Process for utilizing low-cost graphite substrates for polycrystalline solar cells  
[NASA-CASE-GSC-12022-2] c 44 N78-24609  
Method for the preparation of inorganic single crystal and polycrystalline electronic materials  
[NASA-CASE-XLE-02545-1] c 76 N79-21910  
Quasi-containerless glass formation method and apparatus  
[NASA-CASE-MFS-28090-1] c 27 N87-21111

## POLYESTERS

Novel polycarboxylic prepolymeric materials and polymers thereof Patent  
[NASA-CASE-NPO-10596] c 06 N71-25929  
Apparatus for forming drive belts  
[NASA-CASE-NPO-13205-1] c 31 N74-32917  
Stabilized unsaturated polyesters  
[NASA-CASE-NPO-16103-1] c 27 N85-29043  
Sulfone-ester polymers containing pendent ethynyl groups  
[NASA-CASE-LAR-13316-1] c 27 N86-27450

Ethynyl terminated ester oligomers and polymers therefrom  
[NASA-CASE-LAR-13118-2] c 27 N87-16907

Tapered, tubular polyester fabric  
[NASA-CASE-MSC-21082-1] c 27 N87-29672

Polyether-polyester graft copolymer  
[NASA-CASE-LAR-13447-1] c 27 N88-18725

## POLYETHER RESINS

Polyurethanes from fluoroalkyl propylene glycol polyethers  
[NASA-CASE-MFS-10506] c 06 N73-30100  
Fluorohydroxy ethers  
[NASA-CASE-MFS-10507] c 06 N73-30101  
Highly fluorinated polymers  
[NASA-CASE-MFS-11492] c 06 N73-30102  
Aqueous alkali metal hydroxide insoluble cellulose ether membrane  
[NASA-CASE-XGS-05584-1] c 25 N82-29370  
Phenoxo resins containing pendent ethynyl groups and cured resins obtained therefrom  
[NASA-CASE-LAR-13262-1] c 23 N85-28973

- Polyether-polyester graft copolymer  
[NASA-CASE-LAR-13447-1] c 27 N88-18725
- POLYIMIDE RESINS**
- Polyimide adhesives  
[NASA-CASE-LAR-11397-1] c 27 N75-29263
- Polyimide adhesives  
[NASA-CASE-LAR-12181-1] c 27 N78-17205
- Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
[NASA-CASE-ARC-11040-2] c 24 N78-27184
- Mixed diamines for lower melting addition polyimide preparation and utilization  
[NASA-CASE-LAR-12054-1] c 27 N79-33316
- Composition and method for making polyimide resin-reinforced fabric  
[NASA-CASE-LEW-12933-1] c 27 N81-19296
- Tackifier for addition polyimides containing monoethylphthalate  
[NASA-CASE-LAR-12642-1] c 27 N81-29229
- Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-2] c 27 N83-29392
- Elastomer-modified phosphorus-containing imide resins  
[NASA-CASE-ARC-11400-1] c 27 N84-14322
- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-1] c 27 N84-27885
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-2] c 27 N85-21347
- Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-3] c 27 N85-21350
- Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-4] c 27 N85-21351
- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-5] c 27 N85-21352
- Chemical control of nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-2] c 25 N85-28982
- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-6] c 25 N85-30039
- High temperature resistant polyimide from tetra ester, diamine, diester and N-arylnadimide  
[NASA-CASE-LEW-13864-1] c 27 N86-19457
- Process for curing bismaleimide resins  
[NASA-CASE-ARC-11429-4CU] c 27 N87-15304
- Vinyl capped addition polyimides  
[NASA-CASE-LEW-15027-1] c 27 N91-13566
- Addition polyimides with enhanced processability  
[NASA-CASE-LEW-15043-1] c 27 N91-32230
- A process for preparing an assembly of an article and a soluble polyimide which resists dimensional change, delamination, and debonding when exposed to changes in temperature  
[NASA-CASE-LAR-14763-1] c 27 N92-12121
- Semi-interpenetrating polymer network for tougher and more microcracking resistant high temperature polymers  
[NASA-CASE-LAR-13925-1] c 27 N92-21711
- Vinyl capped addition polyimides  
[NASA-CASE-LEW-15027-2] c 27 N92-24053
- Semi-interpenetrating polymer network for tougher and more microcracking resistant high temperature polymers  
[NASA-CASE-LAR-13925-2] c 27 N93-11059
- POLYIMIDES**
- Preparation of polyimides from mixtures of monomeric diamines and esters of polycarboxylic acids  
[NASA-CASE-LEW-11325-1] c 06 N73-27980
- Polyimide foam for the thermal insulation and fire protection  
[NASA-CASE-ARC-10464-1] c 27 N74-12812
- Reinforced structural plastics  
[NASA-CASE-LEW-10199-1] c 27 N74-23125
- Polyimides of ether-linked aryl tetracarboxylic dianhydrides  
[NASA-CASE-MFS-22355-1] c 23 N76-15268
- Process for preparing thermoplastic aromatic polyimides  
[NASA-CASE-LAR-11828-1] c 27 N78-32261
- Ambient cure polyimide foams --- thermal resistant foams  
[NASA-CASE-ARC-11170-1] c 27 N79-11215
- Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c 25 N80-16116
- Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
[NASA-CASE-LAR-12099-1] c 27 N80-16158
- Method for preparing addition type polyimide prepreps  
[NASA-CASE-LAR-12054-2] c 27 N81-14078
- Aluminum ion-containing polyimide adhesives  
[NASA-CASE-LAR-12640-1] c 27 N82-11206
- Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c 25 N82-26396
- Elastomer toughened polyimide adhesives  
[NASA-CASE-LAR-12775-1] c 27 N83-28240
- Solvent resistant thermoplastic aromatic poly(imidesulfone) and process for preparing same  
[NASA-CASE-LAR-12858-1] c 27 N83-34041
- Process for preparing solvent resistant, thermoplastic aromatic poly(imidesulfone)  
[NASA-CASE-LAR-12858-2] c 27 N85-20124
- Elastomer toughened polyimide adhesives --- bonding metal and composite material structures for aircraft and spacecraft  
[NASA-CASE-LAR-12775-2] c 27 N85-21349
- Fire-resistant phosphorus containing polyimides and copolyimides  
[NASA-CASE-ARC-11522-2] c 27 N85-34280
- Maleimido substituted aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-1] c 23 N86-19376
- Process of end-capping a polyimide system  
[NASA-CASE-LAR-13135-1] c 27 N86-19456
- High temperature polyimide film laminates and process for preparation thereof  
[NASA-CASE-LAR-13384-1] c 27 N86-20561
- Poly(carbonate-mide) polymer  
[NASA-CASE-LAR-13292-1] c 27 N86-24841
- Laminate comprising fibers embedded in cured amine terminated bis-imide  
[NASA-CASE-ARC-11421-3] c 24 N86-25416
- Process for preparing essentially colorless polyimide film containing phenoxy-linked diamines  
[NASA-CASE-LAR-13353-1] c 27 N86-29039
- Acetylene (ethynyl) terminated polyimide siloxane and process for preparation thereof  
[NASA-CASE-LAR-13318-1] c 27 N87-14516
- Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N87-23736
- Polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-13633-1] c 27 N87-24575
- Process for developing crystallinity in linear aromatic polyimides  
[NASA-CASE-LAR-13732-1] c 27 N87-25474
- Semi-2-interpenetrating networks of high temperature systems  
[NASA-CASE-LAR-13450-1] c 27 N87-28657
- Substituted 1,1,1-Triaryl-2,2,2-Trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-1] c 23 N88-26404
- Novel polyimide compositions based on 4,4': Isophthaloyldiphthalic anhydride (IDPA)  
[NASA-CASE-LAR-14194-1] c 24 N90-15148
- Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14162-1] c 27 N90-15259
- New Condensation polyimides containing 1,1,1-triaryl-2,2,2-trifluoroethane structures  
[NASA-CASE-LEW-14346-1] c 23 N90-19300
- Bis(4-(3,4-dimethylenepyrrolidyl)-phenyl) methane  
[NASA-CASE-LAR-13965-1-CU] c 23 N90-21118
- Process for lowering the dielectric constant of polyimides using diamine acid additives  
[NASA-CASE-LAR-13902-1] c 27 N90-23546
- A tough performance simultaneous semi-interpenetrating polymer network  
[NASA-CASE-LAR-14339-1] c 27 N90-26955
- Aromatic polyimides containing a dimethylsilane-linked dianhydride  
[NASA-CASE-LAR-14198-1] c 27 N90-26956
- Bis (4-(3,4-dimethylene-pyrrolidyl)-phenyl) methane  
[NASA-CASE-LAR-13965-2-CU] c 23 N91-14418
- Processable polyimide adhesive and matrix composite resin  
[NASA-CASE-LAR-14101-1] c 27 N91-15403
- Preparing composite materials from matrices of processable aromatic polyimide thermoplastic blends  
[NASA-CASE-LAR-14107-1] c 24 N91-25200
- Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14489-1] c 37 N91-27562
- A process for preparing an assembly of an article and a polyimide which resists dimensional change, delamination, and debonding when exposed to changes in temperature  
[NASA-CASE-LAR-14538-1] c 27 N92-11201
- A process for preparing an assembly of an article and a soluble polyimide which resists dimensional change, delamination, and debonding when exposed to changes in temperature  
[NASA-CASE-LAR-14763-1] c 27 N92-12121
- Processing for maximizing the level of crystallinity in linear aromatic polyimides  
[NASA-CASE-LAR-14481-1] c 25 N92-16043
- Polyimides containing amide and perfluoroisopropyl connecting groups  
[NASA-CASE-LAR-14608-1] c 27 N92-17676
- Tough, high performance, addition-type thermoplastic polymers  
[NASA-CASE-LAR-14346-1] c 27 N92-22044
- Polyimidoazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14145-1] c 27 N92-28751
- Polyimide processing additives  
[NASA-CASE-LAR-13669-1] c 27 N92-29157
- Polyimides with carbonyl and ether connecting groups between the aromatic rings  
[NASA-CASE-LAR-14001-1] c 27 N92-33008
- Polyimide molding powder, coating, adhesive, and matrix resin  
[NASA-CASE-LAR-14163-1] c 27 N92-33014
- Methyl substituted polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-14351-1] c 27 N92-33015
- Low pressure process for continuous fiber reinforced polyamic acid resin matrix composite laminates  
[NASA-CASE-LAR-14954-1] c 24 N92-34214
- A tough high performance composite matrix  
[NASA-CASE-LAR-14338-1] c 24 N93-13416
- Low toxicity high temperature PMR polyimide  
[NASA-CASE-LAR-14639-1] c 27 N93-14709
- High temperature polymer from maleimide-acetylene terminated monomers  
[NASA-CASE-LAR-14475-1] c 27 N93-19327
- Crosslinked polyimides prepared from N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14774-1] c 27 N93-19388
- Polyimide from bis(n-isoprenyl)s of aryl diamides  
[NASA-CASE-LAR-14330-2-CU] c 27 N93-22033
- Polyimides with improved compression moldability  
[NASA-CASE-LAR-14457-1] c 27 N93-25997
- Polyimides containing the cyclobutene-3,4-dione moiety  
[NASA-CASE-LAR-14753-1] c 27 N93-25999
- Polyimides prepared from 3,5-diamino benzo trifluoride  
[NASA-CASE-LAR-14206-1] c 27 N93-29083
- Diphenylmethane-containing dianhydride and polyimides prepared therefrom  
[NASA-CASE-LAR-14487-1] c 27 N93-29085
- Process to prepare 1,3-diamino-5-pentafluorosulfanylbenzene  
[NASA-CASE-LAR-14773-2-CU] c 25 N93-29506
- POLYISOBUTYLENE**
- Method of forming difunctional polyisobutylene  
[NASA-CASE-NPO-10893] c 27 N73-22710
- POLYISOPRENES**
- Enhancement of in vitro guayule propagation  
[NASA-CASE-NPO-15213-1] c 51 N83-17045
- POLYMER BLENDS**
- A method for making biocompatible polymer articles using atomic oxygen  
[NASA-CASE-MSC-21529-1] c 27 N92-30100
- POLYMER CHEMISTRY**
- Trifunctional alcohol  
[NASA-CASE-NPO-10714] c 06 N69-31244
- Synthesis of siloxane-containing epoxy polymers  
Patent  
[NASA-CASE-MFS-13994-1] c 06 N71-11240
- Apparatus for testing polymeric materials  
Patent  
[NASA-CASE-XNP-09699] c 06 N71-24607
- Polyimide adhesives  
[NASA-CASE-LAR-11397-1] c 27 N75-29263
- Trimerization of aromatic nitriles  
[NASA-CASE-LEW-12053-1] c 27 N78-15276
- Polyimide adhesives  
[NASA-CASE-LAR-12181-1] c 27 N78-17205
- Infusible silazane polymer and process for producing same --- protective coatings  
[NASA-CASE-XMF-02526-1] c 27 N79-21190
- Fluorine-containing polyformals  
[NASA-CASE-XMF-06900-1] c 27 N79-21191
- In situ self cross-linking of polyvinyl alcohol battery separators  
[NASA-CASE-LEW-12972-1] c 44 N79-25481
- Bifunctional monomers having terminal oxime and cyano or amide groups  
[NASA-CASE-ARC-11253-3] c 27 N81-24256
- In-situ cross linking of polyvinyl alcohol --- application to battery separator films  
[NASA-CASE-LEW-13135-2] c 27 N81-24257
- Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics  
[NASA-CASE-NPO-10424-1] c 27 N81-24258
- Process for the preparation of polycarbonylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c 27 N81-27271
- Phosphorus-containing bisimide resins  
[NASA-CASE-ARC-11321-1] c 27 N81-27272
- Preparation of crosslinked 1,2,4-oxadiazole polymer  
[NASA-CASE-ARC-11253-2] c 27 N82-24338
- Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c 23 N82-28353

- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-6] c 25 N85-30039
- Amine terminated bisaspartamide polymer  
[NASA-CASE-ARC-11421-2] c 27 N86-31726
- Aminophenoxycyclophosphazene cured epoxy resins and the composites, laminates, adhesives and structures thereof  
[NASA-CASE-ARC-11548-1] c 27 N87-25469
- The 1-((diorganooxy phosphonyl) methyl)-2,4- and -2,6-diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-2] c 23 N87-28605
- Substituted 1,1,1-Triaryl-2,2,2-Trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-1] c 23 N88-26404
- Polyphenylquinoxalines via aromatic nucleophilic displacement  
[NASA-CASE-LAR-13988-1] c 23 N89-11814
- New Condensation polyimides containing 1,1,1-triaryl-2,2,2-trifluoroethane structures  
[NASA-CASE-LEW-14346-1] c 23 N90-19300
- N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14188-2] c 23 N91-14419
- Ladder polymers for use as high temperature stable resins or coatings  
[NASA-CASE-LEW-14203-1] c 27 N91-15402
- A process for preparing 1,3-diamino-5-pentafluorosulfanylbenzene and polymers therefrom  
[NASA-CASE-LAR-14773-1-CU] c 27 N92-10105
- Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-6] c 23 N92-17882
- Controlled method of reducing electrophoretic mobility of macromolecules, particles, or cells  
[NASA-CASE-MFS-26049-2-NP] c 25 N92-28728
- Polyimides with improved compression moldability  
[NASA-CASE-LAR-14457-1] c 27 N93-25997
- Diphenylmethane-containing dianhydride and polyimides prepared therefrom  
[NASA-CASE-LAR-14487-1] c 27 N93-29085
- Ion exchange polymers and method for making  
[NASA-CASE-LEW-15576-1] c 27 N93-31316
- POLYMER MATRIX COMPOSITES**
- Intumescent-ablator coatings using endothermic fillers  
[NASA-CASE-ARC-11043-1] c 24 N78-27180
- Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
[NASA-CASE-ARC-11429-1-CU] c 27 N86-20560
- Light weight polymer matrix composite material  
[NASA-CASE-LEW-14734-1] c 24 N89-23623
- Processable polyimide adhesive and matrix composite resin  
[NASA-CASE-LAR-14101-1] c 27 N91-15403
- Semi-interpenetrating polymer network for tougher and more microcracking resistant high temperature polymers  
[NASA-CASE-LAR-13925-1] c 27 N92-21711
- Tough, high performance, addition-type thermoplastic polymers  
[NASA-CASE-LAR-14346-1] c 27 N92-22044
- Semi-interpenetrating polymer network for tougher and more microcracking resistant high temperature polymers  
[NASA-CASE-LAR-13925-2] c 27 N93-11059
- Imide/arylene ether copolymers containing phosphine oxide groups  
[NASA-CASE-LAR-14925-1] c 27 N93-20567
- POLYMERIC FILMS**
- Processing for producing a sterilized instrument Patent  
[NASA-CASE-XNP-09763] c 14 N71-20461
- Hydraulic casting of liquid polymers Patent  
[NASA-CASE-XNP-07659] c 06 N71-22975
- Thermoelectric radiometer utilizing polymer film  
[NASA-CASE-ARC-10138-1] c 14 N72-24477
- Apparatus and method for skin packaging articles  
[NASA-CASE-MFS-20855] c 15 N73-27405
- Covered silicon solar cells and method of manufacture — with polymeric films  
[NASA-CASE-LEW-11065-2] c 44 N76-14600
- Preparation of dielectric coating of variable dielectric constant by plasma polymerization  
[NASA-CASE-ARC-10892-2] c 27 N79-14214
- Reverse osmosis membrane of high urea rejection properties — water purification  
[NASA-CASE-ARC-10980-1] c 27 N80-23452
- Surface finishing  
[NASA-CASE-MSC-12631-3] c 27 N81-14077
- Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13101-2] c 23 N81-29160
- Separator for alkaline electric cells and method of making  
[NASA-CASE-GSC-10017-1] c 44 N82-24643
- Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c 25 N82-26396
- Texturing polymer surfaces by transfer casting — cardiovascular prosthesis  
[NASA-CASE-LEW-13120-1] c 27 N82-28440
- Method for the preparation of thin-skinned asymmetric reverse osmosis membranes and products thereof  
[NASA-CASE-ARC-11359-1] c 51 N84-28361
- Metal phthalocyanine intermediates for the preparation of polymers  
[NASA-CASE-ARC-11405-2] c 27 N86-19455
- High temperature polyimide film laminates and process for preparation thereof  
[NASA-CASE-LAR-13384-1] c 27 N86-20561
- Process for preparing essentially colorless polyimide film containing phenacyl-linked diamines  
[NASA-CASE-LAR-13353-1] c 27 N86-29039
- Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-31727
- Polyenamines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-1-CU] c 27 N87-22847
- Water-absorbing capacitor system for measuring relative humidity  
[NASA-CASE-NPO-16544-1-CU] c 35 N87-22953
- Polymeric heat pipe wick  
[NASA-CASE-GSC-13019-1] c 34 N88-29133
- Polyenamines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-2-CU] c 23 N89-12667
- Method and apparatus for maintaining thermal control in plasma conditions  
[NASA-CASE-MFS-28368-1] c 75 N90-10717
- Tensile film clamps and mounting block for the rheovibron and autovibron viscoelastometer  
[NASA-CASE-LAR-13696-1] c 37 N90-20409
- Low dielectric fluorinated poly(phenylene ether ketone) film and coating  
[NASA-CASE-LAR-13992-1-CU] c 23 N91-27220
- Slow positron beam generator for lifetime studies  
[NASA-CASE-LAR-14250-1-SB] c 72 N91-27936
- Composite flexible blanket insulation  
[NASA-CASE-ARC-11907-1-NP] c 24 N91-31236
- High energy and high power density ultracapacitors and supercapacitors  
[NASA-CASE-NPO-18568-1-CU] c 33 N93-17274
- POLYMERIZATION**
- New polymers of perfluorobutadiene and method of manufacture Patent application  
[NASA-CASE-NPO-10863] c 06 N70-11251
- Method of polymerizing perfluorobutadiene Patent application  
[NASA-CASE-NPO-10447] c 06 N70-11252
- Process for interfacial polymerization of pyromellitic dianhydride and 1,2,4,5-tetraamino-benzene Patent  
[NASA-CASE-XLA-03104] c 06 N71-11235
- Imidazopyrrolone/imide copolymers Patent  
[NASA-CASE-XLA-08802] c 06 N71-11238
- Direct synthesis of polymeric schiff bases from two amines and two aldehydes Patent  
[NASA-CASE-XMF-08655] c 06 N71-11239
- Azine polymers and process for preparing the same Patent  
[NASA-CASE-XMF-08656] c 06 N71-11242
- Synthesis of polymeric schiff bases by reaction of acetals and amine compounds Patent  
[NASA-CASE-XMF-08652] c 06 N71-11243
- Elastomeric silazane polymers and process for preparing the same Patent  
[NASA-CASE-XMF-04133] c 06 N71-20717
- Reaction of fluorine with polyperfluoropolyenes  
[NASA-CASE-NPO-10862] c 06 N72-22107
- Silphenylenesiloxane polymers having in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20979] c 06 N72-25151
- Polymers of perfluorobutadiene and method of manufacture  
[NASA-CASE-NPO-10863-2] c 06 N72-25152
- Fluorohydroxy ethers  
[NASA-CASE-MFS-10507] c 06 N73-30101
- Highly fluorinated polymers  
[NASA-CASE-MFS-11492] c 06 N73-30102
- Method of preparing water purification membranes — polymerization of allyl amine as thin films in plasma discharge  
[NASA-CASE-ARC-10643-1] c 25 N75-12087
- Utilization of oxygen difluoride for syntheses of fluoropolymers  
[NASA-CASE-NPO-12061-1] c 27 N76-16228
- Nuclear alkylated pyridine aldehyde polymers and conductive compositions thereof  
[NASA-CASE-NPO-10557] c 27 N78-17214
- Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c 27 N78-31232
- Ambient cure polyimide foams — thermal resistant foams  
[NASA-CASE-ARC-11170-1] c 27 N79-11215
- Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c 27 N79-22300
- Catalytic trimerization of aromatic nitriles and triaryl-s-triazine ring cross-linked high temperature resistant polymers and copolymers made thereby  
[NASA-CASE-LEW-12053-2] c 27 N79-28307
- Mixed diamines for lower melting addition polyimide preparation and utilization  
[NASA-CASE-LAR-12054-1] c 27 N79-33316
- Compound oxidized styrylphosphine — flame resistant vinyl polymers  
[NASA-CASE-MSC-14903-2] c 27 N80-10358
- Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-3] c 27 N80-24438
- Perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c 25 N81-14016
- Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c 27 N81-15104
- Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c 27 N81-17259
- The 1,2,4-oxadiazole elastomers — heat resistant polymers  
[NASA-CASE-ARC-11253-1] c 27 N81-17262
- Process for preparation of large-particle-size monodisperse latexes  
[NASA-CASE-MFS-25000-1] c 25 N81-19242
- Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c 25 N81-19244
- Carboranylchlorotriphosphazenes and their polymers — thermal insulation  
[NASA-CASE-ARC-11176-1] c 27 N82-18389
- Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c 25 N82-26396
- Solvent resistant thermoplastic aromatic poly(imidesulfone) and process for preparing same  
[NASA-CASE-LAR-12858-1] c 27 N83-34041
- Elastomer-modified phosphorus-containing imide resins  
[NASA-CASE-ARC-11400-1] c 27 N84-14322
- Supercritical solvent coal extraction  
[NASA-CASE-NPO-15210-1] c 25 N84-22709
- Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-2] c 27 N84-22746
- Polyphenylene ethers with imide linking groups  
[NASA-CASE-LAR-12980-1] c 27 N84-22749
- Carboranyl(methylene-substituted) phosphazenes and polymers thereof  
[NASA-CASE-ARC-11370-1] c 27 N84-22750
- Metal phthalocyanine polymers  
[NASA-CASE-ARC-11405-1] c 27 N84-27884
- Phthalocyanine polymers  
[NASA-CASE-ARC-11413-1] c 27 N85-21348
- Stabilized unsaturated polyesters  
[NASA-CASE-NPO-16103-1] c 27 N85-29043
- Maleimido substituted aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-1] c 23 N86-19376
- Ethynyl and substituted ethynyl-terminated polysulfones  
[NASA-CASE-LAR-12931-2] c 27 N86-21675
- Laminate comprising fibers embedded in cured amine terminated bis-imide  
[NASA-CASE-ARC-11421-3] c 24 N86-25416
- Sulfone-ester polymers containing pendent ethynyl groups  
[NASA-CASE-LAR-13316-1] c 27 N86-27450
- Polymer of phosphonylmethyl-2,4- and -2,6-diamino benzene and polyfunctional monomer  
[NASA-CASE-ARC-11506-2] c 23 N86-32525
- Polyarylene ethers with improved properties  
[NASA-CASE-LAR-13555-1] c 23 N86-32526
- The 5-(4-Ethynylphenoxy) isophthalic chloride  
[NASA-CASE-LAR-13316-2] c 27 N87-14515
- Ethynyl terminated ester oligomers and polymers therefrom  
[NASA-CASE-LAR-13118-2] c 27 N87-16907
- Process for preparing phthalocyanine polymer from imide containing bisphthalonitrile  
[NASA-CASE-ARC-11511-2] c 27 N87-21112
- Polyenamines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-1-CU] c 27 N87-22847
- Process for crosslinking and extending conjugated diene-containing polymers  
[NASA-CASE-LAR-13452-1] c 27 N87-22848

- Fire and heat resistant laminating resins based on maleimide and citraconimide substituted 1,2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-1] c 27 N87-23751
- Fire and heat resistant laminating resins based on maleimide and citraconimide substituted 1-(diorgano oxyphosphonyl) methyl -2,4- and -2,6- diaminobenzenes  
[NASA-CASE-ARC-11533-3] c 27 N87-24564
- Polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-13633-1] c 27 N87-24575
- Process for developing crystallinity in linear aromatic polyimides  
[NASA-CASE-LAR-13732-1] c 27 N87-25474
- Semi-2-interpenetrating networks of high temperature systems  
[NASA-CASE-LAR-13450-1] c 27 N87-28657
- Aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-3] c 23 N88-24692
- Polynamines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-2-CU] c 23 N89-12667
- Predictive aging of polymers  
[NASA-CASE-NPO-17524-1-CU] c 27 N90-10261
- Cellular thermosetting fluorodiepoxide polymers  
[NASA-CASE-GSC-13008-2] c 27 N90-16949
- Copolyimide with a combination of flexibilizing groups  
[NASA-CASE-LAR-13821-1] c 27 N90-16950
- New Condensation polyimides containing 1,1,1-triaryl-2,2,2-trifluoroethane structures  
[NASA-CASE-LEW-14346-1] c 23 N90-19300
- The 1-((diorganoxyphosphonyl)-methyl)-2,4- and -2,6-diamido benzenes  
[NASA-CASE-ARC-11425-4] c 23 N90-20133
- Process for crosslinking methylene-containing aromatic polymers with ionizing radiation  
[NASA-CASE-LAR-13448-1] c 27 N90-21198
- Some 1-(diorganoxyphosphonyl)methyl-2,4- and -2,6-dinitro-benzenes  
[NASA-CASE-ARC-11425-3] c 23 N90-23475
- Noninvasive method and apparatus for monitoring the cure of polymeric materials  
[NASA-CASE-LAR-13465-1] c 27 N90-23544
- Graphite fluorid<sup>a</sup> fiber polymer composite material  
[NASA-CASE-LEW-14472-1] c 24 N91-15320
- Ladder polymers for use as high temperature stable resins or coatings  
[NASA-CASE-LEW-14203-1] c 27 N91-15402
- Processable polyimide adhesive and matrix composite resin  
[NASA-CASE-LAR-14101-1] c 27 N91-15403
- Low dielectric fluorinated poly(phenylene ether ketone) film and coating  
[NASA-CASE-LAR-13992-1-CU] c 23 N91-27220
- Molecules with enhanced electronic polarizabilities based on defect-like states in conjugated polymers  
[NASA-CASE-NPO-17633-1-CU] c 27 N91-27372
- Addition polyimides with enhanced processability  
[NASA-CASE-LEW-15043-1] c 27 N91-32230
- A process for preparing an assembly of an article and a polyimide which resists dimensional change, delamination, and debonding when exposed to changes in temperature  
[NASA-CASE-LAR-14538-1] c 27 N92-11201
- Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-6] c 23 N92-17882
- Tough, high performance, addition-type thermoplastic polymers  
[NASA-CASE-LAR-14346-1] c 27 N92-22044
- Poly(1,3,4-oxadiazoles) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14427-1] c 23 N92-29141
- Boron-carbon-silicon polymers and ceramic and a process for the production thereof  
[NASA-CASE-ARC-11891-2-SB] c 27 N92-34160
- Low toxicity high temperature PMR polyimide  
[NASA-CASE-LAR-14639-1] c 27 N93-14709
- Poly(1,2,4-triazole) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14440-1] c 23 N93-18283
- High temperature polymer from maleimide-acetylene terminated monomers  
[NASA-CASE-LAR-14475-1] c 27 N93-19327
- Imide/arylene ether copolymers containing phosphine oxide groups  
[NASA-CASE-LAR-14925-1] c 27 N93-20567
- Polyimides prepared from 3,5-diamino benzo trifluoride  
[NASA-CASE-LAR-14206-1] c 27 N93-29083
- POLYMERS**  
Preparation of ordered poly /arylenesiloxane/ polymers  
[NASA-CASE-XMF-10753] c 06 N71-11237
- Aromatic diamine-aromatic dialdehyde high molecular weight Schiff base polymers prepared in a monofunctional Schiff base Patent  
[NASA-CASE-XMF-03074] c 06 N71-24740
- Resilience testing device Patent  
[NASA-CASE-XLA-08254] c 14 N71-26161
- Epoxy-aziridine polymer product Patent  
[NASA-CASE-NPO-10701] c 06 N71-28620
- Solid state thermal control polymer coating Patent  
[NASA-CASE-XLA-01745] c 33 N71-28903
- Polymeric vehicles as carriers for sulfonic acid salt of nitrosubstituted aromatic amines  
[NASA-CASE-ARC-10325] c 06 N72-25147
- Hydrazinium nitroformate propellant with saturated polymeric hydrocarbon binder  
[NASA-CASE-NPO-12015] c 27 N73-16764
- Method of forming difunctional polyisobutylene  
[NASA-CASE-NPO-10893] c 27 N73-22710
- Novel polymers and method of preparing same  
[NASA-CASE-NPO-10998-1] c 06 N73-32029
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c 27 N74-21156
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c 27 N76-32315
- Oil and fat absorbing polymers  
[NASA-CASE-NPO-11609-2] c 27 N77-31308
- Method for separating biological cells --- suspended in aqueous polymer systems  
[NASA-CASE-MFS-23883-1] c 51 N80-16715
- Chelate-modified polymers for atmospheric gas chromatography  
[NASA-CASE-ARC-11154-1] c 25 N80-23383
- Modification of the electrical and optical properties of polymers --- ion irradiation to create texture  
[NASA-CASE-LEW-13027-1] c 27 N80-24437
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-3] c 27 N84-22745
- Carboranyl methylene-substituted phosphazenes and polymers thereof  
[NASA-CASE-ARC-11370-1] c 27 N84-22750
- Process for improving moisture resistance of epoxy resins by addition of chromium ions  
[NASA-CASE-LAR-13226-1] c 27 N85-34282
- Polyarylene ethers with improved properties  
[NASA-CASE-LAR-13555-1] c 23 N86-32526
- Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N87-23736
- Etching method for photoresists or polymers  
[NASA-CASE-ARC-11873-2] c 25 N91-31258
- Process for application of powder particles to filamentary materials  
[NASA-CASE-LAR-14231-1] c 24 N92-10070
- Polymer-coated surfaces to control surface zeta potential  
[NASA-CASE-MFS-26050-1] c 27 N92-25397
- Poly(1,2,4-triazole) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14440-1] c 23 N93-18283
- Atomic oxygen protective coating with resistance to undercutting at defect sites  
[NASA-CASE-LEW-15306-1] c 27 N93-20566
- Polyimide from bis(n-isopropenyl)s of aryl diamides  
[NASA-CASE-LAR-14330-2-CU] c 27 N93-22033
- Ion exchange polymers and method for making  
[NASA-CASE-LEW-15576-1] c 27 N93-31316
- POLYMETHYL METHACRYLATE**  
Durable antistatic coating for polymethylmethacrylate  
[NASA-CASE-NPO-13867-1] c 27 N78-14164
- Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polymethyl methacrylate lenses  
[NASA-CASE-ARC-11039-1] c 74 N78-32854
- POLYPHENYL ETHER**  
Polyphenylene ethers with imide linking groups  
[NASA-CASE-LAR-12980-1] c 27 N84-22749
- Low dielectric fluorinated poly(phenylene ether ketone) film and coating  
[NASA-CASE-LAR-13992-1-CU] c 23 N91-27220
- POLYPHENYLS**  
Polyphenylquinoxalines containing pendant phenylethynyl and ethynyl groups --- for thermoplastic resins  
[NASA-CASE-LAR-12838-1] c 27 N83-34040
- Polyphenylene ethers with imide linking groups  
[NASA-CASE-LAR-12980-1] c 27 N84-22749
- Polyphenylquinoxalines via aromatic nucleophilic displacement  
[NASA-CASE-LAR-13988-1] c 23 N89-11814
- Polyphenylquinoxalines containing alkylendioxy groups  
[NASA-CASE-LAR-13601-1-CU] c 27 N89-14337
- Low dielectric fluorinated poly(phenylene ether ketone) film and coating  
[NASA-CASE-LAR-13992-1-CU] c 23 N91-27220
- Addition polyimides with enhanced processability  
[NASA-CASE-LEW-15043-1] c 27 N91-32230
- POLYQUINOXALINES**  
Polyphenylquinoxalines containing alkylendioxy groups  
[NASA-CASE-LAR-13601-1-CU] c 27 N89-14337
- POLYSACCHARIDES**  
Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c 27 N77-30236
- POLYTETRAFLUOROETHYLENE**  
Method and apparatus for bonding a plastics sleeve onto a metallic body Patent  
[NASA-CASE-XLA-01262] c 15 N71-21404
- Diffusely reflecting paints including polytetrafluoroethylene and method of manufacture  
[NASA-CASE-GSC-12883-1] c 27 N85-29044
- POLYURETHANE FOAM**  
Flexible foam erectable space structures Patent  
[NASA-CASE-XLA-00686] c 31 N70-34135
- Modified polyurethane foams for fuel-fire Patent  
[NASA-CASE-ARC-10098-1] c 06 N71-24739
- Flexible fire retardant polyisocyanate modified neoprene foam --- for thermal protective devices  
[NASA-CASE-ARC-10180-1] c 27 N74-12814
- Fiber modified polyurethane foam for ballistic protection  
[NASA-CASE-ARC-10714-1] c 27 N76-15310
- Mixing insert for foam dispensing apparatus  
[NASA-CASE-MFS-20607-1] c 37 N76-19436
- Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797
- POLYURETHANE RESINS**  
Hydroxy terminated perfluoro ethers Patent  
[NASA-CASE-NPO-10768] c 06 N71-27254
- Polyurethane resins from hydroxy terminated perfluoro ethers  
[NASA-CASE-NPO-10768-2] c 06 N72-27144
- Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-2] c 06 N72-27151
- Polyurethanes of fluorine containing polycarbonates  
[NASA-CASE-MFS-10512] c 06 N73-30099
- Polyurethanes from fluoroalkyl propyleneglycol polyethers  
[NASA-CASE-MFS-10506] c 06 N73-30100
- Fluorine containing polyurethane  
[NASA-CASE-MFS-10509] c 06 N73-30103
- Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-1] c 06 N73-33076
- Flame retardant spandex type polyurethanes  
[NASA-CASE-MSC-14331-2] c 27 N78-17213
- POLYVINYL ALCOHOL**  
In situ self cross-linking of polyvinyl alcohol battery separators  
[NASA-CASE-LEW-12972-1] c 44 N79-25481
- Method of cross-linking polyvinyl alcohol and other water soluble resins  
[NASA-CASE-LEW-13103-1] c 27 N80-32516
- In-situ cross linking of polyvinyl alcohol --- application to battery separator films  
[NASA-CASE-LEW-13135-2] c 27 N81-24257
- Polyvinyl alcohol battery separator containing inert filler --- alkaline batteries  
[NASA-CASE-LEW-13556-1] c 44 N81-27615
- Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13101-2] c 23 N81-29160
- Polyvinyl alcohol cross-linked with two aldehydes  
[NASA-CASE-LEW-13504-1] c 25 N83-13188
- Ion exchange polymers and method for making  
[NASA-CASE-LEW-15576-1] c 27 N93-31316
- POLYVINYL CHLORIDE**  
Hydraulic lifting device  
[NASA-CASE-SSC-00008-1] c 37 N91-13733
- PONDS**  
Stable density stratification solar pond  
[NASA-CASE-NPO-15419-2] c 44 N85-30474
- PORCELAIN**  
Refractory porcelain enamel passive control coating for high temperature alloys  
[NASA-CASE-MFS-22324-1] c 27 N75-27160
- POROSITY**  
Process for making sheets with parallel pores of uniform size  
[NASA-CASE-GSC-10984-1] c 37 N75-26371
- Krypton based adsorption type cryogenic refrigerator  
[NASA-CASE-NPO-17334-1-CU] c 31 N88-23917
- Porous plug for reducing orifice induced pressure error in airfoils  
[NASA-CASE-LAR-13569-1] c 35 N89-12841
- Method for maintaining precise suction strip porosities  
[NASA-CASE-LAR-13638-1] c 31 N88-19427
- Regenerative Cu/La zeolite supported desulfurizing sorbents  
[NASA-CASE-NPO-17480-1-CU] c 25 N92-10073
- Toughened uni-piece fibrous insulation  
[NASA-CASE-ARC-11888-1] c 24 N92-16026



Passive control of pressure loads using porosity  
[NASA-CASE-LAR-14547-1] c 34 N92-17909

Control and augmentation of passive porosity through transpiration control  
[NASA-CASE-LAR-14682-1] c 34 N92-30387

**POROUS MATERIALS**  
Method of producing refractory bodies having controlled porosity Patent  
[NASA-CASE-LEW-10393-1] c 17 N71-15468

Multilayer porous ionizer Patent  
[NASA-CASE-XNP-04338] c 17 N71-23046

Fluid lubricant system Patent  
[NASA-CASE-XNP-03972] c 15 N71-23048

Method and device for detecting voids in low density material Patent  
[NASA-CASE-MFS-20044] c 14 N71-28993

Fabrication of controlled-porosity metals Patent  
[NASA-CASE-XNP-04339] c 17 N71-29137

Compressible biomedical electrode  
[NASA-CASE-MSC-13648] c 05 N72-27103

Porus electrode comprising a bonded stack of pieces of corrugated metal foil  
[NASA-CASE-GSC-11368-1] c 09 N73-32108

Method of making porous conductive supports for electrodes -- by electroforming and stacking nickel foils  
[NASA-CASE-GSC-11367-1] c 44 N74-19692

Fluid valve assembly  
[NASA-CASE-MSC-12731-1] c 37 N78-25426

Heat exchanger and method of making -- bonding rocket chambers with a porous metal matrix  
[NASA-CASE-LEW-12441-1] c 34 N79-13289

Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-3] c 37 N82-19540

Densification of porous refractory substrates -- space shuttle orbiter tiles  
[NASA-CASE-MSC-18737-1] c 24 N83-13171

Method of repairing surface damage to porous refractory substrates -- space shuttle orbiter tiles  
[NASA-CASE-MSC-18736-1] c 24 N83-13172

Advanced inorganic separators for alkaline batteries and method of making the same  
[NASA-CASE-LEW-13171-2] c 44 N83-32176

Water-absorbing capacitor system for measuring relative humidity  
[NASA-CASE-NPO-16544-1-CU] c 35 N87-22953

Control and augmentation of passive porosity through transpiration control  
[NASA-CASE-LAR-14682-1] c 34 N92-30387

Method for preparation of a microporous structure with layered interstitial surface treatment  
[NASA-CASE-MSC-21487-2] c 24 N93-29023

**POROUS PLATES**  
Method of producing porous tungsten ionizers for ion rocket engines Patent  
[NASA-CASE-XLE-00455] c 28 N70-38197

**PORPHYRINS**  
Method and apparatus for eliminating luminol interference material  
[NASA-CASE-MSC-16260-1] c 51 N80-16714

**PORTABLE EQUIPMENT**  
Split welding chamber Patent  
[NASA-CASE-LEW-11531] c 15 N71-14932

Portable superclean air column device Patent  
[NASA-CASE-XMF-03212] c 15 N71-22721

Weld preparation machine Patent  
[NASA-CASE-XKS-07953] c 15 N71-26134

Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-2] c 15 N71-26148

Cryogenic cooling system Patent  
[NASA-CASE-NPO-10467] c 23 N71-26654

Boring bar drive mechanism Patent  
[NASA-CASE-XLA-03661] c 15 N71-33518

One hand backpack harness  
[NASA-CASE-LAR-10102-1] c 05 N72-23085

Bacterial contamination monitor  
[NASA-CASE-GSC-10879-1] c 14 N72-25413

Self-recording portable soil penetrometer  
[NASA-CASE-MFS-20774] c 14 N73-19420

Hand-held photomicroscope  
[NASA-CASE-ARC-10468-1] c 14 N73-33361

System for enhancing tool-exchange capabilities of a portable wrench  
[NASA-CASE-MFS-22283-1] c 37 N75-33395

Method of peening and portable peening gun  
[NASA-CASE-MFS-23047-1] c 37 N76-18454

Portable electrophoresis apparatus using minimum electrolyte  
[NASA-CASE-NPO-13274-1] c 25 N79-10163

Portable heatable container  
[NASA-CASE-NPO-14237-1] c 44 N80-20808

Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c 33 N80-26599

Portable appliance security apparatus  
[NASA-CASE-GSC-12399-1] c 33 N81-25299

Dual-beam skin friction interferometer  
[NASA-CASE-ARC-11354-1] c 74 N83-21949

Two-dimensional scanner apparatus -- flaw detector in small flat plates  
[NASA-CASE-MFS-25687-1] c 35 N84-22928

Portable reflectance spectrometer  
[NASA-CASE-NPO-13556-1] c 35 N84-33766

Portable pallet weighing apparatus  
[NASA-CASE-GSC-12789-1] c 35 N85-20294

Portable remote laser sensor for methane leak detection  
[NASA-CASE-NPO-15790-1] c 36 N85-21631

Portable 90 degree proof loading device  
[NASA-CASE-MSC-20250-1] c 35 N86-19581

Acoustic guide for noise-transmission testing of aircraft  
[NASA-CASE-LAR-13111-1-CU] c 71 N87-21652

**PORTABLE LIFE SUPPORT SYSTEMS**  
Portable breathing system -- a breathing apparatus using a rebreathing system of heat exchangers for carbon dioxide removal  
[NASA-CASE-MSC-16182-1] c 54 N80-10799

**PORTS (OPENINGS)**  
Evacuation port seal Patent  
[NASA-CASE-XMF-03290] c 15 N71-23256

Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c 31 N81-19343

**POSITION (LOCATION)**  
Position location system and method Patent  
[NASA-CASE-GSC-10087-2] c 21 N71-13958

Position location and data collection system and method Patent  
[NASA-CASE-GSC-10083-1] c 30 N71-16090

Emergency escape system Patent  
[NASA-CASE-XKS-07814] c 15 N71-27067

Position location system and method  
[NASA-CASE-GSC-10087-3] c 07 N72-12080

Location identification system  
[NASA-CASE-ERC-10324] c 07 N72-25173

Cosmic dust or other similar outer space particles impact location detector  
[NASA-CASE-GSC-11291-1] c 25 N72-33696

Collimator of multiple plates with axially aligned identical random arrays of apertures  
[NASA-CASE-MFS-20546-2] c 14 N73-30389

Measuring probe position recorder  
[NASA-CASE-LAR-10806-1] c 35 N74-32877

Vehicle locating system utilizing AM broadcasting station carriers  
[NASA-CASE-NPO-13217-1] c 32 N75-26194

Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c 35 N75-27331

Aircraft-mounted crash-activated transmitter device  
[NASA-CASE-MFS-16609-3] c 03 N76-32140

Twin-capacitive shaft angle encoder with analog output signal  
[NASA-CASE-ARC-10897-1] c 33 N77-31404

X-ray position detector  
[NASA-CASE-NPO-12087-1] c 74 N81-19898

Adjustable indicating device for load position  
[NASA-CASE-MFS-28008-1] c 35 N85-20300

Controlled sample orientation and rotation in an acoustic levitator  
[NASA-CASE-NPO-17086-1-CU] c 35 N89-14422

Acoustic controlled rotation and orientation  
[NASA-CASE-NPO-16995-1-CU] c 71 N90-12289

Variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-2] c 89 N91-14096

Acoustic positioning and orientation prediction  
[NASA-CASE-NPO-17511-1-CU] c 71 N91-14807

Remote object configuration/orientation determination  
[NASA-CASE-NPO-17436-1-CU] c 35 N91-15512

System and method for measuring ocean surface currents at locations remote from land masses using synthetic aperture radar  
[NASA-CASE-NPO-17937-1-CU] c 43 N91-21621

Emergency locating transmitter  
[NASA-CASE-GSC-12821-2] c 33 N91-31530

Apparatus for precision focussing and positioning of a beam waist on a target  
[NASA-CASE-ARC-11916-1-SB] c 74 N92-16811

Method for non-destructive estimation of waveguide directional coupler dimensions  
[NASA-CASE-NPO-18454-1-CU] c 33 N92-17865

Two dimensional vernier  
[NASA-CASE-MSC-21700-1] c 35 N92-22039

Discrete optical fiber strain sensor  
[NASA-CASE-LAR-14810-1-SB] c 35 N93-19492

**POSITION ERRORS**  
Position-error-based force reflection and compliance control  
[NASA-CASE-NPO-18668-1-CU] c 37 N92-29765

**POSITION INDICATORS**

Scanning aspect sensor employing an apertured disc and a commutator  
[NASA-CASE-XGS-08266] c 14 N69-27432

Angular measurement system Patent  
[NASA-CASE-XMF-00447] c 14 N70-33179

Position sensing device employing misaligned magnetic field generating and detecting apparatus Patent  
[NASA-CASE-XGS-07514] c 23 N71-16099

Angular position and velocity sensing apparatus Patent  
[NASA-CASE-XGS-05680] c 14 N71-17585

Extended area semiconductor radiation detectors and a novel readout arrangement Patent  
[NASA-CASE-XGS-03230] c 14 N71-23401

Doppler compensation by shifting transmitted object frequency within limits  
[NASA-CASE-GSC-10087-4] c 07 N73-20174

Meteoroid impact position locator aid for manned space station  
[NASA-CASE-LAR-10629-1] c 35 N75-33367

Position determination systems -- using orbital antenna scan of celestial bodies  
[NASA-CASE-MSC-12593-1] c 17 N76-21250

Solar cell angular position transducer  
[NASA-CASE-LAR-11999-1] c 44 N80-18552

Synchronization tracking in pulse position modulation receiver  
[NASA-CASE-NPO-16256-1] c 32 N87-21207

Aircraft control position indicator  
[NASA-CASE-LAR-12984-1] c 06 N87-22678

Legislated emergency locating transmitters and emergency position indicating radio beacons  
[NASA-CASE-GSC-12892-1] c 32 N89-14374

Visual aid for the hearing impaired  
[NASA-CASE-GSC-13027-1-CU] c 35 N91-27522

**POSITION SENSING**  
Position sensing device employing misaligned magnetic field generating and detecting apparatus Patent  
[NASA-CASE-XGS-07514] c 23 N71-16099

Laser optical disk position encoder with active heads  
[NASA-CASE-GSC-13175-1] c 74 N92-29133

Sample positioning in microgravity  
[NASA-CASE-NPO-18448-1-CU] c 29 N92-30083

Sample positioning in microgravity  
[NASA-CASE-NPO-18448-1-CU] c 29 N93-24600

Method and apparatus for deflection measurements using eddy current effects  
[NASA-CASE-GSC-13506-1] c 35 N93-26103

**POSITIONING**  
Instrument support with precise lateral adjustment Patent  
[NASA-CASE-XMF-00480] c 14 N70-39898

Portable alignment tool Patent  
[NASA-CASE-XMF-01452] c 15 N70-41371

Optical alignment system Patent  
[NASA-CASE-XNP-02029] c 14 N70-41955

Null device for hand controller Patent  
[NASA-CASE-XLA-01808] c 15 N71-20740

Rotating raster generator  
[NASA-CASE-FRC-10071-1] c 32 N74-20813

Low noise lead screw positioner  
[NASA-CASE-NPO-15617-1] c 35 N87-21304

Acoustic positioning and orientation prediction  
[NASA-CASE-NPO-17511-1-CU] c 71 N91-14807

Alignment positioning mechanism  
[NASA-CASE-MSC-21502-1] c 37 N91-21543

Apparatus for precision focussing and positioning of a beam waist on a target  
[NASA-CASE-ARC-11916-1-SB] c 74 N92-16811

**POSITIONING DEVICES (MACHINERY)**  
Swivel support for gas bearings Patent  
[NASA-CASE-XMF-07808] c 15 N71-23812

Caterpillar micro positioner  
[NASA-CASE-GSC-10780-1] c 14 N72-16283

Positioning mechanism  
[NASA-CASE-NPO-10679] c 15 N72-21462

Test stand system for vacuum chambers  
[NASA-CASE-MFS-21362] c 11 N73-20267

Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c 74 N74-21304

Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c 35 N75-15014

Reference apparatus for medical ultrasonic transducer  
[NASA-CASE-ARC-10753-1] c 54 N75-27760

Controlled caging and uncaging mechanism  
[NASA-CASE-GSC-11063-1] c 37 N77-27400

Workpiece positioning vise  
[NASA-CASE-GSC-12762-1] c 37 N84-28083

Load positioning system with gravity compensation  
[NASA-CASE-ARC-11525-1] c 37 N86-27629

Gripping device  
[NASA-CASE-MSC-21365-1] c 37 N90-20408

Three point lead screw positioning apparatus  
[NASA-CASE-LEW-15216-1] c 37 N92-17678

# SUBJECT INDEX

Sample positioning in microgravity  
[NASA-CASE-NPO-18448-1-CU] c 29 N92-30083

Page turning system  
[NASA-CASE-GSC-13415-1] c 37 N92-33616

Counter-balanced, multiple cable construction crane  
[NASA-CASE-LAR-14565-1-CU] c 37 N92-34212

Sample positioning in microgravity  
[NASA-CASE-NPO-18448-1-CU] c 29 N93-24600

Turntable mechanism  
[NASA-CASE-MFS-28522-1] c 37 N93-31313

**POSITIVE FEEDBACK**  
Complementary regenerative switch Patent  
[NASA-CASE-XGS-02751] c 09 N71-23015

**POSITRONS**  
Slow positron beam generator for lifetime studies  
[NASA-CASE-LAR-14250-1-SB] c 72 N91-27936

**POTABLE WATER**  
Recovery of potable water from human wastes in below-G conditions Patent  
[NASA-CASE-XLA-03213] c 05 N71-11207

Compact solar still Patent  
[NASA-CASE-XMS-04533] c 15 N71-23086

Specialized halogen generator for purification of water Patent  
[NASA-CASE-XLA-08913] c 14 N71-28933

Potable water dispenser  
[NASA-CASE-MFS-21115-1] c 54 N74-12779

Metering gun for dispensing precisely measured charges of fluid  
[NASA-CASE-MFS-21163-1] c 54 N74-17853

Iodine generator for reclaimed water purification  
[NASA-CASE-MSC-14632-1] c 54 N78-14784

Degassing and mixing apparatus for liquids --- potable water for spacecraft  
[NASA-CASE-MSC-18936-1] c 35 N83-29652

Regenerable biocide delivery unit  
[NASA-CASE-MSC-21763-1-SB] c 51 N93-18351

**POTASSIUM SILICATES**  
Fire resistant coating composition Patent  
[NASA-CASE-GSC-10072] c 18 N71-14014

**POTENTIOMETERS**  
Angle detector  
[NASA-CASE-ARC-11036-1] c 35 N78-32395

**POTENTIOMETERS (INSTRUMENTS)**  
Two-axis controller Patent  
[NASA-CASE-XFR-04104] c 03 N70-42073

Control device Patent  
[NASA-CASE-XAC-10019] c 15 N71-23809

Line following servosystem Patent  
[NASA-CASE-XAC-00001] c 15 N71-28952

Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c 51 N81-28698

**POTTING COMPOUNDS**  
Method and apparatus for shock protection Patent  
[NASA-CASE-XLA-00482] c 15 N70-36409

Flexible, repairable, potable material for electrical connectors Patent  
[NASA-CASE-XGS-05180] c 18 N71-25881

Thermally conductive polymers  
[NASA-CASE-GSC-11304-1] c 06 N72-21105

**POWDER (PARTICLES)**  
Method for forming pyrrone molding powders and products of said method  
[NASA-CASE-LAR-10423-1] c 23 N82-29358

Powder fed sheared dispersal particle generator  
[NASA-CASE-LAR-12785-1] c 37 N84-16561

Method of making single crystal fibers  
[NASA-CASE-LEW-14921-1] c 24 N91-13502

Preparing composite materials from matrices of processable aromatic polyimide thermoplastic blends  
[NASA-CASE-LAR-14107-1] c 24 N91-25200

Process for application of powder particles to filamentary materials  
[NASA-CASE-LAR-14231-1] c 24 N92-10070

Method of making contamination-free ceramic bodies  
[NASA-CASE-LEW-14984-1] c 27 N92-16122

Polyimide molding powder, coating, adhesive, and matrix resin  
[NASA-CASE-LAR-14163-1] c 27 N92-33014

Process for applying a superconductive powder to a wide variety of substrates  
[NASA-CASE-LAR-14729-1-CU] c 33 N93-19051

Ceramic fiber reinforced glass-ceramic matrix composite  
[NASA-CASE-LEW-15262-1] c 24 N93-26100

Vacuum powder injector and method of impregnating fiber with powder  
[NASA-CASE-LAR-14179-1] c 31 N93-26101

**POWDER METALLURGY**  
Process of casting heavy slips Patent  
[NASA-CASE-XLE-00106] c 15 N71-16076

Fabrication of controlled-porosity metals Patent  
[NASA-CASE-XNP-04339] c 17 N71-29137

Method of making dry electrodes  
[NASA-CASE-FRC-10029-2] c 05 N72-25121

Method for producing dispersion strengthened alloys by converting metal to a halide, comminuting, reducing the metal halide to the metal and sintering  
[NASA-CASE-LEW-10450-1] c 15 N72-25448

Method of forming superalloys  
[NASA-CASE-LEW-10805-1] c 15 N73-13465

Method of heat treating a formed powder product material  
[NASA-CASE-LEW-10805-3] c 26 N74-10521

Method of forming articles of manufacture from superalloy powders  
[NASA-CASE-LEW-10805-2] c 37 N74-13179

Cermet composition and method of fabrication --- heat resistant alloys and powders  
[NASA-CASE-NPO-13120-1] c 27 N76-15311

Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267

Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N86-32550

One step HIP canning of powder metallurgy composites  
[NASA-CASE-LEW-14719-1] c 24 N90-23493

Method of making carbide/fluoride/silver composites  
[NASA-CASE-LEW-14902-1] c 24 N91-27244

**POWDERED ALUMINUM**  
Aluminum ion-containing polyimide adhesives  
[NASA-CASE-LAR-12640-1] c 27 N82-11206

**POWER AMPLIFIERS**  
Ac power amplifier Patent Application  
[NASA-CASE-LAR-10218-1] c 09 N70-34559

Power supply Patent  
[NASA-CASE-XMS-02159] c 10 N71-22961

Broadband stable power multiplier Patent  
[NASA-CASE-XNP-10854] c 10 N71-26331

Signal path series step biased multidevice high efficiency amplifier Patent  
[NASA-CASE-GSC-10668-1] c 07 N71-28430

Isolated output system for a class D switching-mode amplifier  
[NASA-CASE-MFS-21616-1] c 33 N75-30429

Method for remotely powering a device such as a lunar rover  
[NASA-CASE-LAR-14789-1] c 37 N92-30388

Cascaded transformerless DC-DC voltage amplifier with optically isolated switching devices  
[NASA-CASE-NPO-17994-1-CU] c 33 N93-18278

**POWER CONDITIONING**  
Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c 33 N79-24254

Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12586-1] c 44 N80-14472

Inelastic tunnel diodes  
[NASA-CASE-LEW-13833-1] c 33 N85-21492

Power supply conditioning circuit  
[NASA-CASE-NPO-17233-1-CU] c 33 N88-29095

**POWER CONVERTERS**  
Gas-to-hydraulic power converter  
[NASA-CASE-MSC-18794-1] c 44 N83-14693

Microprocessor control of multiple peak power tracking DC/DC converters for use with solar cell arrays  
[NASA-CASE-GSC-13450-1] c 44 N92-23463

Cascaded transformerless DC-DC voltage amplifier with optically isolated switching devices  
[NASA-CASE-NPO-17994-1-CU] c 33 N93-18278

**POWER EFFICIENCY**  
Low power drain semi-conductor circuit  
[NASA-CASE-XGS-04999] c 09 N69-24317

Excitation and detection circuitry for a flux responsive magnetic head  
[NASA-CASE-XNP-04183] c 09 N69-24329

Apparatus for increasing ion engine beam density Patent  
[NASA-CASE-XLE-00519] c 28 N70-41576

Gaseous control system for nuclear reactors  
[NASA-CASE-XLE-04599] c 22 N72-20597

Remote platform power conserving system  
[NASA-CASE-GSC-11182-1] c 15 N75-13007

Family of airfoil shapes for rotating blades --- for increased power efficiency and blade stability  
[NASA-CASE-LAR-12843-1] c 02 N84-11136

Increased voltage photovoltaic cell  
[NASA-CASE-NPO-16155-1] c 44 N85-30475

Wingtip vortex propeller  
[NASA-CASE-LAR-13019-1] c 07 N85-35194

Linearized traveling wave amplifier with hard limiter characteristics  
[NASA-CASE-LEW-13981-2] c 33 N86-21742

Low power consumption current transducer  
[NASA-CASE-NPO-16888-1-CU] c 33 N89-29681

Optical fiber sensor having an active core  
[NASA-CASE-LAR-14607-1SB] c 74 N92-30029

# POWER SUPPLY CIRCUITS

**POWER FACTOR CONTROLLERS**  
Triac failure detector  
[NASA-CASE-MFS-25607-1] c 33 N83-34190

Control system for an induction motor with energy recovery  
[NASA-CASE-MFS-25477-1] c 33 N84-14424

Motor power control circuit for ac induction motors  
[NASA-CASE-MFS-25323-1] c 33 N84-22886

Solar powered actuator with continuously variable auxiliary power control  
[NASA-CASE-MFS-25637-1] c 44 N85-21769

Power control for ac motor  
[NASA-CASE-MFS-25861-1] c 33 N85-22877

**POWER GAIN**  
Serrodyne frequency converter re-entrant amplifier system Patent  
[NASA-CASE-XGS-01022] c 07 N71-16088

CRT blanking and brightness control circuit  
[NASA-CASE-KSC-10647-1] c 10 N72-31273

**POWER LIMITERS**  
Monostable multivibrator  
[NASA-CASE-GSC-10082-1] c 10 N72-20221

**POWER LINES**  
Electrical connector for flat cables Patent  
[NASA-CASE-XMF-00324] c 09 N70-34596

Motor run-up system --- power lines  
[NASA-CASE-NPO-13374-1] c 33 N75-19524

Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c 33 N79-18193

Shielded conductor cable system  
[NASA-CASE-MSC-12745-1] c 33 N81-27397

Electrical power generating system  
[NASA-CASE-MFS-25302-1] c 33 N83-28319

Rotatable electric cable connecting system  
[NASA-CASE-GSC-12899-1] c 33 N86-20669

**POWER REACTORS**  
Low power consumption current transducer  
[NASA-CASE-NPO-16888-1-CU] c 33 N89-29681

**POWER SERIES**  
Computing apparatus Patent  
[NASA-CASE-XGS-04765] c 08 N71-18693

Phase modulating with odd and even finite power series of a modulating signal  
[NASA-CASE-LAR-11607-1] c 32 N77-14292

**POWER SPECTRA**  
Method and apparatus for high resolution spectral analysis  
[NASA-CASE-NPO-10748] c 08 N72-20177

Instrument for determining coincidence and elapse time between independent sources of random sequential events  
[NASA-CASE-LAR-12531-1] c 35 N83-29651

**POWER SUPPLIES**  
Tape recorder Patent  
[NASA-CASE-XGS-08259] c 14 N71-23698

Current dependent filter inductance  
[NASA-CASE-ERC-10139] c 09 N72-17154

Power supply for carbon dioxide lasers  
[NASA-CASE-GSC-11222-1] c 16 N73-32391

High voltage distributor  
[NASA-CASE-GSC-11849-1] c 33 N76-16332

Method and apparatus for precision control of radiometer  
[NASA-CASE-NPO-15398-1] c 35 N84-22931

**POWER SUPPLY CIRCUITS**  
Regulated dc to dc converter  
[NASA-CASE-XGS-03429] c 03 N69-21330

Power control circuit  
[NASA-CASE-XNP-02713] c 10 N69-39888

Electronic amplifier with power supply switching Patent  
[NASA-CASE-XMS-00945] c 09 N71-10798

Heat pipe thermionic diode power system Patent  
[NASA-CASE-XMF-05843] c 03 N71-11055

Pulsed energy power system Patent  
[NASA-CASE-MSC-13112] c 03 N71-11057

Data processor having multiple sections activated at different times by selective power coupling to the sections Patent  
[NASA-CASE-XGS-04767] c 08 N71-12494

Microwave power receiving antenna Patent  
[NASA-CASE-MFS-20333] c 09 N71-13486

Regulated power supply Patent  
[NASA-CASE-XMS-01991] c 09 N71-21449

Power supply Patent  
[NASA-CASE-XMS-02159] c 10 N71-22961

Polarity sensitive circuit Patent  
[NASA-CASE-XNP-00952] c 10 N71-23271

Power supply circuit Patent  
[NASA-CASE-XMS-00913] c 10 N71-23543

Drive circuit for minimizing power consumption in inductive load Patent  
[NASA-CASE-NPO-10716] c 09 N71-24892

Unsaturating saturable core transformer Patent  
[NASA-CASE-ERC-10125] c 09 N71-24893

- Voltage dropout sensor Patent  
[NASA-CASE-KSC-10020] c 10 N71-27338
- Maximum power point tracker Patent  
[NASA-CASE-GSC-10376-1] c 14 N71-27407
- High power microwave power divider Patent  
[NASA-CASE-NPO-11031] c 07 N71-33606
- Ripple indicator  
[NASA-CASE-KSC-10162] c 09 N72-11225
- A dc to ac to dc converter having transistor synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c 09 N72-25253
- LC-oscillator with automatic stabilized amplitude via bias current control --- power supply circuit for transducers  
[NASA-CASE-MFS-21698-1] c 33 N74-26732
- Integrable power gyrator --- with Z-matrix design using parallel transistors  
[NASA-CASE-MFS-22342-1] c 33 N75-30428
- The dc-to-dc converters employing staggered-phase power switches with two-loop control  
[NASA-CASE-NPO-13512-1] c 33 N77-10428
- Control for nuclear thermionic power source  
[NASA-CASE-NPO-13114-2] c 73 N78-28913
- Closed Loop solar array-ion thruster system with power control circuitry  
[NASA-CASE-LEW-12780-1] c 20 N79-20179
- Three phase power factor controller  
[NASA-CASE-MFS-25535-1] c 33 N81-12330
- Power factor control system for ac induction motors  
[NASA-CASE-MFS-23988-1] c 33 N81-27395
- Triac failure detector  
[NASA-CASE-MFS-25607-1] c 33 N83-34190
- Arc lamp power supply using a voltage multiplier  
[NASA-CASE-LAR-13202-1] c 33 N88-23942
- PREAMPLIFIERS**
- Electronic still camera  
[NASA-CASE-MSC-21797-1] c 35 N93-17076
- PREBURNERS**
- Turbomachinery shaft insert  
[NASA-CASE-MFS-28345-2] c 37 N89-28842
- PRECSSION**
- Dynamic precession damper for spin stabilized vehicles Patent  
[NASA-CASE-XLA-01989] c 21 N70-34295
- PRECIPITATION (CHEMISTRY)**
- Production of pure metals  
[NASA-CASE-LEW-10906-1] c 25 N74-30502
- Human serum albumin crystals and method of preparation  
[NASA-CASE-MFS-28234-1] c 52 N90-20616
- PRECIPITATORS**
- Acoustic agglomeration methods and apparatus  
[NASA-CASE-NPO-15466-1] c 71 N85-22104
- Electronic precipitator control  
[NASA-CASE-LAR-13273-2] c 33 N90-20320
- PRECISION**
- Precision stepping drive Patent  
[NASA-CASE-MFS-14772] c 15 N71-17692
- Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-2] c 15 N71-26148
- PREDICTIONS**
- Digital phase-lock loop having an estimator and predictor of error  
[NASA-CASE-NPO-17196-1-CU] c 32 N88-29076
- Predictive aging of polymers  
[NASA-CASE-NPO-17524-1-CU] c 27 N90-10261
- Predictive sensor method and apparatus  
[NASA-CASE-SSC-00006-1] c 35 N91-13691
- Acoustic positioning and orientation prediction  
[NASA-CASE-NPO-17511-1-CU] c 71 N91-14807
- Method and apparatus for predicting the direction of movement in machine vision  
[NASA-CASE-NPO-17552-1-CU] c 54 N92-29129
- Microwave temperature profiler for clear air turbulence prediction  
[NASA-CASE-NPO-18115-1-CU] c 47 N92-29148
- PREFLIGHT OPERATIONS**
- Automatic balancing device Patent  
[NASA-CASE-LAR-10774] c 10 N71-13545
- PREFORMS**
- Method of preparing fiber reinforced ceramic material  
[NASA-CASE-LEW-14392-1] c 27 N87-28656
- Lightweight piston architecture  
[NASA-CASE-LAR-13926-1] c 37 N90-22042
- High temperature, flexible, fiber-preform seal  
[NASA-CASE-LEW-15085-1] c 37 N92-22043
- Method and apparatus for weaving a woven angle ply fabric  
[NASA-CASE-LAR-14048-1] c 31 N93-29611
- PRELAUNCH TESTS**
- Parasitic probe antenna Patent  
[NASA-CASE-XKS-09348] c 09 N71-13521
- Electronic checkout system for space vehicles Patent  
[NASA-CASE-XKS-08012-2] c 31 N71-15566

**PREPOLYMERS**

- Novel polycarboxylic prepolymeric materials and polymers thereof Patent  
[NASA-CASE-NPO-10596] c 06 N71-25929
- Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same  
[NASA-CASE-NPO-13137-1] c 27 N80-32514
- Prepolymer dianhydrides  
[NASA-CASE-NPO-13899-1] c 27 N80-32515
- Structural wood panels with improved fire resistance  
[NASA-CASE-ARC-11174-1] c 24 N81-13999
- Method for forming pyrrone molding powders and products of said method  
[NASA-CASE-LAR-10423-1] c 23 N82-29358
- Elastomer toughened polyimide adhesives  
[NASA-CASE-LAR-12775-1] c 27 N83-28240
- Polyphenylquinoxalines containing pendant phenylethynyl and ethynyl groups --- for thermoplastic resins  
[NASA-CASE-LAR-12838-1] c 27 N83-34040
- PREPREGS**
- Tackifier for addition polyimides containing monoethylphthalate  
[NASA-CASE-LAR-12642-1] c 27 N81-29229
- Continuous fiber thermoplastic prepreg  
[NASA-CASE-LAR-14459-1] c 24 N91-15334
- Preparing composite materials from matrices of processable aromatic polyimide thermoplastic blends  
[NASA-CASE-LAR-14107-1] c 24 N91-25200
- Process for application of powder particles to filamentary materials  
[NASA-CASE-LAR-14231-1] c 24 N92-10070
- Low pressure process for continuous fiber reinforced polyamic acid resin matrix composite laminates  
[NASA-CASE-LAR-14954-1] c 24 N92-34214
- Continuous fiber thermoplastic prepreg  
[NASA-CASE-LAR-14459-1] c 24 N93-24597
- Vacuum powder injector and method of impregnating fiber with powder  
[NASA-CASE-LAR-14179-1] c 31 N93-26101
- PRESSURE**
- Strain gage mounting assembly  
[NASA-CASE-NPO-13170-1] c 35 N76-14430
- High temperature, flexible pressure-actuated, brush seal  
[NASA-CASE-LEW-15086-1] c 37 N92-16318
- PRESSURE CHAMBERS**
- Electric arc driven wind tunnel Patent  
[NASA-CASE-XMF-00411] c 11 N70-36913
- Whole body measurement systems --- for weightlessness simulation  
[NASA-CASE-MSC-13972-1] c 52 N74-10975
- Accumulator  
[NASA-CASE-MFS-19287-1] c 34 N77-30399
- Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c 31 N81-19343
- Weightlessness simulation system and process  
[NASA-CASE-ARC-11646-1] c 14 N87-25344
- PRESSURE DISTRIBUTION**
- Instrument for use in performing a controlled Valsalva maneuver Patent  
[NASA-CASE-XMS-01615] c 05 N70-41329
- Prevention of pressure build-up in electrochemical cells Patent  
[NASA-CASE-XGS-01419] c 03 N70-41864
- Accumulator  
[NASA-CASE-MFS-19287-1] c 34 N77-30399
- Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures  
[NASA-CASE-MSC-18134-1] c 37 N81-15363
- Continuous self-locking spiral wound seal --- for maintaining pressure between chambers in cryogenic wind tunnels  
[NASA-CASE-LAR-12315-1] c 37 N82-24490
- Ultrasonic transducer with Gaussian radial pressure distribution  
[NASA-CASE-LAR-12967-1] c 35 N84-22932
- Passive control of pressure loads using porosity  
[NASA-CASE-LAR-14547-1] c 34 N92-17909
- Combined load test apparatus for flat panels  
[NASA-CASE-LAR-14698-1] c 39 N92-30028
- PRESSURE DRAG**
- Multi-body aircraft with an all-movable center fuselage actively controlling fuselage pressure drag  
[NASA-CASE-LAR-13511-1] c 05 N88-23765
- PRESSURE DROP**
- Leak detector  
[NASA-CASE-MFS-21761-1] c 35 N75-15931
- PRESSURE EFFECTS**
- System for stabilizing cable phase delay utilizing a coaxial cable under pressure  
[NASA-CASE-NPO-13138-1] c 33 N74-17927
- Evacuated, displacement compression mold --- of tubular bodies from thermosetting plastics  
[NASA-CASE-LAR-10782-2] c 31 N75-13111

- Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
[NASA-CASE-MFS-19193-1] c 37 N75-19686
- Fluid pressure balanced seal  
[NASA-CASE-XGS-01286-1] c 37 N79-33469
- Real time pressure signal system for a rotary engine  
[NASA-CASE-LEW-13622-1] c 07 N84-22559
- Optical pressure sealing coupling apparatus  
[NASA-CASE-MFS-29348-1] c 74 N89-25689
- Ballast system for maintaining constant pressure in a glove box  
[NASA-CASE-NPO-17786-1-CU] c 35 N90-17104
- Thermal power transfer system using applied potential difference to sustain operating pressure difference  
[NASA-CASE-NPO-18034-1-CU] c 44 N92-16457
- Device for applying constant pressure to a surface  
[NASA-CASE-GSC-13230-1] c 37 N92-28754
- PRESSURE GAGES**
- Differential pressure cell Patent  
[NASA-CASE-XAC-00042] c 14 N70-34816
- Blood pressure measuring system for separating and separately recording dc signal and an ac signal Patent  
[NASA-CASE-XMS-06061] c 05 N71-23317
- Apparatus for testing a pressure responsive instrument Patent  
[NASA-CASE-XMF-04134] c 14 N71-23755
- Device for measuring pressure Patent  
[NASA-CASE-XAC-04458] c 14 N71-24232
- Ultrahigh vacuum gauge having two collector electrodes  
[NASA-CASE-LAR-02743] c 14 N73-32324
- Gas ion laser construction for electrically isolating the pressure gauge thereof  
[NASA-CASE-MFS-22597] c 36 N78-17366
- PRESSURE GRADIENTS**
- Positive displacement flowmeter Patent  
[NASA-CASE-XMF-02822] c 14 N70-41994
- Dual laser optical system and method for studying fluid flow  
[NASA-CASE-MFS-25315-1] c 36 N83-29680
- Underwing compression vortex attenuation device  
[NASA-CASE-LAR-14744-1] c 02 N93-19053
- PRESSURE HEADS**
- Head for high speed spinner having a vacuum chuck --- holding silicon dioxide chips for etching  
[NASA-CASE-NPO-15227-1] c 37 N81-33482
- PRESSURE MEASUREMENT**
- Inertia diaphragm pressure transducer Patent  
[NASA-CASE-XAC-02981] c 14 N71-21072
- Linear differential pressure sensor Patent  
[NASA-CASE-XMF-01974] c 14 N71-22752
- Device for measuring pressure Patent  
[NASA-CASE-XAC-04458] c 14 N71-24232
- Device for measuring light scattering wherein the measuring beam is successively reflected between a pair of parallel reflectors Patent  
[NASA-CASE-XER-11203] c 14 N71-28994
- Sensing probe  
[NASA-CASE-LEW-10281-1] c 14 N72-17327
- Gauge calibration by diffusion  
[NASA-CASE-XGS-07752] c 14 N73-30390
- Apparatus for absolute pressure measurement  
[NASA-CASE-LAR-10000] c 14 N73-30394
- Wind tunnel model and method  
[NASA-CASE-LAR-10812-1] c 09 N74-17955
- Indicated mean-effective pressure instrument  
[NASA-CASE-LEW-12661-1] c 35 N79-14345
- High-temperature microphone system --- for measuring pressure fluctuations in gases at high temperature  
[NASA-CASE-LAR-12375-1] c 32 N79-24203
- Static pressure orifice system testing method and apparatus  
[NASA-CASE-LAR-12269-1] c 35 N80-18358
- Detection of the transitional layer between laminar and turbulent flow areas on a wing surface --- using an accelerometer to measure pressure levels during wind tunnel tests  
[NASA-CASE-LAR-12261-1] c 02 N80-20224
- Non-invasive method and apparatus for measuring pressure within a pliable vessel  
[NASA-CASE-ARC-11264-2] c 52 N83-29991
- Electronic scanning pressure measuring system and transducer package  
[NASA-CASE-ARC-11361-1] c 35 N84-22934
- Method of and apparatus for measuring temperature and pressure --- atmospheric sounding  
[NASA-CASE-GSC-12558-1] c 36 N85-21639
- Device for quick changeover between wind tunnel force and pressure testing  
[NASA-CASE-LAR-13512-1] c 35 N87-28884
- Porous plug for reducing orifice induced pressure error in airfoils  
[NASA-CASE-LAR-13569-1] c 35 N89-12841
- Pressure measuring probe  
[NASA-CASE-LAR-13853-1] c 35 N89-14423

- Measurement of waves in flows across a surface  
[NASA-CASE-NPO-17479-1-CU] c 34 N91-13658
- Probe insertion apparatus with inflatable seal  
[NASA-CASE-LEW-14965-1] c 37 N91-13732
- Volumetric measurement of tank volume  
[NASA-CASE-MSC-21500-1] c 35 N91-21493
- Tank gauging apparatus and method  
[NASA-CASE-MSC-21059-3] c 35 N91-21495
- Pressure transducer and system for cryogenic environments  
[NASA-CASE-LAR-14579-1] c 35 N92-29097
- Calibration apparatus for recess mounted pressure transducers  
[NASA-CASE-LAR-14724-1] c 35 N92-30030
- High temperature fiber optic microphone having a pressure-sensing reflective membrane under tensile stress  
[NASA-CASE-LAR-14402-1-CU] c 74 N92-33017
- Pilot-pressure probe for measuring pressure in a hypersonic wind tunnel  
[NASA-CASE-LAR-14232-1] c 09 N92-34213
- Acoustic device and method for measuring gas densities  
[NASA-CASE-NPO-18155-1-CU] c 71 N93-13421
- Fiber optic microphone having a pressure sensing reflective membrane and a voltage source for calibration purpose  
[NASA-CASE-LAR-14402-2-CU] c 71 N93-24602
- PRESSURE PULSES**
- Passive fetal monitoring sensor  
[NASA-CASE-LAR-14088-1-CU] c 35 N92-33016
- PRESSURE REDUCTION**
- Relief valve  
[NASA-CASE-XMS-05894-1] c 15 N69-21924
- Sealed battery gas manifold construction Patent  
[NASA-CASE-XNP-03378] c 03 N71-11051
- Depressurization of arc lamps  
[NASA-CASE-NPO-10790-1] c 33 N77-21316
- Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c 26 N80-14229
- Pressure letdown method and device for coal conversion systems  
[NASA-CASE-NPO-15100-1] c 44 N84-14583
- Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095
- Method for growth of crystals by pressure reduction of supercritical or subcritical solution  
[NASA-CASE-NPO-15772-1] c 76 N85-29800
- System for venting gas from a liquid storage tank  
[NASA-CASE-MSC-21253-1] c 31 N90-20254
- Volumetric measurement of tank volume  
[NASA-CASE-MSC-21500-1] c 35 N91-21493
- PRESSURE REGULATORS**
- Pressure regulating system Patent  
[NASA-CASE-XNP-00450] c 15 N70-38603
- Resuscitation apparatus Patent  
[NASA-CASE-XMS-01115] c 05 N70-39922
- High pressure regulator valve Patent  
[NASA-CASE-XNP-00710] c 15 N71-10778
- Space suit pressure stabilizer Patent  
[NASA-CASE-XLA-05332] c 05 N71-11194
- Portable environmental control system Patent  
[NASA-CASE-XMS-09632-1] c 05 N71-11203
- Anti-backlash circuit for hydraulic drive system Patent  
[NASA-CASE-XNP-01020] c 03 N71-12260
- High impact pressure regulator Patent  
[NASA-CASE-NPO-10175] c 14 N71-18625
- Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332] c 05 N72-20097
- Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332-2] c 05 N73-25125
- Combined pressure regulator and shutoff valve  
[NASA-CASE-NPO-13201-1] c 37 N75-15050
- Pressure modulating valve  
[NASA-CASE-MSC-14905-1] c 37 N77-28487
- Flow compensating pressure regulator  
[NASA-CASE-LEW-12718-1] c 34 N78-25351
- Flow diverter valve and flow diversion method  
[NASA-CASE-HQN-00573-1] c 37 N79-33468
- Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12955-1] c 52 N80-14684
- Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12723-1] c 52 N80-18690
- Pressure control valve --- inflating flexible bladders  
[NASA-CASE-ARC-11251-1] c 37 N81-17433
- Prosthetic urinary sphincter  
[NASA-CASE-MFS-23717-1] c 52 N81-25660
- Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-1] c 52 N83-21785
- Vibration isolation and pressure compensation apparatus for sensitive instrumentation  
[NASA-CASE-LAR-12728-1] c 35 N83-32026
- Apparatus and method for jet noise suppression  
[NASA-CASE-LAR-11903-2] c 71 N84-14873
- Bio-reactor chamber  
[NASA-CASE-MSC-20929-1] c 51 N91-14703
- Passive control of pressure loads using porosity  
[NASA-CASE-LAR-14547-1] c 34 N92-17909
- PRESSURE SENSORS**
- Pressure variable capacitor  
[NASA-CASE-XNP-09752] c 14 N69-21541
- Aerodynamic measuring device Patent  
[NASA-CASE-XLA-00481] c 14 N70-36824
- Check valve assembly for a probe Patent  
[NASA-CASE-XLA-00128] c 15 N70-37925
- Dynamic sensor Patent  
[NASA-CASE-XAC-02877] c 14 N70-41681
- Inertia diaphragm pressure transducer Patent  
[NASA-CASE-XAC-02981] c 14 N71-21072
- Linear differential pressure sensor Patent  
[NASA-CASE-XMF-01974] c 14 N71-22752
- Pressure transducer calibrator Patent  
[NASA-CASE-XNP-01660] c 14 N71-23036
- Instrument for measuring the dynamic behavior of liquids Patent  
[NASA-CASE-XLA-05541] c 12 N71-26387
- Pressure sensitive transducers Patent  
[NASA-CASE-ERC-10087] c 14 N71-27334
- Method of making pressurized panel Patent  
[NASA-CASE-XLA-08916] c 15 N71-29018
- Sensing probe  
[NASA-CASE-LEW-10281-1] c 14 N72-17327
- Pressure transducer  
[NASA-CASE-NPO-10832] c 14 N72-21405
- Pressure operated electrical switch responsive to a pressure decrease after a pressure increase  
[NASA-CASE-LAR-10137-1] c 09 N72-22204
- Wide range dynamic pressure sensor  
[NASA-CASE-ARC-10263-1] c 14 N72-22438
- Differential pressure control  
[NASA-CASE-MFS-14216] c 14 N73-13418
- Pressurized panel  
[NASA-CASE-XLA-08916-2] c 14 N73-28487
- System for calibrating pressure transducer  
[NASA-CASE-LAR-10910-1] c 35 N74-13132
- Stagnation pressure probe --- for measuring pressure of supersonic gas streams  
[NASA-CASE-LAR-11139-1] c 35 N74-32878
- Circuit for detecting initial systole and diastolic notch --- for monitoring arterial pressure  
[NASA-CASE-LEW-11581-1] c 54 N75-13531
- Leak detector  
[NASA-CASE-MFS-21761-1] c 35 N75-15931
- Measurement of gas production of microorganisms --- using pressure sensors  
[NASA-CASE-LAR-11326-1] c 35 N75-33368
- Static pressure probe  
[NASA-CASE-LAR-11552-1] c 35 N76-14429
- Trielectrode capacitive pressure transducer  
[NASA-CASE-ARC-10711-2] c 33 N76-21390
- Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NPO-13643-1] c 52 N76-29896
- Miniature biaxial strain transducer  
[NASA-CASE-LAR-11648-1] c 35 N77-14407
- Pressure transducer --- using a monomeric charge transfer complex sensor  
[NASA-CASE-NPO-11150] c 35 N78-17359
- Electronically scanned pressure sensor module with in SITU calibration capability  
[NASA-CASE-LAR-12230-1] c 35 N79-14347
- System for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations  
[NASA-CASE-FRC-11024-1] c 02 N80-28300
- Automatic compression adjusting mechanism for internal combustion engines  
[NASA-CASE-MSC-18807-1] c 37 N83-36483
- Self-correcting electronically scanned pressure sensor  
[NASA-CASE-LAR-12686-1] c 35 N84-14491
- Electronic scanning pressure measuring system and transducer package  
[NASA-CASE-ARC-11361-1] c 35 N84-22934
- Heat pipe cooled probe  
[NASA-CASE-LAR-12588-1] c 34 N85-21568
- Miniature remote dead weight calibrator  
[NASA-CASE-LAR-13564-1] c 35 N87-25558
- Porous plug for reducing orifice induced pressure error in airfoils  
[NASA-CASE-LAR-13569-1] c 35 N89-12841
- Pressure measuring probe  
[NASA-CASE-LAR-13853-1] c 35 N89-14423
- Circumferential pressure probe  
[NASA-CASE-LAR-13775-1] c 35 N90-23706
- Wind tunnel balance  
[NASA-CASE-ARC-11877-1-SB] c 09 N91-14357
- Water cooled static pressure probe  
[NASA-CASE-LAR-14340-1-CU] c 35 N92-21586
- Pressure transducer and system for cryogenic environments  
[NASA-CASE-LAR-14579-1] c 35 N92-29097
- Calibration apparatus for recess mounted pressure transducers  
[NASA-CASE-LAR-14724-1] c 35 N92-30030
- High temperature fiber optic microphone having a pressure-sensing reflective membrane under tensile stress  
[NASA-CASE-LAR-14402-1-CU] c 74 N92-33017
- Pilot-pressure probe for measuring pressure in a hypersonic wind tunnel  
[NASA-CASE-LAR-14232-1] c 09 N92-34213
- An interferometer having fused optical fibers, and apparatus and method using the interferometer  
[NASA-CASE-LAR-14640-1-CU] c 74 N93-17052
- PRESSURE SUITS**
- Pressure suit tie-down mechanism Patent  
[NASA-CASE-XMS-00784] c 05 N71-12335
- Pressure garment joint Patent  
[NASA-CASE-XMS-09636] c 05 N71-12344
- Omnidirectional joint Patent  
[NASA-CASE-XMS-09635] c 05 N71-24623
- Foreshortened convolute section for a pressurized suit Patent  
[NASA-CASE-XMS-09637-1] c 05 N71-24730
- Method of forming a root cord restrained convolute section  
[NASA-CASE-MSC-12398] c 05 N72-20098
- Restraint torso for a pressurized suit  
[NASA-CASE-MSC-12397-1] c 05 N72-25119
- Flexible joint for pressurizable garment  
[NASA-CASE-MSC-11072] c 54 N74-32546
- Walking boot assembly  
[NASA-CASE-ARC-11101-1] c 54 N78-17675
- Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c 54 N82-26987
- Method and apparatus for simulating gravitational forces on a living organism  
[NASA-CASE-MSC-20202-1] c 54 N84-16803
- PRESSURE SWITCHES**
- Reinforcing means for diaphragms Patent  
[NASA-CASE-XNP-01962] c 32 N70-41370
- Calibrating pressure switch  
[NASA-CASE-XMF-04494-1] c 33 N79-33392
- Valve malfunction detection apparatus  
[NASA-CASE-MFS-29904-1] c 35 N93-29503
- PRESSURE VESSELS**
- Liquid rocket system Patent  
[NASA-CASE-XNP-00610] c 28 N70-36910
- Thin-walled pressure vessel Patent  
[NASA-CASE-XLE-04677] c 15 N71-10577
- Gas regulator Patent  
[NASA-CASE-NPO-10298] c 12 N71-17661
- Controlled glass bead peening Patent  
[NASA-CASE-XLA-07390] c 15 N71-18616
- Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c 35 N74-15093
- Method and apparatus for nondestructive testing of pressure vessels  
[NASA-CASE-NPO-12142-1] c 38 N76-28563
- Gas compression apparatus  
[NASA-CASE-MSC-14757-1] c 35 N78-10428
- Pressure control valve --- inflating flexible bladders  
[NASA-CASE-ARC-11251-1] c 37 N81-17433
- Space Shuttle with rail system and aft thrust structure securing solid rocket boosters to external tank  
[NASA-CASE-MFS-25853-1] c 16 N84-27784
- Oxygen recombination in individual pressure vessel nickel-hydrogen batteries  
[NASA-CASE-LEW-13822-1] c 44 N86-25874
- Cellular thermosetting fluoropolymers and process for making them  
[NASA-CASE-GSC-13008-1] c 27 N88-23894
- Probe insertion apparatus with inflatable seal  
[NASA-CASE-LEW-14965-1] c 37 N91-13732
- Pressure vessel flex joint  
[NASA-CASE-MSC-21748-1] c 37 N92-21727
- PRESSURE WELDING**
- Diffusion welding --- heat treatment of nickel alloys following single step vacuum welding process  
[NASA-CASE-LEW-11388-2] c 37 N74-21055
- PRESSURIZING**
- Restraining mechanism  
[NASA-CASE-MSC-13054] c 54 N78-17677
- PRESTRESSING**
- Prestressed refractory structure Patent  
[NASA-CASE-XNP-02888] c 18 N71-21068
- Method of manufacture of bonded fiber flywheel --- fiberglass-epoxy  
[NASA-CASE-MFS-23674-1] c 24 N81-29163

- Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MSC-18791-1] c 37 N83-36482
- Preloadable vector sensitive latch  
[NASA-CASE-MSC-20910-1] c 37 N87-25582
- Preloaded brake disc  
[NASA-CASE-MSC-21132-1] c 37 N88-29181
- Method and apparatus for preloading a joint by remotely operable means  
[NASA-CASE-MSC-21940-1] c 37 N92-30540
- Electromagnetic attachment mechanism  
[NASA-CASE-MSC-21463-1] c 37 N92-33018
- Method and apparatus for preloading a joint by remotely operable means  
[NASA-CASE-MSC-21940-1] c 37 N93-20120
- PRETREATMENT**
- Pretreatment method for anti-wettable materials  
[NASA-CASE-XMS-03537] c 15 N69-21471
- Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MSC-18791-1] c 37 N83-36482
- PRINTED CIRCUITS**
- Electrical feed-through connection for printed circuit boards and printed cable  
[NASA-CASE-XMF-01483] c 14 N69-27431
- Printed cable connector Patent  
[NASA-CASE-XMF-00369] c 09 N70-36494
- Printed circuit board with bellows rivet connection Patent  
[NASA-CASE-XNP-05082] c 15 N70-41960
- Electrical spot terminal assembly Patent  
[NASA-CASE-NPO-10034] c 15 N71-17685
- Method of coating circuit paths on printed circuit boards with solder Patent  
[NASA-CASE-XMF-01599] c 09 N71-20705
- Device for handling printed circuit cards Patent  
[NASA-CASE-MFS-20453] c 15 N71-29133
- Polyimide resin-fiberglass cloth laminates for printed circuit boards  
[NASA-CASE-MFS-20408] c 18 N73-12604
- Circuit board package with wedge shaped covers  
[NASA-CASE-MFS-21919-1] c 10 N73-25243
- Device for configuring multiple leads --- method for connecting electric leads to printed circuit board  
[NASA-CASE-MFS-22133-1] c 33 N74-26977
- Connector --- for connecting circuits on different layers of multilayer printed circuit boards  
[NASA-CASE-LAR-11709-1] c 37 N76-27567
- Controlled caging and uncaging mechanism  
[NASA-CASE-GSC-11063-1] c 37 N77-27400
- Solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-1] c 44 N79-17314
- PRINTERS**
- Printer port interface  
[NASA-CASE-LAR-13950-1] c 60 N92-30541
- PRINTING**
- Application of semiconductor diffusants to solar cells by screen printing  
[NASA-CASE-LEW-12775-1] c 44 N79-11468
- Multicolor printing plate joining  
[NASA-CASE-LEW-13598-1] c 35 N84-22930
- Screen printed interdigitated back contact solar cell  
[NASA-CASE-LEW-13414-1] c 44 N85-20530
- PRINTOUTS**
- Device for handling printed circuit cards Patent  
[NASA-CASE-MFS-20453] c 15 N71-29133
- PRISMS**
- Interferometric rotation sensor  
[NASA-CASE-ARC-10278-1] c 14 N73-25463
- Method and apparatus for splitting a beam of energy --- optical communication  
[NASA-CASE-GSC-12083-1] c 73 N78-32848
- Multiprism collimator  
[NASA-CASE-GSC-12608-1] c 74 N83-10900
- Rhomboid prism pair for rotating the plane of parallel light beams  
[NASA-CASE-ARC-11311-1] c 74 N83-13978
- Laser Resonator  
[NASA-CASE-GSC-12565-1] c 36 N84-14509
- PROBABILITY THEORY**
- System and method for character recognition  
[NASA-CASE-NPO-11337-1] c 74 N81-19896
- Multistage estimation of received carrier signal parameters under very high dynamic conditions of the receiver  
[NASA-CASE-NPO-17911-1-CU] c 32 N90-27016
- Asymmetric soft-error resistant memory  
[NASA-CASE-NPO-17394-1-CU] c 60 N91-31810
- Electronic neural network for solving traveling salesman and similar global optimization problems  
[NASA-CASE-NPO-17807-2-CU] c 63 N92-29955
- Modified fast frequency acquisition via adaptive least squares algorithm  
[NASA-CASE-NPO-17845-2-CU] c 61 N93-14882

## PROBES

- Method and apparatus for securing to a spacecraft Patent  
[NASA-CASE-MFS-11133] c 31 N71-16222
- Droplet monitoring probe  
[NASA-CASE-NPO-10985] c 14 N73-20478
- System and method for moving a probe to follow movements of tissue  
[NASA-CASE-NPO-15197-1] c 52 N83-25346
- Heat pipe cooled probe  
[NASA-CASE-LAR-12588-1] c 34 N85-21568
- Precision tunable resonant microwave cavity  
[NASA-CASE-LEW-13935-1] c 33 N87-21234

## PROBLEM SOLVING

- Electronic neural network for solving traveling salesman and similar global optimization problems  
[NASA-CASE-NPO-17807-2-CU] c 63 N92-29955

## PROCESS CONTROL (INDUSTRY)

- Photoelectric detection system --- manufacturing automation  
[NASA-CASE-MFS-23776-1] c 33 N82-28545
- Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-3] c 27 N85-21350
- Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-4] c 27 N85-21351
- Procedure to prepare transparent silica gels  
[NASA-CASE-LAR-13476-1-CU] c 76 N87-29360
- N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14188-2] c 23 N91-14419
- Method and apparatus for producing microshells  
[NASA-CASE-NPO-16635-1-CU] c 31 N91-32240
- A process for preparing 1,3-diamino-5-pentafluorosulfanylbenzene and polymers therefrom  
[NASA-CASE-LAR-14773-1-CU] c 27 N92-10105
- Polybenzimidazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14643-1] c 27 N92-29953
- A method for making biocompatible polymer articles using atomic oxygen  
[NASA-CASE-MSC-21529-1] c 27 N92-30100
- Polyimides with improved compression moldability  
[NASA-CASE-LAR-14457-1] c 27 N93-25997

## PROCESSES

- Polyimide processing additives  
[NASA-CASE-LAR-13669-1] c 27 N92-29157

## PROCESSING

- Low gravity exothermic heating/cooling apparatus  
[NASA-CASE-MSC-25707-1] c 35 N85-29214

## PRODUCT DEVELOPMENT

- Technique of duplicating fragile core  
[NASA-CASE-XLA-07829] c 15 N72-16329
- Tube fabricating process  
[NASA-CASE-LAR-10203-1] c 15 N72-16330
- Process for making diamonds  
[NASA-CASE-MFS-20698-2] c 15 N73-19457
- High power laser apparatus and system  
[NASA-CASE-XLE-2529-2] c 36 N75-27364
- Induced junction solar cell and method of fabrication  
[NASA-CASE-NPO-13786-1] c 44 N80-29835
- Process for preparation of large-particle-size monodisperse latexes  
[NASA-CASE-MFS-25000-1] c 25 N81-19242
- Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c 25 N81-19244
- Precision heat forming of tetrafluoroethylene tubing  
[NASA-CASE-MSC-18430-1] c 37 N82-24491
- Fiber optic crossbar switch for automatically patching optical signals  
[NASA-CASE-KSC-11104-1] c 74 N83-29032
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c 27 N83-31854
- Encyclopedia of software components  
[NASA-CASE-NPO-18435-1-CU] c 61 N92-30543

## PRODUCTION ENGINEERING

- Indexed keyed connection Patent  
[NASA-CASE-XMS-02532] c 15 N70-41808
- Method and apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917] c 15 N71-15597
- Method of making self lubricating fluoride-metal composite materials Patent  
[NASA-CASE-XLE-08511-2] c 18 N71-16105
- Method of making impurity-type semiconductor electrical contacts Patent  
[NASA-CASE-XMF-01016] c 26 N71-17818
- Method of making inflatable honeycomb Patent  
[NASA-CASE-XLA-03492] c 15 N71-22713
- Multilayer porous ionizer Patent  
[NASA-CASE-XNP-04338] c 17 N71-23046
- Ion engine casing construction and method of making same Patent  
[NASA-CASE-XNP-06942] c 28 N71-23293

- Flexible conductive disc electrode Patent  
[NASA-CASE-FRC-10029] c 09 N71-24618
- Star tracking reticles  
[NASA-CASE-GSC-11188-1] c 14 N73-32320
- Process for making sheets with parallel pores of uniform size  
[NASA-CASE-GSC-10984-1] c 37 N75-26371
- Solar cell collector and method for producing same  
[NASA-CASE-LEW-12552-2] c 44 N79-11472
- Multilevel metallization method for fabricating a metal oxide semiconductor device  
[NASA-CASE-MFS-23541-1] c 76 N79-14906
- Solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-1] c 44 N79-17314
- Method of fabricating a photovoltaic module of a substantially transparent construction  
[NASA-CASE-NPO-14303-1] c 44 N80-18550
- Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c 33 N81-19389
- Method and apparatus for producing concentric hollow spheres --- inertial confinement fusion targets  
[NASA-CASE-NPO-14596-1] c 31 N81-33319
- Apparatus for sequentially transporting containers  
[NASA-CASE-MFS-23846-1] c 37 N82-32731
- Solar cell having improved back surface reflector  
[NASA-CASE-LEW-13620-1] c 44 N83-13579
- Method of increasing minority carrier lifetime in silicon web or the like  
[NASA-CASE-NPO-15530-1] c 76 N83-35888
- Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-256704-1] c 33 N84-22884
- PROJECTILES**
- Self-obturing, gas operated launcher  
[NASA-CASE-NPO-11013] c 11 N72-22247
- Two stage light gas-plasma projectile accelerator  
[NASA-CASE-MFS-22287-1] c 75 N76-14931
- Electromagnetic Meissner effect launcher  
[NASA-CASE-MFS-28323-1] c 14 N92-15081
- PROJECTION**
- Projection system for display of parallax and perspective  
[NASA-CASE-MFS-23194-1] c 35 N78-17357
- Large area projection liquid-crystal video display system with inherent grid pattern optically removed  
[NASA-CASE-NPO-16932-2-CU] c 74 N93-13711
- PROJECTIVE GEOMETRY**
- Projection system for display of parallax and perspective  
[NASA-CASE-MFS-23194-1] c 35 N78-17357
- PROJECTORS**
- Optical projector system Patent  
[NASA-CASE-XNP-03853] c 23 N71-21882
- System and method for obtaining wide screen Schlieren photographs  
[NASA-CASE-NPO-14174-1] c 74 N79-20856
- Large TV display system  
[NASA-CASE-NPO-16932-1CU] c 33 N87-15413
- PROPAGATION MODES**
- Dual waveguide mode source having control means for adjusting the relative amplitude of two modes Patent  
[NASA-CASE-XNP-03134] c 07 N71-10676
- PROPAGATION VELOCITY**
- Double reference pulsed phase locked loop  
[NASA-CASE-LAR-13310-1] c 32 N87-14559
- PROPARGYL GROUPS**
- Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-2] c 27 N84-22746
- Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-1] c 27 N85-20123
- PROPELLANT ACTUATED INSTRUMENTS**
- Pressure limiting propellant actuating system  
[NASA-CASE-MSC-18179-1] c 20 N80-18097
- PROPELLANT ADDITIVES**
- Inhibited solid propellant composition containing beryllium hydride  
[NASA-CASE-NPO-10866-1] c 28 N79-14228
- PROPELLANT BINDERS**
- Method of forming difunctional polyisobutylene  
[NASA-CASE-NPO-10893] c 27 N73-22710
- Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c 28 N81-15119
- PROPELLANT CASTING**
- Casting propellant in rocket engine  
[NASA-CASE-LAR-11995-1] c 28 N77-10213
- Solid propellant rocket motor and method of making same  
[NASA-CASE-XLA-01349] c 20 N77-17143
- PROPELLANT CHEMISTRY**
- Nitramine propellants --- gun propellant burning rate  
[NASA-CASE-NPO-14103-1] c 28 N78-31255

**PROPELLANT COMBUSTION**

- Spherically-shaped rocket motor Patent  
[NASA-CASE-XHQ-01897] c 28 N70-35381  
Control of transverse instability in rocket combustors Patent  
[NASA-CASE-XLE-04603] c 33 N71-21507

**PROPELLANT DECOMPOSITION**

- Decomposition unit Patent  
[NASA-CASE-XMS-00583] c 28 N70-38504

**PROPELLANT GRAINS**

- Propellant grain for rocket motors Patent  
[NASA-CASE-XGS-03556] c 27 N70-35534

**PROPELLANT TANKS**

- Liquid rocket system Patent  
[NASA-CASE-XNP-00610] c 28 N70-36910  
Slosh suppressing device and method Patent  
[NASA-CASE-XMF-00658] c 12 N70-38997  
Measuring device Patent  
[NASA-CASE-XMS-01546] c 14 N70-40233  
Zero gravity starting means for liquid propellant motors Patent  
[NASA-CASE-XNP-01390] c 28 N70-41275  
Tank construction for space vehicles Patent  
[NASA-CASE-XMF-01899] c 31 N70-41948  
Method and apparatus for detection and location of microleaks Patent  
[NASA-CASE-XMF-02307] c 14 N71-10779  
Method of making a filament-wound container Patent  
[NASA-CASE-XLE-03803-2] c 15 N71-17651  
Slosh alleviator Patent  
[NASA-CASE-XLA-05749] c 15 N71-19569  
Booster tank system Patent  
[NASA-CASE-MSC-12390] c 27 N71-29155  
Space vehicle system  
[NASA-CASE-MSC-12561-1] c 18 N76-17185  
Passive propellant system  
[NASA-CASE-MFS-23642-2] c 20 N78-27176  
Space Shuttle with rail system and aft thrust structure securing solid rocket boosters to external tank  
[NASA-CASE-MFS-25853-1] c 16 N84-27784  
Three stage rocket vehicle with parallel staging  
[NASA-CASE-MFS-25878-1] c 18 N84-27787  
Reusable cryogenic liquid rocket propellant tank  
[NASA-CASE-LAR-14172-1] c 20 N93-31295

**PROPELLANT TRANSFER**

- Fluid coupling Patent  
[NASA-CASE-XLE-00397] c 15 N70-36492  
Apparatus for transferring cryogenic liquids Patent  
[NASA-CASE-XLE-00345] c 15 N70-38020  
Method for continuous variation of propellant flow and thrust in propulsive devices Patent  
[NASA-CASE-XLE-00177] c 28 N70-40367  
Fluid dispensing apparatus and method Patent  
[NASA-CASE-XLE-01182] c 27 N71-15635  
Electrostatic ion rocket engine Patent  
[NASA-CASE-XLE-02066] c 28 N71-15661  
Control of transverse instability in rocket combustors Patent  
[NASA-CASE-XLE-04603] c 33 N71-21507  
Vapor liquid separator Patent  
[NASA-CASE-XMF-04042] c 15 N71-23023  
Filler valve Patent  
[NASA-CASE-XNP-01747] c 15 N71-23024  
Propellant feed isolator Patent  
[NASA-CASE-LEW-10210-1] c 28 N71-26781  
Spherical shield Patent  
[NASA-CASE-XNP-01855] c 15 N71-28937  
Passive propellant system  
[NASA-CASE-MFS-23642-2] c 20 N78-27176  
Three stage rocket vehicle with parallel staging  
[NASA-CASE-MFS-25878-1] c 18 N84-27787  
System for connecting fluid couplings  
[NASA-CASE-MFS-26042-1-SB] c 37 N91-14613

**PROPELLANTS**

- Ignitability test method and apparatus  
[NASA-CASE-LAR-13996-1-SB] c 25 N90-15161  
Method of injecting fluid propellants into a rocket combustion chamber  
[NASA-CASE-LEW-14846-2] c 20 N91-26200

**PROPELLER BLADES**

- Propeller blade loading control Patent  
[NASA-CASE-XAC-00139] c 02 N70-34856

**PROPELLER EFFICIENCY**

- Over-the-wing propeller  
[NASA-CASE-LAR-13134-2] c 07 N87-16828

**PROPELLERS**

- Heads up display  
[NASA-CASE-LAR-12630-1] c 06 N84-27733  
Wingtip vortex propeller  
[NASA-CASE-LAR-13019-1] c 07 N85-35194  
High lift, low pitching moment airfoils  
[NASA-CASE-LAR-13215-1] c 02 N89-14224

**PROPORTIONAL CONTROL**

- Proportional controller Patent  
[NASA-CASE-XAC-03392] c 03 N70-41954

- Three-parameter tunable Tilt-Integral-Derivative (TID) controller  
[NASA-CASE-NPO-18492-1-CU] c 63 N93-29176

**PROPULSION SYSTEM CONFIGURATIONS**

- Electro-thermal rocket Patent  
[NASA-CASE-XLE-00267] c 28 N70-33356  
Propellant grain for rocket motors Patent  
[NASA-CASE-XGS-03556] c 27 N70-35534  
Composite powerplant and shroud therefor Patent  
[NASA-CASE-XLA-01043] c 28 N71-10780  
Annular slit colloid thruster Patent  
[NASA-CASE-GSC-10709-1] c 28 N71-25213  
Propellant tank pressurization system Patent  
[NASA-CASE-XNP-00650] c 27 N71-28929  
Apparatus for endoscopic examination --- analysis of the propulsion system configuration and transmitter  
[NASA-CASE-NPO-14092-1] c 52 N80-16725  
Aerospace vehicle  
[NASA-CASE-LAR-13155-1] c 05 N86-19310  
Propulsion apparatus and method using boil-off gas from a cryogenic liquid  
[NASA-CASE-MFS-25946-1] c 20 N86-26368  
Over-the-wing propeller  
[NASA-CASE-LAR-13134-2] c 07 N87-16828  
Variable orifice flow regulator  
[NASA-CASE-MSC-21549-1] c 34 N91-27504  
Shuttle orbiter with telescoping main propulsion unit and payload  
[NASA-CASE-LAR-13586-1] c 16 N92-10035  
Shuttle orbiter with telescoping main propulsion unit and payload  
[NASA-CASE-LAR-13586-1] c 16 N93-20115

**PROPULSION SYSTEM PERFORMANCE**

- Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c 07 N78-18067

**PROPYLENE**

- Stabilized unsaturated polyesters  
[NASA-CASE-NPO-16103-1] c 27 N85-29043

**PROSTHETIC DEVICES**

- Tactile sensing means for prosthetic limbs  
[NASA-CASE-MFS-16570-1] c 05 N73-32013  
Orthotic arm joint --- for use in mechanical arms  
[NASA-CASE-MFS-21611-1] c 54 N75-12616  
Actuator device for artificial leg  
[NASA-CASE-MFS-23225-1] c 52 N77-14735  
Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c 27 N77-30236  
Rotational joint assembly for the prosthetic leg  
[NASA-CASE-KSC-11004-1] c 54 N77-30749  
Mechanical energy storage device for hip disarticulation  
[NASA-CASE-ARC-10916-1] c 52 N78-10686  
Method of adhering bone to a rigid substrate using a graphite fiber reinforced bone cement  
[NASA-CASE-NPO-13764-1] c 27 N78-17215  
Compact artificial hand  
[NASA-CASE-NPO-13906-1] c 54 N79-24652  
Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c 52 N79-26772  
Prosthetic urinary sphincter  
[NASA-CASE-MFS-23717-1] c 52 N81-25660  
Texturing polymer surfaces by transfer casting --- cardiovascular prosthesis  
[NASA-CASE-LEW-13120-1] c 27 N82-28440  
Prosthetic occlusive device for an internal passageway  
[NASA-CASE-MFS-25740-1] c 52 N84-11744  
Compliant joint  
[NASA-CASE-GSC-13153-1] c 37 N91-17387  
Rotationally actuated prosthetic helping hand  
[NASA-CASE-MFS-28426-1] c 54 N91-32795  
Automatic locking orthotic knee device  
[NASA-CASE-MFS-28633-1] c 54 N92-17866  
Prosthetic helping hand  
[NASA-CASE-MFS-28430-1] c 54 N92-24044  
Bar-holding prosthetic limb  
[NASA-CASE-MFS-28481-1] c 54 N93-14870  
Control system and method for prosthetic devices  
[NASA-CASE-MSC-21941-1] c 54 N93-17087  
Prosthetic elbow joint  
[NASA-CASE-MFS-28707-1] c 54 N93-30566

**PROTECTION**

- Apparatus and method for protecting a photographic device Patent  
[NASA-CASE-NPO-10174] c 14 N71-18465  
Fiber modified polyurethane foam for ballistic protection  
[NASA-CASE-ARC-10714-1] c 27 N76-15310  
Lightning discharge protection rod  
[NASA-CASE-LAR-13470-1] c 03 N88-14083  
Pressure rig for repetitive casting  
[NASA-CASE-LAR-14050-1] c 31 N90-21216

**PROTECTIVE CLOTHING**

- Process for conditioning tanned sharkskin and articles made therefrom Patent  
[NASA-CASE-XMS-09691-1] c 18 N71-15545

- Biological isolation garment Patent  
[NASA-CASE-MSC-12206-1] c 05 N71-17599  
Garments for controlling the temperature of the body Patent  
[NASA-CASE-XMS-10269] c 05 N71-24147  
Foreshortened convolute section for a pressurized suit Patent  
[NASA-CASE-XMS-09637-1] c 05 N71-24730  
Protective suit having an audio transceiver Patent  
[NASA-CASE-KSC-10164] c 07 N71-33108  
Protective garment ventilation system  
[NASA-CASE-XMS-04928] c 54 N78-17679  
Ultra-violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments  
[NASA-CASE-MSC-16074-1] c 27 N80-26446  
Heat resistant protective hand covering  
[NASA-CASE-MSC-20261-2] c 54 N84-23113  
Protective helmet assembly  
[NASA-CASE-MSC-21842-1] c 54 N93-17088

**PROTECTIVE COATINGS**

- Coating process  
[NASA-CASE-XNP-06508] c 18 N69-39895  
Alkali-metal silicate protective coating  
[NASA-CASE-XGS-04119] c 18 N69-39979  
Process for applying a protective coating for salt bath brazing Patent  
[NASA-CASE-XLE-00046] c 15 N70-33311  
Method and apparatus for shock protection Patent  
[NASA-CASE-XLA-00482] c 15 N70-36409  
Thermal control of space vehicles Patent  
[NASA-CASE-XLA-01291] c 33 N70-36617  
Process for preparing sterile solid propellants Patent  
[NASA-CASE-XNP-01749] c 27 N70-41897  
Fire resistant coating composition Patent  
[NASA-CASE-GSC-10072] c 18 N71-14014  
Bacteriostatic conformal coating and methods of application Patent  
[NASA-CASE-GSC-10007] c 18 N71-16046  
Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00284] c 15 N71-16075  
Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00302] c 15 N71-16077  
Aerodynamic protection for space flight vehicles Patent  
[NASA-CASE-XNP-02507] c 31 N71-17679  
Heat protection apparatus Patent  
[NASA-CASE-XLA-00892] c 33 N71-17897  
Bismuth-lead coatings for gas bearings used in atmospheric environments and vacuum chambers Patent  
[NASA-CASE-XGS-02011] c 15 N71-20739  
Alkali metal silicate protective coating Patent  
[NASA-CASE-XGS-04799] c 18 N71-24183  
Process for reducing secondary electron emission Patent  
[NASA-CASE-XNP-09469] c 24 N71-25555  
Solid state thermal control polymer coating Patent  
[NASA-CASE-XLA-01745] c 33 N71-28903  
Method of coating through-holes Patent  
[NASA-CASE-XMF-05999] c 15 N71-29032  
Potassium silicate zinc coatings  
[NASA-CASE-GSC-10361-1] c 18 N72-23581  
Method of coating solar cell with borosilicate glass and resultant product  
[NASA-CASE-GSC-11514-1] c 03 N72-24037  
Semiconductor surface protection material  
[NASA-CASE-ERC-10339-1] c 18 N73-30532  
Nonflammable coating compositions --- for use in high oxygen environments  
[NASA-CASE-MFS-20486-2] c 27 N74-17283  
Fused silicide coatings containing discrete particles for protecting niobium alloys --- used in space shuttle thermal protection systems and turbine engine components  
[NASA-CASE-LEW-11179-1] c 27 N76-16229  
High temperature oxidation resistant cermet compositions  
[NASA-CASE-NPO-13666-1] c 27 N77-13217  
Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c 24 N77-19170  
Intumescent coatings containing 4,4'-dinitrosulfanilide  
[NASA-CASE-ARC-11042-1] c 24 N78-14096  
Sprayable low density ablator and application process  
[NASA-CASE-MFS-23506-1] c 24 N78-24290  
Reaction cured glass and glass coatings  
[NASA-CASE-ARC-11051-1] c 27 N78-32260  
Infusible silazane polymer and process for producing same --- protective coatings  
[NASA-CASE-XMF-02526-1] c 27 N79-21190  
Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c 15 N79-26100  
Improved refractory coatings --- sputtered coatings on substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c 26 N81-16209



Corrosion resistant thermal barrier coating --- protecting gas turbines and other engine parts  
[NASA-CASE-LEW-13088-1] c 26 N81-25188

Heat sealable, flame and abrasion resistant coated fabric --- clothing and containers for space exploration  
[NASA-CASE-MSC-18382-1] c 27 N82-16238

Method of protecting a surface with a silicon-slurry/aluminide coating --- coatings for gas turbine engine blades and vanes  
[NASA-CASE-LEW-13343-1] c 27 N82-28441

Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c 34 N83-27144

Silicon-slurry/aluminide coating --- protecting gas turbine engine vanes and blades  
[NASA-CASE-LEW-13343] c 26 N83-31795

Covering solid, film coated surfaces with a duplex thermal barrier coating  
[NASA-CASE-LEW-13450-1] c 31 N83-35177

Heat sealable, flame and abrasion resistant coated fabric  
[NASA-CASE-MSC-18382-2] c 27 N84-14324

Method and apparatus for coating substrates using a laser  
[NASA-CASE-LEW-13526-1] c 36 N84-22944

Coating with overlay metallic-cermet alloy systems  
[NASA-CASE-LEW-13639-2] c 26 N84-27855

Overlay metallic-cermet alloy coating systems  
[NASA-CASE-LEW-13639-1] c 26 N84-33555

Corrosion resistant coating  
[NASA-CASE-NPO-15928-1] c 26 N85-29005

Spray applicator for spraying coatings and other fluids in space  
[NASA-CASE-MSC-18852-1] c 37 N85-29283

Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-1] c 27 N86-19458

Process for preparing essentially colorless polyimide film containing phenoxy-linked diamines  
[NASA-CASE-LAR-13353-1] c 27 N86-29039

Apparatus for producing oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-2] c 27 N86-32569

Nickel base coating alloy  
[NASA-CASE-LEW-13834-1] c 26 N87-14482

Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N87-23736

Oxygen diffusion barrier coating  
[NASA-CASE-LAR-13474-1-SB] c 26 N87-25455

Hazards protection for space suits and spacecraft  
[NASA-CASE-MSC-21366-1] c 54 N90-25498

High temperature refractory member with radiation emissive overcoat  
[NASA-CASE-NPO-17122-1-CU] c 27 N91-14489

Metallic seal for thermal barrier coating systems  
[NASA-CASE-LEW-15020-1] c 27 N91-15412

Helmet of a laminate construction of polycarbonate and polysulfone polymeric material  
[NASA-CASE-MSC-21503-1] c 27 N92-10091

Sprayable lightweight ablative coating  
[NASA-CASE-MFS-28372-1] c 27 N92-16123

Oxidation resistant coating for titanium alloys and titanium alloy matrix composites  
[NASA-CASE-LEW-15155-1] c 27 N92-29090

Multi-layer light-weight protective coating and method for application  
[NASA-CASE-LAR-14448-1] c 27 N93-11912

Process for applying a superconductive powder to a wide variety of substrates  
[NASA-CASE-LAR-14729-1-CU] c 33 N93-19051

Oxidation resistant overlay coatings for low expansion substrates  
[NASA-CASE-LEW-15154-1] c 27 N93-19332

Atomic oxygen protective coating with resistance to undercutting at defect sites  
[NASA-CASE-LEW-15306-1] c 27 N93-20566

Diamond composite films for protective coatings on metals and method of formation  
[NASA-CASE-NPO-18501-1-CU] c 27 N93-28426

Plasma sprayed ceramic thermal barrier coating for NiAl-based intermetallic alloys  
[NASA-CASE-LEW-15535-1] c 26 N93-31294

Oxidation resistant overlay coatings for low expansion substrates  
[NASA-CASE-LEW-15154-2] c 27 N93-31300

PROTECTORS

Load cell protection device Patent  
[NASA-CASE-XMS-06782] c 32 N71-15974

Omnidirectional multiple impact landing system Patent  
[NASA-CASE-XLA-09881] c 31 N71-16085

Protective telescoping shield for solar concentrator  
[NASA-CASE-NPO-16236-1] c 44 N86-27706

**PROTEIN CRYSTAL GROWTH**

Drop deployment system for crystal growth apparatus  
[NASA-CASE-MFS-28422-1] c 29 N91-17250

Protein crystal growth tray assembly  
[NASA-CASE-MFS-28507-1] c 76 N92-34171

Method and apparatus for controlling protein crystallization  
[NASA-CASE-MFS-28688-1] c 76 N93-17043

PROTEINS

Protein sterilization method of firefly luciferase using reduced pressure and molecular sieves  
[NASA-CASE-GSC-10225-1] c 06 N73-27086

Hanging drop crystal growth apparatus and method  
[NASA-CASE-MFS-28206-1-SB] c 76 N90-23242

Crystal growth apparatus  
[NASA-CASE-MFS-28182-1] c 76 N90-24169

Apparatus and method for cellulose processing using microwave pretreatment  
[NASA-CASE-MSC-21938-1-SB] c 25 N93-22036

Pseudomonas screening assay  
[NASA-CASE-NPO-17653-1-CU] c 51 N93-25994

PROTOCOL (COMPUTERS)

Multicomputer communication system  
[NASA-CASE-NPO-15433-1] c 32 N85-21428

System and method for a general purpose architecture for intelligent computer-aided training  
[NASA-CASE-MSC-21381-1] c 63 N91-13944

PROTON FLUX DENSITY

Flame detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c 19 N74-29410

PROTOZOA

Process for selectively recovering algae and protozoa  
[NASA-CASE-MFS-26124-1-NPO] c 51 N93-29174

PROXIMITY

Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c 74 N85-22139

Distributed proximity sensor system  
[NASA-CASE-NPO-17275-1-CU] c 37 N89-29750

PSEUDOMONAS

Pseudomonas screening assay  
[NASA-CASE-NPO-17653-1-CU] c 51 N93-25994

PSEUDONOISE

Rapid sync acquisition system Patent  
[NASA-CASE-NPO-10214] c 10 N71-26577

Pseudonoise sequence generators with three tap linear feedback shift registers  
[NASA-CASE-NPO-11406] c 08 N73-12175

Two carrier communication system with single transmitter  
[NASA-CASE-NPO-11548] c 07 N73-26118

Pseudo-noise test set for communication system evaluation --- test signals  
[NASA-CASE-MFS-22671-1] c 35 N75-21582

Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c 32 N81-15179

PULLEYS

Tension measurement device Patent  
[NASA-CASE-XMS-04545] c 15 N71-22878

Tensile strength testing device Patent  
[NASA-CASE-XNP-05634] c 15 N71-24834

PULLING

Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N87-21332

PULMONARY CIRCULATION

Resuscitation apparatus Patent  
[NASA-CASE-XMS-01115] c 05 N70-39922

PULMONARY FUNCTIONS

Instrument for use in performing a controlled Valsalva maneuver Patent  
[NASA-CASE-XMS-01615] c 05 N70-41329

PULSE AMPLITUDE

System for monitoring signal amplitude ranges  
[NASA-CASE-XMS-04061-1] c 09 N69-39885

Analog to digital converter Patent  
[NASA-CASE-XLA-00670] c 08 N71-12501

Pulse amplitude and width detector Patent  
[NASA-CASE-XMF-06519] c 09 N71-12519

Analog-to-digital converter  
[NASA-CASE-XNP-00477] c 08 N73-28045

Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-11389-1] c 33 N77-26387

PULSE AMPLITUDE MODULATION

Speech analyzer  
[NASA-CASE-GSC-11898-1] c 32 N77-30309

Power factor control system for ac induction motors  
[NASA-CASE-MFS-23988-1] c 33 N81-27395

Video processor for air traffic control beacon system  
[NASA-CASE-KSC-11155-1] c 04 N86-19304

Method and apparatus for characterizing reflected ultrasonic pulses  
[NASA-CASE-LAR-13966-1] c 71 N91-27914

PULSE AMPLITUDE MODULATION

Signal ratio system utilizing voltage controlled oscillators  
[NASA-CASE-XMF-04367] c 09 N71-23545

Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c 33 N82-24418

PULSE CODE MODULATION

Adaptive compression of communication signals Patent  
[NASA-CASE-XLA-03076] c 07 N71-11266

Bi-polar phase detector and corrector for split phase PCM data signals Patent  
[NASA-CASE-XGS-01590] c 07 N71-12392

System for recording and reproducing pulse code modulated data Patent  
[NASA-CASE-XGS-01021] c 08 N71-21042

Frequency shift keying apparatus Patent  
[NASA-CASE-XGS-01537] c 07 N71-23405

Data compression system  
[NASA-CASE-NPO-11243] c 07 N72-20154

Method and apparatus for frequency-division multiplex communications by digital phase shift of carrier  
[NASA-CASE-NPO-11338] c 08 N72-25208

Apparatus for deriving synchronizing pulses from pulses in a single channel PCM communications system  
[NASA-CASE-NPO-11302-1] c 07 N73-13149

Method and apparatus for a single channel digital communications system --- synchronization of received PCM signal by digital correlation with reference signal  
[NASA-CASE-NPO-11302-2] c 32 N74-10132

Multifunction audio digitizer --- producing direct delta and pulse code modulation  
[NASA-CASE-MSC-13855-1] c 35 N74-17885

Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12462-1] c 32 N74-20809

Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12494-1] c 32 N74-20810

Digital transmitter for data bus communications system  
[NASA-CASE-MSC-14558-1] c 32 N75-21486

Compact bi-phase pulse coded modulation decoder  
[NASA-CASE-KSC-10834-1] c 33 N76-14371

Low distortion receiver for bi-level baseband PCM waveforms  
[NASA-CASE-MSC-14557-1] c 32 N76-16249

Differential pulse code modulation  
[NASA-CASE-MSC-12506-1] c 32 N77-12239

Digital demodulator  
[NASA-CASE-LAR-12659-1] c 33 N82-26570

Method and apparatus for operating on companded PCM voice data  
[NASA-CASE-KSC-11285-1] c 32 N86-27513

PULSE COMMUNICATION

Phase-shift data transmission system having a pseudo-noise SYNC code modulated with the data in a single channel Patent  
[NASA-CASE-XNP-00911] c 08 N70-41961

Differential pulse code modulation  
[NASA-CASE-MSC-12506-1] c 32 N77-12239

Memory-based frame synchronizer --- for digital communication systems  
[NASA-CASE-GSC-12430-1] c 60 N82-16747

Method and apparatus for operating on companded PCM voice data  
[NASA-CASE-KSC-11285-1] c 32 N86-27513

Trellis coded modulation for transmission over fading mobile satellite channel  
[NASA-CASE-NPO-16904-2-CU] c 32 N91-14523

PULSE DURATION

Frequency to analog converter Patent  
[NASA-CASE-XNP-07040] c 08 N71-12500

Pulse amplitude and width detector Patent  
[NASA-CASE-XMF-06519] c 09 N71-12519

Variable pulse width multiplier Patent  
[NASA-CASE-XLA-02850] c 09 N71-20447

Pulse width inverter Patent  
[NASA-CASE-MFS-10068] c 10 N71-25139

Multivibrator circuit with means to prevent false triggering from supply voltage fluctuations Patent  
[NASA-CASE-ARC-10137-1] c 09 N71-28468

Pulse stretcher for narrow pulses  
[NASA-CASE-MSC-14130-1] c 33 N74-32711

Method and circuit for controlling the evolution time interval of a laser output pulse  
[NASA-CASE-LAR-13772-1] c 36 N92-31788

PULSE DURATION MODULATION

Pulse-width modulation multiplier Patent  
[NASA-CASE-XER-09213] c 07 N71-12390

Variable duration pulse integrator Patent  
[NASA-CASE-XLA-01219] c 10 N71-23084

Transistor servo system including a unique differential amplifier circuit Patent  
[NASA-CASE-XMF-05195] c 10 N71-24861

Control apparatus for applying pulses of selectively predetermined duration to a sequence of loads Patent  
[NASA-CASE-XGS-04224] c 10 N71-26418

Monostable multivibrator with complementary NOR gates Patent  
[NASA-CASE-MSC-13492-1] c 10 N71-28860

Load current sensor for a series pulse width modulated power supply  
[NASA-CASE-GSC-10656-1] c 09 N72-25249

Buck/boost regulator  
[NASA-CASE-GSC-12360-1] c 33 N81-19392

# PULSE FREQUENCY MODULATION

- Apparatus for measuring current flow Patent  
[NASA-CASE-XGS-02439] c 14 N71-19431
- Digitally controlled frequency synthesizer Patent  
[NASA-CASE-XGS-02317] c 09 N71-23525
- Noninterruptible digital counting system Patent  
[NASA-CASE-XNP-09759] c 08 N71-24891
- Frequency modulation demodulator threshold extension device Patent  
[NASA-CASE-MSC-12165-1] c 07 N71-33696
- Versatile LDV burst simulator  
[NASA-CASE-LAR-11859-1] c 35 N79-14349

# PULSE GENERATORS

- High voltage pulse generator Patent  
[NASA-CASE-MSC-12178-1] c 09 N71-13518
- Flipflop interrogator and bi-polar current driver Patent  
[NASA-CASE-XGS-03058] c 10 N71-19547
- Pulse modulator providing fast rise and fall times Patent  
[NASA-CASE-XMS-04919] c 09 N71-23270
- Passive synchronized spike generator with high input impedance and low output impedance and capacitor power supply Patent  
[NASA-CASE-XGS-03632] c 09 N71-23311
- Resettable monostable pulse generator Patent  
[NASA-CASE-GSC-11139] c 09 N71-27016
- Pulse generating circuit employing switch means on ends of delay line for alternately charging and discharging same Patent  
[NASA-CASE-XNP-00745] c 10 N71-28960
- Pulse coupling circuit  
[NASA-CASE-LEW-10433-1] c 09 N72-22197
- Method and apparatus for nondestructive testing --- using high frequency arc discharges  
[NASA-CASE-MFS-21233-1] c 38 N74-15395
- Random pulse generator  
[NASA-CASE-MSC-14131-1] c 33 N75-19515
- Active lamp pulse driver circuit --- optical pumping of laser media  
[NASA-CASE-GSC-12566-1] c 33 N83-34189
- Synchronization tracking in pulse position modulation receiver  
[NASA-CASE-NPO-16256-1] c 32 N87-21207

# PULSE HEATING

- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-1] c 35 N82-25484

# PULSE MODULATION

- Synchronization tracking in pulse position modulation receiver  
[NASA-CASE-NPO-16256-1] c 32 N87-21207

# PULSE RATE

- Counter Patent  
[NASA-CASE-XNP-06234] c 10 N71-27137
- Peak holding circuit for extremely narrow pulses  
[NASA-CASE-MSC-14129-1] c 33 N75-18479
- Dual physiological rate measurement instrument  
[NASA-CASE-MSC-20078-3] c 52 N91-14709

# PULSED LASERS

- Repetitively pulsed, wavelength selective laser Patent  
[NASA-CASE-ERC-10178] c 16 N71-24832
- Dually mode locked Nd:YAG laser  
[NASA-CASE-GSC-11746-1] c 36 N75-19654
- Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c 36 N77-26477
- Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NPO-14657-1] c 74 N81-17887
- Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c 33 N82-24418
- Coherently pulsed laser source  
[NASA-CASE-NPO-15111-1] c 36 N82-29589
- Active lamp pulse driver circuit --- optical pumping of laser media  
[NASA-CASE-GSC-12566-1] c 33 N83-34189
- Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629
- Sample positioning in microgravity  
[NASA-CASE-NPO-18448-1-CU] c 29 N92-30083
- Sample positioning in microgravity  
[NASA-CASE-NPO-18448-1-CU] c 29 N93-24600

# PULSED RADIATION

- Cyclically operable optical shutter  
[NASA-CASE-NPO-10758] c 14 N73-14427
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373
- Acoustic radiation stress measurement  
[NASA-CASE-LAR-13440-1] c 71 N87-21653
- Method and apparatus for characterizing reflected ultrasonic pulses  
[NASA-CASE-LAR-13966-1] c 71 N91-27914

# PULSES

- High pulse rate high resolution optical radar system  
[NASA-CASE-NPO-11426] c 07 N73-26119

# PULTRUSION

- Pultrusion die assembly  
[NASA-CASE-LAR-13719-1] c 37 N89-12867
- Continuous fiber thermoplastic prepreg  
[NASA-CASE-LAR-14459-1] c 24 N91-15334
- Continuous fiber thermoplastic prepreg  
[NASA-CASE-LAR-14459-1] c 24 N93-24597

# PUMP SEALS

- Fluid impervious barrier including liquid metal alloy and method of making same Patent  
[NASA-CASE-XNP-08881] c 17 N71-28747
- Spiral groove seal --- for hydraulic rotating shaft  
[NASA-CASE-LEW-10326-3] c 37 N74-10474

# PUMPS

- Piezoelectric pump Patent  
[NASA-CASE-XNP-05429] c 26 N71-21824
- Vapor liquid separator Patent  
[NASA-CASE-XMF-04042] c 15 N71-23023
- Automatic pump Patent  
[NASA-CASE-XNP-04731] c 15 N71-24042
- Hydraulic transformer Patent  
[NASA-CASE-MFS-20830] c 15 N71-30028
- Firefly pump-metering system  
[NASA-CASE-GSC-10218-1] c 15 N72-21465
- Magnetocaloric pump --- for cryogenic fluids  
[NASA-CASE-LEW-11672-1] c 37 N74-27904
- Continuous coal processing method  
[NASA-CASE-NPO-13758-2] c 31 N81-15154
- Gas-to-hydraulic power converter  
[NASA-CASE-MSC-18794-1] c 44 N83-14693
- Variable speed drive  
[NASA-CASE-GSC-12643-1] c 37 N83-26078
- Reciprocating magnetic refrigerator employing tandem porous matrices within a reciprocating displacer  
[NASA-CASE-NPO-16257-1] c 31 N85-29082
- Remotely operable peristaltic pump  
[NASA-CASE-MFS-28059-1] c 37 N86-32738
- Multi-path peristaltic pump  
[NASA-CASE-MSC-20907-1] c 37 N87-18818
- Pumped two-phase heat transfer loop  
[NASA-CASE-MSC-20841-1] c 34 N87-22950
- Pumped two-phase heat transfer loop  
[NASA-CASE-MSC-20841-2] c 34 N88-23958
- Polymeric heat pipe wick  
[NASA-CASE-GSC-13019-1] c 34 N88-29133

# PUNCHED CARDS

- File card marker Patent  
[NASA-CASE-XLA-02705] c 08 N71-15908
- Device for handling printed circuit cards Patent  
[NASA-CASE-MFS-20453] c 15 N71-29133

# PUNCHES

- Convoluting device for forming convolutions and the like Patent  
[NASA-CASE-XNP-05297] c 15 N71-23811

# PURGING

- Techniques for insulating cryogenic fuel containers Patent  
[NASA-CASE-XLA-01967] c 31 N70-42015
- High pressure gas filter system Patent  
[NASA-CASE-MFS-12806] c 14 N71-17588
- Apparatus for purging systems handling toxic, corrosive, noxious and other fluids Patent  
[NASA-CASE-XMS-01905] c 12 N71-21089
- Purge device for thrust engines Patent  
[NASA-CASE-XMS-04826] c 28 N71-28849
- Purging means and method for Xenon arc lamps  
[NASA-CASE-NPO-11978] c 31 N78-17238

# PURIFICATION

- High pressure helium purifier Patent  
[NASA-CASE-XMF-06888] c 15 N71-24044
- Method and apparatus for distillation of liquids Patent  
[NASA-CASE-XNP-08124] c 15 N71-27184
- Targets for producing high purity I-123  
[NASA-CASE-LEW-10518-3] c 25 N78-27226
- Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c 85 N79-17747
- Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c 26 N80-14229
- Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c 27 N81-14076
- Electromigrating process for the purification of molten silicon during crystal growth  
[NASA-CASE-NPO-14831-1] c 76 N82-30105
- Nebulization reflux concentrator  
[NASA-CASE-LAR-13254-1CU] c 35 N86-29174
- Purification system  
[NASA-CASE-MSC-21584-1] c 25 N92-33029

# PURITY

- Process for preparation of dianilinosilanes Patent  
[NASA-CASE-XMF-06409] c 06 N71-23230
- Low defect, high purity crystalline layers grown by selective deposition  
[NASA-CASE-NPO-15813-1] c 76 N85-30922
- Quasi-containerless glass formation method and apparatus  
[NASA-CASE-MFS-28090-1] c 27 N87-21111
- Converting a CO2 atmosphere to a high-purity O2 supply  
[NASA-CASE-LAR-14398-1] c 25 N92-30098

# PUSH-PULL AMPLIFIERS

- Frequency modulated oscillator  
[NASA-CASE-MFS-23181-1] c 33 N77-17351
- Low current linearization of magnetic amplifier for dc transducer  
[NASA-CASE-NPO-14617-1] c 33 N81-24338
- Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c 33 N81-33404

# PUSHING

- Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N87-21332

# PYLONS

- Decoupler pylon: wing/store flutter suppressor  
[NASA-CASE-LAR-12468-1] c 08 N82-32373
- Compression pylon  
[NASA-CASE-LAR-13777-1] c 05 N90-20078

# PYRIDINES

- Nuclear alkylated pyridine aldehyde polymers and conductive compositions thereof  
[NASA-CASE-NPO-10557] c 27 N78-17214
- Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
[NASA-CASE-ARC-11429-1-CU] c 27 N86-20560
- Vinyl stilbazoles  
[NASA-CASE-ARC-11429-3CU] c 27 N87-16908
- Structural panels  
[NASA-CASE-ARC-11429-2-CU] c 27 N87-22845

# PYROELECTRICITY

- Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c 35 N82-31659
- Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-2] c 33 N83-24763

# PYROGEN

- Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c 20 N78-24275

# PYROLYSIS

- Molten salt pyrolysis of latex --- synthetic hydrocarbon fuel production using the Guayule shrub  
[NASA-CASE-NPO-14315-1] c 27 N81-17261
- Thermal reactor --- liquid silicon production from silane gas  
[NASA-CASE-NPO-14369-1] c 44 N83-10501
- Solar heated oil shale pyrolysis process  
[NASA-CASE-NPO-16392-1] c 25 N86-25428
- Ceramic honeycomb structures and the method thereof  
[NASA-CASE-ARC-11652-1] c 27 N87-23737

# PYROLYTIC GRAPHITE

- Multilist film cooled pyrolytic graphite rocket nozzle Patent  
[NASA-CASE-XNP-04389] c 28 N71-20942
- Ion sputter textured graphite --- anode collector plates in electron tube devices  
[NASA-CASE-LEW-12919-1] c 24 N83-10117
- Ion sputter textured graphite electrode plates  
[NASA-CASE-LEW-12919-2] c 70 N84-28565
- Heat transfer device and method of making the same  
[NASA-CASE-LEW-14162-1] c 34 N91-13668
- Semiconductor cooling apparatus  
[NASA-CASE-LEW-14162-3] c 24 N93-29614

# PYROLYTIC MATERIALS

- Ablation structures Patent  
[NASA-CASE-XMS-01816] c 33 N71-15623

# PYROMETERS

- Ablation sensor  
[NASA-CASE-XLA-01781] c 14 N69-39975
- Noncontact temperature pattern measuring device  
[NASA-CASE-NPO-17024-1-CU] c 35 N88-24943
- Noncontact temperature pattern measuring device  
[NASA-CASE-NPO-17824-1-CU] c 36 N90-17132

# PYROTECHNICS

- Disconnect unit  
[NASA-CASE-NPO-11330] c 33 N73-26958
- Fully redundant mechanical release actuator  
[NASA-CASE-LAR-13198-1] c 37 N87-23983
- Double swivel toggle release  
[NASA-CASE-MSC-21436-1] c 37 N90-21390

# PYRRONES (TRADEMARK)

- Method for forming pyrrone molding powders and products of said method  
[NASA-CASE-LAR-10423-1] c 23 N82-29358

## Q

## Q SWITCHED LASERS

- Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c 28 N74-27425
- Spatial filter for Q-switched lasers  
[NASA-CASE-LEW-12164-1] c 36 N77-32478
- Laser Resonator  
[NASA-CASE-GSC-12565-1] c 36 N84-14509
- Method and circuit for shaping laser output pulses  
[NASA-CASE-LAR-14203-1] c 36 N89-28817
- Method and circuit for controlling the evolution time interval of a laser output pulse  
[NASA-CASE-LAR-13772-1] c 36 N92-31788
- Method and apparatus for detection and control of preflashing in a Q-switched laser  
[NASA-CASE-LAR-14790-1] c 36 N93-19373

## Q VALUES

- Active RC networks  
[NASA-CASE-ARC-10042-2] c 10 N72-11256

## QUADRANTS

- Remote object configuration/orientation determination  
[NASA-CASE-NPO-17436-1-CU] c 35 N91-15512

## QUADRATIC PROGRAMMING

- Quadrature demodulation  
[NASA-CASE-GSC-12137-1] c 33 N78-32338

## QUADRATURES

- Automatic quadrature control and measuring system --- using optical coupling circuitry  
[NASA-CASE-MFS-21660-1] c 35 N74-21017

## QUALITATIVE ANALYSIS

- Ultraviolet atomic emission detector  
[NASA-CASE-HQN-10756-1] c 14 N72-25428
- Analysis of volatile organic compounds --- trace amounts of organic volatiles in gas samples  
[NASA-CASE-MSC-14428-1] c 23 N77-17161
- Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points  
[NASA-CASE-MSC-16841-1] c 34 N79-24285

## QUANTITATIVE ANALYSIS

- Fluid phase analyzer Patent  
[NASA-CASE-NPO-10691] c 14 N71-26199
- Apparatus for detecting the amount of material in a resonant cavity container Patent  
[NASA-CASE-XNP-02500] c 18 N71-27397
- Ultraviolet atomic emission detector  
[NASA-CASE-HQN-10756-1] c 14 N72-25428
- Nondispersive gas analyzing method and apparatus wherein radiation is serially passed through a reference and unknown gas  
[NASA-CASE-ARC-10308-1] c 06 N72-31141
- Analysis of volatile organic compounds --- trace amounts of organic volatiles in gas samples  
[NASA-CASE-MSC-14428-1] c 23 N77-17161
- Electrophotolysis oxidation system for measurement of organic concentration in water  
[NASA-CASE-MSC-16497-1] c 25 N82-12166
- Method for detecting coliform organisms  
[NASA-CASE-ARC-11322-1] c 51 N83-28849

## QUANTUM THEORY

- III-V photocathode with nitrogen doping for increased quantum efficiency  
[NASA-CASE-NPO-12134-1] c 33 N76-31409

## QUANTUM WELLS

- Growth of III-V films by control of MBE growth front stoichiometry  
[NASA-CASE-NPO-17724-1-CU] c 76 N92-22035
- Quantum well, beam deflecting surface emitting lasers  
[NASA-CASE-NPO-18243-1-CU] c 36 N93-13418
- Long wavelength infrared detector  
[NASA-CASE-NPO-17543-2-CU] c 35 N93-19387

## QUARTZ

- Ultraviolet filter  
[NASA-CASE-XNP-02340] c 23 N69-24332
- Method for attaching a fused-quartz mirror to a conductive metal substrate  
[NASA-CASE-MFS-23405-1] c 26 N77-29260
- Quartz ball valve  
[NASA-CASE-NPO-14473-1] c 37 N80-23654
- Ampoule sealing apparatus and process --- for housing a semiconductor growth charge under vacuum  
[NASA-CASE-LAR-12847-1] c 33 N83-16633

## QUARTZ LAMPS

- High intensity heat and light unit Patent  
[NASA-CASE-XLA-00141] c 09 N70-33312
- Light shield and cooling apparatus --- high intensity ultraviolet lamp  
[NASA-CASE-LAR-10089-1] c 34 N74-23066

## QUEUEING THEORY

- Neural-network dedicated processor for solving competitive assignment problems  
[NASA-CASE-NPO-17781-1-CU] c 60 N92-17884
- Neural-network dedicated processor for solving competitive assignment problems  
[NASA-CASE-NPO-17781-1-CU] c 60 N93-20116

## QUINOXALINES

- Polyphenylquinoxalines containing pendant phenylethynyl and ethynyl groups --- for thermoplastic resins  
[NASA-CASE-LAR-12838-1] c 27 N83-34040
- Polyphenylquinoxalines via aromatic nucleophilic displacement  
[NASA-CASE-LAR-13988-1] c 23 N89-11814

## R

## RACKS (FRAMES)

- Test stand system for vacuum chambers  
[NASA-CASE-MFS-21362] c 11 N73-20267
- Thrust-isolating mounting --- characteristics of support for loads mounted in spacecraft  
[NASA-CASE-MFS-21680-1] c 18 N74-27397
- Automated syringe sampler --- remote sampling of air and water  
[NASA-CASE-LAR-12308-1] c 35 N81-29407
- Laboratory glassware rack for seismic safety  
[NASA-CASE-ARC-11422-1] c 35 N86-20751

## RADAR ANTENNAS

- Radar antenna system for acquisition and tracking Patent  
[NASA-CASE-XMS-09610] c 07 N71-24625
- Variable beamwidth antenna --- with multiple beam, variable feed system  
[NASA-CASE-GSC-11862-1] c 32 N76-18295
- Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NPO-13568-1] c 32 N76-21365
- Baseband signal combiner for large aperture antenna array  
[NASA-CASE-NPO-14641-1] c 32 N81-29308

## RADAR ATTENUATION

- FM/CW radar system  
[NASA-CASE-MFS-22234-1] c 32 N79-10264

## RADAR BEACONS

- Video processor for air traffic control beacon system  
[NASA-CASE-KSC-11155-1] c 04 N86-19304

## RADAR BEAMS

- Method and apparatus for measuring frequency and phase difference  
[NASA-CASE-MSC-20865-1] c 32 N87-18692

## RADAR CROSS SECTIONS

- Almond test body --- for microwave anechoic chambers  
[NASA-CASE-LAR-13747-1-CU] c 32 N89-28672
- Method and apparatus for sensor fusion  
[NASA-CASE-MSC-21334-1] c 32 N91-25317

## RADAR DATA

- Charge-coupled device data processor for an airborne imaging radar system  
[NASA-CASE-NPO-13587-1] c 32 N77-32342
- Pipeline synthetic aperture radar data compression utilizing systolic binary tree-searched architecture for vector quantization  
[NASA-CASE-NPO-17941-1-CU] c 32 N91-13595
- Generation of topographic terrain models utilizing synthetic aperture radar and surface level data  
[NASA-CASE-GSC-13212-1] c 43 N91-32546

## RADAR DETECTION

- Method and apparatus for measuring frequency and phase difference  
[NASA-CASE-MSC-20865-1] c 32 N87-18692

## RADAR ECHOES

- Charge-coupled device data processor for an airborne imaging radar system  
[NASA-CASE-NPO-13587-1] c 32 N77-32342

## RADAR EQUIPMENT

- Method and apparatus for mapping planets  
[NASA-CASE-NPO-11001] c 07 N72-21118
- FM/CW radar system  
[NASA-CASE-MFS-22234-1] c 32 N79-10264

## RADAR IMAGERY

- Method of locating persons in distress --- by using radar imagery from radar reflectors  
[NASA-CASE-LAR-11390-1] c 32 N77-21267
- Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-1] c 32 N79-19195
- Radar target for remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c 43 N80-18498
- Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c 32 N82-12297
- Clutter free synthetic aperture radar correlator  
[NASA-CASE-NPO-14035-1] c 32 N83-19968
- Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c 32 N83-31918

- Method and apparatus for contour mapping using synthetic aperture radar  
[NASA-CASE-NPO-15939-1] c 43 N86-19711
- Method for providing a polarization filter for processing synthetic aperture radar image data  
[NASA-CASE-NPO-17904-1-CU] c 32 N91-13594
- Method for detecting surface motions and mapping small terrestrial or planetary surface deformations with synthetic aperture radar  
[NASA-CASE-NPO-17831-1-CU] c 43 N91-14642
- Generation of topographic terrain models utilizing synthetic aperture radar and surface level data  
[NASA-CASE-GSC-13212-1] c 43 N91-32546

## RADAR MEASUREMENT

- Thickness measurement system  
[NASA-CASE-MFS-23721-1] c 31 N79-28370

## RADAR RANGE

- Radar ranging receiver Patent  
[NASA-CASE-XNP-00748] c 07 N70-36911

## RADAR RECEIVERS

- Polarization diversity monopulse tracking receiver Patent  
[NASA-CASE-XGS-03501] c 09 N71-20864

## RADAR RECEPTION

- Radar ranging receiver Patent  
[NASA-CASE-XNP-00748] c 07 N70-36911

## RADAR REFLECTORS

- Inflatable radar reflector unit Patent  
[NASA-CASE-XMS-00893] c 07 N70-40063
- Method of locating persons in distress --- by using radar imagery from radar reflectors  
[NASA-CASE-LAR-11390-1] c 32 N77-21267

## RADAR TARGETS

- Radar target for remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c 43 N80-18498
- Synthetic aperture radar target simulator  
[NASA-CASE-NPO-15024-1] c 32 N84-27951

## RADAR TRACKING

- Tracking antenna system Patent  
[NASA-CASE-GSC-10553-1] c 07 N71-19854
- Polarization diversity monopulse tracking receiver Patent  
[NASA-CASE-XGS-03501] c 09 N71-20864

## RADAR TRANSMITTERS

- Monopulse tracking system Patent  
[NASA-CASE-XGS-01155] c 10 N71-21483
- Radar calibration sphere  
[NASA-CASE-XLA-11154] c 07 N72-21117

- Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c 32 N82-23376

- Motion-sensitive optical correlator  
[NASA-CASE-NPO-18769-1-CU] c 74 N93-28133

## RADAR TRANSMITTERS

- High pulse rate high resolution optical radar system  
[NASA-CASE-NPO-11426] c 07 N73-26119

## RADIAL DISTRIBUTION

- Ultrasonic transducer with Gaussian radial pressure distribution  
[NASA-CASE-LAR-12967-1] c 35 N84-22932

## RADIAL FLOW

- Radial heat flux transformer  
[NASA-CASE-NPO-10828] c 33 N72-17948
- Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c 37 N76-18459

## RADIANCE

- Shock-layer radiation measurement  
[NASA-CASE-XAC-02970] c 14 N69-39896

## RADIANT COOLING

- Direct radiation cooling of the collector of linear beam tubes  
[NASA-CASE-XNP-09227] c 15 N69-24319

- Process for applying black coating to metals Patent  
[NASA-CASE-XLA-06199] c 15 N71-24875

- Method for attaching a fused-quartz mirror to a conductive metal substrate  
[NASA-CASE-MFS-23405-1] c 26 N77-29260

- Radiative cooler --- spacecraft radiators  
[NASA-CASE-NPO-15465-1] c 34 N84-22903

- Liquid sheet radiator apparatus  
[NASA-CASE-LEW-14295-1] c 31 N91-15424

## RADIANT FLUX DENSITY

- High intensity radiant energy pulse source having means for opening shutter when light flux has reached a desired level  
[NASA-CASE-ARC-10178-1] c 09 N72-17152
- Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c 33 N80-18287

## RADIANT HEATING

- High intensity heat and light unit Patent  
[NASA-CASE-XLA-00141] c 09 N70-33312
- High temperature heat source Patent  
[NASA-CASE-XLE-00490] c 33 N70-34545

- Radiant heater having formed filaments Patent  
[NASA-CASE-XLE-00387] c 33 N70-34812

- Ceramic insulation for radiant heating environments and method of preparing the same Patent  
[NASA-CASE-MFS-14253] c 33 N71-24858
- Portable linear-focused solar thermal energy collecting system  
[NASA-CASE-NPO-13734-1] c 44 N78-10554
- High thermal power density heat transfer --- thermionic converters  
[NASA-CASE-LEW-12950-1] c 34 N82-11399
- RADIATION**
- Two color horizon sensor  
[NASA-CASE-ERC-10174] c 14 N72-25409
- Irradiance measuring device  
[NASA-CASE-NPO-11493] c 14 N73-12447
- Analog to digital converter for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-3] c 60 N77-32731
- Memory device for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-2] c 60 N78-10709
- RADIATION ABSORPTION**
- NDIR gas analyzer based on absorption modulation ratios for known and unknown samples  
[NASA-CASE-ARC-10802-1] c 35 N75-30502
- Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c 44 N79-11469
- Broadband optical radiation detector  
[US-PATENT-4,262,198] c 74 N83-19597
- Extra-corporeal blood access, sensing, and radiation methods and apparatuses  
[NASA-CASE-MSC-21775-1] c 52 N92-11627
- RADIATION COUNTERS**
- Particle detection apparatus Patent  
[NASA-CASE-XLA-00135] c 14 N70-33322
- Method and apparatus for determining satellite orientation utilizing spatial energy sources Patent  
[NASA-CASE-XGS-00466] c 21 N70-34297
- Particle beam measurement apparatus using beam kinetic energy to change the heat sensitive resistance of the detection probe Patent  
[NASA-CASE-XLE-00243] c 14 N70-38602
- Baseline stabilization system for ionization detector Patent  
[NASA-CASE-XNP-03128] c 10 N70-41991
- Method of forming thin window drifted silicon charged particle detector Patent  
[NASA-CASE-XLE-00808] c 24 N71-10560
- Dosimeter for high levels of absorbed radiation Patent  
[NASA-CASE-XLA-03645] c 14 N71-20430
- Coincidence apparatus for detecting particles  
[NASA-CASE-XLA-07813] c 14 N72-17328
- Radiation and particle detector and amplifier  
[NASA-CASE-NPO-12128-1] c 14 N73-32317
- Coaxial anode wire for gas radiation counters  
[NASA-CASE-GSC-11492-1] c 35 N74-26949
- Particle parameter analyzing system --- x-y plotter circuits and display  
[NASA-CASE-XLE-06094] c 33 N78-17293
- Method and means for helium/hydrogen ratio measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c 25 N80-20334
- Ion mass spectrometer  
[NASA-CASE-NPO-15423-1] c 35 N84-28016
- Radionuclide counting technique for measuring wind velocity and direction  
[NASA-CASE-LAR-12971-1] c 47 N84-28292
- RADIATION DAMAGE**
- Semiconductor material and method of making same Patent  
[NASA-CASE-XLE-02798] c 26 N71-23654
- Recovery of radiation damaged solar cells through thermal annealing  
[NASA-CASE-XGS-04047-2] c 03 N72-11062
- Photomultiplier circuit including means for rapidly reducing the sensitivity thereof --- and protection from radiation damage  
[NASA-CASE-ARC-10593-1] c 33 N74-27682
- Lithium counterdoped silicon solar cell  
[NASA-CASE-LEW-14177-1] c 44 N86-32875
- RADIATION DETECTORS**
- Penetrating radiation system for detecting the amount of liquid in a tank Patent  
[NASA-CASE-MSC-12280] c 27 N71-16348
- Light detection instrument Patent  
[NASA-CASE-XGS-05534] c 23 N71-16355
- Attitude sensor for space vehicles Patent  
[NASA-CASE-XLA-00793] c 21 N71-22880
- Extended area semiconductor radiation detectors and a novel readout arrangement Patent  
[NASA-CASE-XGS-03230] c 14 N71-23401
- Nondispersive gas analyzing method and apparatus wherein radiation is serially passed through a reference and unknown gas  
[NASA-CASE-ARC-10308-1] c 06 N72-31141
- Radiant source tracker independent of nonconstant irradiance  
[NASA-CASE-NPO-11686] c 14 N73-25462
- Radiation and particle detector and amplifier  
[NASA-CASE-NPO-12128-1] c 14 N73-32317
- Mossbauer spectrometer radiation detector  
[NASA-CASE-LAR-11155-1] c 35 N74-15091
- High field CdS detector for infrared radiation  
[NASA-CASE-LAR-11027-1] c 35 N74-18088
- Flame detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c 19 N74-29410
- Wide angle sun sensor --- consisting of cylinder, insulation and pair of detectors  
[NASA-CASE-NPO-13327-1] c 35 N75-23910
- Detector absorptivity measuring method and apparatus  
[NASA-CASE-LAR-10907-1] c 35 N76-29551
- Wedge immersed thermistor bolometers  
[NASA-CASE-XGS-01245-1] c 35 N79-33449
- X-ray position detector  
[NASA-CASE-NPO-12087-1] c 74 N81-19898
- Broadband optical radiation detector  
[US-PATENT-4,262,198] c 74 N83-19597
- Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c 35 N83-21311
- Method and apparatus for precision control of radiometer  
[NASA-CASE-NPO-15398-1] c 35 N84-22931
- Double photon excitation of high-Rydberg atoms as a long-lived submillimeter detector  
[NASA-CASE-NPO-16372-1] c 72 N86-33127
- Apparatus and procedure to detect a liquid-solid interface during crystal growth in a bridgman furnace  
[NASA-CASE-LAR-13597-1-CU] c 25 N87-23713
- X ray sensitive area detection device  
[NASA-CASE-MFS-28232-1] c 74 N91-14835
- Multiwavelength pyrometer for gray and non-gray surfaces in the presence of interfering radiation  
[NASA-CASE-LEW-15250-1] c 35 N93-17060
- RADIATION DISTRIBUTION**
- Space simulator Patent  
[NASA-CASE-XNP-00459] c 11 N70-38675
- Extra-corporeal blood access, sensing, and radiation methods and apparatuses  
[NASA-CASE-MSC-21775-1] c 52 N92-11627
- RADIATION DOSAGE**
- Dosimeter for high levels of absorbed radiation Patent  
[NASA-CASE-XLA-03645] c 14 N71-20430
- Method for analyzing radiation sensitivity of integrated circuits  
[NASA-CASE-NPO-14350-1] c 33 N80-14332
- Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c 35 N83-21311
- Extra-corporeal blood access, sensing, and radiation methods and apparatuses  
[NASA-CASE-MSC-21775-1] c 52 N92-11627
- RADIATION EFFECTS**
- Method of temperature compensating semiconductor strain gages Patent  
[NASA-CASE-XLA-04555-1] c 14 N71-25892
- Gamma ray collimator  
[NASA-CASE-SSC-00013-1] c 38 N91-32515
- Extra-corporeal blood access, sensing, and radiation methods and apparatuses  
[NASA-CASE-MSC-21775-1] c 52 N92-11627
- RADIATION HARDENING**
- Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential of field effect device  
[NASA-CASE-GSC-11425-1] c 76 N74-20329
- Integrated, non-volatile, high-speed analog random access memory  
[NASA-CASE-NPO-17998-1-CU] c 60 N92-12438
- RADIATION HAZARDS**
- Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c 35 N83-21311
- RADIATION MEASUREMENT**
- Irradiance measuring device  
[NASA-CASE-NPO-11493] c 14 N73-12447
- RADIATION MEASURING INSTRUMENTS**
- Scanning aspect sensor employing an apertured disc and a commutator  
[NASA-CASE-XGS-08266] c 14 N69-27432
- Infrared scanner Patent  
[NASA-CASE-XLA-00120] c 21 N70-33181
- Instrument for the quantitative measurement of radiation at multiple wave lengths Patent  
[NASA-CASE-XLE-00011] c 14 N70-41946
- Method for improving the signal-to-noise ratio of the Wheatstone bridge type bolometer Patent  
[NASA-CASE-XLA-02810] c 14 N71-25901
- Irradiance measuring device  
[NASA-CASE-NPO-11493] c 14 N73-12447
- Phototransistor  
[NASA-CASE-MFS-20407] c 09 N73-19235
- Method and apparatus for measuring electromagnetic radiation  
[NASA-CASE-LEW-11159-1] c 14 N73-28488
- Compton scatter attenuation gamma ray spectrometer  
[NASA-CASE-MFS-21441-1] c 14 N73-30392
- Coaxial anode wire for gas radiation counters  
[NASA-CASE-GSC-11492-1] c 35 N74-26949
- Cloud cover sensor  
[NASA-CASE-NPO-14936-1] c 47 N83-32232
- RADIATION MEDICINE**
- Method of producing I-123 --- by bombardment of cesium causing spallation  
[NASA-CASE-LEW-11390-2] c 25 N76-27383
- RADIATION PROTECTION**
- Method and construction for protecting heat sensitive bodies from thermal radiation and convective heat Patent  
[NASA-CASE-XNP-01310] c 33 N71-28852
- Laser coolant and ultraviolet filter  
[NASA-CASE-MFS-20180] c 16 N72-12440
- Photomultiplier circuit including means for rapidly reducing the sensitivity thereof --- and protection from radiation damage  
[NASA-CASE-ARC-10593-1] c 33 N74-27682
- Sun shield  
[NASA-CASE-MSC-20162-1] c 37 N87-17036
- Hazards protection for space suits and spacecraft  
[NASA-CASE-MSC-21366-1] c 54 N90-25498
- RADIATION PYROMETERS**
- Multiwavelength pyrometer for gray and non-gray surfaces in the presence of interfering radiation  
[NASA-CASE-LEW-15250-1] c 35 N93-17060
- Correction-free pyrometry in radiant wall furnaces  
[NASA-CASE-NPO-18655-1-CU] c 35 N93-28322
- RADIATION SHIELDING**
- Ion thruster cathode Patent Application  
[NASA-CASE-LEW-10814-1] c 28 N70-35422
- Ionization vacuum gauge with all but the end of the ion collector shielded Patent  
[NASA-CASE-XLA-07424] c 14 N71-18482
- Sealed cabinetry Patent  
[NASA-CASE-MSC-12168-1] c 09 N71-18600
- Propellant feed isolator Patent  
[NASA-CASE-LEW-10210-1] c 28 N71-26781
- Zero gravity shadow shield aligner  
[NASA-CASE-KSC-10622-1] c 31 N72-21893
- Light shield and cooling apparatus --- high intensity ultraviolet lamp  
[NASA-CASE-LAR-10089-1] c 34 N74-23066
- Gamma ray collimator  
[NASA-CASE-SSC-00013-1] c 38 N91-32515
- Cryogenic shutter  
[NASA-CASE-GSC-13189-2] c 37 N92-29151
- RADIATION SOURCES**
- Sight switch using an infrared source and sensor Patent  
[NASA-CASE-XMF-03934] c 09 N71-22985
- Apparatus for obtaining isotropic irradiation of a specimen  
[NASA-CASE-MFS-20095] c 24 N72-11595
- Radiant source tracker independent of nonconstant irradiance  
[NASA-CASE-NPO-11686] c 14 N73-25462
- High powered arc electrodes --- producing solar simulator radiation  
[NASA-CASE-LEW-11162-1] c 33 N74-12913
- Electric arc light source having undercut recessed anode  
[NASA-CASE-ARC-10266-1] c 33 N75-29318
- Variable magnification variable dispersion glancing incidence imaging x ray spectroscopic telescope  
[NASA-CASE-MFS-28013-3] c 89 N90-27594
- Variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-2] c 89 N91-14096
- Radiation sensitive area detection device and method  
[NASA-CASE-MFS-28563-1] c 35 N91-25388
- Multispectral variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-4] c 89 N92-33012
- Purification system  
[NASA-CASE-MSC-21584-1] c 25 N92-33029
- RADIATION SPECTRA**
- Maksutov spectrograph Patent  
[NASA-CASE-XLA-10402] c 14 N71-29041
- RADIATION THERAPY**
- Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c 52 N82-22875
- RADIATION TOLERANCE**
- Alkali-metal silicate protective coating  
[NASA-CASE-XGS-04119] c 18 N69-39979
- Method of making a silicon semiconductor device Patent  
[NASA-CASE-XLE-02792] c 26 N71-10607

# RADIATIVE HEAT TRANSFER

# SUBJECT INDEX

Radiation resistant silicon semiconductor devices Patent  
[NASA-CASE-XGS-07801] c 09 N71-12513

Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential  
[NASA-CASE-GSC-11425-2] c 76 N75-25730

Method for analyzing radiation sensitivity of integrated circuits  
[NASA-CASE-NPO-14350-1] c 33 N80-14332

Lithium counterdoped silicon solar cell  
[NASA-CASE-LEW-14177-1] c 44 N86-32875

**RADIATIVE HEAT TRANSFER**

Heat flux sensor assembly  
[NASA-CASE-XMS-05909-1] c 14 N69-27459

Capillary radiator Patent  
[NASA-CASE-XLE-03307] c 33 N71-14035

Transient heat transfer gauge Patent  
[NASA-CASE-XNP-09802] c 33 N71-15641

Construction and method of arranging a plurality of ion engines to form a cluster Patent  
[NASA-CASE-XNP-02923] c 28 N71-23081

Apparatus and method for heating a material in a transparent ampoule --- crystal growth  
[NASA-CASE-MFS-25436-1] c 27 N83-36220

**RADIATORS**

Self-adjusting multisegment, deployable, natural circulation radiator Patent  
[NASA-CASE-XHO-03873] c 33 N71-29046

**RADIO ANTENNAS**

Parasitic probe antenna Patent  
[NASA-CASE-XKS-09348] c 09 N71-13521

VHF/UHF parasitic probe antenna Patent  
[NASA-CASE-XKS-09340] c 07 N71-24614

Unfurlable structure including coiled strips thrust launched upon tension release Patent  
[NASA-CASE-HQN-00937] c 07 N71-28979

Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NPO-13568-1] c 32 N76-21365

Switched steerable multiple beam antenna system  
[NASA-CASE-MSC-20873-1-SB] c 32 N89-11961

Antenna surface contour control system  
[NASA-CASE-LAR-13798-1] c 32 N89-25363

**RADIO ASTRONOMY**

Millimeter wave radiometer for radio astronomy Patent  
[NASA-CASE-XNP-09832] c 30 N71-23723

**RADIO BEACONS**

RF beam center location method and apparatus for power transmission system  
[NASA-CASE-NPO-13821-1] c 44 N78-28594

Legislated emergency locating transmitters and emergency position indicating radio beacons  
[NASA-CASE-GSC-12892-1] c 32 N89-14374

**RADIO COMMUNICATION**

System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c 32 N79-20296

Antimultipath communication by injecting tone into null in signal spectrum  
[NASA-CASE-NPO-16414-1-CU] c 32 N87-25511

**RADIO CONTROL**

RF controlled solid state switch  
[NASA-CASE-ARC-10136-1] c 09 N72-22202

Timing control system  
[NASA-CASE-NPO-16882-1-CU] c 33 N88-24863

**RADIO EQUIPMENT**

System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c 32 N79-20296

**RADIO FREQUENCIES**

Helical coaxial resonator RF filter  
[NASA-CASE-XGS-02816] c 07 N69-24323

Automatic gain control system  
[NASA-CASE-XMS-05307] c 09 N69-24330

Radio frequency shielded enclosure Patent  
[NASA-CASE-XMF-09422] c 07 N71-19436

Automatic frequency discriminators and control for a phase-lock loop providing frequency preset capabilities Patent  
[NASA-CASE-XMF-08665] c 10 N71-19467

Sidereal frequency generator Patent  
[NASA-CASE-XGS-02610] c 14 N71-23174

Radio frequency coaxial high pass filter Patent  
[NASA-CASE-XGS-01418] c 09 N71-23573

Variable frequency nuclear magnetic resonance spectrometer Patent  
[NASA-CASE-XNP-09830] c 14 N71-26266

Signal path series step biased multidevice high efficiency amplifier Patent  
[NASA-CASE-GSC-10668-1] c 07 N71-28430

Method and apparatus for sputtering utilizing an apertured electrode and a pulsed substrate bias  
[NASA-CASE-LEW-10920-1] c 17 N73-24569

RF-source resistance meters  
[NASA-CASE-NPO-11291-1] c 14 N73-30388

Multichannel logarithmic RF level detector  
[NASA-CASE-LAR-11021-1] c 32 N76-14321

Ion and electron detector for use in an ICR spectrometer  
[NASA-CASE-NPO-13479-1] c 35 N77-10492

Radio frequency arraying method for receivers  
[NASA-CASE-NPO-14328-1] c 32 N80-18253

Precise RF timing signal distribution to remote stations --- fiber optics  
[NASA-CASE-NPO-14749-1] c 32 N81-14186

Hyperthermia heating apparatus --- cancer therapy  
[NASA-CASE-NPO-14549-2] c 52 N82-33996

High stability buffered phase comparator  
[NASA-CASE-GSC-12645-1] c 33 N84-16454

Linearized traveling wave amplifier with hard limiter characteristics  
[NASA-CASE-LEW-13981-2] c 33 N86-21742

Precision tunable resonant microwave cavity  
[NASA-CASE-LEW-13935-1] c 33 N87-21234

Antimultipath communication by injecting tone into null in signal spectrum  
[NASA-CASE-NPO-16414-1-CU] c 32 N87-25511

Radio Frequency (RF) strain monitor  
[NASA-CASE-LAR-13705-1] c 39 N88-25011

Fiber optic sensing system  
[NASA-CASE-LEW-14795-1] c 74 N91-21871

Acoustophoresis method and apparatus  
[NASA-CASE-LAR-13388-1] c 25 N92-33611

Burst-by-burst laser frequency monitor  
[NASA-CASE-NPO-18596-1-CU] c 36 N93-28132

**RADIO FREQUENCY DISCHARGE**

Electric discharge for treatment of trace contaminants  
[NASA-CASE-ARC-10975-1] c 33 N79-15245

**RADIO FREQUENCY HEATING**

Gyrotrotron transmitting tube  
[NASA-CASE-LEW-13429-1] c 33 N83-31952

**RADIO FREQUENCY INTERFERENCE**

Parametric microwave noise generator Patent  
[NASA-CASE-XER-11019] c 09 N71-23598

System for interference signal nulling by polarization adjustment  
[NASA-CASE-NPO-13140-1] c 32 N75-24982

Systems and methods for determining radio frequency interference  
[NASA-CASE-GSC-12150-1] c 32 N79-11265

Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c 32 N81-27341

Method and apparatus for measuring distance  
[NASA-CASE-MSC-20912-1] c 32 N88-26568

**RADIO FREQUENCY SHIELDING**

Shielded cathode mode bulk effect devices  
[NASA-CASE-ERC-10119] c 26 N72-21701

Process for making RF shielded cable connector assemblies and the products formed thereby  
[NASA-CASE-GSC-11215-1] c 09 N73-28083

**RADIO INTERFEROMETERS**

System for real-time crustal deformation monitoring  
[NASA-CASE-NPO-14124-1] c 46 N80-14603

**RADIO PROBING**

Method and apparatus for calibrating the ionosphere and application to surveillance of geophysical events  
[NASA-CASE-NPO-15430-1] c 46 N85-21846

**RADIO RECEIVERS**

Multiple input radio receiver Patent  
[NASA-CASE-XLA-00901] c 07 N71-10775

Optimum predetection diversity receiving system Patent  
[NASA-CASE-XGS-00740] c 07 N71-23098

Radio frequency arraying method for receivers  
[NASA-CASE-NPO-14328-1] c 32 N80-18253

Interferometric locating system  
[NASA-CASE-NPO-14173-1] c 04 N80-32359

Efficient detection and signal parameter estimation with application to high dynamic GPS receiver  
[NASA-CASE-NPO-17820-1-CU] c 04 N91-14321

Real-time edge-enhanced optical correlator  
[NASA-CASE-NPO-18521-1-CU] c 74 N93-14404

Miniature modular microwave end-to-end receiver  
[NASA-CASE-NPO-18713-1-CU] c 32 N93-29087

**RADIO RELAY SYSTEMS**

Satellite communication system Patent  
[NASA-CASE-XNP-02389] c 07 N71-28900

Systems and methods for determining radio frequency interference  
[NASA-CASE-GSC-12150-1] c 32 N79-11265

**RADIO SIGNALS**

Passive communication satellite Patent  
[NASA-CASE-XLA-00210] c 30 N70-40309

Millimeter wave radiometer for radio astronomy Patent  
[NASA-CASE-XNP-09832] c 30 N71-23723

**RADIO SOURCES (ASTRONOMY)**

Conical scan tracking system employing a large antenna  
[NASA-CASE-NPO-14009-1] c 32 N79-13214

**RADIO STARS**

Sidereal frequency generator Patent  
[NASA-CASE-XGS-02610] c 14 N71-23174

**RADIO TELEMETRY**

Digital telemetry system Patent  
[NASA-CASE-XGS-01812] c 07 N71-23001

**RADIO TELESCOPES**

Antenna grout replacement system  
[NASA-CASE-NPO-15202-1] c 27 N83-34043

**RADIO TRANSMITTERS**

Vehicle locating system utilizing AM broadcasting station carriers  
[NASA-CASE-NPO-13217-1] c 32 N75-26194

Aircraft-mounted crash-activated transmitter device  
[NASA-CASE-MFS-16609-3] c 03 N76-32140

Low-frequency radio navigation system  
[NASA-CASE-NPO-15264-1] c 04 N84-27713

Antimultipath communication by injecting tone into null in signal spectrum  
[NASA-CASE-NPO-16414-1-CU] c 32 N87-25511

**RADIO WAVES**

Shielded cathode mode bulk effect devices  
[NASA-CASE-ERC-10119] c 26 N72-21701

**RADIOACTIVE ISOTOPES**

Thermally cascaded thermoelectric generator  
[NASA-CASE-NPO-10753] c 03 N72-26031

Protected isotope heat source --- for atmospheric reentry protection and heat transmission to spacecraft  
[NASA-CASE-LEW-11227-1] c 73 N75-30876

Radionuclide counting technique for measuring wind velocity and direction  
[NASA-CASE-LAR-12971-1] c 47 N84-28292

**RADIOBIOLOGY**

Production of high purity I-123  
[NASA-CASE-LEW-10518-1] c 24 N72-33681

Extra-corporeal blood access, sensing, and radiation methods and apparatuses  
[NASA-CASE-MSC-21775-1] c 52 N92-11627

**RADIOGRAPHY**

Determination of spot weld quality Patent  
[NASA-CASE-XNP-02588] c 15 N71-18613

Method and system for in vivo measurement of bone tissue using a two level energy source  
[NASA-CASE-MSC-14276-1] c 52 N77-14737

Medical clip  
[NASA-CASE-LAR-12650-1] c 52 N84-28388

Process of making medical clip  
[NASA-CASE-LAR-12650-2] c 52 N84-28389

X-ray determination of parts alignment  
[NASA-CASE-MSC-20418-1] c 74 N86-20126

Method of radiographic inspection of wooden members  
[NASA-CASE-LAR-13724-1] c 38 N90-23756

**RADIOLOGY**

Hyperthermia heating apparatus --- cancer therapy  
[NASA-CASE-NPO-14549-2] c 52 N82-33996

**RADIOLYSIS**

Process for making anhydrous metal halides  
[NASA-CASE-LEW-11860-1] c 37 N76-18458

**RADIOMETERS**

Compensating radiometer  
[NASA-CASE-XLA-04556] c 14 N69-27484

Conically shaped cavity radiometer with a dual purpose cone winding Patent  
[NASA-CASE-XNP-09701] c 14 N71-26475

Black body cavity radiometer Patent  
[NASA-CASE-NPO-10810] c 14 N71-27323

Thermoelectric radiometer utilizing polymer film  
[NASA-CASE-ARC-10138-1] c 14 N72-24477

Two color horizon sensor  
[NASA-CASE-ERC-10174] c 14 N72-25409

Clear air turbulence detector  
[NASA-CASE-ERC-10081] c 14 N72-28437

Method and apparatus for measuring solar activity and atmospheric radiation effects  
[NASA-CASE-ERC-10276] c 14 N73-26432

Steady state thermal radiometers  
[NASA-CASE-MFS-21108-1] c 34 N74-27861

Method and apparatus for precision control of radiometer  
[NASA-CASE-NPO-15398-1] c 35 N84-22931

Non-mechanical optical path switching and its application to dual beam spectroscopy including gas filter correlation radiometry  
[NASA-CASE-LAR-14588-1-CU] c 74 N92-29117

**RADIOSONDES**

Induction powered biological radiosonde  
[NASA-CASE-ARC-11120-1] c 52 N80-18691

**RADOME MATERIALS**

Fiber-reinforced monoclinic celsian matrix composite material  
[NASA-CASE-LEW-15269-1] c 24 N93-20040

**RAIN**

Precipitation detector Patent  
[NASA-CASE-XLA-02619] c 10 N71-26334

- Environmental log/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c 09 N82-24212
- RAMJET ENGINES**  
Telescoping-spike supersonic inlet for aircraft engines Patent  
[NASA-CASE-XLE-00005] c 28 N70-39899  
Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c 15 N78-32168
- RAMPS (STRUCTURES)**  
Automated multi-level vehicle parking system  
[NASA-CASE-NPO-13058-1] c 37 N77-22480
- RANDOM ACCESS MEMORY**  
Memory-based frame synchronizer --- for digital communication systems  
[NASA-CASE-GSC-12430-1] c 60 N82-16747  
Memory-based parallel data output controller  
[NASA-CASE-GSC-12447-2] c 60 N84-28491  
Hybrid analog-digital associative neural network  
[NASA-CASE-NPO-17058-1-CU] c 62 N87-25803  
Integrated, non-volatile, high-speed analog random access memory  
[NASA-CASE-NPO-17998-1-CU] c 60 N92-12438  
High speed magneto-resistive random access memory  
[NASA-CASE-NPO-17954-1-CU] c 60 N93-14704  
Self-checking on-line testable static RAM  
[NASA-CASE-NPO-17939-1-CU] c 60 N93-22032
- RANDOM LOADS**  
Fatigue testing device Patent  
[NASA-CASE-XLA-02131] c 32 N70-42003
- RANDOM NOISE**  
Noise limiter Patent  
[NASA-CASE-NPO-10169] c 10 N71-24844  
Digital servo control of random sound test excitation --- in reverberant acoustic chamber  
[NASA-CASE-NPO-11623-1] c 71 N74-31148  
Random pulse generator  
[NASA-CASE-MS-C-14131-1] c 33 N75-19515  
Pseudo noise code and data transmission method and apparatus  
[NASA-CASE-GSC-12017-1] c 32 N77-30308  
Low phase noise oscillator using two parallel connected amplifiers  
[NASA-CASE-GSC-13018-1] c 33 N87-21232
- RANDOM NUMBERS**  
Long period pseudo random number sequence generator  
[NASA-CASE-NPO-17241-1-CU] c 33 N90-23636
- RANGE (EXTREMES)**  
Logarithmic circuit with wide dynamic range  
[NASA-CASE-GSC-12145-1] c 33 N78-32339
- RANGE AND RANGE RATE TRACKING**  
Range and range rate system  
[NASA-CASE-MS-C-20867-1] c 36 N88-24958
- RANGE FINDERS**  
Closed loop ranging system Patent  
[NASA-CASE-XNP-01501] c 21 N70-41930  
Digital demodulator-correlator  
[NASA-CASE-NPO-13982-1] c 32 N79-14267  
Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c 32 N82-23376  
Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629  
Optical distance measuring instrument  
[NASA-CASE-GSC-12761-1] c 74 N86-32266
- RANGEFINDING**  
Dynamic Doppler simulator Patent  
[NASA-CASE-XMS-05454-1] c 07 N71-12391  
Ranging system Patent  
[NASA-CASE-NPO-10066] c 09 N71-18598  
Binary coded sequential acquisition ranging system  
[NASA-CASE-NPO-11194] c 08 N72-25209  
Code regenerative clean-up loop transponder for a mu-type ranging system  
[NASA-CASE-NPO-11707] c 07 N73-25161  
Orbital and entry tracking accessory for globes --- to provide range requirements for reentry vehicles to any landing site  
[NASA-CASE-LAR-10626-1] c 19 N74-21015
- RARE EARTH COMPOUNDS**  
Didymium hydrate additive to nickel hydroxide electrodes Patent  
[NASA-CASE-XGS-03505] c 03 N71-10608  
High modulus rare earth and beryllium containing silicate glass compositions --- for glass reinforcing fibers  
[NASA-CASE-HQN-10595-1] c 27 N82-29455
- RARE GASES**  
Inert gas metallic vapor laser  
[NASA-CASE-NPO-13449-1] c 36 N75-32441  
Fluidized bed desulfurization  
[NASA-CASE-NPO-15924-1] c 25 N85-35253  
Low noise lead screw positioner  
[NASA-CASE-NPO-15617-1] c 35 N87-21304
- RAREFIED GASES**  
Magnetically controlled plasma accelerator Patent  
[NASA-CASE-XLA-00327] c 25 N71-29184
- RASTER SCANNING**  
Method for advanced material characterization by laser induced eddy current imaging  
[NASA-CASE-GSC-13386-1] c 38 N92-29154  
Rotating-unbalanced-mass devices and methods for scanning balloon-borne-experiments, free-flying spacecraft, and space shuttle/space station attached experiments  
[NASA-CASE-MFS-28425-1] c 35 N92-33010
- RATES (PER TIME)**  
Rate data encoder  
[NASA-CASE-LAR-10128-1] c 08 N73-20217  
Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629  
Disk memory device  
[NASA-CASE-GSC-13196-1] c 60 N92-29132
- RAY TRACING**  
Feedback controlled optics with wavefront compensation  
[NASA-CASE-NPO-18194-1-CU] c 74 N91-32924  
Correction-free pyrometry in radiant wall furnaces  
[NASA-CASE-NPO-18655-1-CU] c 35 N93-28322
- RC CIRCUITS**  
Pulse counting circuit which simultaneously indicates the occurrence of the nth pulse Patent  
[NASA-CASE-XMF-00906] c 09 N70-41655  
RC rate generator for slow speed measurement Patent  
[NASA-CASE-XMF-02966] c 10 N71-24863  
Transient augmentation circuit for pulse amplifiers Patent  
[NASA-CASE-XNP-01068] c 10 N71-28739  
Active RC networks  
[NASA-CASE-ARC-10042-2] c 10 N72-11256  
RC networks and amplifiers employing the same  
[NASA-CASE-XAC-05462-2] c 10 N72-17171  
Active RC networks  
[NASA-CASE-ARC-10020] c 10 N72-17172  
Multiloop RC active filter apparatus having low parameter sensitivity with low amplifier gain  
[NASA-CASE-ARC-10192] c 09 N72-21245  
Temperature control system with a pulse width modulated bridge  
[NASA-CASE-NPO-11304] c 14 N73-26430  
Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-3] c 33 N75-19520
- REACTING FLOW**  
Atmospheric pressure flow reactor: Gas phase chemical kinetics under tropospheric conditions without wall effects  
[NASA-CASE-MS-C-21384-2] c 35 N93-17626
- REACTION BONDING**  
Fiber reinforced ceramic material  
[NASA-CASE-LEW-14392-2] c 27 N89-29538
- REACTION CONTROL**  
Voice operated controller Patent  
[NASA-CASE-XLA-04063] c 31 N71-33160
- REACTION KINETICS**  
Synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c 23 N82-16174  
Atmospheric pressure flow reactor: Gas phase chemical kinetics under tropospheric conditions without wall effects  
[NASA-CASE-MS-C-21384-2] c 35 N93-17626
- REACTION PRODUCTS**  
Process for crosslinking and extending conjugated diene-containing polymers  
[NASA-CASE-LAR-13452-1] c 27 N87-22848
- REACTION TIME**  
Pseudonoise code tracking loop  
[NASA-CASE-MS-C-18035-1] c 32 N81-15179
- REACTION WHEELS**  
Reaction wheel scanner Patent  
[NASA-CASE-XGS-02629] c 14 N71-21082  
Gravity gradient attitude control system Patent  
[NASA-CASE-GSC-10555-1] c 21 N71-27324  
Emitted vibration measurement device and method  
[NASA-CASE-MFS-25981-1] c 35 N87-14670
- REACTIVITY**  
Gaseous control system for nuclear reactors  
[NASA-CASE-XLE-04599] c 22 N72-20597  
Phenylethynyl endcapping reagents and reactive diluents  
[NASA-CASE-LAR-14796-1] c 25 N93-31459
- REACTOR CORES**  
Uninsulated in-core thermionic diode  
[NASA-CASE-NPO-10542] c 09 N72-27228
- REACTOR DESIGN**  
Non-equilibrium radiation nuclear reactor  
[NASA-CASE-HQN-10841-1] c 73 N78-19920
- Thermal reactor --- liquid silicon production from silane gas  
[NASA-CASE-NPO-14369-1] c 44 N83-10501
- REACTOR MATERIALS**  
Zirconium modified nickel-copper alloy  
[NASA-CASE-LEW-12245-1] c 26 N77-20201
- REACTOR PHYSICS**  
Non-equilibrium radiation nuclear reactor  
[NASA-CASE-HQN-10841-1] c 73 N78-19920
- READ-ONLY MEMORY DEVICES**  
Method and apparatus for operating on companded PCM voice data  
[NASA-CASE-KSC-11285-1] c 32 N86-27513
- READERS**  
Braille reading system  
[NASA-CASE-LAR-13306-1] c 82 N87-29372
- READING**  
Page turning system  
[NASA-CASE-GSC-13415-1] c 37 N92-33616
- READOUT**  
Flow angle sensor and read out system Patent  
[NASA-CASE-XLE-04503] c 14 N71-24864  
Plural position switch status and operativeness checker Patent  
[NASA-CASE-XLA-08799] c 10 N71-27272  
Magneto-optic detection system with noise cancellation  
[NASA-CASE-NPO-11954-1] c 35 N78-29421  
Hybridization of detector array and integrated circuit for readout  
[NASA-CASE-NPO-18062-1-CU] c 33 N92-30542
- REAL TIME OPERATION**  
Respiratory analysis system and method  
[NASA-CASE-MS-C-13436-1] c 05 N73-32015  
Real time moving scene holographic camera system  
[NASA-CASE-MFS-21087-1] c 35 N74-17153  
Real time, large volume, moving scene holographic camera system  
[NASA-CASE-MFS-22537-1] c 35 N75-27328  
Carbon monoxide monitor --- using real time operation  
[NASA-CASE-MFS-22060-1] c 35 N75-29380  
Real time analysis of voiced sounds  
[NASA-CASE-NPO-13465-1] c 32 N76-31372  
Real time reflectometer --- measurement of specular reflectance  
[NASA-CASE-MFS-23118-1] c 35 N77-31465  
Contour detector and data acquisition system for the left ventricular outline  
[NASA-CASE-ARC-10985-1] c 52 N79-10724  
Azimuth correlator for real-time synthetic aperture radar image processing  
[NASA-CASE-NPO-14019-1] c 32 N79-14268  
System for real-time crustal deformation monitoring  
[NASA-CASE-NPO-14124-1] c 46 N80-14603  
X-ray position detector  
[NASA-CASE-NPO-12087-1] c 74 N81-19898  
Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c 32 N82-12297  
Pipelined digital SAR azimuth correlator using hybrid FFT-transversal filter  
[NASA-CASE-NPO-15519-1] c 32 N84-34651  
Optical stereo video signal processor  
[NASA-CASE-MFS-25752-1] c 74 N86-21348  
Real-time garbage collection for list processing  
[NASA-CASE-MS-C-20964-1] c 60 N87-14863  
Real-time optical multiple object recognition and tracking system and method  
[NASA-CASE-NPO-17139-1-CU] c 74 N88-25301  
Real-time image difference detection using a polarization rotation spatial light modulator  
[NASA-CASE-NPO-17144-1-CU] c 74 N88-25305  
Remotely controllable real-time optical processor  
[NASA-CASE-NPO-16750-1-CU] c 74 N89-14078  
Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13734-1-CU] c 09 N90-20096  
Real-time data compression of broadcast video signals  
[NASA-CASE-LEW-14945-1] c 32 N91-13598  
Predictive sensor method and apparatus  
[NASA-CASE-SSC-00006-1] c 35 N91-13691  
Real-time dynamic holographic image storage device  
[NASA-CASE-LAR-13989-1] c 35 N91-13694  
Programmable remapper with single flow architecture  
[NASA-CASE-MS-C-21481-1] c 60 N91-13890  
Synchronized computational architecture for generalized bilateral control of robot arms  
[NASA-CASE-NPO-17401-1-CU] c 63 N91-31885  
Real-time data compression of broadcast video signals  
[NASA-CASE-LEW-14945-2] c 32 N92-10128  
Method for providing real-time control of a gaseous propellant rocket propulsion system  
[NASA-CASE-MS-C-21542-1] c 20 N92-15122



- Storage control system  
[NASA-CASE-LAR-14651-1] c 82 N92-30386
- Real-time edge-enhanced optical correlator  
[NASA-CASE-NPO-18379-1-CU] c 74 N92-33022
- Real time pre-detection dynamic range compression  
[NASA-CASE-NPO-18098-1-CU] c 74 N92-33028
- Real-time edge-enhanced optical correlator  
[NASA-CASE-NPO-18521-1-CU] c 74 N93-14404
- Operator-tailored adjustable control station with movable monitors and cameras for viewing systems in robotics and teleoperations  
[NASA-CASE-NPO-17837-1-CU] c 74 N93-17273
- Near real-time stereo vision system  
[NASA-CASE-NPO-18593-1-CU] c 74 N93-18276
- Burst-by-burst laser frequency monitor  
[NASA-CASE-NPO-18596-1-CU] c 36 N93-28132
- Improved real-time imaging spectrometer  
[NASA-CASE-NPO-18410-1-CU] c 74 N93-29086
- Special purpose parallel computer architecture for real-time control and simulation in robotic applications  
[NASA-CASE-NPO-17629-1-CU] c 60 N93-29608
- Two-stage gas measurement system  
[NASA-CASE-LAR-14791-1] c 35 N93-31297
- REATTACHED FLOW**  
Method and apparatus for detecting laminar flow separation and reattachment  
[NASA-CASE-LAR-13952-1-SB] c 34 N90-19534
- Method and apparatus for detecting laminar flow separation and reattachment  
[NASA-CASE-LAR-13952-2-SB] c 34 N91-31596
- REBREATHING**  
Portable breathing system -- a breathing apparatus using a rebreathing system of heat exchangers for carbon dioxide removal  
[NASA-CASE-MSC-16182-1] c 54 N80-10799
- RECEIVERS**  
System for improving signal-to-noise ratio of a communication signal Patent Application  
[NASA-CASE-MSC-12259-1] c 07 N70-12616
- Receiver with an improved phase lock loop in a multichannel telemetry system with suppressed carrier  
[NASA-CASE-NPO-11593-1] c 07 N73-28012
- Automatic carrier acquisition system  
[NASA-CASE-NPO-11628-1] c 07 N73-30113
- Coherent receiver employing nonlinear coherence detection for carrier tracking  
[NASA-CASE-NPO-11921-1] c 32 N74-30523
- Low distortion receiver for bi-level baseband PCM waveforms  
[NASA-CASE-MSC-14557-1] c 32 N76-16249
- Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c 32 N77-28346
- Self-calibrating threshold detector  
[NASA-CASE-MSC-16370-1] c 35 N81-19427
- Method and apparatus for receiving and tracking phase modulated signals  
[NASA-CASE-MSC-16170-2] c 32 N84-27952
- Method of measuring sea surface water temperature with a satellite including wideband passive synthetic-aperture multichannel receiver  
[NASA-CASE-NPO-15651-1] c 43 N85-21723
- High dynamic global positioning system receiver  
[NASA-CASE-NPO-16171-1-CU] c 04 N86-27270
- Miniaturization of flight deflection measurement system  
[NASA-CASE-LAR-13628-1] c 35 N90-23707
- Solar thermal energy receiver  
[NASA-CASE-LEW-14949-1] c 44 N92-29143
- Doppler shift compensation system for laser transmitters and receivers  
[NASA-CASE-GSC-13194-1] c 36 N93-18287
- RECHARGING**  
Anode for rechargeable ambient temperature lithium cells  
[NASA-CASE-NPO-18580-1-CU] c 33 N93-17278
- RECIPROCATION**  
Reciprocating magnetic refrigerator employing tandem porous matrices within a reciprocating displacer  
[NASA-CASE-NPO-16257-1] c 31 N85-29082
- Reciprocating linear motor  
[NASA-CASE-GSC-12773-2] c 33 N87-23904
- RECOMBINATION REACTIONS**  
Oxygen recombination in individual pressure vessel nickel-hydrogen batteries  
[NASA-CASE-LEW-13822-1] c 44 N86-25874
- Isotope exchange in oxide-containing catalyst  
[NASA-CASE-LAR-13542-2-SB] c 25 N90-20154
- RECONSTRUCTION**  
Method and means for recording and reconstructing holograms without use of a reference beam Patent  
[NASA-CASE-ERC-10020] c 16 N71-26154
- RECORDING HEADS**  
Electromagnetic transducer recording head having a laminated core section and tapered gap  
[NASA-CASE-NPO-10711-1] c 35 N77-21392

## RECORDING INSTRUMENTS

- Automatic force measuring system Patent  
[NASA-CASE-XLA-02605] c 14 N71-10773
- Blood pressure measuring system for separating and separately recording dc signal and an ac signal Patent  
[NASA-CASE-XMS-06061] c 05 N71-23317
- Helical recorder arrangement for multiple channel recording on both sides of the tape  
[NASA-CASE-GSC-10614-1] c 09 N72-11224
- Thermomagnetic recording and magneto-optic playback system having constant intensity laser beam control  
[NASA-CASE-NPO-11317-2] c 36 N74-13205
- Holography utilizing surface plasmon resonances  
[NASA-CASE-MFS-22040-1] c 35 N74-26946
- Measuring probe position recorder  
[NASA-CASE-LAR-10806-1] c 35 N74-32877
- Acceleration recorder and playback module  
[NASA-CASE-MSC-22008-1] c 35 N93-17077
- RECOVERABILITY**  
Ejectable underwater sound source recovery assembly  
[NASA-CASE-LAR-10595-1] c 35 N74-16135
- RECOVERABLE LAUNCH VEHICLES**  
Recoverable rocket vehicle Patent  
[NASA-CASE-XMF-00389] c 31 N70-34176
- Oribter/launch system  
[NASA-CASE-LAR-12250-1] c 14 N81-26161
- RECOVERABLE SPACECRAFT**  
Space capsule ejection assembly Patent  
[NASA-CASE-XMF-03169] c 31 N71-15675
- RECOVERY PARACHUTES**  
Vehicle parachute and equipment jettison system Patent  
[NASA-CASE-XLA-00195] c 02 N70-38009
- Vortex breach high pressure gas generator  
[NASA-CASE-LAR-10549-1] c 31 N73-13898
- Selectable towline spin chute system  
[NASA-CASE-LAR-14322-1] c 02 N91-27139
- RECTANGULAR PANELS**  
Stacked solar cell arrays  
[NASA-CASE-NPO-11771] c 03 N73-20040
- Composite sandwich lattice structure  
[NASA-CASE-LAR-11898-1] c 24 N78-10214
- RECTIFIERS**  
Thin window, drifted silicon, charged particle detector  
[NASA-CASE-XLE-10529] c 14 N69-23191
- Power control circuit  
[NASA-CASE-XNP-02713] c 10 N69-39888
- Precision rectifier with FET switching means Patent  
[NASA-CASE-ARC-10101-1] c 09 N71-33109
- SCR lamp driver  
[NASA-CASE-GSC-10221-1] c 09 N72-23171
- A dc to ac to dc converter having transistor synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c 09 N72-25253
- Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c 33 N81-19393
- RECTUM**  
Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c 52 N82-22875
- RECURSIVE FUNCTIONS**  
Backward assembly planning with DFA analysis  
[NASA-CASE-NPO-18817-1-CU] c 31 N93-12202
- RECYCLING**  
Gas storage and recovery system  
[NASA-CASE-MSC-22091-1] c 31 N93-28136
- REDOX CELLS**  
Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c 44 N81-29524
- Zirconium carbide as an electrocatalyst for the chromous-chromic redox couple  
[NASA-CASE-LEW-13246-1] c 44 N83-27344
- Chromium electrodes for REDOX cells  
[NASA-CASE-LEW-13653-1] c 44 N84-28205
- Negative electrode catalyst for the iron chromium redox energy storage system  
[NASA-CASE-LEW-14028-1] c 44 N86-19721
- Method and apparatus for rebalancing a REDOX flow cell system  
[NASA-CASE-LEW-14127-1] c 33 N86-20680
- REDUCTION (CHEMISTRY)**  
Production of metal powders  
[NASA-CASE-XLE-06461] c 17 N72-22530
- Process for making anhydrous metal halides  
[NASA-CASE-LEW-11860-1] c 37 N76-18458
- Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same  
[NASA-CASE-NPO-13137-1] c 27 N80-32514
- Hydrodesulfurization of chlorinated coal  
[NASA-CASE-NPO-15304-1] c 25 N83-31743
- REDUNDANCY**  
Reconfiguring redundancy management  
[NASA-CASE-MSC-18498-1] c 60 N82-29013

- New kinematic functions for redundancy resolution using configuration control  
[NASA-CASE-NPO-18608-1-CU] c 63 N93-17275
- REDUNDANCY ENCODING**  
Fault-tolerant fiber optic backplane  
[NASA-CASE-LAR-14785-1] c 74 N93-19052
- REDUNDANT COMPONENTS**  
Redundant memory organization Patent  
[NASA-CASE-GSC-10564] c 10 N71-29135
- Redundant disc  
[NASA-CASE-LEW-12496-1] c 07 N78-33101
- Redundant motor drive system  
[NASA-CASE-MFS-23777-1] c 37 N80-32716
- Redundant operation of counter modules  
[NASA-CASE-NPO-14162-1] c 60 N81-15706
- REED-SOLOMON CODES**  
Mappings between codewords of two distinct (N,K) Reed-Solomon codes over GF(2 sup J)  
[NASA-CASE-NPO-18771-1-CU] c 61 N93-11664
- REELS**  
Method and apparatus for measuring web material wound on a reel  
[NASA-CASE-GSC-11902-1] c 38 N77-17495
- Rotatable electric cable connecting system  
[NASA-CASE-GSC-12899-1] c 33 N86-20669
- REENTRY COMMUNICATION**  
Electrostatic plasma modulator for space vehicle re-entry communication Patent  
[NASA-CASE-XLA-01400] c 07 N70-41331
- Means for communicating through a layer of ionized gases Patent  
[NASA-CASE-XLA-01127] c 07 N70-41372
- Reentry communication by material addition Patent  
[NASA-CASE-XLA-01552] c 07 N71-11284
- REENTRY SHIELDING**  
Transpirationally cooled heat ablation system Patent  
[NASA-CASE-XMS-02677] c 31 N70-42075
- Method and apparatus for making a heat insulating and ablative structure Patent  
[NASA-CASE-XMS-02009] c 33 N71-20834
- Stand-off type ablative heat shield  
[NASA-CASE-MSC-12143-1] c 33 N72-17947
- Protected isotope heat source -- for atmospheric reentry protection and heat transmission to spacecraft  
[NASA-CASE-LEW-11227-1] c 73 N75-30876
- Fibrous refractory composite insulation -- shielding reusable spacecraft  
[NASA-CASE-ARC-11169-1] c 24 N79-24062
- Adjustable high emittance gap filler -- reentry shielding for space shuttle vehicles  
[NASA-CASE-ARC-11310-1] c 27 N82-24339
- Method for repair of thin glass coatings -- on space shuttle orbiter tiles  
[NASA-CASE-KSC-11097-1] c 27 N82-33520
- Ceramic-ceramic shell tile thermal protection system and method thereof  
[NASA-CASE-ARC-11641-1] c 24 N88-18628
- REENTRY TRAJECTORIES**  
Hypersonic reentry vehicle Patent  
[NASA-CASE-XMS-04142] c 31 N70-41631
- REENTRY VEHICLES**  
Reentry vehicle leading edge Patent  
[NASA-CASE-XLA-00165] c 31 N70-33242
- Variable-geometry winged reentry vehicle Patent  
[NASA-CASE-XLA-00241] c 31 N70-37986
- Telespectrograph Patent  
[NASA-CASE-XLA-03273] c 14 N71-18699
- Ablation sensor Patent  
[NASA-CASE-XLA-01791] c 14 N71-22991
- Ring wing tension vehicle Patent  
[NASA-CASE-XLA-04901] c 31 N71-24315
- Ferry system  
[NASA-CASE-LAR-10574-1] c 11 N73-13257
- Vortex breach high pressure gas generator  
[NASA-CASE-LAR-10549-1] c 31 N73-13898
- Three-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-2] c 27 N76-23426
- Earth-to-orbit vehicle providing a reusable orbital stage  
[NASA-CASE-LAR-13486-1] c 16 N90-22584
- REFERENCE SYSTEMS**  
Automatic frequency control loop including synchronous switching circuits  
[NASA-CASE-KSC-10393] c 09 N72-21247
- Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c 04 N77-19056
- REFINING**  
Helium refining by superfluidity Patent  
[NASA-CASE-XNP-00733] c 06 N70-34946
- REFLECTANCE**  
Optical characteristics measuring apparatus Patent  
[NASA-CASE-XNP-08840] c 23 N71-16365
- Gravimeter Patent  
[NASA-CASE-XMF-05844] c 14 N71-17587
- Optical mirror apparatus Patent  
[NASA-CASE-ERC-10001] c 23 N71-24868

- Portable reflectance spectrometer  
[NASA-CASE-NPO-13556-1] c 35 N84-33766  
Diffusely reflecting paints including  
polytetrafluoroethylene and method of manufacture  
[NASA-CASE-GSC-12883-1] c 27 N85-29044  
Wide-angle flat field telescope  
[NASA-CASE-GSC-12825-1] c 74 N86-28732  
Doppler radar with multiphase modulation of transmitted  
and reflected signal  
[NASA-CASE-MSC-18808-1] c 32 N90-20280  
Water window imaging x ray microscope  
[NASA-CASE-MFS-28485-1] c 35 N92-29135  
Multiwavelength pyrometer for gray and non-gray  
surfaces in the presence of interfering radiation  
[NASA-CASE-LEW-15250-1] c 35 N93-17060

**REFLECTED WAVES**

- Device and method for determining X ray reflection  
efficiency of optical surfaces  
[NASA-CASE-MFS-20243] c 23 N73-13662  
Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c 36 N75-15028  
Reflected-wave maser --- low noise amplifier  
[NASA-CASE-NPO-13490-1] c 36 N76-31512  
Method and apparatus for characterizing reflected  
ultrasonic pulses  
[NASA-CASE-LAR-13966-1] c 71 N91-27914  
System and method for cancelling expansion waves in  
a wave rotor  
[NASA-CASE-LEW-15218-1] c 34 N93-11172

**REFLECTING TELESCOPES**

- Anastigmatic three-mirror telescope  
[NASA-CASE-MFS-23675-1] c 89 N79-10969  
Wide-angle flat field telescope  
[NASA-CASE-GSC-12825-1] c 74 N86-28732

**REFLECTION**

- Synthesis of zinc titanate pigment and coatings  
containing the same  
[NASA-CASE-MFS-13532] c 18 N72-17532  
Method and apparatus for compensating reflection  
losses in a path length modulated absorption-absorption  
trace gas detector --- for determining density of gas  
[NASA-CASE-ARC-10631-1] c 74 N76-20958  
Ranging system which compares an object reflected  
component of a light beam to a reference component of  
the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629

**REFLECTOMETERS**

- Ellipsoidal mirror reflectometer including means for  
averaging the radiation reflected from the sample  
Patent  
[NASA-CASE-XGS-05291] c 23 N71-16341  
Real time reflectometer --- measurement of specular  
reflectance  
[NASA-CASE-MFS-23118-1] c 35 N77-31465  
Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c 43 N79-25443  
Visible and infrared polarization ratio  
spectroreflectometer  
[NASA-CASE-LAR-12285-1] c 35 N80-28687

**REFLECTOR ANTENNAS**

- Focal axis resolver for offset reflector antennas  
[NASA-CASE-GSC-12630-1] c 33 N83-36355  
Double-loop frequency-selected surfaces for  
multifrequency division multiplexing in a dual-reflector  
antenna  
[NASA-CASE-NPO-18701-1-CU] c 32 N92-30391  
A satellite-tracking millimeter-wave reflector antenna  
system for mobile satellite-tracking  
[NASA-CASE-NPO-18772-1-CU] c 32 N93-28955  
Planar microstrip YAGI antenna array  
[NASA-CASE-NPO-18783-2-CU] c 32 N93-29507

**REFLECTORS**

- Reflector space satellite Patent  
[NASA-CASE-XLA-00138] c 31 N70-37981  
Self-erecting reflector Patent  
[NASA-CASE-XGS-09190] c 31 N71-16102  
Spectroscopy equipment using a slender cylindrical  
reflector as a substitute for a slit Patent  
[NASA-CASE-XGS-08269] c 23 N71-26206  
Conical reflector antenna  
[NASA-CASE-NPO-10303] c 07 N72-22127  
Target acquisition antenna  
[NASA-CASE-GSC-10064-1] c 10 N72-22235  
Multi-purpose antenna employing dish reflector with  
plural coaxial horn feeds  
[NASA-CASE-NPO-11264] c 07 N72-25174  
Multiple reflection conical microwave antenna  
[NASA-CASE-NPO-11661] c 07 N73-14130  
Non-tracking solar energy collector system  
[NASA-CASE-NPO-13813-1] c 44 N78-31526  
Solar cell having improved back surface reflector  
[NASA-CASE-LEW-13620-1] c 44 N83-13579  
Acoustic suspension system  
[NASA-CASE-NPO-15435-1] c 71 N83-36846  
Optical system with reflective baffles  
[NASA-CASE-ARC-11502-1] c 74 N86-20125

- Ultrasonic angle beam standard reflector --- ultrasonic  
nondestructive inspection  
[NASA-CASE-LAR-13153-1] c 71 N86-21276  
Compensation for primary reflector wavefront error  
[NASA-CASE-NPO-16869-1CU] c 74 N86-33138  
Welding torch with arc light reflector  
[NASA-CASE-MFS-29134-1] c 74 N87-17493  
Self-clamping arc light reflector for welding torch  
[NASA-CASE-MFS-29207-1] c 74 N87-25843  
Reflection oscillators employing series resonant  
crystals  
[NASA-CASE-GSC-13173-1] c 33 N90-23635  
Method and apparatus for phasing segmented mirror  
arrays  
[NASA-CASE-NPO-18095-1-CU] c 74 N92-29122  
Core design for use with precision composite  
reflectors  
[NASA-CASE-NPO-17858-1-CU] c 24 N93-14700  
Aberration correction of unstable resonators  
[NASA-CASE-NPO-18662-1-CU] c 74 N93-28428

**REFRACTION**

- Method and apparatus for second-rank tensor  
generation  
[NASA-CASE-NPO-17512-1-CU] c 74 N91-26918  
Optical fiber fluorosensor  
[NASA-CASE-LAR-14525-1-CU] c 74 N93-22008

**REFRACTIVITY**

- The 2 deg/90 deg laboratory scattering photometer ---  
particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c 74 N78-13874  
Chromatically corrected virtual image visual display ---  
reducing eye strain in flight simulators  
[NASA-CASE-LAR-12251-1] c 74 N80-27185  
Dual laser optical system and method for studying fluid  
flow  
[NASA-CASE-MFS-25315-1] c 36 N83-29680  
Photorefractor ocular screening system  
[NASA-CASE-MFS-26011-1-SB] c 52 N87-24874  
Dynamic range compression/expansion of light beams  
by photorefractive crystals  
[NASA-CASE-NPO-17140-1-CU] c 74 N89-14077  
Dynamic aperture fringe discriminator  
[NASA-CASE-NPO-18478-1-CU] c 74 N92-30084

**REFRACTORY COATINGS**

- Refractory coatings and method of producing the  
same  
[NASA-CASE-LEW-13169-1] c 26 N82-29415  
Refractory coatings  
[NASA-CASE-LEW-13169-2] c 26 N82-30371  
Method for repair of thin glass coatings --- on space  
shuttle orbiter tiles  
[NASA-CASE-KSC-11097-1] c 27 N82-33520  
Thermal barrier coating system  
[NASA-CASE-LEW-13324-2] c 24 N85-21266

**REFRACTORY MATERIALS**

- High temperature testing apparatus Patent  
[NASA-CASE-XLE-00335] c 14 N70-35368  
Prestressed refractory structure Patent  
[NASA-CASE-XNP-02888] c 18 N71-21068  
Method of manufacturing semiconductor devices using  
refractory dielectrics  
[NASA-CASE-XER-08476-1] c 26 N72-17820  
High temperature furnace for melting materials in  
space  
[NASA-CASE-MFS-20710] c 11 N72-23215  
High temperature resistant cermet and ceramic  
compositions --- for thermal resistant insulators and  
refractory coatings  
[NASA-CASE-NPO-13690-1] c 27 N78-19302  
High temperature resistant cermet and ceramic  
compositions  
[NASA-CASE-NPO-13690-2] c 27 N79-14213  
Fibrous refractory composite insulation --- shielding  
reusable spacecraft  
[NASA-CASE-ARC-11169-1] c 24 N79-24062  
Catalytic trimerization of aromatic nitriles and  
triaryl-s-triazine ring cross-linked high temperature  
resistant polymers and copolymers made thereby  
[NASA-CASE-LEW-12053-2] c 27 N79-28307  
Improved refractory coatings --- sputtered coatings on  
substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c 26 N81-16209  
Adjustable high emittance gap filler --- reentry shielding  
for space shuttle vehicles  
[NASA-CASE-ARC-11310-1] c 27 N82-24339  
Attachment system for silica tiles --- thermal protection  
for space shuttle orbiter  
[NASA-CASE-MSC-18741-1] c 27 N82-29456  
Densification of porous refractory substrates --- space  
shuttle orbiter tiles  
[NASA-CASE-MSC-18737-1] c 24 N83-13171  
Method of repairing surface damage to porous refractory  
substrates --- space shuttle orbiter tiles  
[NASA-CASE-MSC-18736-1] c 24 N83-13172

- High temperature silicon carbide impregnated insulating  
fabrics  
[NASA-CASE-MSC-18832-1] c 27 N83-18908  
Apparatus for accurately preloading auger attachment  
means for frangible protective material  
[NASA-CASE-MSC-18791-1] c 37 N83-36482  
High temperature resistant polyimide from tetra ester,  
diamine, diester and N-arylnadimide  
[NASA-CASE-LEW-13864-1] c 27 N86-19457  
Boron-containing organosilane polymers and ceramic  
materials thereof  
[NASA-CASE-ARC-11649-2-SB] c 27 N90-21177  
Lightweight ceramic insulation and method  
[NASA-CASE-MSC-20782-1] c 27 N90-23566  
Metallic threaded composite fastener  
[NASA-CASE-MSC-21580-1] c 37 N92-21726  
Boron-carbon-silicon polymers and ceramic and a  
process for the production thereof  
[NASA-CASE-ARC-11891-2-SB] c 27 N92-34160  
SiC fiber-reinforced Celsian glass-ceramic matrix  
composite  
[NASA-CASE-LEW-15264-1] c 24 N93-31293  
Method of producing a ceramic fiber-reinforced  
glass-ceramic matrix composite  
[NASA-CASE-LEW-15264-2] c 24 N93-31299

**REFRACTORY METALS**

- Radiant heater having formed filaments Patent  
[NASA-CASE-XLE-00387] c 33 N70-34812  
Method of producing refractory bodies having controlled  
porosity Patent  
[NASA-CASE-LEW-10393-1] c 17 N71-15468  
Multilayer porous ionizer Patent  
[NASA-CASE-XNP-04338] c 17 N71-23046  
Brazing alloy Patent  
[NASA-CASE-XNP-03063] c 17 N71-23365  
Thermal radiation shielding Patent  
[NASA-CASE-XLE-03432] c 33 N71-24145  
Method of producing refractory composites containing  
tantalum carbide, hafnium carbide, and hafnium boride  
Patent  
[NASA-CASE-XLE-03940] c 18 N71-26153  
Silicide coatings for refractory metals Patent  
[NASA-CASE-XLE-10910] c 18 N71-29040  
Refractory metal base alloy composites  
[NASA-CASE-XLE-03940-2] c 17 N72-28536  
Fused silicide coatings containing discrete particles for  
protecting niobium alloys --- used in space shuttle thermal  
protection systems and turbine engine components  
[NASA-CASE-LEW-11179-1] c 27 N76-16229  
Method of making an apertured casting --- using  
duplicate mold  
[NASA-CASE-LEW-11169-1] c 37 N76-23570  
Absorbable-susceptor joining of ceramic surfaces  
[NASA-CASE-NPO-15640-1] c 27 N84-22748  
One step HIP canning of powder metallurgy  
composites  
[NASA-CASE-LEW-14719-1] c 24 N90-23493  
High temperature refractory member with radiation  
emissive overcoat  
[NASA-CASE-NPO-17122-1-CU] c 27 N91-14489

**REFRIGERATING**

- Helium refrigerator and method for decontaminating the  
refrigerator  
[NASA-CASE-NPO-10634] c 23 N72-25619  
Magnetic heat pumping  
[NASA-CASE-LEW-12508-3] c 34 N83-29625  
Ultra-high temperature stability Joule-Thomson cooler  
with capability to accommodate pressure variations  
[NASA-CASE-NPO-18184-1-CU] c 35 N92-29156

**REFRIGERATING MACHINERY**

- Refrigeration apparatus  
[NASA-CASE-NPO-10309] c 15 N69-23190  
Refrigeration apparatus Patent  
[NASA-CASE-XNP-08877] c 15 N71-23025  
Dual solid cryogens for spacecraft refrigeration Patent  
[NASA-CASE-GSC-10188-1] c 23 N71-24725  
Stirling cycle engine and refrigeration systems  
[NASA-CASE-NPO-13613-1] c 37 N76-29590  
Cycling Joule Thomson refrigerator  
[NASA-CASE-NPO-15251-1] c 31 N83-31897  
Vibration isolation and pressure compensation  
apparatus for sensitive instrumentation  
[NASA-CASE-LAR-12728-1] c 35 N83-32026  
Magnetically actuated compressor  
[NASA-CASE-GSC-12799-1] c 31 N85-21404  
Oxygen chemisorption cryogenic refrigerator  
[NASA-CASE-NPO-16734-1-CU] c 31 N88-14223

**REFRIGERATORS**

- Intermittent type silica gel adsorption refrigerator  
Patent  
[NASA-CASE-XNP-00920] c 15 N71-15906  
Helium refrigerator  
[NASA-CASE-NPO-13435-1] c 31 N76-14284

Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
 [NASA-CASE-GSC-12168-1] c 31 N79-17029  
 Reciprocating magnetic refrigerator employing tandem porous matrices within a reciprocating displacer  
 [NASA-CASE-NPO-16257-1] c 31 N85-29082  
 Ten degree Kelvin hydride refrigerator  
 [NASA-CASE-NPO-16393-1-CU] c 31 N87-21159  
 Krypton based adsorption type cryogenic refrigerator  
 [NASA-CASE-NPO-17334-1-CU] c 31 N88-23917  
 Cryogenic regenerator including saran-carbon heat conduction matrix  
 [NASA-CASE-NPO-17291-1-CU] c 34 N88-23946  
 Self-actuating heat switches for redundant refrigeration systems  
 [NASA-CASE-NPO-17085-1-CU] c 31 N89-12785  
 Joule Thomson refrigerator  
 [NASA-CASE-NPO-17143-1-CU] c 31 N89-14351  
 Two stage sorption type cryogenic refrigerator including heat regeneration system  
 [NASA-CASE-NPO-17630-1-CU] c 31 N89-29577  
 Multicomponent gas sorption Joule-Thomson refrigeration  
 [NASA-CASE-NPO-17569-1-CU] c 31 N92-15203  
 Three-stage sorption type cryogenic refrigeration systems and methods employing heat regeneration  
 [NASA-CASE-NPO-18366-1-CU] c 31 N93-13422

**REFUELING**

Quick-disconnect inflatable seal assembly  
 [NASA-CASE-KSC-11368-1] c 37 N89-13786  
 System for connecting fluid couplings  
 [NASA-CASE-MFS-26042-1-SB] c 37 N91-14613  
**REGENERATION (ENGINEERING)**  
 Switching circuit employing regeneratively connected complementary transistors Patent  
 [NASA-CASE-XNP-02654] c 10 N70-42032  
 Regenerative braking system Patent  
 [NASA-CASE-XMF-01096] c 10 N71-16030  
 Free-piston regenerative hot gas hydraulic engine  
 [NASA-CASE-LEW-12274-1] c 37 N80-31790  
 Cryogenic regenerator including saran-carbon heat conduction matrix  
 [NASA-CASE-NPO-17291-1-CU] c 34 N88-23946  
 Regenerative Cu/La zeolite supported desulfurizing sorbents  
 [NASA-CASE-NPO-17480-1-CU] c 25 N92-10073  
**REGENERATION (PHYSIOLOGY)**  
 Implantable electrical device  
 [NASA-CASE-GSC-12560-1] c 52 N82-29863  
 Method and apparatus for bio-regenerative life support system  
 [NASA-CASE-MSC-21629-1] c 54 N91-31803

**REGENERATIVE COOLING**

Formed metal ribbon wrap Patent  
 [NASA-CASE-XLE-00164] c 15 N70-36411  
 Method of making a regeneratively cooled combustion chamber Patent  
 [NASA-CASE-XLE-00150] c 28 N70-41818  
 Small rocket engine Patent  
 [NASA-CASE-XLE-00685] c 28 N70-41992  
 Combustion chamber Patent  
 [NASA-CASE-XLE-04857] c 28 N71-23968  
 Method of making apparatus for sensing temperature  
 [NASA-CASE-XLE-05230-2] c 14 N73-13417  
 Three-stage sorption type cryogenic refrigeration systems and methods employing heat regeneration  
 [NASA-CASE-NPO-18366-1-CU] c 31 N93-13422

**REGENERATIVE FUEL CELLS**

Electrolytically regenerative hydrogen-oxygen fuel cell Patent  
 [NASA-CASE-XLE-04526] c 03 N71-11052

**REGENERATORS**

Code regenerative clean-up loop transponder for a mu-type ranging system  
 [NASA-CASE-NPO-11707] c 07 N73-25161  
 Magnetic heat pumping  
 [NASA-CASE-LEW-12508-3] c 34 N83-29625  
 Two stage sorption type cryogenic refrigerator including heat regeneration system  
 [NASA-CASE-NPO-17630-1-CU] c 31 N89-29577

**REGISTERS (COMPUTERS)**

Variable digital processor including a register for shifting and rotating bits in either direction Patent  
 [NASA-CASE-GSC-10186] c 08 N71-33110  
 Priority interrupt system --- comprised of four registers  
 [NASA-CASE-NPO-13067-1] c 60 N76-18800

**REINFORCED PLASTICS**

Tube fabricating process  
 [NASA-CASE-LAR-10203-1] c 15 N72-16330  
 Reinforced structural plastics  
 [NASA-CASE-LEW-10199-1] c 27 N74-23125

**REINFORCEMENT (STRUCTURES)**

Reinforcing means for diaphragms Patent  
 [NASA-CASE-XNP-01962] c 32 N70-41370

Thermally activated retainer means  
 [NASA-CASE-MSC-21793-1] c 16 N91-28166

**REINFORCEMENT RINGS**

Tube coupling device  
 [NASA-CASE-MFS-25964-2] c 37 N87-22977

**REINFORCING FIBERS**

Reinforced metallic composites Patent  
 [NASA-CASE-XLE-02428] c 17 N70-33288  
 Method of making fiber reinforced metallic composites Patent  
 [NASA-CASE-XLE-00231] c 17 N70-38198  
 Method for producing fiber reinforced metallic composites Patent  
 [NASA-CASE-XLE-03925] c 18 N71-22894  
 Thermal protection ablation spray system Patent  
 [NASA-CASE-XLA-04251] c 18 N71-26100  
 Method of preparing graphite reinforced aluminum composite  
 [NASA-CASE-MFS-21077-1] c 24 N75-28135  
 Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
 [NASA-CASE-LAR-12099-1] c 27 N80-16158  
 Composition and method for making polyimide resin-reinforced fabric  
 [NASA-CASE-LEW-12933-1] c 27 N81-19296  
 High modulus rare earth and beryllium containing silicate glass compositions --- for glass reinforcing fibers  
 [NASA-CASE-HQN-10595-1] c 27 N82-29455  
 Method of carbonizing polyacrylonitrile fibers  
 [NASA-CASE-ARC-11261-1] c 24 N83-25789  
 Fluoroether modified epoxy composites  
 [NASA-CASE-ARC-11418-1] c 24 N84-11213  
 Lightweight piston  
 [NASA-CASE-LAR-13150-1] c 24 N87-27742  
 Seamless metal-clad fiber-reinforced organic matrix composite structures and process for their manufacture  
 [NASA-CASE-LAR-13562-1] c 24 N90-25196  
 Continuous fiber thermoplastic prepreg  
 [NASA-CASE-LAR-14459-1] c 24 N91-15334  
 Process for the manufacture of seamless metal-clad fiber-reinforced organic matrix composite structures  
 [NASA-CASE-LAR-13562-2] c 24 N91-25199  
 Continuous fiber thermoplastic prepreg  
 [NASA-CASE-LAR-14459-1] c 24 N93-24597  
 SiC fiber-reinforced Celsian glass-ceramic matrix composite  
 [NASA-CASE-LEW-15264-1] c 24 N93-31293  
 Method of producing a ceramic fiber-reinforced glass-ceramic matrix composite  
 [NASA-CASE-LEW-15264-2] c 24 N93-31299

**REINFORCING MATERIALS**

Numerical control fabrication technique for dynamic composite models  
 [NASA-CASE-LAR-14004-1] c 63 N93-19024

**RELAXATION OSCILLATORS**

Voltage to frequency converter Patent  
 [NASA-CASE-GSC-10022-1] c 10 N71-25882

**RELAY SATELLITES**

Satellite communication system and method Patent  
 [NASA-CASE-GSC-10118-1] c 07 N71-24621  
 Satellite personal communications system  
 [NASA-CASE-NPO-14480-1] c 32 N80-20448

**RELEASING**

Despin weight release Patent  
 [NASA-CASE-XLA-00679] c 15 N70-38601  
 Quick attach and release fluid coupling assembly Patent  
 [NASA-CASE-XKS-01985] c 15 N71-10782  
 Redundant actuating mechanism Patent  
 [NASA-CASE-XGS-08718] c 15 N71-24600  
 Quick release hook tape Patent  
 [NASA-CASE-XMS-10660-1] c 15 N71-25975  
 Delayed simultaneous release mechanism  
 [NASA-CASE-GSC-10814-1] c 03 N73-20039  
 Slide release mechanism --- for space shuttle orbiter/external tank connection device  
 [NASA-CASE-MSC-20080-1] c 37 N85-30334  
 Fully redundant mechanical release actuator  
 [NASA-CASE-LAR-13198-1] c 37 N87-23983  
 Preloadable vector sensitive latch  
 [NASA-CASE-MSC-20910-1] c 37 N87-25582  
 Releasable clamping apparatus  
 [NASA-CASE-MFS-28192-1] c 37 N90-17154  
 Double swivel toggle release  
 [NASA-CASE-MSC-21436-1] c 37 N90-21390  
 Quick action clamp  
 [NASA-CASE-LEW-14887-1] c 37 N91-27561  
 Method and apparatus for releasably connecting first and second objects  
 [NASA-CASE-MSC-21517-1] c 31 N92-16161

**RELIABILITY ANALYSIS**

Program for computer aided reliability estimation  
 [NASA-CASE-NPO-13086-1] c 15 N73-12495  
 Integrated circuit reliability testing  
 [NASA-CASE-NPO-17393-1-CU] c 33 N89-29679

**RELIABILITY ENGINEERING**

Method of improving the reliability of a rolling element system Patent  
 [NASA-CASE-XLE-02999] c 15 N71-16052  
 Inspection gage for boss Patent  
 [NASA-CASE-XMF-04966] c 14 N71-17658  
 Valving device for automatic refilling in cryogenic liquid systems  
 [NASA-CASE-NPO-11177] c 15 N72-17453  
 Electrical connector  
 [NASA-CASE-NPO-10694] c 09 N72-20200  
 Inherent redundancy electric heater  
 [NASA-CASE-MFS-21462-1] c 33 N74-14935  
 Hollow rolling element bearings  
 [NASA-CASE-LEW-11087-3] c 37 N74-21064  
 Reconfiguring redundancy management  
 [NASA-CASE-MSC-18498-1] c 60 N82-29013  
 Phase sensitive guidance sensor for wire-following vehicles  
 [NASA-CASE-NPO-15341-1] c 35 N84-33769  
 Lightweight piston  
 [NASA-CASE-LAR-13150-1] c 24 N87-27742

**RELIEF MAPS**

Method and apparatus for contour mapping using synthetic aperture radar  
 [NASA-CASE-NPO-15939-1] c 43 N86-19711

**RELIEF VALVES**

Relief valve  
 [NASA-CASE-XMS-05894-1] c 15 N69-21924  
 Zero gravity separator Patent  
 [NASA-CASE-XLE-00586] c 15 N71-15968  
 Redundant hydraulic control system for actuators  
 [NASA-CASE-MFS-20944] c 15 N73-13466  
 Prosthetic urinary sphincter  
 [NASA-CASE-MFS-23717-1] c 52 N81-25660  
 Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
 [NASA-CASE-LEW-13107-1] c 52 N83-21785  
 Ultra-high temperature stability Joule-Thomson cooler with capability to accommodate pressure variations  
 [NASA-CASE-NPO-18184-1-CU] c 35 N92-29156  
 Gas storage and recovery system  
 [NASA-CASE-MSC-22091-1] c 31 N93-28136

**REMANENCE**

Method and apparatus for using magneto-acoustic remanence to determine embrittlement  
 [NASA-CASE-LAR-13817-5] c 39 N92-28757  
 Magnetic remanence method and apparatus to test materials for embrittlement  
 [NASA-CASE-LAR-13817-4] c 39 N92-29101

**REMOTE CONTROL**

Electromagnetic mirror drive system  
 [NASA-CASE-XLA-03724] c 14 N69-27461  
 Tubular coupling having frangible connecting means  
 [NASA-CASE-XLA-02854] c 15 N69-27490  
 Bimetallic power controlled actuator  
 [NASA-CASE-XNP-09776] c 09 N69-39929  
 Fluid coupling Patent  
 [NASA-CASE-XLE-00397] c 15 N70-36492  
 Umbilical disconnect Patent  
 [NASA-CASE-XLA-00711] c 03 N71-12258  
 Remote controlled tubular disconnect Patent  
 [NASA-CASE-XLA-01396] c 03 N71-12259  
 Three-axis finger tip controller for switches Patent  
 [NASA-CASE-XAC-02405] c 09 N71-16089  
 Satellite communication system Patent  
 [NASA-CASE-XNP-02389] c 07 N71-28900  
 Method and apparatus for aligning a laser beam projector Patent  
 [NASA-CASE-NPO-11087] c 23 N71-29125  
 Solid state remote circuit selector switch  
 [NASA-CASE-LEW-10387] c 09 N72-22201  
 Laser communication system for controlling several functions at a location remote to the laser  
 [NASA-CASE-LAR-10311-1] c 16 N73-16536  
 Cooperative multi-axis sensor for teleoperation of article manipulating apparatus  
 [NASA-CASE-NPO-13386-1] c 54 N75-27758  
 Remotely operable articulated manipulator  
 [NASA-CASE-MFS-22707-1] c 37 N76-15457  
 Remote manipulator system  
 [NASA-CASE-MFS-22022-1] c 37 N76-15460  
 Remote lightning monitor system  
 [NASA-CASE-KSC-11031-1] c 33 N79-11315  
 Simulator method and apparatus for practicing the mating of an observer-controlled object with a target  
 [NASA-CASE-MFS-23052-2] c 74 N79-13855  
 Terminal guidance sensor system --- space shuttle coupling to orbiting satellites  
 [NASA-CASE-NPO-14521-1] c 37 N81-27519  
 Retinally stabilized differential resolution television display  
 [NASA-CASE-NPO-15432-1] c 32 N85-29117  
 Digital control of diode laser for atmospheric spectroscopy  
 [NASA-CASE-NPO-16000-1] c 36 N85-29264

- Remotely controllable mixing system  
[NASA-CASE-MFS-28153-1] c 31 N86-32589
- Remotely operable peristaltic pump  
[NASA-CASE-MFS-28059-1] c 37 N86-32738
- Radial and torsionally controlled magnetic bearing  
[NASA-CASE-GSC-12957-1] c 37 N87-17038
- Apparatus and method of capturing an orbiting spacecraft  
[NASA-CASE-MSC-20979-1] c 37 N87-22985
- Remotely controlled spray gun  
[NASA-CASE-MFS-28110-1] c 37 N87-24689
- Improved docking alignment system  
[NASA-CASE-MSC-21372-1] c 35 N89-12842
- Magnetic attachment mechanism  
[NASA-CASE-MSC-21095-1] c 37 N89-12866
- Remotely controllable real-time optical processor  
[NASA-CASE-NPO-16750-1-CU] c 74 N89-14078
- A generalized compliant motion primitive  
[NASA-CASE-NPO-18134-1-CU] c 37 N91-32510
- End effector with astronaut foot restraint  
[NASA-CASE-MSC-21721-1] c 54 N92-16559
- Closed-loop motor control using high-speed fiber optics  
[NASA-CASE-MSC-21806-1] c 74 N92-17863
- Method and apparatus for preloading a joint by remotely operable means  
[NASA-CASE-MSC-21940-1] c 37 N92-30540
- Method and apparatus for preloading a joint by remotely operable means  
[NASA-CASE-MSC-21940-1] c 37 N93-20120
- REMOTE HANDLING**
- Remote control manipulator for zero gravity environment  
[NASA-CASE-MFS-14405] c 15 N72-28495
- Apparatus for remote handling of materials --- mixing or analyzing dangerous chemicals  
[NASA-CASE-LAR-10634-1] c 37 N74-18123
- Anthropomorphic master/slave manipulator system  
[NASA-CASE-ARC-10756-1] c 54 N77-32721
- Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c 37 N79-28551
- Apparatus for sequentially transporting containers  
[NASA-CASE-MFS-23846-1] c 37 N82-32731
- Precision manipulator heating and cooling apparatus for use in UHV systems with sample transfer capability  
[NASA-CASE-LAR-13040-1] c 37 N85-29286
- Space spider crane  
[NASA-CASE-LAR-13411-1-SB] c 18 N88-23828
- Mobile remote manipulator system for a tetrahedral truss  
[NASA-CASE-MSC-20985-1] c 18 N88-26398
- REMOTE MANIPULATOR SYSTEM**
- Coupling device for moving vehicles  
[NASA-CASE-GSC-12322-1] c 37 N80-14398
- Apparatus and method of capturing an orbiting spacecraft  
[NASA-CASE-MSC-20979-1] c 37 N87-22985
- Mobile remote manipulator vehicle system  
[NASA-CASE-LAR-13393-1] c 54 N87-29118
- Standard remote manipulator system docking target augmentation for automated docking  
[NASA-CASE-MFS-28419-1] c 18 N91-27200
- Synchronized computational architecture for generalized bilateral control of robot arms  
[NASA-CASE-NPO-17401-1-CU] c 63 N91-31885
- End effector with astronaut foot restraint  
[NASA-CASE-MSC-21721-1] c 54 N92-16559
- REMOTE SENSING**
- Method and apparatus for calibrating the ionosphere and application to surveillance of geophysical events  
[NASA-CASE-NPO-15430-1] c 46 N85-21846
- Method for detecting surface motions and mapping small terrestrial or planetary surface deformations with synthetic aperture radar  
[NASA-CASE-NPO-17831-1-CU] c 43 N91-14642
- Remote object configuration/orientation determination  
[NASA-CASE-NPO-17436-1-CU] c 35 N91-15512
- Thermal remote anemometer system  
[NASA-CASE-LAR-13508-1] c 35 N92-21710
- Programmable hyperspectral image mapper with on-array processing  
[NASA-CASE-NPO-17794-1-CU] c 74 N92-30104
- Method and apparatus for deflection measurements using eddy current effects  
[NASA-CASE-GSC-13506-1] c 35 N93-26103
- REMOTE SENSORS**
- Passive optical wind and turbulence detection system Patent  
[NASA-CASE-XMF-14032] c 20 N71-16340
- Pressure monitoring with a plurality of ionization gauges controlled at a central location Patent  
[NASA-CASE-XLE-00787] c 14 N71-21090
- Flow angle sensor and read out system Patent  
[NASA-CASE-XLE-04503] c 14 N71-24864
- Time synchronization system utilizing moon reflected coded signals Patent  
[NASA-CASE-NPO-10143] c 10 N71-26326
- Clear air turbulence detector  
[NASA-CASE-ERC-10081] c 14 N72-28437
- Intruder detection system  
[NASA-CASE-ARC-10097-2] c 07 N73-25160
- Microwave power transmission system wherein level of transmitted power is controlled by reflections from receiver  
[NASA-CASE-MFS-21470-1] c 44 N74-19870
- Voltage monitoring system  
[NASA-CASE-KSC-10736-1] c 33 N75-19521
- Wind sensor  
[NASA-CASE-NPO-13462-1] c 35 N76-24524
- Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c 35 N77-10493
- Wind measurement system  
[NASA-CASE-MFS-23362-1] c 47 N77-10753
- Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c 35 N77-27367
- Remote sensing of vegetation and soil using microwave ellipsometry  
[NASA-CASE-GSC-11976-1] c 43 N78-10529
- Remote water monitoring system  
[NASA-CASE-LAR-11973-1] c 35 N78-27384
- Radar target for remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c 43 N80-18498
- Method of and apparatus for measuring temperature and pressure --- atmospheric sounding  
[NASA-CASE-GSC-12558-1] c 36 N85-21639
- Improved real-time imaging spectrometer  
[NASA-CASE-NPO-18410-1-CU] c 74 N93-29086
- REMOTELY PILOTTED VEHICLES**
- Rotating launch device for a remotely piloted aircraft  
[NASA-CASE-ARC-10979-1] c 09 N77-19076
- REMOVAL**
- Catalyst bed removing tool Patent  
[NASA-CASE-XFR-00811] c 15 N70-36901
- Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c 28 N81-15119
- Acoustic bubble removal method  
[NASA-CASE-NPO-15334-1] c 71 N83-35781
- Device for removing foreign objects from anatomic organs  
[NASA-CASE-GSC-13306-1] c 52 N92-33032
- REPEATERS**
- Time division radio relay synchronizing system using different sync code words for in sync and out of sync conditions Patent  
[NASA-CASE-GSC-10373-1] c 07 N71-19773
- REPLACING**
- Electron beam tube containing a multiple cathode array employing indexing means for cathode substitution Patent  
[NASA-CASE-NPO-10625] c 09 N71-26182
- High reliability robot friendly ORU interface  
[NASA-CASE-GSC-13360-1] c 37 N92-23377
- Bearing servicing tool  
[NASA-CASE-MSC-21881-1] c 37 N93-14871
- RESCUE OPERATIONS**
- Backpack carrier Patent  
[NASA-CASE-LAR-10056] c 05 N71-12351
- Rescue litter flotation assembly Patent  
[NASA-CASE-XMS-04170] c 05 N71-22748
- Method of locating persons in distress --- by using radar imagery from radar reflectors  
[NASA-CASE-LAR-11390-1] c 32 N77-21267
- Apparatus and method of capturing an orbiting spacecraft  
[NASA-CASE-MSC-20979-1] c 37 N87-22985
- Airborne rescue system  
[NASA-CASE-ARC-11909-1] c 03 N91-31113
- RESEARCH AIRCRAFT**
- Miniature electrooptical air flow sensor  
[NASA-CASE-LAR-13065-1] c 35 N85-20295
- RESEARCH AND DEVELOPMENT**
- Tube fabricating process  
[NASA-CASE-LAR-10203-1] c 15 N72-16330
- RESEARCH FACILITIES**
- Nano-G research laboratory for a spacecraft  
[NASA-CASE-GSC-13197-1] c 18 N91-27201
- RESEARCH VEHICLES**
- Lunar landing flight research vehicle Patent  
[NASA-CASE-XFR-00929] c 31 N70-34966
- Velocity limiting safety system Patent  
[NASA-CASE-XLA-07473] c 15 N71-24895
- RESERVOIRS**
- Water cooled static pressure probe  
[NASA-CASE-LAR-14340-1-CU] c 35 N92-21586
- RESIDUAL STRESS**
- Miniature stress transducer Patent  
[NASA-CASE-XNP-02983] c 14 N71-21091
- Method of making a perspiration resistant biopotential electrode  
[NASA-CASE-MSC-90153-2] c 05 N72-25120
- Method and apparatus for determination of material residual stress  
[NASA-CASE-GSC-13451-1] c 39 N92-23549
- Method of characterizing residual stress in ferromagnetic materials using a pulse histogram of acoustic emission signals  
[NASA-CASE-LAR-14239-1] c 26 N93-14705
- Method and apparatus for determination of material residual stress  
[NASA-CASE-GSC-13451-1] c 39 N93-20118
- RESILIENCE**
- Resilience testing device Patent  
[NASA-CASE-XLA-08254] c 14 N71-26161
- RESIN BONDING**
- Method and apparatus for bonding a plastics sleeve onto a metallic body Patent  
[NASA-CASE-XLA-01262] c 15 N71-21404
- Covered silicon solar cells and method of manufacture --- with polymeric films  
[NASA-CASE-LEW-11065-2] c 44 N76-14600
- Method of manufacture of bonded fiber flywheel --- fiberglass-epoxy  
[NASA-CASE-MFS-23674-1] c 24 N81-29163
- RESIN MATRIX COMPOSITES**
- Phosphorus-containing bisimide resins  
[NASA-CASE-ARC-11321-1] c 27 N81-27272
- Elastomer coated filler and composites thereof comprising at least 60% by weight of a hydrated filler and an elastomer containing an acid substituent  
[NASA-CASE-NPO-14857-1] c 27 N83-19900
- Method of tracing contour patterns for use in making gradual contour resin matrix composites  
[NASA-CASE-ARC-11246-1] c 31 N83-34073
- Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
[NASA-CASE-ARC-11429-1-CU] c 27 N86-20560
- High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1SB] c 24 N86-21590
- Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-2] c 27 N86-27451
- Process for preparing phthalocyanine polymer from imide containing bisphthalonitrile  
[NASA-CASE-ARC-11511-2] c 27 N87-21112
- Method of controlling a resin curing process --- for fiber reinforced composites  
[NASA-CASE-MSC-21169-1] c 27 N89-29539
- Ladder polymers for use as high temperature stable resins or coatings  
[NASA-CASE-LEW-14203-1] c 27 N91-15402
- Processable polyimide adhesive and matrix composite resin  
[NASA-CASE-LAR-14101-1] c 27 N91-15403
- Poly 1, 2, 4-triazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14440-1] c 23 N92-10066
- Semi-interpenetrating polymer network for tougher and more microcracking resistant high temperature polymers  
[NASA-CASE-LAR-13925-1] c 27 N92-21711
- Low pressure process for continuous fiber reinforced polyamic acid resin matrix composite laminates  
[NASA-CASE-LAR-14954-1] c 24 N92-34214
- Semi-interpenetrating polymer network for tougher and more microcracking resistant high temperature polymers  
[NASA-CASE-LAR-13925-2] c 27 N93-11059
- Low toxicity high temperature PMR polyimide  
[NASA-CASE-LAR-14639-1] c 27 N93-14709
- Poly(1,2,4-triazole) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14440-1] c 23 N93-18283
- RESINS**
- Modified polyurethane foams for fuel-fire Patent  
[NASA-CASE-ARC-10098-1] c 06 N71-24739
- Bonding or repairing process  
[NASA-CASE-MSC-12357] c 15 N73-12489
- Semiconductor surface protection material  
[NASA-CASE-ERC-10339-1] c 18 N73-37532
- Composite lamination method  
[NASA-CASE-LAR-12019-1] c 24 N78-17150
- Polyvinyl alcohol cross-linked with two aldehydes  
[NASA-CASE-LEW-13504-1] c 25 N83-13188
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c 27 N83-31854
- Fire and heat resistant laminating resins based on maleimide and citraconimide substituted 1-(diorgano oxyphosphoryl) methyl -2,4- and -2,6- diaminobenzenes  
[NASA-CASE-ARC-11533-3] c 27 N87-24564
- Fire and heat resistant laminating resin based on maleimide and citraconimide substituted 1-(diorganooxyphosphoryl-methyl)-2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-2] c 27 N89-16042

- Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14489-1] c 37 N91-27562
- Ethynyl terminated imidothioethers and resins therefrom  
[NASA-CASE-LAR-13910-2-CU] c 27 N91-31307
- Polyimide molding powder, coating, adhesive, and matrix resin  
[NASA-CASE-LAR-14163-1] c 27 N92-33014
- RESISTANCE**  
Method of making a perspiration resistant biopotential electrode  
[NASA-CASE-MSC-90153-2] c 05 N72-25120
- Variable resistance constant tension and lubrication device --- using oil-saturated leather wiper  
[NASA-CASE-KSC-10723-1] c 37 N75-13265
- Acoustic ground impedance meter  
[NASA-CASE-LAR-12995-1] c 35 N84-22933
- RESISTANCE HEATING**  
Electrothermal rockets having improved heat exchangers Patent  
[NASA-CASE-XLE-01783] c 28 N70-34175
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA 1.71:NPO-15494-2] c 35 N85-34373
- RESISTANCE THERMOMETERS**  
Sub-Kelvin resistance thermometer  
[NASA-CASE-GSC-13406-1] c 35 N92-33614
- RESISTORS**  
High isolation RF signal selection switches  
[NASA-CASE-NPO-13081-1] c 33 N74-22814
- Resistive anode image converter  
[NASA-CASE-HQN-10876-1] c 33 N76-27473
- Amplifier for measuring low-level signals in the presence of high common mode voltage  
[NASA-CASE-MFS-25868-1] c 33 N86-20670
- RESOLUTION**  
Analog-to-digital conversion system Patent  
[NASA-CASE-XAC-00404] c 08 N70-40125
- Spectroscopy equipment using a slender cylindrical reflector as a substitute for a slit Patent  
[NASA-CASE-XGS-08269] c 23 N71-26206
- Resolution enhanced sound detecting apparatus  
[NASA-CASE-NPO-14134-1] c 71 N79-23753
- Television monitor field shifter and an opto-electronic method for obtaining a stereo image of optimal depth resolution and reduced depth distortion on a single screen  
[NASA-CASE-NPO-17249-1-CU] c 32 N89-28676
- Phase ambiguity resolution for offset OPSK modulation systems  
[NASA-CASE-NPO-17853-1-CU] c 32 N91-25318
- New kinematic functions for redundancy resolution using configuration control  
[NASA-CASE-NPO-18608-1-CU] c 63 N93-17275
- RESOLVERS**  
Differential phase shift keyed signal resolver  
[NASA-CASE-MSC-14066-1] c 33 N74-27705
- Focal axis resolver for offset reflector antennas  
[NASA-CASE-GSC-12630-1] c 33 N83-36355
- Magnetic heading reference  
[NASA-CASE-LAR-12638-1] c 04 N84-14132
- Angular measurement system  
[NASA-CASE-MFS-25825-1] c 31 N86-29055
- RESONANCE**  
Optically selective, acoustically resonant gas detecting transducer  
[NASA-CASE-ARC-10639-1] c 35 N78-13400
- Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c 36 N83-35350
- Arrangement for damping the resonance in a laser diode  
[NASA-CASE-NPO-15980-1] c 36 N85-30305
- Precision tunable resonant microwave cavity  
[NASA-CASE-LEW-13935-1] c 33 N87-21234
- RESONANT FREQUENCIES**  
Vibrating element electrometer with output signal magnified over input signal by a function of the mechanical Q of the vibrating element Patent  
[NASA-CASE-XAC-02807] c 09 N71-23021
- Apparatus for detecting the amount of material in a resonant cavity container Patent  
[NASA-CASE-XNP-02500] c 18 N71-27397
- Parasitic suppressing circuit  
[NASA-CASE-ERC-10403-1] c 10 N73-26228
- CW ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c 39 N78-15512
- Microbalance --- for measuring particle mass  
[NASA-CASE-MSC-11242] c 35 N78-17358
- Method and apparatus for shaping and enhancing acoustical levitation forces  
[NASA-CASE-MFS-25050-1] c 71 N81-15767
- Acoustic bubble removal method  
[NASA-CASE-NPO-15334-1] c 71 N83-35781
- Low noise tuned amplifier  
[NASA-CASE-GSC-12567-1] c 33 N84-22887
- Acoustic ground impedance meter  
[NASA-CASE-LAR-12995-1] c 35 N84-22933
- Vibrating-chamber levitation systems  
[NASA-CASE-NPO-16142-1-CU] c 35 N86-20752
- Single mode levitation and translation  
[NASA-CASE-NPO-16675-1-CU] c 71 N88-24241
- Reflection oscillators employing series resonant crystals  
[NASA-CASE-GSC-13173-1] c 33 N90-23635
- Acoustic positioning and orientation prediction  
[NASA-CASE-NPO-17511-1-CU] c 71 N91-14807
- Method of recertifying a loaded bearing member  
[NASA-CASE-LAR-14168-1] c 39 N92-34174
- RESONANT VIBRATION**  
Acoustic agglomeration methods and apparatus  
[NASA-CASE-NPO-15466-1] c 71 N85-22104
- Acoustophoresis method and apparatus  
[NASA-CASE-LAR-13388-1] c 25 N92-33611
- High speed thin plate fatigue crack monitor  
[NASA-CASE-LAR-14816-1-SB] c 39 N93-19329
- RESONATORS**  
High-Q bandpass resonators utilizing bandstop resonator pairs  
[NASA-CASE-GSC-10990-1] c 09 N73-26195
- Low noise cryogenic dielectric resonator oscillator  
[NASA-CASE-NPO-17157-1-CU] c 33 N88-26596
- Method and circuit for shaping laser output pulses  
[NASA-CASE-LAR-14203-1] c 36 N89-28817
- Self-collimated unstable resonator semiconductor laser  
[NASA-CASE-NPO-18386-1-CU] c 36 N93-18277
- Aberration correction of unstable resonators  
[NASA-CASE-NPO-18662-1-CU] c 74 N93-28428
- RESOURCE ALLOCATION**  
Dynamic resource allocation scheme for distributed heterogeneous computer systems  
[NASA-CASE-NPO-17197-1-CU] c 62 N91-25693
- RESPIRATION**  
Method and system for respiration analysis Patent  
[NASA-CASE-XFR-08403] c 05 N71-11202
- RESPIRATORS**  
Respiration monitor  
[NASA-CASE-FRC-10012] c 14 N72-17329
- RESPIRATORY RATE**  
Gas low pressure low flow rate metering system Patent  
[NASA-CASE-FRC-10022] c 12 N71-26546
- Respiratory analysis system and method  
[NASA-CASE-MSC-13436-1] c 05 N73-32015
- Metabolic analyzer --- for measuring metabolic rate and breathing dynamics of human beings  
[NASA-CASE-MFS-21415-1] c 52 N74-20728
- RESPIROMETERS**  
Metabolic analyzer --- for measuring metabolic rate and breathing dynamics of human beings  
[NASA-CASE-MFS-21415-1] c 52 N74-20728
- RESPONSE TIME (COMPUTERS)**  
Dynamic resource allocation scheme for distributed heterogeneous computer systems  
[NASA-CASE-NPO-17197-1-CU] c 62 N91-25693
- RESPONSES**  
Frequency division multiplex technique  
[NASA-CASE-KSC-10521] c 07 N73-20176
- RESTARTABLE ROCKET ENGINES**  
Zero gravity starting means for liquid propellant motors Patent  
[NASA-CASE-XNP-01390] c 28 N70-41275
- Small rocket engine Patent  
[NASA-CASE-XLE-00685] c 28 N70-41992
- RESTORATION**  
Multiresponse imager and imaging process for improved resolution  
[NASA-CASE-LAR-14779-1] c 74 N92-29951
- RESUSCITATION**  
Resuscitation apparatus Patent  
[NASA-CASE-XMS-01115] c 05 N70-39922
- RETAINING**  
Floating nut retention system  
[NASA-CASE-MSC-16938-1] c 37 N80-23653
- Modified spiral wound retaining ring  
[NASA-CASE-LAR-12361-1] c 37 N83-19091
- Payload retention device  
[NASA-CASE-MSC-21906-1] c 37 N92-28727
- RETARDERS (DEVICES)**  
Thrust reverser for a long duct fan engine --- for turbofan engines  
[NASA-CASE-LEW-13199-1] c 07 N82-26293
- RETARDING**  
Ablative resin Patent  
[NASA-CASE-XLE-05913] c 33 N71-14032
- RETICLES**  
Optical tracker having overlapping reticles on parallel axes Patent  
[NASA-CASE-XGS-05715] c 23 N71-16100
- Star tracking reticles and process for the production thereof  
[NASA-CASE-GSC-11188-2] c 21 N73-19630
- Star tracking reticles  
[NASA-CASE-GSC-11188-1] c 14 N73-32320
- Formation of star tracking reticles  
[NASA-CASE-GSC-11188-3] c 74 N74-20008
- Star scanner --- with a reticle with a pair of slits having differing separation  
[NASA-CASE-GSC-11569-1] c 89 N74-30886
- Multiple axis reticle  
[NASA-CASE-ARC-11886-1-SB] c 35 N91-14591
- RETINA**  
Optical joint correlator for real-time image tracking and retinal surgery  
[NASA-CASE-MSC-21509-1] c 74 N91-25840
- Portable dynamic fundus instrument  
[NASA-CASE-MSC-21675-1] c 52 N92-28755
- RETINAL IMAGES**  
Retinally stabilized differential resolution television display  
[NASA-CASE-NPO-15432-1] c 32 N85-29117
- RETRACTABLE EQUIPMENT**  
Runway light Patent  
[NASA-CASE-XLA-00119] c 11 N70-33329
- Extensible cable support Patent  
[NASA-CASE-XMF-07587] c 15 N71-18701
- Retractable environmental seal  
[NASA-CASE-MFS-23646-1] c 37 N79-22474
- Antenna deployment mechanism for use with a spacecraft --- extensible and retractable telescopic antenna mast  
[NASA-CASE-GSC-12331-1] c 18 N80-14183
- CAM controlled retractable door latch  
[NASA-CASE-MSC-20304-1] c 37 N82-31690
- Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c 18 N83-29303
- Retractable tool bit having latch type catch mechanism  
[NASA-CASE-GSC-13359-1] c 37 N92-23378
- Retractable tool bit having latch type catch mechanism  
[NASA-CASE-GSC-13359-1] c 37 N93-18286
- Split rail gripper assembly and tool driver therefor  
[NASA-CASE-GSC-13370-2] c 37 N93-18288
- RETROFIRING**  
Visual target for retrofire attitude control  
[NASA-CASE-XMS-12158-1] c 31 N69-27499
- Discrete local attitude sensing device Patent  
[NASA-CASE-XMS-03792] c 14 N70-41812
- RETROREFLECTION**  
Interferometer servo system Patent  
[NASA-CASE-NPO-10300] c 14 N71-17662
- Over-under double-pass interferometer  
[NASA-CASE-NPO-13999-1] c 35 N78-18395
- Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c 32 N80-24510
- Remote object configuration/orientation determination  
[NASA-CASE-NPO-17436-1-CU] c 35 N91-15512
- Multiperiod-grating surface-emitting lasers  
[NASA-CASE-NPO-17763-1-CU] c 36 N93-14703
- RETROREFLECTORS**  
Interferometer --- high resolution  
[NASA-CASE-NPO-14448-1] c 74 N81-29963
- Low noise lead screw positioner  
[NASA-CASE-NPO-15617-1] c 35 N87-21304
- Equal path, phase shifting, sample point interferometer for monitoring the configuration of surfaces  
[NASA-CASE-NPO-17913-1-CU] c 74 N92-22034
- RETROROCKET ENGINES**  
Steerable solid propellant rocket motor Patent  
[NASA-CASE-XNP-00234] c 28 N70-38645
- RETURN TO EARTH SPACE FLIGHT**  
Assured crew return vehicle  
[NASA-CASE-MSC-21536-1] c 18 N92-21999
- REUSABLE HEAT SHIELDING**  
High temperature glass thermal control structure and coating --- for application to spacecraft reusable heat shielding  
[NASA-CASE-ARC-11164-1] c 44 N83-34448
- Thermally activated retainer means  
[NASA-CASE-MSC-21793-1] c 16 N91-28166
- REUSABLE ROCKET ENGINES**  
Earth-to-orbit vehicle providing a reusable orbital stage  
[NASA-CASE-LAR-13486-1] c 16 N90-22584
- REUSABLE SPACECRAFT**  
Recoverable single stage spacecraft hooster Patent  
[NASA-CASE-XMF-01973] c 31 N70-41588
- Space shuttle vehicle and system  
[NASA-CASE-MSC-12433] c 31 N73-14854
- Aerospace vehicle  
[NASA-CASE-LAR-13155-1] c 05 N86-19310
- REUSE**  
Silica reusable surface insulation  
[NASA-CASE-ARC-10721-1] c 27 N76-22376

- Reusable captive blind fastener  
[NASA-CASE-MS-C-18742-1] c 37 N82-26673
- Cryogenic insulation system  
[NASA-CASE-LAR-13506-1] c 27 N89-12741
- Reusable high-temperature heat pipes and heat pipe panels  
[NASA-CASE-LAR-13761-1] c 34 N90-20323
- REVERSE OSMOSIS**  
Reverse osmosis membrane of high urea rejection properties --- water purification  
[NASA-CASE-ARC-10980-1] c 27 N80-23452  
Method for the preparation of thin-skinned asymmetric reverse osmosis membranes and products thereof  
[NASA-CASE-ARC-11359-1] c 51 N84-28361
- REVERSED FLOW**  
Multistage multiple-reentry turbine Patent  
[NASA-CASE-XLE-00170] c 15 N70-36412  
Reversible current control apparatus Patent  
[NASA-CASE-XLA-09371] c 10 N71-18724  
Positive locking check valve Patent  
[NASA-CASE-XMS-09310] c 15 N71-22706  
Reverse pitch fan with divided splitter  
[NASA-CASE-LEW-12760-1] c 07 N77-17059  
Reversal electron attachment ionizer for detection of trace species  
[NASA-CASE-NPO-17596-1-CU] c 35 N89-28795
- REYNOLDS NUMBER**  
Wind tunnel test section  
[NASA-CASE-MFS-20509] c 11 N72-17183
- REYNOLDS STRESS**  
System for measuring Reynolds in a turbulently flowing fluid --- signal processing  
[NASA-CASE-ARC-10755-2] c 34 N76-27517
- RHENIUM**  
Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c 35 N77-32454
- RHEOMETERS**  
Viscosity measuring instrument  
[NASA-CASE-NPO-14501-1] c 35 N80-18357
- RHOMBOIDS**  
Rhomboid prism pair for rotating the plane of parallel light beams  
[NASA-CASE-ARC-11311-1] c 74 N83-13978
- RIBBONS**  
Formed metal ribbon wrap Patent  
[NASA-CASE-XLE-00164] c 15 N70-36411  
Forming tool for ribbon or wire  
[NASA-CASE-XLA-05966] c 15 N72-12408  
Twisted multifilament superconductor  
[NASA-CASE-LEW-11726-1] c 26 N73-26752  
Method of controlling defect orientation in silicon crystal ribbon growth  
[NASA-CASE-NPO-13918-1] c 76 N79-11920  
Solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-1] c 44 N79-17314  
Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c 76 N79-23798  
Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c 44 N79-24431  
Method for forming a solar array strip  
[NASA-CASE-NPO-13652-3] c 44 N80-14474  
Means for growing ribbon crystals without subjecting the crystals to thermal shock-induced strains  
[NASA-CASE-NPO-14298-1] c 76 N80-32244  
Method of growing a ribbon crystal particularly suited for facilitating automated control of ribbon width  
[NASA-CASE-NPO-14295-1] c 76 N80-32245  
Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c 33 N81-19389  
Method of increasing minority carrier lifetime in silicon web or the like  
[NASA-CASE-NPO-15530-1] c 76 N83-35888  
Ribbon growing method and apparatus  
[NASA-CASE-NPO-16306-1-CU] c 76 N91-15898  
Permanent wire splicing by an explosive joining process  
[NASA-CASE-LAR-13825-1] c 31 N92-16162  
Device for mechanically stabilizing web ribbon buttons during growth initiation  
[NASA-CASE-NPO-17074-2-CU] c 76 N92-21499
- RIBBLETS**  
Combined riblet and lebu drag reduction system  
[NASA-CASE-LAR-13286-1] c 02 N88-14071  
Polymer/riblet combination for hydrodynamic skin friction reduction  
[NASA-CASE-LAR-14271-1-CU] c 27 N91-13558
- RIBOFLAVIN**  
Flavin coenzyme assay  
[NASA-CASE-GSC-10565-1] c 06 N72-25149
- RIBS (SUPPORTS)**  
Aeroflexible structures  
[NASA-CASE-XLA-06095] c 01 N69-39981
- RICE**  
Modification of the physical properties of freeze-dried rice  
[NASA-CASE-MS-C-13540-1] c 05 N72-33096
- RIDING QUALITY**  
Ride quality meter  
[NASA-CASE-LAR-12882-1] c 35 N84-12445
- RIGID ROTORS**  
Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c 05 N77-17029
- RIGID STRUCTURES**  
Quick release hook tape Patent  
[NASA-CASE-XMS-10660-1] c 15 N71-25975  
Thermally activated foaming compositions Patent  
[NASA-CASE-LAR-10373-1] c 18 N71-26155  
Adjustable mount for a trihedral mirror Patent  
[NASA-CASE-XNP-08907] c 23 N71-29123  
Folding structure fabricated of rigid panels  
[NASA-CASE-XHQ-02146] c 18 N75-27040  
Telescoping columns --- parabolic antenna support  
[NASA-CASE-LAR-12195-1] c 31 N81-27324  
Mechanical end joint system for connecting structural column elements  
[NASA-CASE-LAR-14465-1] c 37 N91-14614  
Clevis joint for deployable space structures  
[NASA-CASE-LAR-13898-1] c 37 N91-15544  
Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N91-28184  
Pressure wall patch  
[NASA-CASE-MFS-28724-1] c 18 N93-17061  
Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N93-24598
- RIGID WINGS**  
Flexible wing deployment device Patent  
[NASA-CASE-XLA-01220] c 02 N70-41863
- RIMS**  
Rim inertial measuring system  
[NASA-CASE-LAR-12052-1] c 18 N81-29152  
Wheels for wheelchairs and the like  
[NASA-CASE-MFS-28632-1] c 54 N93-17042
- RING CURRENTS**  
Ring counter  
[NASA-CASE-XGS-03095] c 09 N69-27463
- RING STRUCTURES**  
Reversible ring counter employing cascaded single SCR stages Patent  
[NASA-CASE-XGS-01473] c 09 N71-10673  
Energy absorbing device Patent  
[NASA-CASE-XMF-10040] c 15 N71-22877  
Phase-locked servo system --- for synchronizing the rotation of slip ring assembly  
[NASA-CASE-MFS-22073-1] c 33 N75-13139  
Laser system with an antiresonant optical ring  
[NASA-CASE-HQN-10844-1] c 36 N75-19653  
Helmet latching and attaching ring  
[NASA-CASE-XMS-04670] c 54 N78-17678  
Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c 32 N80-29539  
Modified spiral wound retaining ring  
[NASA-CASE-LAR-12361-1] c 37 N83-19091  
Torso sizing ring construction for hard space suit  
[NASA-CASE-ARC-11616-1] c 54 N86-28618  
Method and apparatus for making an optical element having a dielectric film  
[NASA-CASE-ARC-11611-1] c 74 N87-28416
- RING WINGS**  
Ring wing tension vehicle Patent  
[NASA-CASE-XLA-04901] c 31 N71-24315
- RIPPLES**  
Ripple indicator  
[NASA-CASE-KSC-10162] c 09 N72-11225
- RIVETS**  
Printed circuit board with bellows rivet connection Patent  
[NASA-CASE-XNP-05082] c 15 N70-41960
- ROBOT ARMS**  
Spiral lead platen robotic end effector  
[NASA-CASE-LAR-13855-1] c 37 N91-14615  
Multi-fingered robotic hand  
[NASA-CASE-NPO-15959-2] c 37 N91-14616  
Robot cable-compliant devices  
[NASA-CASE-GSC-13127-1] c 37 N91-17388  
Method and apparatus for positioning a robotic end effector  
[NASA-CASE-MS-C-21476-1] c 37 N91-21542  
Method and apparatus for configuration control of redundant robots  
[NASA-CASE-NPO-17801-1-CU] c 37 N91-21544  
Robotic tool change mechanism  
[NASA-CASE-GSC-13239-1] c 37 N91-31656  
Synchronized computational architecture for generalized bilateral control of robot arms  
[NASA-CASE-NPO-17401-1-CU] c 63 N91-31885  
Telerobot control system  
[NASA-CASE-NPO-18116-1-CU] c 37 N91-32509
- A generalized compliant motion primitive  
[NASA-CASE-NPO-18134-1-CU] c 37 N91-32510  
High level language-based robotic control system  
[NASA-CASE-NPO-17918-2-CU] c 63 N92-17895  
Configuration control of seven-degree-of-freedom arms  
[NASA-CASE-NPO-18607-1-CU] c 37 N92-23553  
Controlling flexible robot arms using a high speed dynamics process  
[NASA-CASE-NPO-18499-1-CU] c 37 N92-24042  
Controlling under-actuated robot arms using a high speed dynamics process  
[NASA-CASE-NPO-18498-1-CU] c 37 N92-24043  
Double-V block fingers with cruciform recess  
[NASA-CASE-GSC-13356-1] c 37 N92-24243  
Robot serviced space facility  
[NASA-CASE-GSC-13408-1] c 18 N92-24244  
Rolling friction robot fingers  
[NASA-CASE-GSC-13261-1] c 37 N92-29138  
Position-error-based force reflection and compliance control  
[NASA-CASE-NPO-18668-1-CU] c 37 N92-29765  
Flexible robotic arm  
[NASA-CASE-GSC-13161-1] c 37 N92-33634  
Hazardous materials emergency response mobile robot  
[NASA-CASE-NPO-18690-1-CU] c 37 N92-34205  
Driven shielding capacitive proximity sensor  
[NASA-CASE-GSC-13377-1] c 63 N93-14701  
Extended task space control for robotic manipulators  
[NASA-CASE-NPO-18902-1-CU] c 37 N93-28129
- ROBOT CONTROL**  
Robust high-performance control for robotic manipulators  
[NASA-CASE-NPO-17785-1-CU] c 37 N89-28846  
Spiral lead platen robotic end effector  
[NASA-CASE-LAR-13855-1] c 37 N91-14615  
Method and apparatus for positioning a robotic end effector  
[NASA-CASE-MS-C-21476-1] c 37 N91-21542  
A universal computer control system for motors  
[NASA-CASE-NPO-17134-1-CU] c 33 N91-31528  
High level language-based robotic control system  
[NASA-CASE-NPO-17918-2-CU] c 63 N92-17895  
Bilevel shared control for teleoperators  
[NASA-CASE-NPO-17800-1-CU] c 37 N92-22036  
Climbing robot --- caterpillar design  
[NASA-CASE-GSC-13442-1] c 37 N92-23547  
Double-V block fingers with cruciform recess  
[NASA-CASE-GSC-13356-1] c 37 N92-24243  
Position-error-based force reflection and compliance control  
[NASA-CASE-NPO-18668-1-CU] c 37 N92-29765  
Obstacle avoidance for redundant robots using configuration control  
[NASA-CASE-NPO-17852-1-CU] c 63 N92-33019  
Hazardous materials emergency response mobile robot  
[NASA-CASE-NPO-18690-1-CU] c 37 N92-34205  
The adaptive neuron model: An architecture for the rapid learning of nonlinear topological transformations  
[NASA-CASE-NPO-18579-1-CU] c 63 N93-11174  
Terminal slider control of nonlinear robotic systems  
[NASA-CASE-NPO-18584-1-CU] c 37 N93-11177  
A method for surmounting an obstacle by a robot vehicle  
[NASA-CASE-NPO-18764-1-CU] c 37 N93-17272  
Operator-tailored adjustable control station with movable monitors and cameras for viewing systems in robotics and teleoperations  
[NASA-CASE-NPO-17837-1-CU] c 74 N93-17273  
Force reflecting hand controller  
[NASA-CASE-NPO-17851-1-CU] c 37 N93-23078  
Dual arm generalized compliant motion with shared control  
[NASA-CASE-NPO-18738-1-CU] c 37 N93-28954  
Spline screw autochanger  
[NASA-CASE-GSC-13435-1] c 37 N93-29505  
Special purpose parallel computer architecture for real-time control and simulation in robotic applications  
[NASA-CASE-NPO-17629-1-CU] c 60 N93-29608
- ROBOT DYNAMICS**  
Spiral lead platen robotic end effector  
[NASA-CASE-LAR-13855-1] c 37 N91-14615  
Multi-fingered robotic hand  
[NASA-CASE-NPO-15959-2] c 37 N91-14616  
Robot cable-compliant devices  
[NASA-CASE-GSC-13127-1] c 37 N91-17388  
Method and apparatus for configuration control of redundant robots  
[NASA-CASE-NPO-17801-1-CU] c 37 N91-21544  
Robotic tool change mechanism  
[NASA-CASE-GSC-13239-1] c 37 N91-31656  
Climbing robot --- caterpillar design  
[NASA-CASE-GSC-13442-1] c 37 N92-23547



# ROBOT SENSORS

- Flexible robotic arm  
[NASA-CASE-GSC-13161-1] c 37 N92-33634
- Dual arm generalized compliant motion with shared control  
[NASA-CASE-NPO-18738-1-CU] c 37 N93-28954
- Spline screw autochanger  
[NASA-CASE-GSC-13435-1] c 37 N93-29505
- ROBOT SENSORS**
- Method and apparatus for positioning a robotic end effector  
[NASA-CASE-MSC-21476-1] c 37 N91-21542
- Dual arm generalized compliant motion with shared control  
[NASA-CASE-NPO-18738-1-CU] c 37 N93-28954
- ROBOTICS**
- Self-locking telescoping manipulator arm  
[NASA-CASE-MFS-25906-1] c 37 N86-20789
- Remotely controlled spray gun  
[NASA-CASE-MFS-28110-1] c 37 N87-24689
- Optically controlled welding system  
[NASA-CASE-MFS-29291-1] c 37 N89-12868
- Passively activated prehensile digit for a robotic end effector  
[NASA-CASE-NPO-16766-1-CU] c 37 N89-13785
- Distributed proximity sensor system  
[NASA-CASE-NPO-17275-1-CU] c 37 N89-29750
- Gripping device  
[NASA-CASE-MSC-21365-1] c 37 N90-20408
- Compliant joint  
[NASA-CASE-GSC-13153-1] c 37 N91-17387
- Power saw  
[NASA-CASE-MSC-21469-1] c 37 N91-31655
- A generalized compliant motion primitive  
[NASA-CASE-NPO-18134-1-CU] c 37 N91-32510
- High level language-based robotic control system  
[NASA-CASE-NPO-17918-2-CU] c 63 N92-17895
- Controlling flexible robot arms using a high speed dynamics process  
[NASA-CASE-NPO-18499-1-CU] c 37 N92-24042
- Controlling under-actuated robot arms using a high speed dynamics process  
[NASA-CASE-NPO-18498-1-CU] c 37 N92-24043
- Method and apparatus for predicting the direction of movement in machine vision  
[NASA-CASE-NPO-17552-1-CU] c 54 N92-29129
- Bladder operated robotic joint  
[NASA-CASE-MFS-28682-1] c 27 N92-29831
- Work attachment mechanism/work attachment fixture  
[NASA-CASE-GSC-13430-1] c 37 N93-14712
- Operator-tailored adjustable control station with movable monitors and cameras for viewing systems in robotics and teleoperations  
[NASA-CASE-NPO-17837-1-CU] c 74 N93-17273
- Near real-time stereo vision system  
[NASA-CASE-NPO-18593-1-CU] c 74 N93-18276
- Retractable tool bit having latch type catch mechanism  
[NASA-CASE-GSC-13359-1] c 37 N93-18286
- Split rail gripper assembly and tool driver therefor  
[NASA-CASE-GSC-13370-2] c 37 N93-18288
- Robot friendly probe and socket assembly  
[NASA-CASE-MSC-22028-1] c 37 N93-22007
- Special purpose parallel computer architecture for real-time control and simulation in robotic applications  
[NASA-CASE-NPO-17629-1-CU] c 60 N93-29608
- Split rail gripper assembly and tool driver therefor  
[NASA-CASE-GSC-13370-1] c 37 N93-31317
- ROBOTS**
- Optically controlled welding system  
[NASA-CASE-MFS-29291-1] c 37 N89-12868
- Robust high-performance control for robotic manipulators  
[NASA-CASE-NPO-17785-1-CU] c 37 N89-28846
- Distributed proximity sensor system  
[NASA-CASE-NPO-17275-1-CU] c 37 N89-29750
- Robot cable-compliant devices  
[NASA-CASE-GSC-13127-1] c 37 N91-17388
- Method and apparatus for configuration control of redundant robots  
[NASA-CASE-NPO-17801-1-CU] c 37 N91-21544
- Telerobot control system  
[NASA-CASE-NPO-18116-1-CU] c 37 N91-32509
- A generalized compliant motion primitive  
[NASA-CASE-NPO-18134-1-CU] c 37 N91-32510
- High level language-based robotic control system  
[NASA-CASE-NPO-17918-2-CU] c 63 N92-17895
- High reliability robot friendly ORU interface  
[NASA-CASE-GSC-13360-1] c 37 N92-23377
- Climbing robot — caterpillar design  
[NASA-CASE-GSC-13442-1] c 37 N92-23547
- Controlling flexible robot arms using a high speed dynamics process  
[NASA-CASE-NPO-18499-1-CU] c 37 N92-24042
- Controlling under-actuated robot arms using a high speed dynamics process  
[NASA-CASE-NPO-18498-1-CU] c 37 N92-24043

- Double-V block fingers with cruciform recess  
[NASA-CASE-GSC-13356-1] c 37 N92-24243
- Robot serviced space facility  
[NASA-CASE-GSC-13408-1] c 18 N92-24244
- Bladder operated robotic joint  
[NASA-CASE-MFS-28682-1] c 27 N92-29831
- Obstacle avoidance for redundant robots using configuration control  
[NASA-CASE-NPO-17852-1-CU] c 63 N92-33019
- Hazardous materials emergency response mobile robot  
[NASA-CASE-NPO-18690-1-CU] c 37 N92-34205
- Terminal slider control of nonlinear robotic systems  
[NASA-CASE-NPO-18584-1-CU] c 37 N93-11177
- A method for surmounting an obstacle by a robot vehicle  
[NASA-CASE-NPO-18764-1-CU] c 37 N93-17272
- Double-V block fingers with cruciform recess  
[NASA-CASE-GSC-13356-2] c 37 N93-17625
- Robot friendly probe and socket assembly  
[NASA-CASE-MSC-22028-1] c 37 N93-22007
- Force reflecting hand controller  
[NASA-CASE-NPO-17851-1-CU] c 37 N93-23078
- Split rail gripper assembly and tool driver therefor  
[NASA-CASE-GSC-13370-1] c 37 N93-31317
- ROCKET ENGINE CASES**
- Method of making a rocket motor casing Patent  
[NASA-CASE-XLE-00409] c 28 N71-15658
- Rocket motor casing Patent  
[NASA-CASE-XLE-05689] c 28 N71-15659
- Payload/burned-out motor case separation system Patent  
[NASA-CASE-XLA-05369] c 31 N71-15687
- Solid propellant liner Patent  
[NASA-CASE-XNP-09744] c 27 N71-16392
- Ion engine casing construction and method of making same Patent  
[NASA-CASE-XNP-06942] c 28 N71-23293
- Casting propellant in rocket engine  
[NASA-CASE-LAR-11995-1] c 28 N77-10213
- Solid propellant rocket motor and method of making same  
[NASA-CASE-XLA-01349] c 20 N77-17143
- ROCKET ENGINE CONTROL**
- Fluid thrust control system --- for liquid propellant rocket engines  
[NASA-CASE-XMF-05964-1] c 20 N79-21124
- ROCKET ENGINE DESIGN**
- Annular rocket motor and nozzle configuration Patent  
[NASA-CASE-XLE-00078] c 28 N70-33284
- Spherical solid-propellant rocket motor Patent  
[NASA-CASE-XLA-00105] c 28 N70-33331
- Spherically-shaped rocket motor Patent  
[NASA-CASE-XHQ-01897] c 28 N70-35381
- Rocket engine Patent  
[NASA-CASE-XLE-00342] c 28 N70-37980
- Swirling flow nozzle Patent  
[NASA-CASE-XNP-03692] c 28 N71-24321
- Ion thruster with a combination keeper electrode and electron baffle  
[NASA-CASE-NPO-11880] c 28 N73-24783
- Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c 20 N74-13502
- Rocket chamber and method of making  
[NASA-CASE-LEW-11118-2] c 20 N76-14191
- System for imposing directional stability on a rocket-propelled vehicle  
[NASA-CASE-MFS-21311-1] c 20 N76-21275
- Dual-fuel, dual-mode rocket engine  
[NASA-CASE-LAR-13773-1] c 20 N90-19298
- ROCKET ENGINES**
- Channel-type shell construction for rocket engines and the like Patent  
[NASA-CASE-XLE-00144] c 28 N70-34860
- Ion thruster cathode Patent Application  
[NASA-CASE-LEW-10814-1] c 28 N70-35422
- Injector-valve device Patent  
[NASA-CASE-XLE-00303] c 15 N70-36535
- Elastic universal joint Patent  
[NASA-CASE-XNP-00416] c 15 N70-36947
- Passively regulated water electrolysis rocket engine Patent  
[NASA-CASE-XGS-08729] c 28 N71-14044
- Method of igniting solid propellants Patent  
[NASA-CASE-XLE-01988] c 27 N71-15634
- Laminar flow enhancement Patent  
[NASA-CASE-NPO-10122] c 12 N71-17631
- Swirling flow nozzle Patent  
[NASA-CASE-XNP-03692] c 28 N71-24321
- Thruster maintenance system Patent  
[NASA-CASE-MFS-20325] c 28 N71-27095
- Purge device for thrust engines Patent  
[NASA-CASE-XMS-04826] c 28 N71-28849
- Method and device for cooling Patent  
[NASA-CASE-HQN-00938] c 33 N71-29053

- Ion thruster magnetic field control  
[NASA-CASE-LEW-10835-1] c 28 N72-22771
- Altitude simulation chamber for rocket engine testing  
[NASA-CASE-MFS-20620] c 11 N72-27262
- Method of making apparatus for sensing temperature  
[NASA-CASE-XLE-05230-2] c 14 N73-13417
- Magneto-plasma-dynamic arc thruster  
[NASA-CASE-LEW-11180-1] c 25 N73-25760
- Method of electroforming a rocket chamber  
[NASA-CASE-LEW-11118-1] c 20 N74-32919
- Device for installing rocket engines  
[NASA-CASE-MFS-19220-1] c 20 N76-22296
- Ion beam thruster shield  
[NASA-CASE-LEW-12082-1] c 20 N77-10148
- Anode for ion thruster  
[NASA-CASE-LEW-12048-1] c 20 N77-20162
- General purpose rocket furnace  
[NASA-CASE-MFS-23460-1] c 12 N79-26075
- Diffuser/ejector system for a very high vacuum environment  
[NASA-CASE-MFS-25791-1] c 09 N84-27749
- Ring-cusp ion thruster with shell anode  
[NASA-CASE-LEW-13881-1] c 20 N85-21256
- Low loss injector for liquid propellant rocket engines  
[NASA-CASE-MFS-25989-1] c 20 N87-14420
- Emergency egress fixed rocket package  
[NASA-CASE-MSC-21332-1] c 03 N91-15142
- Extended temperature range rocket injector  
[NASA-CASE-LEW-14846-1] c 20 N92-10054
- Accelerometer method and apparatus for integral display and control functions  
[NASA-CASE-MSC-21961-1] c 35 N92-29952
- Hybrid bearings for turbopumps and the like  
[NASA-CASE-MFS-28491-1] c 37 N93-28326
- Altitude compensating ablative stiffening band for rocket motor nozzles  
[NASA-CASE-MFS-28728-1] c 20 N93-28950
- Liquid fuel injection elements for rocket engines  
[NASA-CASE-MFS-28547-1] c 20 N93-29847
- ROCKET EXHAUST**
- Thrust vector control apparatus Patent  
[NASA-CASE-XLE-00208] c 28 N70-34294
- Rocket thrust throttling system  
[NASA-CASE-LEW-10374-1] c 28 N73-13773
- Method and apparatus for suppressing ignition overpressure in solid rocket propulsion systems  
[NASA-CASE-MFS-25843-1] c 20 N83-17588
- Hybrid plume plasma rocket  
[NASA-CASE-MSC-20476-2] c 20 N89-25279
- ROCKET FIRING**
- Alleviation of divergence during rocket launch Patent  
[NASA-CASE-XLA-00256] c 31 N71-15663
- ROCKET FLIGHT**
- Technique for control of free-flight rocket vehicles Patent  
[NASA-CASE-XLA-00937] c 31 N71-17691
- ROCKET LAUNCHING**
- Alleviation of divergence during rocket launch Patent  
[NASA-CASE-XLA-00256] c 31 N71-15663
- Controlled release device Patent  
[NASA-CASE-XKS-03338] c 15 N71-24043
- ROCKET LININGS**
- Heat exchanger and method of making --- rocket lining  
[NASA-CASE-LEW-12441-2] c 34 N80-24573
- ROCKET NOZZLES**
- Gimballed, partially submerged rocket nozzle Patent  
[NASA-CASE-XMF-01544] c 28 N70-34162
- Rocket thrust chamber Patent  
[NASA-CASE-XLE-00145] c 28 N70-36806
- Self-sealing, unbonded, rocket motor nozzle closure Patent  
[NASA-CASE-XLA-02651] c 28 N70-41967
- Automatically deploying nozzle exit cone extension Patent  
[NASA-CASE-XLE-01640] c 31 N71-15637
- Rocket nozzle test method Patent  
[NASA-CASE-NPO-10311] c 31 N71-15643
- Collapsible nozzle extension for rocket engines Patent  
[NASA-CASE-MFS-11497] c 28 N71-16224
- Apparatus and method for protecting a photographic device Patent  
[NASA-CASE-NPO-10174] c 14 N71-18465
- Multislit film cooled pyrolytic graphite rocket nozzle Patent  
[NASA-CASE-XNP-04389] c 28 N71-20942
- Prestressed refractory structure Patent  
[NASA-CASE-XNP-02888] c 18 N71-21068
- Swirling flow nozzle Patent  
[NASA-CASE-XNP-03692] c 28 N71-24321
- Method and device for cooling Patent  
[NASA-CASE-HQN-00938] c 33 N71-29053
- Inflatable transpiration cooled nozzle  
[NASA-CASE-MFS-20619] c 28 N72-11708

# SUBJECT INDEX

Solid propellant rocket motor nozzle  
[NASA-CASE-NPO-11458] c 28 N72-23810

Method of making a rocket nozzle  
[NASA-CASE-XMF-06884-1] c 20 N79-21123

Retractable environmental seal  
[NASA-CASE-MFS-23646-1] c 37 N79-22474

Nozzle fabrication technique  
[NASA-CASE-MSC-21299-1] c 20 N88-24684

Hybrid plume plasma rocket  
[NASA-CASE-MSC-20476-2] c 20 N89-25279

Nozzle fabrication technique  
[NASA-CASE-MSC-21299-2] c 37 N91-32508

Thruster sealing system and apparatus  
[NASA-CASE-MSC-21898-1] c 37 N93-14702

Rocket engine nozzle attenuator  
[NASA-CASE-MFS-28739-1] c 20 N93-28324

Altitude compensating ablative stiffening band for rocket motor nozzles  
[NASA-CASE-MFS-28728-1] c 20 N93-28950

**ROCKET OXIDIZERS**  
Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c 28 N74-33209

**ROCKET PROPELLANTS**  
Two-step rocket engine bipropellant valve Patent  
[NASA-CASE-XMS-04890-1] c 15 N70-22192

Rocket engine injector Patent  
[NASA-CASE-XLE-03157] c 28 N71-24736

Bipropellant injector  
[NASA-CASE-XNP-09461] c 28 N72-23809

**ROCKET TEST FACILITIES**  
High-vacuum condenser tank for ion rocket tests Patent  
[NASA-CASE-XLE-00168] c 11 N70-33278

Micro-pound extended range thrust stand Patent  
[NASA-CASE-GSC-10710-1] c 28 N71-27094

**ROCKET THRUST**  
Apparatus and method for control of a solid fueled rocket vehicle Patent  
[NASA-CASE-XNP-00217] c 28 N70-38181

Electrostatic thruster with improved insulators Patent  
[NASA-CASE-XLE-01902] c 28 N71-10574

Solid propellant rocket motor  
[NASA-CASE-NPO-11559] c 28 N73-24784

Thrust measurement  
[NASA-CASE-XMS-05731] c 35 N75-29382

**ROCKET VEHICLES**  
Umbilical separator for rockets Patent  
[NASA-CASE-XNP-00425] c 11 N70-38202

Support apparatus for dynamic testing Patent  
[NASA-CASE-XMF-01772] c 11 N70-41677

Alleviation of divergence during rocket launch Patent  
[NASA-CASE-XLA-00256] c 31 N71-15663

Technique for control of free-flight rocket vehicles Patent  
[NASA-CASE-XLA-00937] c 31 N71-17691

Coupling device for moving vehicles  
[NASA-CASE-GSC-12322-1] c 37 N80-14398

High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c 15 N82-24272

**ROCKET-BORNE INSTRUMENTS**  
Scanning aspect sensor employing an apertured disc and a commutator  
[NASA-CASE-XGS-08266] c 14 N69-27432

**ROCKETS**  
Hydrogen fire detection system with logic circuit to analyze the spectrum of temporal variations of the optical spectrum  
[NASA-CASE-MFS-13130] c 10 N72-17173

**ROCKS**  
Rock drill for recovering samples  
[NASA-CASE-XNP-07478] c 14 N69-21923

Rock sampling --- apparatus for controlling particle size  
[NASA-CASE-XNP-10007-1] c 46 N74-23068

Rock sampling --- method for controlling particle size distribution  
[NASA-CASE-XNP-09755] c 46 N74-23069

Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c 43 N79-31706

**RODS**  
Nuclear thermionic converter --- tungsten-thorium oxide rods  
[NASA-CASE-NPO-13121-1] c 73 N77-18891

Quasi-containerless glass formation method and apparatus  
[NASA-CASE-MFS-28090-1] c 27 N87-21111

Lightning discharge protection rod  
[NASA-CASE-LAR-13470-1] c 03 N88-14083

Combined load test apparatus for flat panels  
[NASA-CASE-LAR-14698-1] c 39 N92-30028

Preloaded latching device  
[NASA-CASE-MSC-21730-1] c 37 N93-13417

**ROLL**  
Roll alignment detector  
[NASA-CASE-GSC-10514-1] c 14 N72-20379

**ROLLER BEARINGS**

Method of lubricating rolling element bearings Patent  
[NASA-CASE-XLE-09527] c 15 N71-17688

Semi-linear ball bearing Patent  
[NASA-CASE-XLA-02809] c 15 N71-22982

Low mass rolling element for bearings  
[NASA-CASE-LEW-11087-1] c 15 N73-30458

Method of making rolling element bearings  
[NASA-CASE-LEW-11087-2] c 37 N74-15128

Bearing material --- composite material with low friction surface for rolling or sliding contact  
[NASA-CASE-LEW-11930-1] c 24 N76-22309

Rolling friction robot fingers  
[NASA-CASE-GSC-13261-1] c 37 N92-29138

Hybrid bearings for turbopumps and the like  
[NASA-CASE-MFS-28491-1] c 37 N93-28326

**ROLLERS**

Method of improving the reliability of a rolling element system Patent  
[NASA-CASE-XLE-02999] c 15 N71-16052

Load regulating latch  
[NASA-CASE-MSC-19535-1] c 37 N77-32499

Suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NPO-14395-1] c 37 N82-21587

Fully articulated four-point-bend loading fixture  
[NASA-CASE-LEW-14776-1] c 37 N91-21540

Magnetostriuctive roller drive motor  
[NASA-CASE-GSC-13369-1] c 33 N92-15331

Roller locking brake  
[NASA-CASE-GSC-13376-1] c 37 N92-21728

Linear mass actuator  
[NASA-CASE-LAR-14352-1] c 37 N92-34173

**ROLLING**

Device for applying constant pressure to a surface  
[NASA-CASE-GSC-13230-1] c 37 N92-28754

Noncircular rolling joints for vibrational reduction in slewing maneuvers  
[NASA-CASE-LAR-14515-1-CU] c 37 N92-33031

**ROLLING CONTACT LOADS**

Rolling element bearings Patent  
[NASA-CASE-XLE-09527-2] c 15 N71-26189

**ROLLING MOMENTS**

Roll attitude star sensor system Patent  
[NASA-CASE-XNP-01307] c 21 N70-41856

**ROOM TEMPERATURE**

Coating process  
[NASA-CASE-XNP-06508] c 18 N69-39895

Anode for rechargeable ambient temperature lithium cells  
[NASA-CASE-NPO-18580-1-CU] c 33 N93-17278

**ROTARY GYROSCOPES**

Closed loop fiber optic rotation sensor  
[NASA-CASE-NPO-16558-1-CU] c 74 N87-23259

**ROTARY STABILITY**

Reactance control system Patent  
[NASA-CASE-XMF-01598] c 21 N71-15583

Two component bearing Patent  
[NASA-CASE-XLA-00013] c 15 N71-29136

Lubricated journal bearing  
[NASA-CASE-LEW-11076-3] c 37 N75-30562

Cyclical bi-directional rotary actuator  
[NASA-CASE-GSC-11883-1] c 37 N77-19458

Family of airfoil shapes for rotating blades --- for increased power efficiency and blade stability  
[NASA-CASE-LAR-12843-1] c 02 N84-11136

Apparatus for and method of compensating dynamic unbalance  
[NASA-CASE-GSC-12550-1] c 37 N84-28082

Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N87-21332

**ROTARY WING AIRCRAFT**

Aircraft control system  
[NASA-CASE-ERC-10439] c 02 N73-19004

Swashplate control system  
[NASA-CASE-ARC-11633-1] c 08 N87-23631

High lift, low pitching moment airfoils  
[NASA-CASE-LAR-13215-1] c 02 N89-14224

**ROTARY WINGS**

Variable geometry rotor system  
[NASA-CASE-LAR-10557] c 02 N72-11018

Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c 05 N77-17029

Locking redundant link  
[NASA-CASE-LAR-11900-1] c 37 N79-14382

Acoustically swept rotor --- helicopter noise reduction  
[NASA-CASE-ARC-11106-1] c 05 N80-14107

Compensating linkage for main rotor control  
[NASA-CASE-LAR-11797-1] c 05 N81-19087

Family of airfoil shapes for rotating blades --- for increased power efficiency and blade stability  
[NASA-CASE-LAR-12843-1] c 02 N84-11136

Shapes for rotating airfoils  
[NASA-CASE-LAR-12396-1] c 02 N84-28732

Helicopter anti-torque system using strakes  
[NASA-CASE-LAR-13233-1] c 05 N84-33400

**ROTATING BODIES**

Optical spin compensator  
[NASA-CASE-XGS-02401] c 14 N69-27485

Laser apparatus for removing material from rotating objects Patent  
[NASA-CASE-MFS-11279] c 16 N71-20400

Phase-locked servo system --- for synchronizing the rotation of slip ring assembly  
[NASA-CASE-MFS-22073-1] c 33 N75-13139

Annular momentum control device used for stabilization of space vehicles and the like  
[NASA-CASE-LAR-11051-1] c 15 N76-14158

Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c 37 N76-18459

Multiple in-time docking capability for rotating space stations  
[NASA-CASE-MFS-20855-1] c 15 N77-10112

Rotatable mass for a flywheel  
[NASA-CASE-MFS-23051-1] c 37 N79-10422

Acoustic driving of rotor  
[NASA-CASE-NPO-14005-1] c 71 N79-20827

Multi-channel rotating optical interface for data transmission  
[NASA-CASE-NPO-14066-1] c 74 N79-34011

Apparatus for and method of compensating dynamic unbalance  
[NASA-CASE-GSC-12550-1] c 37 N84-28082

Airborne tracking sunphotometer apparatus and system  
[NASA-CASE-ARC-11622-1] c 44 N88-14492

Orbital debris sweeper and method  
[NASA-CASE-MSC-21534-1] c 18 N91-21222

Quick-connect fasteners for assembling devices in space  
[NASA-CASE-MSC-21648-1] c 37 N92-24051

Accelerometer method and apparatus for integral display and control functions  
[NASA-CASE-MSC-21961-1] c 35 N92-29952

**ROTATING CYLINDERS**

Tread drum for animals --- having an electrical shock station  
[NASA-CASE-ARC-10917-1] c 51 N78-27733

Head for high speed spinner having a vacuum chuck --- holding silicon dioxide chips for etching  
[NASA-CASE-NPO-15227-1] c 37 N81-33482

Non-backdrivable free wheeling coupling  
[NASA-CASE-MSC-20475-1] c 37 N87-17037

**ROTATING DISKS**

Foil seal  
[NASA-CASE-XLE-05130] c 15 N69-21362

Scanning aspect sensor employing an apertured disc and a commutator  
[NASA-CASE-XGS-08266] c 14 N69-27432

Redundant disc  
[NASA-CASE-LEW-12496-1] c 07 N78-33101

Spinning disk calibration method and apparatus for laser Doppler velocimeter  
[NASA-CASE-ARC-11510-1] c 35 N86-32697

Electrostatically suspended rotor for angular encoder  
[NASA-CASE-MFS-28294-1] c 31 N91-14508

**ROTATING ELECTRICAL MACHINES**

Light intensity modulator controller Patent  
[NASA-CASE-XMS-04300] c 09 N71-19479

Direct current motor with stationary armature and field Patent  
[NASA-CASE-XGS-05290] c 09 N71-25999

Constant frequency output two stage induction machine systems Patent  
[NASA-CASE-ERC-10065] c 09 N71-27364

**ROTATING ENVIRONMENTS**

Radial module space station Patent  
[NASA-CASE-XMS-01906] c 31 N70-41373

Rotating space station simulator Patent  
[NASA-CASE-XLA-03127] c 11 N71-10776

**ROTATING GENERATORS**

Rotating raster generator  
[NASA-CASE-FRC-10071-1] c 32 N74-20813

Wind wheel electric power generator  
[NASA-CASE-MFS-23515-1] c 44 N80-21828

**ROTATING MIRRORS**

Retrodirective modulator Patent  
[NASA-CASE-GSC-10062] c 14 N71-15605

Attitude sensor for space vehicles Patent  
[NASA-CASE-XLA-00793] c 21 N71-22880

Method for generating ultra-precise angles Patent  
[NASA-CASE-XGS-04173] c 19 N71-26674

Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c 74 N74-21304

Multispectral glancing incidence X-ray telescope  
[NASA-CASE-MFS-28013-1] c 89 N86-22459

**ROTATING SHAFTS**

Foil seal Patent  
[NASA-CASE-XLE-05130-2] c 15 N71-19570

Anemometer with braking mechanism Patent  
[NASA-CASE-XMF-05224] c 14 N71-23726

# ROTATION

Detenting servomotor Patent  
[NASA-CASE-XNP-06936] c 15 N71-24695

Rotating shaft seal Patent  
[NASA-CASE-XNP-02862-1] c 15 N71-26294

Two component bearing Patent  
[NASA-CASE-XLA-00013] c 15 N71-29136

Hall effect transducer  
[NASA-CASE-LAR-10620-1] c 09 N72-25255

Spiral groove seal --- for rotating shaft  
[NASA-CASE-XLE-10326-4] c 37 N74-15125

Digital servo controller --- for rotating antenna shaft  
[NASA-CASE-KSC-10769-1] c 33 N74-29556

Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c 44 N74-33379

Ergometer calibrator --- for any ergometer utilizing rotating shaft  
[NASA-CASE-MFS-21045-1] c 35 N75-15932

Fluid seal for rotating shafts  
[NASA-CASE-LEW-11676-1] c 37 N76-22541

Cyclical bi-directional rotary actuator  
[NASA-CASE-GSC-11883-1] c 37 N77-19458

Tachometer  
[NASA-CASE-MFS-23175-1] c 35 N77-30436

Rotary leveling base platform  
[NASA-CASE-ARC-10981-1] c 37 N78-27425

Rotary electric device  
[NASA-CASE-GSC-12138-1] c 33 N79-20314

Circumferential shaft seal  
[NASA-CASE-LEW-12119-1] c 37 N80-28711

Multiple plate hydrostatic viscous damper  
[NASA-CASE-LEW-12445-1] c 37 N81-22360

Clutchless multiple drive source for output shaft  
[NASA-CASE-ARC-11325-1] c 37 N85-30333

Resilient seal ring assembly with spring means applying force to wedge member --- cryogenic applications  
[NASA-CASE-MFS-25678-1] c 37 N84-11497

Vertical shaft windmill  
[NASA-CASE-LAR-12923-1] c 37 N84-12493

Directional gear ratio transmissions  
[NASA-CASE-LAR-12644-1] c 37 N84-28084

Variable force, eddy-current or magnetic damper  
[NASA-CASE-LEW-13717-1] c 37 N85-30333

Rotary stepping device with memory metal actuator  
[NASA-CASE-NPO-15482-1] c 37 N87-23970

Cryogenic anti-friction bearing with inner race  
[NASA-CASE-MFS-28384-1] c 37 N90-27112

Control circuitry using electronic emulation of a synchro signal for accurate control of position and rate of rotation for shafts  
[NASA-CASE-MFS-28458-1] c 33 N91-26459

Shaft mount for data coupler system  
[NASA-CASE-LAR-13805-1] c 37 N92-30097

**ROTATION**

Semi-linear ball bearing Patent  
[NASA-CASE-XLA-02809] c 15 N71-22982

Mechanical actuator Patent  
[NASA-CASE-XGS-04548] c 15 N71-24045

Positioning mechanism  
[NASA-CASE-NPO-10679] c 15 N72-21462

Spray coating apparatus having a rotatable workpiece holder  
[NASA-CASE-ARC-11110-1] c 37 N82-24492

System for controlled acoustic rotation of objects  
[NASA-CASE-NPO-15522-1] c 71 N83-32516

Acoustic rotation control  
[NASA-CASE-NPO-15689-1] c 71 N84-23233

Improved docking alignment system  
[NASA-CASE-MSC-21372-1] c 35 N89-12842

Controlled sample orientation and rotation in an acoustic levitator  
[NASA-CASE-NPO-17086-1-CU] c 35 N89-14422

Acoustic controlled rotation and orientation  
[NASA-CASE-NPO-16995-1-CU] c 71 N90-12289

Apparatus for mixing solutions in low gravity environments  
[NASA-CASE-MFS-26047-1] c 29 N90-21209

Atmospheric autorotating imaging device  
[NASA-CASE-NPO-17390-1-CU] c 35 N90-22769

Cantilever clamp fitting  
[NASA-CASE-MFS-28328-1] c 37 N91-13731

Hybrid butterfly valve  
[NASA-CASE-SSC-00004-1] c 37 N91-14609

Compliant joint  
[NASA-CASE-GSC-13153-1] c 37 N91-17387

Control circuitry using electronic emulation of a synchro signal for accurate control of position and rate of rotation for shafts  
[NASA-CASE-MFS-28458-1] c 33 N91-26459

Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N91-28184

Rotationally actuated prosthetic helping hand  
[NASA-CASE-MFS-28426-1] c 54 N91-32795

Three dimensional moire pattern alignment  
[NASA-CASE-MSC-21416-1] c 74 N91-32922

Helix translation device --- shim for precision displacements  
[NASA-CASE-GSC-13141-1] c 37 N92-23548

Accelerometer method and apparatus for integral display and control functions  
[NASA-CASE-MSC-21961-1] c 35 N92-29952

Rotating-unbalanced-mass devices and methods for scanning balloon-borne-experiments, free-flying spacecraft, and space shuttle/space station attached experiments  
[NASA-CASE-MFS-28425-1] c 35 N92-33010

Linear mass actuator  
[NASA-CASE-LAR-14352-1] c 37 N92-34173

Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N93-24598

Turntable mechanism  
[NASA-CASE-MFS-28522-1] c 37 N93-31313

**ROTOR AERODYNAMICS**

Acoustically swept rotor --- helicopter noise reduction  
[NASA-CASE-ARC-11106-1] c 05 N80-14107

**ROTOR BLADES**

Non-destructive method for applying and removing instrumentation on helicopter rotor blades  
[NASA-CASE-LAR-11201-1] c 35 N78-24515

Apparatus and method for reducing thermal stress in a turbine rotor  
[NASA-CASE-LEW-12232-1] c 07 N79-10057

**ROTOR BLADES (TURBOMACHINERY)**

Locking device for turbine rotor blades Patent  
[NASA-CASE-XNP-00816] c 28 N71-28928

Turbo-machine blade vibration damper Patent  
[NASA-CASE-XLE-00155] c 28 N71-29154

Apparatus for welding blades to rotors  
[NASA-CASE-LEW-10533-2] c 37 N74-11300

Supersonic fan blading --- noise reduction in turbofan engines  
[NASA-CASE-LEW-11402-1] c 07 N74-28226

Blade retainer assembly  
[NASA-CASE-LEW-12608-1] c 07 N77-27116

Platform for a swing root turbomachinery blade  
[NASA-CASE-LEW-12312-1] c 07 N77-32148

Tip cap for a rotor blade  
[NASA-CASE-LEW-13654-1] c 07 N84-22560

Shapes for rotating airfoils  
[NASA-CASE-LAR-12396-1] c 02 N84-28732

**ROTOR LIFT**

Constant lift rotor for a heavier than air craft  
[NASA-CASE-ARC-11045-1] c 05 N79-17847

**ROTOR SPEED**

Brushless direct current tachometer Patent  
[NASA-CASE-MFS-20385] c 09 N71-24904

**ROTORCRAFT AIRCRAFT**

Constant lift rotor for a heavier than air craft  
[NASA-CASE-ARC-11045-1] c 05 N79-17847

**ROTORS**

Multistage multiple-reentry turbine Patent  
[NASA-CASE-XLE-00085] c 28 N70-39895

Angular position and velocity sensing apparatus Patent  
[NASA-CASE-XGS-05680] c 14 N71-17585

Indexing microwave switch Patent  
[NASA-CASE-XNP-06507] c 09 N71-23548

Detenting servomotor Patent  
[NASA-CASE-XNP-06936] c 15 N71-24695

Rotary vane attenuator wherein rotor has orthogonally disposed resistive and dielectric cards  
[NASA-CASE-NPO-11418-1] c 14 N73-13420

Welding blades to rotors  
[NASA-CASE-LEW-10533-1] c 15 N73-28515

Magnetic field control --- electromechanical torquing device  
[NASA-CASE-MFS-23828-1] c 33 N82-26569

Damping seal for turbomachinery  
[NASA-CASE-MFS-25842-2] c 37 N86-20788

Swashplate control system  
[NASA-CASE-ARC-11633-1] c 08 N87-23631

Electrostatically suspended rotor for angular encoder  
[NASA-CASE-MFS-28294-1] c 31 N91-14508

Turbomachinery rotor support with damping  
[NASA-CASE-MFS-28345-1] c 37 N91-14608

Dynamic tester for rotor seals and bearings  
[NASA-CASE-MFS-28493-1] c 09 N91-25155

Superconducting bearings with levitation control configurations  
[NASA-CASE-GSC-13346-1] c 37 N92-29099

System and method for cancelling expansion waves in a wave rotor  
[NASA-CASE-LEW-15218-1] c 34 N93-11172

**RUBBER**

Thermoplastic rubber comprising ethylene-vinyl acetate copolymer, asphalt and fluxing oil  
[NASA-CASE-NPO-08835-1] c 27 N78-33228

Formulated plastic separators for soluble electrode cells --- rubber-ion transport membranes  
[NASA-CASE-LEW-12358-1] c 44 N79-17313

# SUBJECT INDEX

Enhancement of in vitro guayule propagation  
[NASA-CASE-NPO-15213-1] c 51 N83-17045

Method and apparatus for cleaning rubber deposits from airport runways and roadways  
[NASA-CASE-LAR-14483-1] c 31 N93-22035

**RUBBER COATINGS**

Intumescent paint containing nitrile rubber  
[NASA-CASE-ARC-10196-1] c 18 N73-13562

**RUBY**

Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-1] c 37 N75-15992

Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-3] c 24 N79-25143

**RUBY LASERS**

Laser coolant and ultraviolet filter  
[NASA-CASE-MFS-20180] c 16 N72-12440

**RUNWAY ALIGNMENT**

Magnetic position detection method and apparatus  
[NASA-CASE-ARC-10179-1] c 21 N72-22619

**RUNWAY CONDITIONS**

Warm fog dissipation using large volume water sprays  
[NASA-CASE-MFS-25962-1] c 09 N89-25242

**RUNWAY LIGHTS**

Runway light Patent  
[NASA-CASE-XLA-00119] c 11 N70-33329

Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c 04 N82-16059

**RUNWAYS**

Warm fog dissipation using large volume water sprays  
[NASA-CASE-MFS-25962-1] c 09 N89-25242

Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13854-1-CU] c 04 N91-31120

**RUPTURING**

Means for controlling rupture of shock tube diaphragms Patent  
[NASA-CASE-XAC-00731] c 11 N71-15960

Fully articulated four-point-bend loading fixture  
[NASA-CASE-LEW-14776-1] c 37 N91-21540

**S**

**S WAVES**

Jet mixer noise suppressor using acoustic feedback  
[NASA-CASE-LEW-15170-1] c 71 N93-28953

**SABOT PROJECTILES**

Hypervelocity gun --- using both electric and chemical energy for projectile propulsion  
[NASA-CASE-XLE-03186-1] c 09 N79-21084

**SAFETY**

Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-3] c 27 N84-22745

**SAFETY DEVICES**

Pressure suit tie-down mechanism Patent  
[NASA-CASE-XMS-00784] c 05 N71-12335

Positive locking check valve Patent  
[NASA-CASE-XMS-09310] c 15 N71-22706

Protective device for machine and metalworking tools Patent  
[NASA-CASE-XLE-01092] c 15 N71-22797

Velocity limiting safety system Patent  
[NASA-CASE-XLA-07473] c 15 N71-24895

Combustion products generating and metering device  
[NASA-CASE-GSC-11095-1] c 14 N72-10375

Restraint torso for a pressurized suit  
[NASA-CASE-MSC-12397-1] c 05 N72-25119

Totally confined explosive welding --- apparatus to reduce noise level and protect personnel during explosive bonding  
[NASA-CASE-LAR-10941-1] c 37 N74-21057

Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c 08 N74-30421

Shoulder harness and lap belt restraint system  
[NASA-CASE-ARC-10519-2] c 05 N75-25915

Fifth wheel  
[NASA-CASE-FRC-10081-1] c 37 N77-14477

Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c 33 N80-18287

Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c 31 N81-19343

Self-locking double retention redundant full pin release  
[NASA-CASE-NPO-16233-1] c 37 N86-20801

Variable response load limiting device  
[NASA-CASE-LAR-12801-1] c 37 N88-23982

Timing control system  
[NASA-CASE-NPO-16882-1-CU] c 33 N88-24863

Valve lock  
[NASA-CASE-MFS-29764-1] c 37 N93-19049

## SAFETY FACTORS

- Safety flywheel --- using flexible materials energy storage  
[NASA-CASE-HON-10888-1] c 44 N79-14527  
Airborne rescue system  
[NASA-CASE-ARC-11909-1] c 03 N91-31113

## SAHA EQUATIONS

- Cosmic dust analyzer  
[NASA-CASE-MS-C-13802-2] c 35 N76-15431

## SALT BATHS

- Process for applying a protective coating for salt bath brazing Patent  
[NASA-CASE-XLE-00046] c 15 N70-33311

## SAMARIUM

- Gd or Sm doped silicon semiconductor composition Patent  
[NASA-CASE-XLE-10715] c 26 N71-23292

## SAMPLERS

- Vacuum probe surface sampler  
[NASA-CASE-LAR-10623-1] c 14 N73-30395  
Automated syringe sampler --- remote sampling of air and water  
[NASA-CASE-LAR-12308-1] c 35 N81-29407

## SAMPLES

- Plural output optometric sample cell and analysis system  
[NASA-CASE-NPO-10233-1] c 74 N78-33913  
Mobile sampler for use in acquiring samples of terrestrial atmospheric gases  
[NASA-CASE-NPO-15220-1] c 45 N83-25217

## SAMPLING

- Sample collecting impact bit Patent  
[NASA-CASE-XNP-01412] c 15 N70-42034  
Fluid sample collector Patent  
[NASA-CASE-XMS-06767-1] c 14 N71-20435  
Atmospheric sampling devices  
[NASA-CASE-NPO-11373] c 13 N72-25323  
Digital to analog conversion apparatus  
[NASA-CASE-MS-C-12458-1] c 08 N73-32081  
Rock sampling --- apparatus for controlling particle size  
[NASA-CASE-XNP-10007-1] c 46 N74-23068  
Rock sampling --- method for controlling particle size distribution  
[NASA-CASE-XNP-09755] c 46 N74-23069  
Apparatus for microbiological sampling --- including automatic swabbing  
[NASA-CASE-LAR-11069-1] c 35 N75-12272  
Automatic blowdown sampling  
[NASA-CASE-MS-C-14640-1] c 54 N76-14804  
Remote water monitoring system  
[NASA-CASE-LAR-11973-1] c 35 N78-27384  
Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points  
[NASA-CASE-MS-C-16841-1] c 34 N79-24285  
Method for detecting coliform organisms  
[NASA-CASE-ARC-11322-1] c 51 N83-28849  
Moisture content and gas sampling device  
[NASA-CASE-MS-C-18866-1] c 35 N85-29213  
Optical multiple sample vacuum integrating sphere  
[NASA-CASE-GSC-12849-1] c 74 N86-26190  
Solid sorbent air sampler  
[NASA-CASE-MS-C-20653-1] c 35 N86-26595  
High-pressure promoted combustion chamber  
[NASA-CASE-MS-C-21470-1] c 09 N91-21157  
Biofilm monitoring coupon system and method of use  
[NASA-CASE-MS-C-21585-1] c 51 N91-31755  
High velocity gas particulate sampling system  
[NASA-CASE-MS-C-21729-1] c 34 N92-16241  
Digital carrier demodulator employing components working beyond normal limits  
[NASA-CASE-NPO-17628-1-CU] c 32 N92-21712  
Extended task space control for robotic manipulators  
[NASA-CASE-NPO-18902-1-CU] c 37 N93-28129  
Two-stage gas measurement system  
[NASA-CASE-LAR-14791-1] c 35 N93-31297

## SANDWICH STRUCTURES

- Sandwich panel construction Patent  
[NASA-CASE-XLA-00349] c 33 N70-37979  
Micrometeoroid velocity measuring device Patent  
[NASA-CASE-XLA-00495] c 14 N70-41332  
Meteoroid sensing apparatus having a coincidence network connected to a pair of capacitors Patent  
[NASA-CASE-XLE-01246] c 14 N71-10797  
Method of making inflatable honeycomb Patent  
[NASA-CASE-XLA-03492] c 15 N71-22713  
Convoluting device for forming convolutions and the like Patent  
[NASA-CASE-XNP-05297] c 15 N71-23811  
Composite sandwich lattice structure  
[NASA-CASE-LAR-11898-1] c 24 N78-10214  
Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c 24 N79-16915

Superplastically formed diffusion bonded metallic structure

- [NASA-CASE-FRC-11026-1] c 24 N82-24296  
Multiwall thermal protection system  
[NASA-CASE-LAR-12620-1] c 24 N82-32417  
Core design for use with precision composite reflectors  
[NASA-CASE-NPO-17858-1-CU] c 24 N93-14700  
Sandwiched structural panel having a bi-directional core structure  
[NASA-CASE-MFS-28796-1] c 24 N93-19022

## SAPPHIRE

- Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-1] c 37 N75-15992  
Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-3] c 24 N79-25143

## SATELLITE ANTENNAS

- Antenna system using parasitic elements and two driven elements at 90 deg angle fed 180 deg out of phase Patent  
[NASA-CASE-XLA-00414] c 07 N70-38200  
Apparatus providing a directive field pattern and attitude sensing of a spin stabilized satellite Patent  
[NASA-CASE-XGS-02607] c 31 N71-23009  
Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c 32 N81-27341  
Microwave switching power divider --- antenna feeds  
[NASA-CASE-GSC-12420-1] c 33 N82-16340  
Antenna surface contour control system  
[NASA-CASE-LAR-13798-1] c 32 N89-25363

## SATELLITE ATTITUDE CONTROL

- Photosensitive device to detect bearing deviation Patent  
[NASA-CASE-XNP-00438] c 21 N70-35089  
Attitude control for spacecraft Patent  
[NASA-CASE-XNP-02982] c 31 N70-41855  
Satellite despun device Patent  
[NASA-CASE-XMF-08523] c 31 N71-20396  
Attitude control and damping system for spacecraft Patent  
[NASA-CASE-XLA-02551] c 21 N71-21708  
Gravity gradient attitude control system Patent  
[NASA-CASE-GSC-10555-1] c 21 N71-27324  
Spacecraft attitude control method and apparatus  
[NASA-CASE-HON-10439] c 21 N72-21624  
Dual purpose momentum wheels for spacecraft with magnetic recording  
[NASA-CASE-NPO-11481] c 21 N73-13644  
Combination automatic-starting electrical plasma torch and gas shutoff valve --- for satellite attitude control  
[NASA-CASE-XLE-10717] c 37 N75-29426  
Attitude control system  
[NASA-CASE-MFS-22787-1] c 15 N77-10113  
Rim inertial measuring system  
[NASA-CASE-LAR-12052-1] c 18 N81-29152

## SATELLITE COMMUNICATION

- Satellite communication system and method Patent  
[NASA-CASE-GSC-10118-1] c 07 N71-24621  
Satellite communication system Patent  
[NASA-CASE-XNP-02389] c 07 N71-28900  
Ground plane interference elimination by passive element  
[NASA-CASE-NPO-16632-1-CU] c 32 N87-15390  
Trellis coded modulation for transmission over fading mobile satellite channel  
[NASA-CASE-NPO-16904-2-CU] c 32 N91-14523

## SATELLITE CONTROL

- Stabilization of gravity oriented satellites Patent  
[NASA-CASE-XAC-01591] c 31 N71-17729  
Fluid-loop reaction system  
[NASA-CASE-NPO-17204-1-CU] c 34 N91-25380

## SATELLITE DESIGN

- Inflation system for balloon type satellites Patent  
[NASA-CASE-XGS-03351] c 31 N71-16081

## SATELLITE INSTRUMENTS

- Reaction wheel scanner Patent  
[NASA-CASE-XGS-02629] c 14 N71-21082

## SATELLITE NETWORKS

- Satellite interface synchronization system  
[NASA-CASE-GSC-10390-1] c 07 N72-11149

## SATELLITE OBSERVATION

- Method and apparatus for Delta Kappa synthetic aperture radar measurement of ocean current  
[NASA-CASE-NPO-15704-1] c 32 N85-34327

## SATELLITE ORBITS

- Apparatus for changing the orientation and velocity of a spinning body traversing a path Patent  
[NASA-CASE-HON-00936] c 31 N71-29050

## SATELLITE ORIENTATION

- Method and apparatus for determining satellite orientation utilizing spatial energy sources Patent  
[NASA-CASE-XGS-00466] c 21 N70-34297

Cartwheel satellite synchronization system Patent  
[NASA-CASE-XGS-05579] c 31 N71-15676

Apparatus for changing the orientation and velocity of a spinning body traversing a path Patent  
[NASA-CASE-HON-00936] c 31 N71-29050

Analog spatial maneuver computer

[NASA-CASE-GSC-10880-1] c 08 N72-11172

## SATELLITE PERTURBATION

Method and means for damping nutation in a satellite Patent

[NASA-CASE-XMF-00442] c 31 N71-10747

## SATELLITE POWER TRANSMISSION

Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c 33 N80-18287

Method for remotely powering a device such as a lunar rover  
[NASA-CASE-LAR-14789-1] c 37 N92-30388

## SATELLITE ROTATION

Optical spin compensator  
[NASA-CASE-XGS-02401] c 14 N69-27485

Stretch de-spin mechanism Patent

[NASA-CASE-XGS-00619] c 30 N70-40016

Apparatus for changing the orientation and velocity of a spinning body traversing a path Patent

[NASA-CASE-HON-00936] c 31 N71-29050

Magnetic spin reduction system for free spinning objects  
[NASA-CASE-MFS-25966-1] c 16 N86-26352

## SATELLITE TELEVISION

Adaptive system and method for signal generation Patent

[NASA-CASE-GSC-11367] c 10 N71-26374

## SATELLITE TRACKING

Tracking receiver Patent  
[NASA-CASE-XGS-08679] c 10 N71-21473

Simultaneous acquisition of tracking data from two stations  
[NASA-CASE-NPO-13292-1] c 32 N75-15854

Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c 33 N76-27472

A satellite-tracking millimeter-wave reflector antenna system for mobile satellite-tracking  
[NASA-CASE-NPO-18772-1-CU] c 32 N93-28955

## SATELLITE TRANSMISSION

Asynchronous, multiplexing, single line transmission and recovery data system --- for satellite use  
[NASA-CASE-NPO-13321-1] c 32 N75-26195

## SATELLITE-BORNE INSTRUMENTS

Method of measuring sea surface water temperature with a satellite including wideband passive synthetic-aperture multichannel receiver  
[NASA-CASE-NPO-15651-1] c 43 N85-21723

## SATELLITE-BORNE PHOTOGRAPHY

Rotary solenoid shutter drive assembly and rotary inertia damper and stop plate assembly --- for use with cameras mounted in satellites  
[NASA-CASE-GSC-11560-1] c 33 N74-20861

Scanner --- photography from a spin stabilized synchronous satellite  
[NASA-CASE-GSC-12032-2] c 43 N82-13465

## SATURABLE REACTORS

Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c 33 N82-24418

Low power consumption current transducer  
[NASA-CASE-NPO-16888-1-CU] c 33 N89-29681

## SATURATION

Method of detecting impending saturation of magnetic cores  
[NASA-CASE-ERC-10089] c 23 N72-17747

## SAWS

Ingot slicing machine and method  
[NASA-CASE-NPO-15483-1] c 37 N85-21650

Power saw  
[NASA-CASE-MS-C-21469-1] c 37 N91-31655

## SAWTOOTH WAVEFORMS

Linear sawtooth voltage-wave generator employing transistor timing circuit having capacitor-zener diode combination feedback Patent  
[NASA-CASE-XMS-01315] c 09 N70-41675

## SCALE MODELS

Improved ceramic slip casting technique --- application to aircraft model fabrication  
[NASA-CASE-LAR-14471-1] c 27 N93-20041

## SCANNERS

Monopulse system with an electronic scanner  
[NASA-CASE-XGS-05582] c 07 N69-27460

Electronic background suppression method and apparatus for a field scanning sensor  
[NASA-CASE-XGS-05211] c 07 N69-39980

Method and means for an improved electron beam scanning system Patent  
[NASA-CASE-ERC-10552] c 09 N71-12539

Reaction wheel scanner Patent

[NASA-CASE-XGS-02629] c 14 N71-21082

Electronic scanning of 2-channel monopulse patterns Patent  
[NASA-CASE-GSC-10299-1] c 09 N71-24804

Method and apparatus for mapping the sensitivity of the face of a photodetector specifically a PMT  
[NASA-CASE-LAR-10320-1] c 09 N72-23172

Ultrasonic scanner for radial and flat panels  
[NASA-CASE-MFS-20335-1] c 35 N74-10415

Apparatus for scanning the surface of a cylindrical body  
[NASA-CASE-NPO-11861-1] c 36 N74-20009

Fast scan control for deflection type mass spectrometers  
[NASA-CASE-LAR-11428-1] c 35 N74-34857

Electronically scanned pressure sensor module with in situ calibration capability  
[NASA-CASE-LAR-12230-1] c 35 N79-14347

Scannable beam forming interferometer antenna array system  
[NASA-CASE-GSC-12365-1] c 32 N80-28578

Scanner --- photography from a spin stabilized synchronous satellite  
[NASA-CASE-GSC-12032-2] c 43 N82-13465

Optical crystal temperature gauge with fiber optic connections  
[NASA-CASE-MSC-18627-1] c 74 N82-30071

Scanning seismic intrusion detection method and apparatus --- monitoring unwanted subterranean entry and departure  
[NASA-CASE-ARC-11317-1] c 35 N83-34272

Self-correcting electronically scanned pressure sensor  
[NASA-CASE-LAR-12686-1] c 35 N84-14491

Two-dimensional scanner apparatus --- flaw detector in small flat plates  
[NASA-CASE-MFS-25687-1] c 35 N84-22928

Electronic scanning pressure measuring system and transducer package  
[NASA-CASE-ARC-11361-1] c 35 N84-22934

Programmable scan/read circuitry for charge coupled device imaging detectors --- spacecraft attitude control and star trackers  
[NASA-CASE-NPO-15345-1] c 74 N84-23247

Atmospheric autorotating imaging device  
[NASA-CASE-NPO-17390-1-CU] c 35 N90-22769

**SCANNING**

Television signal scan rate conversion system Patent  
[NASA-CASE-XMS-07168] c 07 N71-11300

Method of erasing target material of a vidicon tube or the like Patent  
[NASA-CASE-XNP-06028] c 09 N71-23189

Position determination systems --- using orbital antenna scan of celestial bodies  
[NASA-CASE-MSC-12593-1] c 17 N76-21250

Magnetometer with a miniature transducer and automatic scanning  
[NASA-CASE-LAR-11617-2] c 35 N78-32397

System and method for character recognition  
[NASA-CASE-NPO-11337-1] c 74 N81-19896

**SCATTERING CROSS SECTIONS**

Method and means for helium/hydrogen ratio measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c 25 N80-20334

Method and apparatus for sensor fusion  
[NASA-CASE-MSC-21334-1] c 32 N91-25317

**SCENE ANALYSIS**

Simulator scene display evaluation device  
[NASA-CASE-ARC-11504-1] c 09 N86-32447

**SCHLIEREN PHOTOGRAPHY**

System and method for obtaining wide screen Schlieren photographs  
[NASA-CASE-NPO-14174-1] c 74 N79-20856

Schlieren system for visualizing the flow within a pipe of circular cross-section  
[NASA-CASE-LAR-13944-1] c 35 N92-11336

**SCHMIDT CAMERAS**

Cooled echelle grating spectrometer --- for space telescope applications  
[NASA-CASE-NPO-14372-1] c 35 N80-26635

**SCHMIDT TELESCOPES**

Dual aperture multispectral Schmidt objective  
[NASA-CASE-GSC-12756-1] c 74 N84-23248

**SCHOOLS**

Silent emergency alarm system for schools and the like  
[NASA-CASE-NPO-11307-1] c 10 N73-30205

**SCHOTTKY DIODES**

High voltage, high current Schottky barrier solar cell  
[NASA-CASE-NPO-13482-1] c 44 N78-13526

Solar cells having integral collector grids  
[NASA-CASE-LEW-12819-1] c 44 N79-11467

Back wall solar cell  
[NASA-CASE-LEW-12236-2] c 44 N79-14528

Schottky barrier solar cell  
[NASA-CASE-NPO-13689-2] c 44 N81-29525

Method of Fabricating Schottky Barrier solar cell  
[NASA-CASE-NPO-13689-4] c 44 N82-28780

Thin wire pointing method  
[NASA-CASE-NPO-15789-1] c 31 N83-19947

Epitaxial thinning process  
[NASA-CASE-NPO-15786-1] c 76 N84-35112

GaAs Schottky barrier photo-responsive device and method of fabrication  
[NASA-CASE-GSC-12816-1] c 76 N86-20150

Laterally stacked Schottky diodes for infrared sensor applications  
[NASA-CASE-NPO-17426-1-CU] c 33 N91-21434

Formation of self-aligned guard rings for monolithic Schottky-barrier diode arrays  
[NASA-CASE-NPO-17734-1-CU] c 33 N92-10146

Whiskerless Schottky diode  
[NASA-CASE-GSC-13063-2-CU] c 33 N92-16197

**SCIENTIFIC SATELLITES**

Nano-G research laboratory for a spacecraft  
[NASA-CASE-GSC-13197-1] c 18 N91-27201

**SCOOPS**

Aeroflexible structures  
[NASA-CASE-XLA-06095] c 01 N69-39981

**SCORING**

Scriber for silicon wafers  
[NASA-CASE-NPO-15539-1] c 37 N82-11469

**SCRAMBLING (COMMUNICATION)**

Random digital encryption secure communication system  
[NASA-CASE-MSC-16462-1] c 32 N82-31583

**SCREWS**

Electromechanical control actuator system Patent  
[NASA-CASE-ERC-10022] c 15 N71-26635

Adjustable support  
[NASA-CASE-NPO-10721] c 15 N72-27484

Low noise lead screw positioner  
[NASA-CASE-NPO-15617-1] c 35 N87-21304

Three point lead screw positioning apparatus  
[NASA-CASE-LEW-15216-1] c 37 N92-17678

Pressure wall patch  
[NASA-CASE-MFS-28724-1] c 18 N93-17061

Spline screw autochanger  
[NASA-CASE-GSC-13435-1] c 37 N93-29505

**SCRUBBERS**

High pressure gas filter system Patent  
[NASA-CASE-MFS-12806] c 14 N71-17588

Nebulization reflux concentrator  
[NASA-CASE-LAR-13254-1CU] c 35 N86-29174

**SEA ICE**

A technique for breaking ice in the path of a ship  
[NASA-CASE-LAR-10815-1] c 16 N72-22520

**SEA STATES**

Oceanic wave measurement system  
[NASA-CASE-MFS-23862-1] c 48 N80-18667

**SEA SURFACE TEMPERATURE**

Method of measuring sea surface water temperature with a satellite including wideband passive synthetic-aperture multichannel receiver  
[NASA-CASE-NPO-15651-1] c 43 N85-21723

**SEALERS**

Pressure garment joint Patent  
[NASA-CASE-XMS-09636] c 05 N71-12344

Sealing device for an electrochemical cell Patent  
[NASA-CASE-XGS-02630] c 03 N71-22974

Bonded elastomeric seal for electrochemical cells Patent  
[NASA-CASE-XGS-02631] c 03 N71-23006

Self-lubricating fluorine metal composite materials Patent  
[NASA-CASE-XLE-08511] c 18 N71-23710

Polyimides of ether-linked aryl tetracarboxylic dianhydrides  
[NASA-CASE-MFS-22355-1] c 23 N76-15268

High performance channel injection sealant invention abstract  
[NASA-CASE-ARC-14408-1] c 27 N82-33523

Glove attachment  
[NASA-CASE-MSC-21632-1] c 54 N92-34210

**SEALING**

Foil seal  
[NASA-CASE-XLE-05130] c 15 N69-21362

Sealed battery gas manifold construction Patent  
[NASA-CASE-XNP-03378] c 03 N71-11051

Sealing device for an electrochemical cell Patent  
[NASA-CASE-XGS-02630] c 03 N71-22974

Sealing member and combination thereof and method of producing said sealing member Patent  
[NASA-CASE-XMS-01625] c 15 N71-23022

Evacuation port seal Patent  
[NASA-CASE-XMF-03290] c 15 N71-23256

Valve seat  
[NASA-CASE-NPO-10606] c 15 N72-25451

Ampoule sealing apparatus and process --- for housing a semiconductor growth charge under vacuum  
[NASA-CASE-LAR-12847-1] c 33 N83-16633

Optical pressure sealing coupling apparatus  
[NASA-CASE-MFS-29348-1] c 74 N89-25689

High temperature flexible seal  
[NASA-CASE-LEW-14695-1] c 37 N90-23751

Cantilever clamp fitting  
[NASA-CASE-MFS-28328-1] c 37 N91-13731

Probe insertion apparatus with inflatable seal  
[NASA-CASE-LEW-14965-1] c 37 N91-13732

O-ring gasket test fixture  
[NASA-CASE-MFS-28376-1] c 14 N91-21175

Double face sealing device  
[NASA-CASE-MFS-28521-1] c 37 N91-26542

Helmet of a laminate construction of polycarbonate and polysulfone polymeric material  
[NASA-CASE-MSC-21503-1] c 27 N92-10091

Thruster sealing system and apparatus  
[NASA-CASE-MSC-21898-1] c 37 N93-14702

Method of applying a thermal barrier coating system to a substrate  
[NASA-CASE-LEW-15020-2] c 24 N93-14706

**SEALS (STOPPERS)**

Spacecraft battery seals  
[NASA-CASE-XGS-03864] c 15 N69-24320

Flexible seal for valves Patent  
[NASA-CASE-XLE-00101] c 15 N70-33376

Shrink-fit gas valve Patent  
[NASA-CASE-XGS-00587] c 15 N70-35087

Thin-walled pressure vessel Patent  
[NASA-CASE-LEW-04677] c 15 N71-10577

Foil seal Patent  
[NASA-CASE-XLE-05130-2] c 15 N71-19570

Storage container for electronic devices Patent  
[NASA-CASE-MFS-20075] c 09 N71-26133

Rotating shaft seal Patent  
[NASA-CASE-XNP-02862-1] c 15 N71-26294

Spiral groove seal --- for rotating shaft  
[NASA-CASE-XLE-10326-4] c 37 N74-15125

Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c 37 N74-21063

High speed, self-acting shaft seal --- for use in turbine engines  
[NASA-CASE-LEW-11274-1] c 37 N75-21631

Method of forming shrink-fit compression seal  
[NASA-CASE-LAR-11563-1] c 37 N77-23482

Counter pumping debris excluder and separator --- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c 07 N78-25090

Composite seal for turbomachinery --- backings for turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c 37 N79-18318

Retractable environmental seal  
[NASA-CASE-MFS-23646-1] c 37 N79-22474

Shaft seal assembly for high speed and high pressure applications  
[NASA-CASE-LEW-11873-1] c 37 N79-22475

Fluid pressure balanced seal  
[NASA-CASE-XGS-01286-1] c 37 N79-33469

Gas path seal  
[NASA-CASE-NPO-12131-3] c 37 N80-18400

Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c 37 N80-26658

Circumferential shaft seal  
[NASA-CASE-LEW-12119-1] c 37 N80-28711

Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures  
[NASA-CASE-MSC-18134-1] c 37 N81-15363

Modified face seal for positive film stiffness  
[NASA-CASE-LEW-12989-1] c 37 N82-12442

Surface conforming thermal/pressure seal --- tail assemblies of space shuttle orbiters  
[NASA-CASE-MSC-18422-1] c 37 N82-16408

Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-3] c 37 N82-19540

Continuous self-locking spiral wound seal --- for maintaining pressure between chambers in cryogenic wind tunnels  
[NASA-CASE-LAR-12315-1] c 37 N82-24490

Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-2] c 37 N82-26674

Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c 27 N82-29453

Process for preparing perfluorotriazine elastomers and precursors thereof  
[NASA-CASE-ARC-11402-1] c 27 N84-22744

Method of fabricating an abradable gas path seal  
[NASA-CASE-LEW-13269-2] c 37 N84-22957

Damping seal for turbomachinery  
[NASA-CASE-MFS-25842-2] c 37 N86-20788

Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N87-21332

Thermal stress minimized, two component, turbine shroud seal  
[NASA-CASE-LEW-14212-1] c 37 N88-23978

Quick-disconnect inflatable seal assembly  
[NASA-CASE-KSC-11368-1] c 37 N89-13786

- High temperature flexible seal  
[NASA-CASE-LEW-14695-1] c 37 N90-23751
- Turbomachinery rotor support with damping  
[NASA-CASE-MFS-28345-1] c 37 N91-14608
- High-temperature, flexible, thermal barrier seal  
[NASA-CASE-LEW-14672-1] c 37 N91-27560
- High temperature, flexible, fiber-preform seal  
[NASA-CASE-LEW-15085-1] c 37 N92-22043
- Check valve with poppet damping mechanism  
[NASA-CASE-MSC-21903-1] c 37 N92-30101
- Thruster sealing system and apparatus  
[NASA-CASE-MSC-21898-1] c 37 N93-14702
- High-temperature, bellows hybrid seal  
[NASA-CASE-LEW-15570-1] c 37 N93-19027

**SEAMS (JOINTS)**

- Traveling sealer for contoured table Patent  
[NASA-CASE-XLA-01494] c 15 N71-24164
- Omnidirectional joint Patent  
[NASA-CASE-XMS-09635] c 05 N71-24623
- Method of making pressure tight seal for super alloy  
[NASA-CASE-LAR-10170-1] c 37 N74-11301

**SEARCHING**

- Dynamic pattern matcher using incomplete data  
[NASA-CASE-MSC-21415-1-SB] c 61 N93-18858

**SEAT BELTS**

- Shoulder harness and lap belt restraint system  
[NASA-CASE-ARC-10519-2] c 05 N75-25915

**SEATS**

- Seat cushion to provide realistic acceleration cues to aircraft simulator pilot  
[NASA-CASE-LAR-12149-2] c 09 N79-31228
- Fire blocking systems for aircraft seat cushions  
[NASA-CASE-ARC-11423-1] c 03 N84-33394
- Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797
- Variable response load limiting device  
[NASA-CASE-LAR-12801-1] c 37 N88-23982
- Hydraulic lifting device  
[NASA-CASE-SSC-00008-1] c 37 N91-13733
- Method and apparatus for waste collection and storage  
[NASA-CASE-MSC-21025-3] c 54 N91-26747
- Passive zero-gravity leg restraint  
[NASA-CASE-ARC-11882-1-CU] c 54 N93-14713
- Portable seat lift  
[NASA-CASE-MFS-28610-1] c 54 N93-17045

**SECONDARY EMISSION**

- Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587

**SECONDARY FLOW**

- Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-1] c 34 N92-28752

**SECTORS**

- Journal Bearings  
[NASA-CASE-LEW-11076-2] c 37 N74-32921

**SECURITY**

- Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c 33 N80-23559
- Portable appliance security apparatus  
[NASA-CASE-GSC-12399-1] c 33 N81-25299
- Random digital encryption secure communication system  
[NASA-CASE-MSC-16462-1] c 32 N82-31583
- Scanning seismic intrusion detection method and apparatus --- monitoring unwanted subterranean entry and departure  
[NASA-CASE-ARC-11317-1] c 35 N83-34272

**SEEDS**

- Device for mechanically stabilizing web ribbon buttons during growth initiation  
[NASA-CASE-NPO-17074-2-CU] c 76 N92-21499

**SEEPAGE**

- Flow rate logging seepage meter  
[NASA-CASE-LAR-14835-1] c 35 N93-19328

**SEGMENTS**

- Method and apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917] c 15 N71-15597
- Equal path, phase shifting, sample point interferometer for monitoring the configuration of surfaces  
[NASA-CASE-NPO-17913-1-CU] c 74 N92-22034
- Method and apparatus for phasing segmented mirror arrays  
[NASA-CASE-NPO-18095-1-CU] c 74 N92-29122

**SEISMIC WAVES**

- Seismic displacement transducer Patent  
[NASA-CASE-XMF-00479] c 14 N70-34794
- Seismic vibration source  
[NASA-CASE-NPO-14112-1] c 46 N79-22679
- Underwater seismic source --- for petroleum exploration  
[NASA-CASE-NPO-14255-1] c 46 N79-23555

**SEISMOGRAPHS**

- Scanning seismic intrusion detection method and apparatus --- monitoring unwanted subterranean entry and departure  
[NASA-CASE-ARC-11317-1] c 35 N83-34272

**SELECTIVE SURFACES**

- Double-loop frequency-selected surfaces for multifrequency division multiplexing in a dual-reflector antenna  
[NASA-CASE-NPO-18701-1-CU] c 32 N92-30391

**SELECTORS**

- Molecular beam velocity selector Patent  
[NASA-CASE-XLE-01533] c 11 N71-10777
- Peak polarity selector Patent  
[NASA-CASE-FRC-10010] c 10 N71-24862

**SELF ADAPTIVE CONTROL SYSTEMS**

- Self-actuating heat switches for redundant refrigeration systems  
[NASA-CASE-NPO-17085-1-CU] c 31 N89-12785

**SELF ALIGNMENT**

- Electro-optical alignment control system Patent  
[NASA-CASE-XMF-00908] c 14 N70-40238
- Electrical self-aligning connector --- orbital servicer vehicles  
[NASA-CASE-MFS-25211-2] c 33 N84-14423
- Formation of self-aligned guard rings for monolithic Schottky-barrier diode arrays  
[NASA-CASE-NPO-17734-1-CU] c 33 N92-10146

**SELF ERECTING DEVICES**

- Flexible foam erectable space structures Patent  
[NASA-CASE-XLA-00686] c 31 N70-34135
- Erectable modular space station Patent  
[NASA-CASE-XLA-00678] c 31 N70-34296
- Manned space station Patent  
[NASA-CASE-XLA-00258] c 31 N70-38676
- Foldable conduit Patent  
[NASA-CASE-XLE-00620] c 32 N70-41579
- Self-erecting reflector Patent  
[NASA-CASE-XGS-09190] c 31 N71-16102
- Collapsible reflector Patent  
[NASA-CASE-XMS-03454] c 09 N71-20658
- Foldable self-erecting joint  
[NASA-CASE-MSC-20635-1] c 18 N87-14373
- Self-deploying photovoltaic power system  
[NASA-CASE-LEW-15308-1] c 44 N92-24057

**SELF FOCUSING**

- Focal axis resolver for offset reflector antennas  
[NASA-CASE-GSC-12630-1] c 33 N83-36355

**SELF LUBRICATING MATERIALS**

- Self-lubricating fluoride metal composite materials Patent  
[NASA-CASE-XLE-08511] c 18 N71-23710
- Self-lubricating gears and other mechanical parts Patent  
[NASA-CASE-MFS-14971] c 15 N71-24984
- Method of making bearing material  
[NASA-CASE-LEW-11930-3] c 24 N80-33482

**SELF LUBRICATION**

- Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications  
[NASA-CASE-LEW-11930-4] c 24 N79-17916
- Carbide-fluoride-silver self-lubricating composite  
[NASA-CASE-LEW-14196-2] c 37 N87-25585

**SELF MANEUVERING UNITS**

- Hand-held self-maneuvering unit Patent  
[NASA-CASE-XMS-05304] c 05 N71-12336
- Personal propulsion unit Patent  
[NASA-CASE-MFS-20130] c 28 N71-27585

**SELF PROPAGATION**

- Optical frequency waveguide Patent  
[NASA-CASE-HQN-10541-1] c 07 N71-26291

**SELF SEALING**

- Modification of one man life raft  
[NASA-CASE-LAR-10241-1] c 54 N74-14845
- Self-stabilizing radial face seal  
[NASA-CASE-LEW-12991-1] c 37 N81-24442
- Self-compensating solenoid valve  
[NASA-CASE-ARC-11620-1] c 37 N87-25573

**SELF TESTS**

- Self-testing and repairing computer Patent  
[NASA-CASE-NPO-10567] c 08 N71-24633
- Self-checking on-line testable static RAM  
[NASA-CASE-NPO-17939-1-CU] c 60 N93-22032

**SEMICONDUCTING FILMS**

- Process for the controlled growth of single-crystal films of silicon carbide polytypes on silicon carbide wafers  
[NASA-CASE-LEW-15222-3] c 76 N93-17413

**SEMICONDUCTOR DEVICES**

- Test fixture for pellet-like electrical elements  
[NASA-CASE-XNP-06032] c 09 N69-21926
- Semiconductor p-n junction stress and strain sensor  
[NASA-CASE-XLA-04980] c 09 N69-27422
- A method for selective gold diffusion of monolithic silicon devices and/or circuits Patent application  
[NASA-CASE-ERC-10072] c 09 N70-11148

Ultra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit Patent

- [NASA-CASE-XGS-00381] c 09 N70-34819
- Method of forming thin window drifted silicon charged particle detector Patent  
[NASA-CASE-XLE-00808] c 24 N71-10560
- Method of making a silicon semiconductor device Patent  
[NASA-CASE-XLE-02792] c 26 N71-10607
- Apparatus and method for separating a semiconductor wafer Patent  
[NASA-CASE-ERC-10138] c 26 N71-14354
- Voltage tunable Gunn-type microwave generator Patent  
[NASA-CASE-XER-07894] c 09 N71-18721
- Method and device for determining battery state of charge Patent  
[NASA-CASE-NPO-10194] c 03 N71-20407
- Multialarm summary alarm Patent  
[NASA-CASE-XLE-03061-1] c 10 N71-24798
- Method of temperature compensating semiconductor strain gages Patent  
[NASA-CASE-XLA-04555-1] c 14 N71-25892
- Pneumatic oscillator Patent  
[NASA-CASE-LEW-10345-1] c 10 N71-25899
- Method and apparatus for detecting gross leaks Patent  
[NASA-CASE-ERC-10033] c 14 N71-26672
- Transistor drive regulator Patent  
[NASA-CASE-LEW-10233] c 10 N71-27126
- Orifice gross leak tester Patent  
[NASA-CASE-ERC-10150] c 14 N71-28992
- Method of manufacturing semiconductor devices using refractory dielectrics  
[NASA-CASE-XER-08476-1] c 26 N72-17820
- Fabrication of single crystal film semiconductor devices  
[NASA-CASE-ERC-10222] c 09 N72-22199
- Electrical insulating layer process  
[NASA-CASE-LEW-10489-1] c 15 N72-25447
- Gunn-type solid state devices  
[NASA-CASE-XER-07895] c 26 N72-25679
- Semiconductor transducer device  
[NASA-CASE-ERC-10087-2] c 14 N72-31446
- Hermetically sealed semiconductor  
[NASA-CASE-GSC-10791-1] c 15 N73-14469
- Process for fabricating SiC semiconductor devices  
[NASA-CASE-LEW-12094-1] c 76 N76-25049
- Semiconductor projectile impact detector  
[NASA-CASE-MFS-23008-1] c 35 N78-18390
- Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction  
[NASA-CASE-MFS-23315-1] c 76 N78-24950
- Apparatus for measuring semiconductor device resistance  
[NASA-CASE-NPO-14424-1] c 33 N80-32650
- Electrical power generating system --- for windpowered generation  
[NASA-CASE-MFS-24368-3] c 33 N81-22280
- Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-2] c 33 N83-24763
- Imaging X-ray spectrometer  
[NASA-CASE-GSC-12682-1] c 35 N84-33765
- Epitaxial thinning process  
[NASA-CASE-NPO-15786-1] c 76 N84-35112
- Process and apparatus for growing a crystal ribbon  
[NASA-CASE-NPO-15629-1] c 76 N84-35113
- Inelastic tunnel diodes  
[NASA-CASE-LEW-13833-1] c 33 N85-21492
- Low defect, high purity crystalline layers grown by selective deposition  
[NASA-CASE-NPO-15813-1] c 76 N85-30922
- Method and apparatus for measuring minority carrier lifetime in a direct band-gap semiconductor  
[NASA-CASE-NPO-16337-1-CU] c 33 N87-22894
- Method of forming three-dimensional semiconductor structures  
[NASA-CASE-NPO-17835-1-CU] c 76 N90-27518
- Process for the controlled growth of single-crystal films of silicon carbide polytypes on silicon carbide wafers  
[NASA-CASE-LEW-15222-1] c 76 N91-26966
- Method for anisotropic etching in the manufacture of semiconductor devices  
[NASA-CASE-MSC-21631-1] c 75 N91-32947
- Process for the controlled growth of single-crystal films of silicon carbide polytypes on silicon carbide wafers  
[NASA-CASE-LEW-15222-3] c 76 N93-17413
- Semiconductor cooling apparatus  
[NASA-CASE-LEW-14162-3] c 24 N93-29614

**SEMICONDUCTOR DIODES**

- Method of fabricating germanium and gallium arsenide devices  
[NASA-CASE-GSC-13265-1] c 76 N91-14066



- Millimeter-wave monolithic diode-grid frequency multiplier  
[NASA-CASE-NPO-17258-1-CU] c 33 N91-14551  
Tm,Ho:YLF laser end-pumped by a semiconductor diode laser array  
[NASA-CASE-NPO-17282-1-CU] c 36 N91-15528
- SEMICONDUCTOR JUNCTIONS**  
Simple method of making photovoltaic junctions Patent  
[NASA-CASE-XNP-01960] c 09 N71-23027  
Pressure sensitive transducers Patent  
[NASA-CASE-ERC-10087] c 14 N71-27334  
Semiconductor surface protection material  
[NASA-CASE-ERC-10339-1] c 18 N73-30532  
High voltage planar multijunction solar cell  
[NASA-CASE-LEW-13400-1] c 44 N82-31764  
Screen printed interdigitated back contact solar cell  
[NASA-CASE-LEW-13414-1] c 44 N85-20530  
Method of measuring field funneling and range straggling in semiconductor charge-collecting junctions  
[NASA-CASE-NPO-16584-1-CU] c 76 N86-25269  
Edge geometry superconducting tunnel junctions utilizing an Nbn/MgO/Nbn thin film structure  
[NASA-CASE-NPO-17812-1-CU] c 76 N90-17456  
Thin solar cell and lightweight array  
[NASA-CASE-LEW-14959-1] c 44 N91-27614
- SEMICONDUCTOR LASERS**  
Field induced gap infrared detector  
[NASA-CASE-NPO-17526-1-CU] c 35 N91-14588  
Fiber optic sensing system  
[NASA-CASE-LEW-14795-1] c 74 N91-21871  
Quantum well, beam deflecting surface emitting lasers  
[NASA-CASE-NPO-18243-1-CU] c 36 N93-13418  
Self-collimated unstable resonator semiconductor laser  
[NASA-CASE-NPO-18386-1-CU] c 36 N93-18277
- SEMICONDUCTORS (MATERIALS)**  
Depositing semiconductor films utilizing a thermal gradient  
[NASA-CASE-XKS-04614] c 15 N69-21460  
System for improving signal-to-noise ratio of a communication signal Patent Application  
[NASA-CASE-MS-C-12259-1] c 07 N70-12616  
High efficiency multivibrator Patent  
[NASA-CASE-XAC-00942] c 10 N71-16042  
Method of making impurity-type semiconductor electrical contacts Patent  
[NASA-CASE-XMF-01016] c 26 N71-17818  
Method of electrolytically binding a layer of semiconductors together Patent  
[NASA-CASE-XNP-01959] c 26 N71-23043  
Gd or Sm doped silicon semiconductor composition Patent  
[NASA-CASE-XLE-10715] c 26 N71-23292  
Infrared detectors  
[NASA-CASE-LAR-10728-1] c 14 N73-12445  
Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility  
[NASA-CASE-HON-10069] c 33 N75-27251  
Vapor deposition apparatus --- semiconductors and gallium arsenides  
[NASA-CASE-HON-10462] c 25 N75-29192  
Application of semiconductor diffusants to solar cells by screen printing  
[NASA-CASE-LEW-12775-1] c 44 N79-11468  
Method for the preparation of inorganic single crystal and polycrystalline electronic materials  
[NASA-CASE-XLE-02545-1] c 76 N79-21910  
Voltage feed through apparatus having reduced partial discharge  
[NASA-CASE-GSC-12347-1] c 33 N80-18286  
Photoelectrochemical cells including chalcogenophosphate photoelectrodes  
[NASA-CASE-LAR-12958-1] c 44 N84-23019  
Epitaxial thinning process  
[NASA-CASE-NPO-15786-1] c 76 N84-35112  
Method for determining the point of zero zeta potential of semiconductor  
[NASA-CASE-LAR-12893-1] c 76 N85-30923  
Method of making macrocrystalline or single crystal semiconductor material  
[NASA-CASE-NPO-15904-1] c 76 N86-28760  
Method for growing low defect, high purity crystalline layers utilizing lateral overgrowth of a patterned mask  
[NASA-CASE-NPO-15813-2] c 76 N87-15882  
Total immersion crystal growth  
[NASA-CASE-NPO-15800-2] c 76 N87-23286  
Apparatus and procedure to detect a liquid-solid interface during crystal growth in a bridgman furnace  
[NASA-CASE-LAR-13597-1-CU] c 25 N87-23713  
Floating emitter solar cell  
[NASA-CASE-NPO-16467-1-CU] c 33 N87-23879  
Liquid encapsulated float zone process and apparatus  
[NASA-CASE-MFS-28144-1] c 76 N88-24545
- Preparation of dilute magnetic semiconductor films by metalorganic chemical vapor deposition  
[NASA-CASE-NPO-17399-1-CU] c 76 N89-14120  
Hybridization of detector array and integrated circuit for readout  
[NASA-CASE-NPO-18062-1-CU] c 33 N92-30542  
Sub-Kelvin resistance thermometer  
[NASA-CASE-GSC-13406-1] c 35 N92-33614  
INAS hole-immobilized doping superlattice long-wave-infrared detector  
[NASA-CASE-NPO-17880-1-CU] c 76 N93-11056  
Quantum well, beam deflecting surface emitting lasers  
[NASA-CASE-NPO-18243-1-CU] c 36 N93-13418  
Epitaxial heterojunctions of oxide semiconductors and metals on high temperature superconductors  
[NASA-CASE-NPO-18483-1-CU] c 76 N93-15151
- SENSITIVITY**  
Active RC networks  
[NASA-CASE-ARC-10042-2] c 10 N72-11256  
Tailorable infrared sensing device with strain layer superlattice structure  
[NASA-CASE-NPO-16607-1-CU] c 76 N88-14836  
Discrete optical fiber strain sensor  
[NASA-CASE-LAR-14810-1-SB] c 35 N93-19492
- SENSITOMETRY**  
Condition sensor system and method  
[NASA-CASE-MS-C-14805-1] c 54 N78-32720
- SENSORS**  
Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c 24 N75-30260  
Medical subject monitoring systems --- multichannel monitoring systems  
[NASA-CASE-MS-C-14180-1] c 52 N76-14757  
Trace water sensor  
[NASA-CASE-NPO-15722-1] c 35 N85-29212  
Method and apparatus for determination of material residual stress  
[NASA-CASE-GSC-13451-1] c 39 N92-23549  
Method of forming a multiple layer dielectric and a hot film sensor therewith  
[NASA-CASE-LAR-13678-3] c 35 N93-14714  
System for memorizing maximum values  
[NASA-CASE-MS-C-21922-1] c 35 N93-14841  
Optical fiber strain sensor with improved linearity  
[NASA-CASE-LAR-14857-1-SB] c 74 N93-19374  
Multiple layer dielectrics, hot film sensors, and methods of producing same  
[NASA-CASE-LAR-14591-1] c 35 N93-19493  
Method and apparatus for determination of material residual stress  
[NASA-CASE-GSC-13451-1] c 39 N93-20118  
Optical fiber fluorosensor  
[NASA-CASE-LAR-14525-1-CU] c 74 N93-22008
- SENSORY PERCEPTION**  
Tactile sensing means for prosthetic limbs  
[NASA-CASE-MFS-16570-1] c 05 N73-32013
- SEPARATED FLOW**  
Thrust vector control apparatus Patent  
[NASA-CASE-XLE-00208] c 28 N70-34294  
Double hinged flap Patent  
[NASA-CASE-XLA-01290] c 02 N70-42016  
Mixture separation cell Patent  
[NASA-CASE-XMS-02952] c 18 N71-20742  
Flow separation detector  
[NASA-CASE-ARC-11046-1] c 35 N78-14364  
Method and apparatus for detecting laminar flow separation and reattachment  
[NASA-CASE-LAR-13952-1-SB] c 34 N90-19534  
Method of forming a multiple layer dielectric and a hot film sensor therewith  
[NASA-CASE-LAR-13678-1] c 76 N90-24168  
Method and apparatus for detecting laminar flow separation and reattachment  
[NASA-CASE-LAR-13952-2-SB] c 34 N91-31596  
Stall departure resistance enhancer  
[NASA-CASE-LAR-14221-1] c 06 N93-19023
- SEPARATION**  
Acoustophoresis method and apparatus  
[NASA-CASE-LAR-13388-1] c 25 N92-33611  
Acoustophoresis separation method  
[NASA-CASE-LAR-13388-2] c 25 N93-20570  
Process for selectively recovering algae and protozoa  
[NASA-CASE-MFS-26124-1-NPO] c 51 N93-29174
- SEPARATORS**  
Condenser - Separator  
[NASA-CASE-XLA-08645] c 15 N69-21465  
Umbilical separator for rockets Patent  
[NASA-CASE-XNP-00425] c 11 N70-38202  
Liquid-gas separation system Patent  
[NASA-CASE-XMS-01624] c 15 N70-40062  
Zero gravity separator Patent  
[NASA-CASE-XLE-00586] c 15 N71-15968  
Separator Patent  
[NASA-CASE-XLA-00415] c 15 N71-16079
- Water separating system Patent  
[NASA-CASE-XMS-13052] c 14 N71-20427  
Vapor liquid separator Patent  
[NASA-CASE-XMF-04042] c 15 N71-23023  
Air removal device  
[NASA-CASE-XLA-08914] c 15 N73-12492  
Centrifugal lyophobic separator  
[NASA-CASE-LAR-10194-1] c 34 N74-30608  
Fluid control apparatus and method  
[NASA-CASE-LAR-11110-1] c 34 N75-26282  
Method and apparatus for fluffing, separating, and cleaning fibers  
[NASA-CASE-LAR-11224-1] c 37 N76-18456  
Gels as battery separators for soluble electrode cells  
[NASA-CASE-LEW-12364-1] c 44 N77-22606  
Low gravity phase separator  
[NASA-CASE-MS-C-14773-1] c 35 N78-12390  
Automatic multiple-sample applicator and electrophoresis apparatus  
[NASA-CASE-ARC-10991-1] c 25 N78-14104  
Counter pumping debris excluder and separator --- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c 07 N78-25090  
Inorganic-organic separators for alkaline batteries  
[NASA-CASE-LEW-12649-1] c 44 N78-25530  
Formulated plastic separators for soluble electrode cells --- rubber-ion transport membranes  
[NASA-CASE-LEW-12358-1] c 44 N79-17313  
Water separator  
[NASA-CASE-XMS-01295-1] c 37 N79-21345  
In situ self cross-linking of polyvinyl alcohol battery separators  
[NASA-CASE-LEW-12972-1] c 44 N79-25481  
Partial interlaminar separation system for composites  
[NASA-CASE-LAR-12065-1] c 24 N81-14000  
Polyvinyl alcohol battery separator containing inert filler --- alkaline batteries  
[NASA-CASE-LEW-13556-1] c 44 N81-27615  
Method of making formulated plastic separators for soluble electrode cells  
[NASA-CASE-LEW-12358-2] c 25 N82-21268  
Process of treating cellulosic membrane and alkaline with membrane separator  
[NASA-CASE-GSC-10019-1] c 44 N82-24641  
Separator for alkaline batteries and method of making same  
[NASA-CASE-GSC-10350-1] c 44 N82-24642  
Separator for alkaline electric cells and method of making  
[NASA-CASE-GSC-10017-1] c 44 N82-24643  
Separator for alkaline electric batteries and method of making  
[NASA-CASE-GSC-10018-1] c 44 N82-24644  
Alkaline electrochemical cells and method of making  
[NASA-CASE-GSC-10349-1] c 44 N82-24645  
Aqueous alkali metal hydroxide insoluble cellulose ether membrane  
[NASA-CASE-XGS-05584-1] c 25 N82-29370  
Advanced inorganic separators for alkaline batteries  
[NASA-CASE-LEW-13171-1] c 44 N82-29708  
Electrophoresis device  
[NASA-CASE-MFS-25426-1] c 25 N83-10126  
Static continuous electrophoresis device  
[NASA-CASE-MFS-25306-1] c 25 N83-13187  
Advanced inorganic separators for alkaline batteries and method of making the same  
[NASA-CASE-LEW-13171-2] c 44 N83-32176  
Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c 33 N85-29144  
Vortex motion phase separator for zero gravity liquid transfer  
[NASA-CASE-KSC-11387-1] c 29 N90-20236  
Zero-G phase detector and separator  
[NASA-CASE-LEW-14844-1] c 35 N90-22024  
Fluid separator  
[NASA-CASE-MFS-28658-1] c 34 N93-17039
- SEQUENCING**  
Synchronous counter Patent  
[NASA-CASE-XGS-02440] c 08 N71-19432  
Control apparatus for applying pulses of selectively predetermined duration to a sequence of loads Patent  
[NASA-CASE-XGS-04224] c 10 N71-26418  
Digital function generator  
[NASA-CASE-NPO-11104] c 08 N72-22165  
MOD 2 sequential function generator for multibit binary sequence  
[NASA-CASE-NPO-10636] c 08 N72-25210  
Pseudonoise sequence generators with three tap linear feedback shift registers  
[NASA-CASE-NPO-11406] c 08 N73-12175  
Mechanical sequencer  
[NASA-CASE-MS-C-19536-1] c 37 N77-22482

Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-15670-1] c 33 N82-33634

Generation of animation sequences of three dimensional models  
[NASA-CASE-MSC-21379-1-SB] c 61 N90-27340

**SEQUENTIAL ANALYSIS**

Binary coded sequential acquisition ranging system  
[NASA-CASE-NPO-11194] c 08 N72-25209

Event sequence detector  
[NASA-CASE-NPO-11703-1] c 10 N73-32144

**SEQUENTIAL COMPUTERS**

Digital data reformatter/deserializer  
[NASA-CASE-NPO-13676-1] c 60 N79-20751

**SEQUENTIAL CONTROL**

Linear three-tap feedback shift register Patent  
[NASA-CASE-NPO-10351] c 08 N71-12503

Binary sequence detector Patent  
[NASA-CASE-XNP-05415] c 08 N71-12505

Sequencing device utilizing planetary gear set  
[NASA-CASE-MSC-19514-1] c 37 N79-20377

Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-256704-1] c 33 N84-22884

Long period pseudo random number sequence generator  
[NASA-CASE-NPO-17241-1-CU] c 33 N90-23636

High level language-based robotic control system  
[NASA-CASE-NPO-17918-2-CU] c 63 N92-17895

**SERUMS**

Reduction of blood serum cholesterol  
[NASA-CASE-NPO-12119-1] c 52 N75-15270

Human serum albumin crystals and method of preparation  
[NASA-CASE-MFS-28234-1] c 52 N90-20616

Amino acid sequences for the binding regions in serum albumin proteins  
[NASA-CASE-MFS-28402-1] c 51 N93-28952

**SERVICE LIFE**

Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-10503-1] c 09 N72-21248

Stirling cycle cryogenic cooler  
[US-PATENT-4,389,849] c 44 N83-28574

Tip cap for a rotor blade  
[NASA-CASE-LEW-13654-1] c 07 N84-22560

Predictive aging of polymers  
[NASA-CASE-NPO-17524-1-CU] c 27 N90-10261

**SERVOAMPLIFIERS**

Pneumatic amplifier Patent  
[NASA-CASE-MSC-12121-1] c 15 N71-27147

**SERVOCONTROL**

Monopulse system with an electronic scanner  
[NASA-CASE-XGS-05582] c 07 N69-27460

Proportional controller Patent  
[NASA-CASE-XAC-03392] c 03 N70-41954

Light intensity modulator controller Patent  
[NASA-CASE-XMS-04300] c 09 N71-19479

Strain coupled servo control system Patent  
[NASA-CASE-XLA-08530] c 32 N71-25360

Energy limiter for hydraulic actuators Patent  
[NASA-CASE-ARC-10131-1] c 15 N71-27754

Digital servo controller --- for rotating antenna shaft  
[NASA-CASE-KSC-10769-1] c 33 N74-29556

Digital servo control of random sound test excitation --- in reverberant acoustic chamber  
[NASA-CASE-NPO-11623-1] c 71 N74-31148

Phase-locked servo system --- for synchronizing the rotation of slip ring assembly  
[NASA-CASE-MFS-22073-1] c 33 N75-13139

Servo-controlled intravital microscope system  
[NASA-CASE-NPO-13214-1] c 35 N75-25123

Autonomous navigation system --- gyroscopic pendulum for air navigation  
[NASA-CASE-ARC-11257-1] c 04 N81-21047

System and method for moving a probe to follow movements of tissue  
[NASA-CASE-NPO-15197-1] c 52 N83-25346

Control system for an induction motor with energy recovery  
[NASA-CASE-MFS-25477-1] c 33 N84-14424

Memory metal actuator  
[NASA-CASE-NPO-15960-1] c 37 N86-19604

**SERVOMECHANISMS**

Interferometer servo system Patent  
[NASA-CASE-NPO-10300] c 14 N71-17662

Line following servosystem Patent  
[NASA-CASE-XAC-00001] c 15 N71-28952

A dc servosystem including an ac motor Patent  
[NASA-CASE-NPO-10700] c 07 N71-33613

Ball screw linear actuator  
[NASA-CASE-NPO-11222] c 15 N72-25456

Rotary actuator  
[NASA-CASE-NPO-10680] c 31 N73-14855

Hydraulic drain means for servo-systems  
[NASA-CASE-NPO-10316-1] c 37 N77-22479

Actuator mechanism  
[NASA-CASE-GSC-11883-2] c 37 N78-31426

Apparatus for providing a servo drive signal in a high-speed stepping interferometer  
[NASA-CASE-NPO-13569-2] c 35 N79-14348

Automated syringe sampler --- remote sampling of air and water  
[NASA-CASE-LAR-12308-1] c 35 N81-29407

Electrical servo actuator bracket --- fuel control valves on jet engines  
[NASA-CASE-FRC-11044-1] c 37 N81-33483

Hydraulic actuator mechanism to control aircraft spoiler movements through dual input commands  
[NASA-CASE-LAR-12412-1] c 08 N82-24205

Servomechanism for Doppler shift compensation in optical correlator for synthetic aperture radar  
[NASA-CASE-NPO-14998-1] c 32 N83-18975

Closed-loop motor control using high-speed fiber optics  
[NASA-CASE-MSC-21806-1] c 74 N92-17863

Controlling under-actuated robot arms using a high speed dynamics process  
[NASA-CASE-NPO-18498-1-CU] c 37 N92-24043

Sample positioning in microgravity  
[NASA-CASE-NPO-18448-1-CU] c 29 N92-30083

Sample positioning in microgravity  
[NASA-CASE-NPO-18448-1-CU] c 29 N93-24600

**SERVOMOTORS**

Automatic closed circuit television arc guidance control Patent  
[NASA-CASE-MFS-13046] c 07 N71-19433

Transistor servo system including a unique differential amplifier circuit Patent  
[NASA-CASE-XMF-05195] c 10 N71-24861

Cyclically operable optical shutter  
[NASA-CASE-NPO-10758] c 14 N73-14427

Rotary actuator  
[NASA-CASE-NPO-10680] c 31 N73-14855

Velocity servo for continuous scan Fourier interference spectrometer  
[NASA-CASE-NPO-14093-1] c 35 N80-20563

Load positioning system with gravity compensation  
[NASA-CASE-ARC-11525-1] c 37 N86-27629

**SEWAGE TREATMENT**

Sewage sludge additive  
[NASA-CASE-NPO-13877-1] c 45 N82-11634

Method for treating wastewater using microorganisms and vascular aquatic plants  
[NASA-CASE-NSTL-10] c 45 N84-12654

**SHADES**

Sun shield  
[NASA-CASE-MSC-20162-1] c 37 N87-17036

**SHAFTS (MACHINE ELEMENTS)**

Fatigue-resistant shear pin  
[NASA-CASE-XLA-09122] c 15 N69-27505

Elastic universal joint Patent  
[NASA-CASE-XNP-00416] c 15 N70-36947

Apparatus for absorbing and measuring power Patent  
[NASA-CASE-XLE-00720] c 14 N70-40201

Two-axis controller Patent  
[NASA-CASE-XFR-04104] c 03 N70-42073

Ratchet mechanism Patent  
[NASA-CASE-MFS-12805] c 15 N71-17805

Frictionless universal joint Patent  
[NASA-CASE-NPO-10646] c 15 N71-28467

Spiral groove seal  
[NASA-CASE-XLE-10326-2] c 15 N72-29488

High speed hybrid bearing comprising a fluid bearing and a rolling bearing connected in series  
[NASA-CASE-LEW-11152-1] c 15 N73-32359

Spiral groove seal --- for hydraulic rotating shaft  
[NASA-CASE-LEW-10326-3] c 37 N74-10474

Hole cutter --- drill bits and rotating shaft  
[NASA-CASE-MFS-22649-1] c 37 N75-25186

Twin-capacitive shaft angle encoder with analog output signal  
[NASA-CASE-ARC-10897-1] c 33 N77-31404

Counter pumping debris excluder and separator --- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c 07 N78-25090

Sequencing device utilizing planetary gear set  
[NASA-CASE-MSC-19514-1] c 37 N79-20377

Shaft seal assembly for high speed and high pressure applications  
[NASA-CASE-LEW-11873-1] c 37 N79-22475

Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion  
[NASA-CASE-NPO-14170-1] c 37 N81-15364

Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c 37 N81-25370

Circumferential shaft seal  
[NASA-CASE-LEW-12119-2] c 37 N81-26447

Hermetic seal for a shaft  
[NASA-CASE-NPO-15115-1] c 37 N82-24493

Method for driving two-phase turbines with enhanced efficiency  
[NASA-CASE-NPO-15037-2] c 37 N85-29282

Angular measurement system  
[NASA-CASE-MFS-25825-1] c 31 N86-29055

Non-backdrivable free wheeling coupling  
[NASA-CASE-MSC-20475-1] c 37 N87-17037

Turbomachinery shaft insert  
[NASA-CASE-MFS-28345-2] c 37 N89-28842

Dynamic tester for rotor seals and bearings  
[NASA-CASE-MFS-28493-1] c 09 N91-25155

Control circuitry using electronic emulation of a synchro signal for accurate control of position and rate of rotation for shafts  
[NASA-CASE-MFS-28458-1] c 33 N91-26459

Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N91-28184

Bidirectional drive and brake mechanism  
[NASA-CASE-MSC-21540-1] c 37 N91-32514

Magnetostrictive roller drive motor  
[NASA-CASE-GSC-13369-1] c 33 N92-15331

J-hook latching device  
[NASA-CASE-GSC-13200-1] c 37 N92-21500

Quick-connect fasteners for assembling devices in space  
[NASA-CASE-MSC-21648-1] c 37 N92-24051

Noncircular rolling joints for vibrational reduction in slewing maneuvers  
[NASA-CASE-LAR-14515-1-CU] c 37 N92-33031

Radial spline assembly for antifriction bearings  
[NASA-CASE-MFS-28629-1] c 37 N93-17084

Method and apparatus for preloading a joint by remotely operable means  
[NASA-CASE-MSC-21940-1] c 37 N93-20120

Robot friendly probe and socket assembly  
[NASA-CASE-MSC-22028-1] c 37 N93-22007

Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N93-24598

Radial spline assembly for antifriction bearings  
[NASA-CASE-MFS-28629-1] c 37 N93-26001

**SHAKERS**

Planar oscillatory stirring apparatus  
[NASA-CASE-MFS-26002-1-CU] c 35 N86-26598

**SHALE OIL**

In-situ laser retorting of oil shale  
[NASA-CASE-LEW-12217-1] c 43 N78-14452

Oil shale extraction using super-critical extraction  
[NASA-CASE-NPO-15656-1] c 43 N84-23012

Solar heated oil shale pyrolysis process  
[NASA-CASE-NPO-16392-1] c 25 N86-25428

**SHALES**

Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c 43 N79-25443

Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c 43 N80-14423

Coal-shale interface detector  
[NASA-CASE-MSC-23720-1] c 43 N80-23711

Oil shale extraction using super-critical extraction  
[NASA-CASE-NPO-15656-1] c 43 N84-23012

**SHAPE CONTROL**

Synchronously deployable truss structure  
[NASA-CASE-LAR-13117-1] c 37 N86-25789

Antenna surface contour control system  
[NASA-CASE-LAR-13798-1] c 32 N89-25363

Method and circuit for shaping laser output pulses  
[NASA-CASE-LAR-14203-1] c 36 N89-28817

**SHAPE MEMORY ALLOYS**

Memory metal actuator  
[NASA-CASE-NPO-15960-1] c 37 N86-19604

Rotary stepping device with memory metal actuator  
[NASA-CASE-NPO-15482-1] c 37 N87-23970

Method and apparatus for preloading a joint by remotely operable means  
[NASA-CASE-MSC-21940-1] c 37 N92-30540

Device for removing foreign objects from anatomic organs  
[NASA-CASE-GSC-13306-1] c 52 N92-33032

Fastening apparatus having shape memory alloy actuator  
[NASA-CASE-MSC-21935-1] c 37 N93-13423

Method and apparatus for preloading a joint by remotely operable means  
[NASA-CASE-MSC-21940-1] c 37 N93-20120

**SHAPED CHARGES**

Coupling for linear shaped charge Patent  
[NASA-CASE-XLA-00189] c 33 N70-36846

Lateral displacement system for separated rocket stages Patent  
[NASA-CASE-XLA-04804] c 31 N71-23008

**SHAPERS**

Mandrel for shaping solid propellant rocket fuel into a motor casing Patent  
[NASA-CASE-XLA-00304] c 27 N70-34783

Tube dimpling tool Patent  
[NASA-CASE-XMS-06876] c 15 N71-21536

- Dielectric molding apparatus Patent  
[NASA-CASE-LAR-10121-1] c 15 N71-26721
- SHAPES**  
Stripline feed for a microstrip array of patch elements with teardrop shaped probes  
[NASA-CASE-NPO-17548-1-CU] c 32 N90-16104  
Lightweight piston architecture  
[NASA-CASE-LAR-13926-1] c 37 N90-22042
- SHARKS**  
Process for conditioning tanned sharkskin and articles made therefrom Patent  
[NASA-CASE-XMS-09691-1] c 18 N71-15545
- SHARPNESS**  
Method of forming a sharp edge on an optical device  
[NASA-CASE-GSC-12348-1] c 74 N80-24149
- SHEAR CREEP**  
Instrument for measuring torsional creep and recovery Patent  
[NASA-CASE-XLE-01481] c 14 N71-10781
- SHEAR FLOW**  
Shear modulated fluid amplifier Patent  
[NASA-CASE-MFS-10412] c 12 N71-17578
- SHEAR PROPERTIES**  
Parallel plate viscometer Patent  
[NASA-CASE-XNP-09462] c 14 N71-17584
- SHEAR STRENGTH**  
Sandwiched structural panel having a bi-directional core structure  
[NASA-CASE-MFS-28796-1] c 24 N93-19022
- SHEAR STRESS**  
Fatigue-resistant shear pin  
[NASA-CASE-XLA-09122] c 15 N69-27505  
Angular velocity and acceleration measuring apparatus  
[NASA-CASE-ERC-10292] c 14 N72-25410  
Bonded joint and method --- for reducing peak shear stress in adhesive bonds  
[NASA-CASE-LAR-10900-1] c 37 N74-23064  
Method and apparatus for detecting laminar flow separation and reattachment  
[NASA-CASE-LAR-13952-1-SB] c 34 N90-19534  
Active thermal isolation for temperature responsive sensors  
[NASA-CASE-LAR-14612-1] c 34 N92-29954  
Three-dimensional cell to tissue assembly process  
[NASA-CASE-MSC-21559-1] c 51 N92-34231  
Shear sensitive monomer-polymer laminate structure and method of using same  
[NASA-CASE-LAR-14654-1-CU] c 39 N93-29613
- SHEARING**  
Elastomer coated filler and composites thereof comprising at least 60% by weight of a hydrated filler and an elastomer containing an acid substituent  
[NASA-CASE-NPO-14857-1] c 27 N83-19900
- SHEATHS**  
High-temperature, bellows hybrid seal  
[NASA-CASE-LEW-15570-1] c 37 N93-19027
- SHELL ANODES**  
Ring-cusp ion thruster with shell anode  
[NASA-CASE-LEW-13881-1] c 20 N85-21256
- SHELLS (STRUCTURAL FORMS)**  
Channel-type shell construction for rocket engines and the like Patent  
[NASA-CASE-XLE-00144] c 28 N70-34860
- SHIELDING**  
Spherical shield Patent  
[NASA-CASE-XNP-01855] c 15 N71-28937  
Shielded flat cable  
[NASA-CASE-MFS-13687-2] c 09 N72-22198  
System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
[NASA-CASE-MFS-23513-1] c 74 N79-11865  
Space ultra-vacuum facility and method of operation  
[NASA-CASE-MFS-28139-1] c 29 N87-18679  
Trailer shield assembly for a welding torch  
[NASA-CASE-MFS-29260-1] c 37 N90-19602  
Electrode carrying wire for GTAW welding  
[NASA-CASE-MFS-29491-1] c 31 N90-26168  
Hypervelocity impact shield  
[NASA-CASE-MSC-21420-1] c 18 N92-15114  
Driven shielding capacitive proximity sensor  
[NASA-CASE-GSC-13377-1] c 63 N93-14701
- SHIFT REGISTERS**  
Binary to binary-coded-decimal converter Patent  
[NASA-CASE-XNP-00432] c 08 N70-35423  
Linear three-tap feedback shift register Patent  
[NASA-CASE-NPO-10351] c 08 N71-12503  
Counter and shift register Patent  
[NASA-CASE-XNP-01753] c 08 N71-22897  
Current steering commutator  
[NASA-CASE-NPO-10743] c 08 N72-21199  
Feedback shift register with states decomposed into cycles of equal length  
[NASA-CASE-NPO-11082] c 08 N72-22167

- MOD 2 sequential function generator for multibit binary sequence  
[NASA-CASE-NPO-10636] c 08 N72-25210
- Pseudonoise sequence generators with three tap linear feedback shift registers  
[NASA-CASE-NPO-11406] c 08 N73-12175  
A m-ary linear feedback shift register with binary logic  
[NASA-CASE-NPO-11868] c 10 N73-20254  
Counting digital filters  
[NASA-CASE-NPO-11821-1] c 08 N73-26175  
Event sequence detector  
[NASA-CASE-NPO-11703-1] c 10 N73-32144  
Method and apparatus for decoding compatible convolutional codes  
[NASA-CASE-MSC-14070-1] c 32 N74-32598  
Nonlinear nonsingular feedback shift registers  
[NASA-CASE-NPO-13451-1] c 33 N76-14373  
Selective data segment monitoring system --- using shift registers  
[NASA-CASE-ARC-10899-1] c 60 N77-19760  
Digital data reformatter/deserializer  
[NASA-CASE-NPO-13676-1] c 60 N79-20751
- SHIP HULLS**  
Hydrodynamic skin-friction reduction  
[NASA-CASE-LAR-14078-1-CU] c 34 N90-27071
- SHOCK ABSORBERS**  
Pivotal shock absorbing pad assembly Patent  
[NASA-CASE-XMF-03856] c 31 N70-34159  
Frangible tube energy dissipation Patent  
[NASA-CASE-XLA-00754] c 15 N70-34850  
Shock absorbing support and restraint means Patent  
[NASA-CASE-XMS-01240] c 05 N70-35152  
Energy absorbing structure Patent Application  
[NASA-CASE-MSC-12279-1] c 15 N70-35679  
Landing pad assembly for aerospace vehicles Patent  
[NASA-CASE-XMF-02853] c 31 N70-36654  
Space craft soft landing system Patent  
[NASA-CASE-XMF-02108] c 31 N70-36845  
Double-acting shock absorber Patent  
[NASA-CASE-XMF-01045] c 15 N70-40354  
Articulated multiple couch assembly Patent  
[NASA-CASE-MSC-11253] c 05 N71-12343  
Shock absorber Patent  
[NASA-CASE-XMS-03722] c 15 N71-21530  
Impact energy absorber Patent  
[NASA-CASE-XLA-01530] c 14 N71-23092  
Low onset rate energy absorber  
[NASA-CASE-MSC-12279] c 15 N72-17450  
Impact energy absorbing system utilizing fractureable material  
[NASA-CASE-NPO-10671] c 15 N72-20443  
Translatory shock absorber for attitude sensors  
[NASA-CASE-MFS-22905-1] c 19 N76-22284  
Vehicular impact absorption system  
[NASA-CASE-NPO-14014-1] c 37 N79-10420  
Variable response load limiting device  
[NASA-CASE-LAR-12801-1] c 37 N88-23982  
Wheels for wheelchairs and the like  
[NASA-CASE-MFS-28632-1] c 54 N93-17042  
Energy dissipator  
[NASA-CASE-MSC-21555-1] c 37 N93-23075
- SHOCK LOADS**  
Wind tunnel model damper Patent  
[NASA-CASE-XLA-09480] c 11 N71-33612
- SHOCK MEASURING INSTRUMENTS**  
Semiconductor projectile impact detector  
[NASA-CASE-MFS-23008-1] c 35 N78-18390
- SHOCK RESISTANCE**  
Method and apparatus for shock protection Patent  
[NASA-CASE-XLA-00482] c 15 N70-36409  
Thermal shock resistant hafnia ceramic material  
[NASA-CASE-LAR-10894-1] c 18 N73-14584  
Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c 27 N78-17206  
Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c 18 N83-20996  
Method of fabricating an abrasible gas path seal  
[NASA-CASE-LEW-13269-2] c 37 N84-22957
- SHOCK TUBES**  
Means for controlling rupture of shock tube diaphragms Patent  
[NASA-CASE-XAC-00731] c 11 N71-15960  
Shock tube bypass piston tunnel  
[NASA-CASE-NPO-12109] c 11 N72-22245  
Annular arc accelerator shock tube  
[NASA-CASE-NPO-13528-1] c 09 N77-10071
- SHOCK WAVE INTERACTION**  
Absorptive splitter for closely spaced supersonic engine air inlets Patent  
[NASA-CASE-XLA-02865] c 28 N71-15563
- SHOCK WAVE LUMINESCENCE**  
Shock-layer radiation measurement  
[NASA-CASE-XAC-02970] c 14 N69-39896

**SHOCK WAVE PROFILES**

- Shock-layer radiation measurement  
[NASA-CASE-XAC-02970] c 14 N69-39896  
Adapter for mounting a microphone flush with the external surface of the skin of a pressurized aircraft  
[NASA-CASE-FRC-11072-1] c 05 N83-27975

**SHOCK WAVES**

- Shock tube powder dispersing apparatus Patent  
[NASA-CASE-XLE-04946] c 17 N71-24911  
Shock wave convergence apparatus  
[NASA-CASE-MFS-20890] c 14 N72-22439  
Synthesis of superconducting compounds by explosive compaction of powders  
[NASA-CASE-MFS-20861-1] c 18 N73-32437  
Shock position sensor for supersonic inlets --- measuring pressure in the throat of a supersonic inlet  
[NASA-CASE-LEW-11915-1] c 35 N76-14431  
Impact tolerant material  
[NASA-CASE-LAR-12887-3] c 24 N90-21822  
Rocket engine nozzle attenuator  
[NASA-CASE-MFS-28739-1] c 20 N93-28324

**SHOES**

- Jet shoes  
[NASA-CASE-XLA-08491] c 05 N69-21380

**SHORT CIRCUITS**

- Protection for energy conversion systems  
[NASA-CASE-XGS-04808] c 03 N69-25146  
Triode thermionic energy converter  
[NASA-CASE-XLE-01015] c 03 N69-39898  
Analog to digital converter tester Patent  
[NASA-CASE-XLA-06713] c 14 N71-28991  
Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c 33 N79-18193  
Test apparatus for locating shorts during assembly of electrical buses  
[NASA-CASE-ARC-11116-1] c 33 N82-24420  
Thermal switch device for short circuit protection of batteries  
[NASA-CASE-MSC-21428-1] c 33 N91-14537

**SHOT PEENING**

- Method of peening and portable peening gun  
[NASA-CASE-MFS-23047-1] c 37 N76-18454

**SHOULDERS**

- Shoulder and hip joint for hard space suits  
[NASA-CASE-ARC-11543-1] c 54 N86-28620  
Shoulder and hip joints for hard space suits and the like  
[NASA-CASE-ARC-11534-1] c 54 N86-29507

**SHROUDED NOZZLES**

- Two dimensional wedge/translating shroud nozzle  
[NASA-CASE-LAR-11919-1] c 07 N78-27121

**SHROUDED TURBINES**

- Composite seal for turbomachinery --- backings for turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c 37 N79-18318  
Gas path seal  
[NASA-CASE-NPO-12131-3] c 37 N80-18400  
Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c 37 N80-26658  
Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c 18 N83-20996  
Thermal stress minimized, two component, turbine shroud seal  
[NASA-CASE-LEW-14212-1] c 37 N88-23978

**SHROUDS**

- Composite powerplant and shroud therefor Patent  
[NASA-CASE-XLA-01043] c 28 N71-10780  
Composite seal for turbomachinery --- backings for turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c 37 N79-18318  
Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-3] c 37 N82-19540  
Active clearance control system for a turbomachine  
[NASA-CASE-LEW-12938-1] c 07 N82-32366  
Method of fabricating an abrasible gas path seal  
[NASA-CASE-LEW-13269-2] c 37 N84-22957  
Bright light delivery system  
[NASA-CASE-MFS-28723-1] c 52 N93-17058

**SHUTTERS**

- High speed shutter --- electrically actuated ribbon loop for shuttering optical or fluid passageways  
[NASA-CASE-ARC-10516-1] c 70 N74-21300  
Cryogenic shutter  
[NASA-CASE-GSC-13189-2] c 37 N92-29151

**SHUTTLE DERIVED VEHICLES**

- Three stage rocket vehicle with parallel staging  
[NASA-CASE-MFS-25878-1] c 18 N84-27787  
Shuttle orbiter with telescoping main propulsion unit and payload  
[NASA-CASE-LAR-13586-1] c 16 N92-10035  
Shuttle orbiter with telescoping main propulsion unit and payload  
[NASA-CASE-LAR-13586-1] c 16 N93-20115

**SIDE INLETS**

Low-drag ground vehicle particularly suited for use in safety transporting livestock  
[NASA-CASE-FRC-11058-1] c 85 N82-33288

**SIDEBANDS**

Phase-locked loop with sideband rejecting properties Patent  
[NASA-CASE-XNP-02723] c 07 N70-41680  
Method and means for generation of tunable laser sidebands in the far-infrared region  
[NASA-CASE-NPO-16497-1-CU] c 36 N87-25567

**SIDELobe REDUCTION**

Dual mode horn antenna Patent  
[NASA-CASE-XNP-01057] c 07 N71-15907  
Video processor for air traffic control beacon system  
[NASA-CASE-KSC-11155-1] c 04 N86-19304

**SIGNAL ANALYSIS**

Signal detection and tracking apparatus Patent  
[NASA-CASE-XGS-03502] c 10 N71-20852  
Method and apparatus for a single channel digital communications system --- synchronization of received PCM signal by digital correlation with reference signal  
[NASA-CASE-NPO-11302-2] c 32 N74-10132  
Differential phase shift keyed signal resolver  
[NASA-CASE-MSC-14066-1] c 33 N74-27705  
Correlation type phase detector --- with time correlation integrator for frequency multiplexed signals  
[NASA-CASE-GSC-11744-1] c 33 N75-26243  
Real time analysis of voiced sounds  
[NASA-CASE-NPO-13465-1] c 32 N76-31372  
Digital plus analog output encoder  
[NASA-CASE-GSC-12115-1] c 62 N76-31946  
Serial data correlator/code translator  
[NASA-CASE-KSC-11025-1] c 32 N83-13323  
Video processor for air traffic control beacon system  
[NASA-CASE-KSC-11155-1] c 04 N86-19304  
Acoustic emission frequency discrimination  
[NASA-CASE-MSC-20467-1] c 35 N88-23966

**SIGNAL ANALYZERS**

System for monitoring signal amplitude ranges  
[NASA-CASE-XMS-04061-1] c 09 N69-39885  
Sampled data controller Patent  
[NASA-CASE-GSC-10554-1] c 08 N71-29033  
Family of frequency to amplitude converters  
[NASA-CASE-MSC-12395] c 09 N72-25257  
Apparatus for statistical time-series analysis of electrical signals  
[NASA-CASE-MSC-12428-1] c 10 N73-25240  
Pulse stretcher for narrow pulses  
[NASA-CASE-MSC-14130-1] c 33 N74-32711  
Electronic optical transfer function analyzer  
[NASA-CASE-MFS-21672-1] c 74 N76-19935  
Speech analyzer  
[NASA-CASE-GSC-11898-1] c 32 N77-30309

**SIGNAL DETECTION**

Position location system and method Patent  
[NASA-CASE-GSC-10087-2] c 21 N71-13958  
Method of detecting impending saturation of magnetic cores  
[NASA-CASE-ERC-10089] c 23 N72-17747  
Anti-multipath digital signal detector  
[NASA-CASE-LAR-11827-1] c 32 N77-10392  
Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c 32 N77-20289  
Automatic communication signal monitoring system  
[NASA-CASE-NPO-13941-1] c 32 N79-10262  
Apparatus and method for stabilized phase detection for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c 33 N79-11313  
Method and apparatus for receiving and tracking phase modulated signals  
[NASA-CASE-MSC-16170-2] c 32 N84-27952  
Vibration analyzer  
[NASA-CASE-MSC-21408-1] c 37 N91-14607  
Multiple symbol differential detection  
[NASA-CASE-NPO-17896-1-CU] c 32 N91-27439  
Real time pre-detection dynamic range compression  
[NASA-CASE-NPO-18098-1-CU] c 74 N92-33028  
Integrated filter and detector array for spectral imaging  
[NASA-CASE-NPO-18317-1-CU] c 74 N93-13419

**SIGNAL DETECTORS**

Surface roughness detector Patent  
[NASA-CASE-XLA-00203] c 14 N70-34161  
Pulse amplitude and width detector Patent  
[NASA-CASE-XMF-06519] c 09 N71-12519  
System for monitoring the presence of neutrals in a stream of ions Patent  
[NASA-CASE-XNP-02592] c 24 N71-20518  
Digital modulator and demodulator Patent  
[NASA-CASE-ERC-10041] c 08 N71-29138  
Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c 43 N80-14423  
Pulse transducer with artifact signal attenuator --- heart rate sensors  
[NASA-CASE-FRC-11012-1] c 52 N80-23969

Self-calibrating threshold detector  
[NASA-CASE-MSC-16370-1] c 35 N81-19427  
Triac failure detector  
[NASA-CASE-MFS-25607-1] c 33 N83-34190  
Method and apparatus for detecting laminar flow separation and reattachment  
[NASA-CASE-LAR-13952-1-SB] c 34 N90-19534

**SIGNAL DISTORTION**

Low distortion receiver for bi-level baseband PCM waveforms  
[NASA-CASE-MSC-14557-1] c 32 N76-16249

**SIGNAL ENCODING**

Adaptive compression of communication signals Patent  
[NASA-CASE-XLA-03076] c 07 N71-11266  
Self-calibrating threshold detector  
[NASA-CASE-MSC-16370-1] c 35 N81-19427  
Random digital encryption secure communication system  
[NASA-CASE-MSC-16462-1] c 32 N82-31583  
Trellis coded modulation for transmission over fading mobile satellite channel  
[NASA-CASE-NPO-16904-2-CU] c 32 N91-14523

**SIGNAL GENERATORS**

Plural recorder system  
[NASA-CASE-XMS-06949] c 09 N69-21467  
Signal generator  
[NASA-CASE-XNP-05612] c 09 N69-21468  
Means for generating a sync signal in an FM communication system Patent  
[NASA-CASE-XNP-10830] c 07 N71-11281  
Array phasing device Patent  
[NASA-CASE-ERC-10046] c 10 N71-18722  
Sidereal frequency generator Patent  
[NASA-CASE-XGS-02610] c 14 N71-23174  
Controllers Patent  
[NASA-CASE-XMS-07487] c 15 N71-23255  
Signal ratio system utilizing voltage controlled oscillators Patent  
[NASA-CASE-XMF-04367] c 09 N71-23545  
Signal processing apparatus for multiplex transmission Patent  
[NASA-CASE-NPO-10388] c 07 N71-24622  
Multialarm summary alarm Patent  
[NASA-CASE-XLE-03061-1] c 10 N71-24798  
Adaptive system and method for signal generation Patent  
[NASA-CASE-GSC-11367] c 10 N71-26374  
Voltage dropout sensor Patent  
[NASA-CASE-KSC-10020] c 10 N71-27338  
System for controlling the operation of a variable signal device  
[NASA-CASE-NPO-11064] c 07 N72-11150  
Digital function generator  
[NASA-CASE-NPO-11104] c 08 N72-22165  
Hall effect transducer  
[NASA-CASE-LAR-10620-1] c 09 N72-25255  
Gunn-type solid state devices  
[NASA-CASE-XER-07895] c 26 N72-25679  
Audio frequency marker system  
[NASA-CASE-NPO-11147] c 14 N72-27408  
Digital servo control of random sound test excitation --- in reverberant acoustic chamber  
[NASA-CASE-NPO-11623-1] c 71 N74-31148  
Signal conditioner test set  
[NASA-CASE-KSC-10750-1] c 35 N75-12270  
System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c 33 N75-19519  
Pseudo-noise test set for communication system evaluation --- test signals  
[NASA-CASE-MFS-22671-1] c 35 N75-21582  
NDIR gas analyzer based on absorption modulation ratios for known and unknown samples  
[NASA-CASE-ARC-10802-1] c 35 N75-30502  
Twin-capacitive shaft angle encoder with analog output signal  
[NASA-CASE-ARC-10897-1] c 33 N77-31404  
Apparatus for providing a servo drive signal in a high-speed stepping interferometer  
[NASA-CASE-NPO-13569-2] c 35 N79-14348  
Versatile LDV burst simulator  
[NASA-CASE-LAR-11859-1] c 35 N79-14349  
Underwater seismic source --- for petroleum exploration  
[NASA-CASE-NPO-14255-1] c 46 N79-23555  
Frequency translating phase conjugation circuit for active retrodirective antenna array --- microwave transmission  
[NASA-CASE-NPO-14536-1] c 32 N81-14185  
Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c 07 N81-19116  
Motor power factor controller with a reduced voltage starter  
[NASA-CASE-MFS-25586-1] c 33 N82-11360

Combinational logic for generating gate drive signals for phase control rectifiers  
[NASA-CASE-MFS-25208-1] c 33 N83-10345  
Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c 33 N83-31953  
Magnetic heading reference  
[NASA-CASE-LAR-12638-1] c 04 N84-14132  
Brushless DC motor control system responsive to control signals generated by a computer or the like  
[NASA-CASE-NPO-16420-1] c 33 N86-20681

**SIGNAL MEASUREMENT**

Amplifier for measuring low-level signals in the presence of high common mode voltage  
[NASA-CASE-MFS-25868-1] c 33 N86-20670

**SIGNAL MIXING**

Signal multiplexer  
[NASA-CASE-XGS-01110] c 07 N69-24334  
Baseband signal combiner for large aperture antenna array  
[NASA-CASE-NPO-14641-1] c 32 N81-29308

**SIGNAL PROCESSING**

Adaptive compression of communication signals Patent  
[NASA-CASE-XLA-03076] c 07 N71-11266  
Television signal scan rate conversion system Patent  
[NASA-CASE-XMS-07168] c 07 N71-11300  
Difference circuit Patent  
[NASA-CASE-XNP-08274] c 10 N71-13537  
Correlation function apparatus Patent  
[NASA-CASE-XNP-00746] c 07 N71-21476  
Sidereal frequency generator Patent  
[NASA-CASE-XGS-02610] c 14 N71-23174  
Feedback integrator with grounded capacitor Patent  
[NASA-CASE-XAC-10607] c 10 N71-23669  
Signal processing apparatus for multiplex transmission Patent  
[NASA-CASE-NPO-10388] c 07 N71-24622  
Television signal processing system Patent  
[NASA-CASE-NPO-10140] c 07 N71-24742  
Electronic scanning of 2-channel monopulse patterns Patent  
[NASA-CASE-GSC-10299-1] c 09 N71-24804  
Remodulator filter Patent  
[NASA-CASE-NPO-10198] c 09 N71-24806  
Video sync processor Patent  
[NASA-CASE-KSC-10002] c 10 N71-25865  
Transient video signal recording with expanded playback Patent  
[NASA-CASE-ARC-10003-1] c 09 N71-25866  
Phase multiplying electronic scanning system Patent  
[NASA-CASE-NPO-10302] c 10 N71-26142  
Variable frequency nuclear magnetic resonance spectrometer Patent  
[NASA-CASE-XNP-09830] c 14 N71-26266  
Digital modulator and demodulator Patent  
[NASA-CASE-ERC-10041] c 08 N71-29138  
Digital pulse width selection circuit Patent  
[NASA-CASE-XLA-07788] c 09 N71-29139  
Phase shift circuit apparatus  
[NASA-CASE-ARC-10269-1] c 10 N72-16172  
Contourograph system for monitoring electrocardiograms  
[NASA-CASE-MSC-13407-1] c 10 N72-20225  
Recorder using selective noise filter  
[NASA-CASE-ERC-10112] c 07 N72-21119  
Logarithmic function generator utilizing an exponentially varying signal in an inverse manner  
[NASA-CASE-ERC-10267] c 09 N72-23173  
Flexible computer accessed telemetry  
[NASA-CASE-NPO-11358] c 07 N72-25172  
Data processor with conditionally supplied clock signals  
[NASA-CASE-GSC-10975-1] c 08 N73-13187  
Multichannel telemetry system  
[NASA-CASE-NPO-11572] c 07 N73-16121  
Measurement system  
[NASA-CASE-MFS-20658-1] c 14 N73-30386  
Digital to analog conversion apparatus  
[NASA-CASE-MSC-12458-1] c 08 N73-32081  
Fluid pressure amplifier and system  
[NASA-CASE-LAR-10868-1] c 33 N74-11050  
Low level signal limiter  
[NASA-CASE-XLE-04791] c 32 N74-22096  
Miniature multichannel biotelemetry system  
[NASA-CASE-NPO-13065-1] c 52 N74-26625  
Apparatus and method for processing Korotkov sounds --- for blood pressure measurement  
[NASA-CASE-MSC-13999-1] c 52 N74-26626  
Pulse stretcher for narrow pulses  
[NASA-CASE-MSC-14130-1] c 33 N74-32711  
Continuous Fourier transform method and apparatus --- for the analysis of simultaneous analog signal components  
[NASA-CASE-ARC-10466-1] c 60 N75-13539

## SIGNAL RECEPTION

Signal conditioning circuit apparatus --- with constant input impedance  
[NASA-CASE-ARC-10348-1] c 33 N75-19518

Television noise reduction device  
[NASA-CASE-MS-C-12607-1] c 32 N75-21485

Isolated output system for a class D switching-mode amplifier  
[NASA-CASE-MFS-21616-1] c 33 N75-30429

Compact bi-phase pulse coded modulation decoder  
[NASA-CASE-KSC-10834-1] c 33 N76-14371

Filtering device --- removing electromagnetic noise from voice communication signals  
[NASA-CASE-MFS-22729-1] c 32 N76-21366

System for measuring Reynolds in a turbulently flowing fluid --- signal processing  
[NASA-CASE-ARC-10755-2] c 34 N76-27517

Three phase full wave dc motor decoder  
[NASA-CASE-GSC-11824-1] c 33 N77-26386

Apparatus for determining thermophysical properties of test specimens  
[NASA-CASE-LAR-11883-1] c 09 N77-27131

Analog to digital converter for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-3] c 60 N77-32731

Hearing aid malfunction detection system  
[NASA-CASE-MS-C-14916-1] c 33 N78-10375

Swept group delay measurement  
[NASA-CASE-NPO-13909-1] c 33 N78-25319

Quadrature demodulation  
[NASA-CASE-GSC-12137-1] c 33 N78-32338

Bit error rate measurement above and below bit rate tracking threshold  
[NASA-CASE-MS-C-12743-1] c 32 N79-10263

Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-1] c 32 N79-19195

Electrochemical detection device --- for use in microbiology  
[NASA-CASE-LAR-11922-1] c 25 N79-24073

Scannable beam forming interferometer antenna array system  
[NASA-CASE-GSC-12365-1] c 32 N80-28578

System for plotting subsoil structure and method therefor  
[NASA-CASE-NPO-14191-1] c 31 N80-32584

CCD correlated quadruple sampling processor  
[NASA-CASE-NPO-14426-1] c 33 N81-27396

Interleaving device  
[NASA-CASE-GSC-12111-2] c 33 N81-29342

Reconfiguring redundancy management  
[NASA-CASE-MS-C-18498-1] c 60 N82-29013

Discriminator aided phase lock acquisition for suppressed carrier signals  
[NASA-CASE-NPO-14311-1] c 33 N82-29539

Serial data correlator/code translator  
[NASA-CASE-KSC-11025-1] c 32 N83-13323

Interferometric angle monitor  
[NASA-CASE-GSC-12614-1] c 74 N83-32577

Real time pressure signal system for a rotary engine  
[NASA-CASE-LEW-13622-1] c 07 N84-22559

Digital interface for bi-directional communication between a computer and a peripheral device  
[NASA-CASE-MS-C-20258-1] c 60 N84-28492

Pipelined digital SAR azimuth correlator using hybrid FFT-transversal filter  
[NASA-CASE-NPO-15519-1] c 32 N84-34651

Optical stereo video signal processor  
[NASA-CASE-MFS-25752-1] c 74 N86-21348

Method and apparatus for telemetry adaptive bandwidth compression  
[NASA-CASE-MS-C-20821-1] c 17 N87-25348

Processing circuit with asymmetry corrector and convolutional encoder for digital data  
[NASA-CASE-MS-C-20187-1] c 33 N87-25531

Frequency domain laser velocimeter signal processor  
[NASA-CASE-LAR-13552-1-CU] c 33 N89-14385

Doppler radar with multiphase modulation of transmitted and reflected signal  
[NASA-CASE-MS-C-18808-1] c 32 N90-20280

Magneto acoustic emission apparatus for testing materials for embrittlement  
[NASA-CASE-LAR-13817-1] c 26 N90-21170

Balanced bridge feedback control system  
[NASA-CASE-NPO-17430-1-CU] c 33 N90-21951

Zero-G phase detector and separator  
[NASA-CASE-LEW-14844-1] c 35 N90-22024

Quantitative surface temperature measurement using two-color thermographic phosphors and video equipment  
[NASA-CASE-LAR-13740-1] c 35 N90-22770

Three-dimensional laser velocimeter simultaneity detector  
[NASA-CASE-ARC-11876-1] c 36 N90-25340

Multistage estimation of received carrier signal parameters under very high dynamic conditions of the receiver  
[NASA-CASE-NPO-17911-1-CU] c 32 N90-27016

Real-time data compression of broadcast video signals  
[NASA-CASE-LEW-14945-1] c 32 N91-13598

Efficient detection and signal parameter estimation with application to high dynamic GPS receiver  
[NASA-CASE-NPO-17820-1-CU] c 04 N91-14321

Doppler-corrected differential detection system  
[NASA-CASE-NPO-16987-1-CU] c 32 N91-25316

Phase ambiguity resolution for offset QPSK modulation systems  
[NASA-CASE-NPO-17853-1-CU] c 32 N91-25318

Radiation sensitive area detection device and method  
[NASA-CASE-MFS-28563-1] c 35 N91-25388

Multiple symbol differential detection  
[NASA-CASE-NPO-17896-1-CU] c 32 N91-27439

Fiber optic frequency transfer link  
[NASA-CASE-NPO-17703-1-CU] c 74 N91-27957

Real-time data compression of broadcast video signals  
[NASA-CASE-LEW-14945-2] c 32 N92-10128

Network of dedicated processors for finding lowest-cost map path  
[NASA-CASE-NPO-17716-1-CU] c 62 N92-15620

Digital carrier demodulator employing components working beyond normal limits  
[NASA-CASE-NPO-17628-1-CU] c 32 N92-21712

Closed-loop autonomous docking system  
[NASA-CASE-MFS-28421-1] c 18 N92-28750

Passive fetal monitoring sensor  
[NASA-CASE-LAR-14088-1-CU] c 35 N92-33016

Real time pre-detection dynamic range compression  
[NASA-CASE-NPO-18098-1-CU] c 74 N92-33028

Auto and hetero-associative memory using a 2-D optical logic gate  
[NASA-CASE-NPO-17997-1-CU] c 60 N92-33057

Modified fast frequency acquisition via adaptive least squares algorithm  
[NASA-CASE-NPO-17845-2-CU] c 61 N93-14882

Measurand transient signal suppressor  
[NASA-CASE-MS-C-22027-1] c 63 N93-17056

Acceleration recorder and playback module  
[NASA-CASE-MS-C-22008-1] c 35 N93-17077

Control system and method for prosthetic devices  
[NASA-CASE-MS-C-21941-1] c 54 N93-17087

Phase discriminating capacitive array sensor system  
[NASA-CASE-GSC-13460-1] c 33 N93-26104

**SIGNAL RECEPTION**

Radar ranging receiver Patent  
[NASA-CASE-XNP-00748] c 07 N70-36911

Reflectometer for receiver input impedance match measurement Patent  
[NASA-CASE-XNP-10843] c 07 N71-11267

Diversity receiving system with diversity phase lock Patent  
[NASA-CASE-XGS-01222] c 10 N71-20841

Signal detection and tracking apparatus Patent  
[NASA-CASE-XGS-03502] c 10 N71-20852

Optimum predetection diversity receiving system Patent  
[NASA-CASE-XGS-00740] c 07 N71-23098

Decoder system Patent  
[NASA-CASE-NPO-10118] c 07 N71-24741

Antenna array phase quadrature tracking system Patent  
[NASA-CASE-MS-C-12205-1] c 07 N71-27056

Electricity measurement devices employing liquid crystalline materials  
[NASA-CASE-ERC-10275] c 26 N72-25680

Filter for third order phase locked loops  
[NASA-CASE-NPO-11941-1] c 10 N73-27171

Ferrofluidic solenoid  
[NASA-CASE-NPO-11738-1] c 09 N73-30185

Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c 35 N76-16391

Faraday rotation measurement method and apparatus  
[NASA-CASE-NPO-14839-1] c 35 N82-15381

Method and apparatus for receiving and tracking phase modulated signals  
[NASA-CASE-MS-C-16170-2] c 32 N84-27952

Single frequency multitransmitter telemetry  
[NASA-CASE-LAR-13006-1] c 17 N87-16863

**SIGNAL REFLECTION**

Reflectometer for receiver input impedance match measurement Patent  
[NASA-CASE-XNP-10843] c 07 N71-11267

Reflex feed system for dual frequency antenna with frequency cutoff means  
[NASA-CASE-NPO-14022-1] c 32 N78-31321

**SIGNAL STABILIZATION**

Linear accelerator frequency control system Patent  
[NASA-CASE-XGS-05441] c 10 N71-22962

## SUBJECT INDEX

Digital modulator and demodulator Patent  
[NASA-CASE-ERC-10041] c 08 N71-29138

System for interference signal nulling by polarization adjustment  
[NASA-CASE-NPO-13140-1] c 32 N75-24982

Fiber optic transmission line stabilization apparatus and method  
[NASA-CASE-NPO-15036-1] c 74 N82-19029

**SIGNAL TO NOISE RATIOS**

System for improving signal-to-noise ratio of a communication signal Patent Application  
[NASA-CASE-MS-C-12259-1] c 07 N70-12616

Radar ranging receiver Patent  
[NASA-CASE-XNP-00748] c 07 N70-36911

Phase detector assembly Patent  
[NASA-CASE-XMF-00701] c 09 N70-40272

Signal-to-noise ratio estimating by taking ratio of mean and standard deviation of integrated signal samples Patent  
[NASA-CASE-XNP-05254] c 07 N71-20791

Signal ratio system utilizing voltage controlled oscillators Patent  
[NASA-CASE-XMF-04367] c 09 N71-23545

Recorder using selective noise filter  
[NASA-CASE-ERC-10112] c 07 N72-21119

Parametric amplifiers with idler circuit feedback  
[NASA-CASE-LAR-10253-1] c 09 N72-25258

System for improving signal-to-noise ratio of a communication signal  
[NASA-CASE-MS-C-12259-2] c 07 N72-33146

Signal-to-noise ratio determination circuit  
[NASA-CASE-GSC-11239-1] c 10 N73-25241

Gated compressor, distortionless signal limiter  
[NASA-CASE-NPO-11820-1] c 32 N74-19768

**SIGNAL TRANSMISSION**

Time division multiplex system  
[NASA-CASE-XGS-05918] c 07 N69-39974

Apparatus for coupling a plurality of ungrounded circuits to a grounded circuit Patent  
[NASA-CASE-XAC-00086] c 09 N70-33182

Bi-carrier demodulator with modulation Patent  
[NASA-CASE-XMF-01180] c 07 N71-11298

Bi-polar phase detector and corrector for split phase PCM data signals Patent  
[NASA-CASE-XGS-01590] c 07 N71-12392

Signal-to-noise ratio estimating by taking ratio of mean and standard deviation of integrated signal samples Patent  
[NASA-CASE-XNP-05254] c 07 N71-20791

Elimination of frequency shift in a multiplex communication system Patent  
[NASA-CASE-XNP-01306] c 07 N71-20814

Adaptive tracking notch filter system Patent  
[NASA-CASE-XMF-01892] c 10 N71-22986

Passive synchronized spike generator with high input impedance and low output impedance and capacitor power supply Patent  
[NASA-CASE-XGS-03632] c 09 N71-23311

Junction range finder  
[NASA-CASE-KSC-10108] c 14 N73-25461

Television multiplexing system  
[NASA-CASE-KSC-10654-1] c 07 N73-30115

Controlled oscillator system with a time dependent output frequency  
[NASA-CASE-NPO-11962-1] c 33 N74-10194

Pulse code modulated signal synchronizer  
[NASA-CASE-MS-C-12462-1] c 32 N74-20809

Pulse code modulated signal synchronizer  
[NASA-CASE-MS-C-12494-1] c 32 N74-20810

Digital transmitter for data bus communications system  
[NASA-CASE-MS-C-14558-1] c 32 N75-21486

Modulator for tone and binary signals --- phase of modulation of tone and binary signals on carrier waves in communication systems  
[NASA-CASE-GSC-11743-1] c 32 N75-24981

Method and apparatus for background signal reduction in opto-acoustic absorption measurement  
[NASA-CASE-NPO-13683-1] c 35 N77-14411

Automatic transponder --- measurement of the internal delay time of a transponder  
[NASA-CASE-GSC-12075-1] c 32 N77-31350

Fiber optic multiplex optical transmission system  
[NASA-CASE-KSC-11047-1] c 74 N78-14889

Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c 32 N79-23310

Precise RF timing signal distribution to remote stations --- fiber optics  
[NASA-CASE-NPO-14749-1] c 32 N81-14186

Digital numerically controlled oscillator  
[NASA-CASE-MS-C-16747-1] c 33 N81-17349

High stability amplifier  
[NASA-CASE-GSC-12646-1] c 33 N83-34191

Navigation system and method  
[NASA-CASE-GSC-12508-1] c 04 N84-22546

- Doppler radar having phase modulation of both transmitted and reflected return signals  
[NASA-CASE-MSC-18675-1] c 32 N84-22820
- Doppler radar with multiphase modulation of transmitted and reflected signal  
[NASA-CASE-MSC-18808-1] c 32 N90-20280
- Emergency locating transmitter  
[NASA-CASE-GSC-12821-2] c 33 N91-31530
- SIGNATURE ANALYSIS**  
Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c 43 N79-17288
- SILANES**  
Elastomeric silazane polymers and process for preparing the same Patent  
[NASA-CASE-XMF-04133] c 06 N71-20717
- Process for preparation of dianilinosilanes Patent  
[NASA-CASE-XMF-06409] c 06 N71-23230
- Process for preparation of high-molecular-weight polyaryloxysilanes Patent  
[NASA-CASE-XMF-08674] c 06 N71-28807
- Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers  
[NASA-CASE-ARC-10915-2] c 27 N79-18052
- Thermal reactor --- liquid silicon production from silane gas  
[NASA-CASE-NPO-14369-1] c 44 N83-10501
- Process for producing tris (n-methylamino) methylsilane  
[NASA-CASE-MFS-25721-1] c 25 N85-21280
- Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-1-SB] c 27 N88-29040
- SILICA GEL**  
Gels as battery separators for soluble electrode cells  
[NASA-CASE-LEW-12364-1] c 44 N77-22606
- Procedure to prepare transparent silica gels  
[NASA-CASE-LAR-13476-1-CU] c 76 N87-29360
- SILICA GLASS**  
Non-toxic invert analog glass compositions of high modulus  
[NASA-CASE-HQN-10328-2] c 27 N82-29454
- High modulus rare earth and beryllium containing silicate glass compositions --- for glass reinforcing fibers  
[NASA-CASE-HQN-10595-1] c 27 N82-29455
- Multiple layer dielectrics, hot film sensors, and methods of producing same  
[NASA-CASE-LAR-14591-1] c 35 N93-19493
- SILICATES**  
Alkali-metal silicate protective coating  
[NASA-CASE-XGS-04119] c 18 N69-39979
- Alkali-metal silicate binders and methods of manufacture  
[NASA-CASE-GSC-12303-1] c 24 N79-31347
- SILICIDES**  
Silicide coatings for refractory metals Patent  
[NASA-CASE-XLE-10910] c 18 N71-29040
- Fused silicide coatings containing discrete particles for protecting niobium alloys --- used in space shuttle thermal protection systems and turbine engine components  
[NASA-CASE-LEW-11179-1] c 27 N76-16229
- Method of forming three-dimensional semiconductor structures  
[NASA-CASE-NPO-17835-1-CU] c 76 N90-27518
- Method of forming silicon structures with selectable optical characteristics  
[NASA-CASE-NPO-18625-1-CU] c 76 N92-30102
- High temperature creep and oxidation resistant chromium silicide matrix alloy containing molybdenum  
[NASA-CASE-LEW-15697-1] c 26 N93-29172
- SILICON**  
Method of forming thin window drifted silicon charged particle detector Patent  
[NASA-CASE-XLE-00808] c 24 N71-10560
- Gd or Sm doped silicon semiconductor composition Patent  
[NASA-CASE-XLE-10715] c 26 N71-23292
- Silicon solar cell with cover glass bonded to cell by metal pattern Patent  
[NASA-CASE-XLE-08569] c 03 N71-23449
- Covered silicon solar cells and method of manufacture --- with polymeric films  
[NASA-CASE-LEW-11065-2] c 44 N76-14600
- Method of controlling defect orientation in silicon crystal ribbon growth  
[NASA-CASE-NPO-13918-1] c 76 N79-11920
- Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c 26 N80-14229
- Method of producing silicon --- gas phase reactor multiple injector liquid feed system  
[NASA-CASE-NPO-14382-1] c 31 N80-18231
- System for slicing silicon wafers  
[NASA-CASE-NPO-14406-1] c 37 N80-29703
- Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c 33 N81-19389
- Scriber for silicon wafers  
[NASA-CASE-NPO-15539-1] c 37 N82-11469
- Method of protecting a surface with a silicon-slurry/aluminide coating --- coatings for gas turbine engine vanes and blades  
[NASA-CASE-LEW-13343-1] c 27 N82-28441
- Thermal reactor --- liquid silicon production from silane gas  
[NASA-CASE-NPO-14369-1] c 44 N83-10501
- Process and apparatus for growing a crystal ribbon  
[NASA-CASE-NPO-15629-1] c 76 N84-35113
- Increased voltage photovoltaic cell  
[NASA-CASE-NPO-16155-1] c 44 N85-30475
- Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267
- Oxygen diffusion barrier coating  
[NASA-CASE-LAR-13474-1-SB] c 26 N87-25455
- Method of forming three-dimensional semiconductor structures  
[NASA-CASE-NPO-17835-1-CU] c 76 N90-27518
- Ribbon growing method and apparatus  
[NASA-CASE-NPO-16306-1-CU] c 76 N91-15898
- Thermal treatment of silicon integrated circuit chips to prevent and heal voids in aluminum metallization  
[NASA-CASE-NPO-17678-1-CU] c 76 N91-28014
- Silicon containing electroconductive polymers and structures made therefrom  
[NASA-CASE-NPO-17826-1-CU] c 27 N92-16121
- Fabrication of nanometer single crystal metallic CoSi<sub>2</sub> structures on Si  
[NASA-CASE-NPO-17736-2-CU] c 24 N92-18561
- Pressure transducer and system for cryogenic environments  
[NASA-CASE-LAR-14579-1] c 35 N92-29097
- Method of forming silicon structures with selectable optical characteristics  
[NASA-CASE-NPO-18625-1-CU] c 76 N92-30102
- SILICON ALLOYS**  
Annealing group III-V compound doped silicon-germanium alloy for improved thermo-electric conversion efficiency  
[NASA-CASE-NPO-17259-1-CU] c 76 N90-19884
- SILICON CARBIDES**  
A method for the deposition of beta-silicon carbide by isoeptaxy  
[NASA-CASE-ERC-10120] c 26 N69-33482
- Production of high purity silicon carbide Patent  
[NASA-CASE-XLA-00158] c 26 N70-36805
- Apparatus for producing high purity silicon carbide crystals Patent  
[NASA-CASE-XLA-02057] c 26 N70-40015
- Process for fabricating SiC semiconductor devices  
[NASA-CASE-LEW-12094-1] c 76 N76-25049
- Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c 76 N79-23798
- High temperature silicon carbide impregnated insulating fabrics  
[NASA-CASE-MSC-18832-1] c 27 N83-18908
- Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267
- Method of preparing fiber reinforced ceramic material  
[NASA-CASE-LEW-14392-1] c 27 N87-28656
- Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-1-SB] c 27 N88-29040
- Process for the controlled growth of single-crystal films of silicon carbide polytypes on silicon carbide wafers  
[NASA-CASE-LEW-15222-1] c 76 N91-26966
- Process for the homoepitaxial growth of single-crystal silicon carbide films on silicon carbide wafers  
[NASA-CASE-LEW-15223-1] c 76 N91-26967
- Composite flexible blanket insulation  
[NASA-CASE-ARC-11907-1-NP] c 24 N91-31236
- Silicon carbide fiber reinforced strontium aluminosilicate glass-ceramic matrix composite  
[NASA-CASE-LEW-15263-1] c 24 N93-11543
- Process for the controlled growth of single-crystal films of silicon carbide polytypes on silicon carbide wafers  
[NASA-CASE-LEW-15222-3] c 76 N93-17413
- SiC fiber-reinforced Celsian glass-ceramic matrix composite  
[NASA-CASE-LEW-15264-1] c 24 N93-31293
- Method of producing a ceramic fiber-reinforced glass-ceramic matrix composite  
[NASA-CASE-LEW-15264-2] c 24 N93-31299
- SILICON COMPOUNDS**  
Method of making a silicon semiconductor device Patent  
[NASA-CASE-XLE-02792] c 26 N71-10607
- Polymerizable disilanolts having in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20979-2] c 06 N73-32030
- Infusible silazane polymer and process for producing same --- protective coatings  
[NASA-CASE-XMF-02526-1] c 27 N79-21190
- Silicon-slurry/aluminide coating --- protecting gas turbine engine vanes and blades  
[NASA-CASE-LEW-13343] c 26 N83-31795
- Production of mullite fibers  
[NASA-CASE-MFS-28431-1] c 24 N92-17870
- SILICON CONTROLLED RECTIFIERS**  
Protection for energy conversion systems  
[NASA-CASE-XGS-04808] c 03 N69-25146
- Transient-compensated SCR inverter  
[NASA-CASE-XLA-08507] c 09 N69-39984
- Reversible ring counter employing cascaded single SCR stages Patent  
[NASA-CASE-XGS-01473] c 09 N71-10673
- SCR blocking pulse gate amplifier Patent  
[NASA-CASE-XLA-07497] c 09 N71-12514
- Combinational logic for generating gate drive signals for phase control rectifiers  
[NASA-CASE-MFS-25208-1] c 33 N83-10345
- SILICON DIOXIDE**  
Intermittent type silica gel adsorption refrigerator Patent  
[NASA-CASE-XNP-00920] c 15 N71-15906
- Nose cone mounted heat resistant antenna Patent  
[NASA-CASE-XMS-04312] c 07 N71-22984
- Method and apparatus for stable silicon dioxide layers on silicon grown in silicon nitride ambient  
[NASA-CASE-ERC-10073-1] c 24 N74-19769
- Silica reusable surface insulation  
[NASA-CASE-ARC-10721-1] c 27 N76-22376
- Two-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-1] c 27 N76-22377
- Transmitting and reflecting diffuser --- using ultraviolet grade fused silica coatings  
[NASA-CASE-LAR-10385-3] c 74 N78-15879
- Field effect transistor and method of construction thereof  
[NASA-CASE-MFS-23312-1] c 33 N78-27326
- Fibrous refractory composite insulation --- shielding reusable spacecraft  
[NASA-CASE-ARC-11169-1] c 24 N79-24062
- Attachment system for silica tiles --- thermal protection for space shuttle orbiter  
[NASA-CASE-MSC-18741-1] c 27 N82-29456
- Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-2] c 33 N83-24763
- Apparatus and method for heating a material in a transparent ampoule --- crystal growth  
[NASA-CASE-MFS-25436-1] c 27 N83-36220
- Toughened uni-piece fibrous insulation  
[NASA-CASE-ARC-11888-1] c 24 N92-16026
- Whiskerless Schottky diode  
[NASA-CASE-GSC-13063-2-CU] c 33 N92-16197
- SILICON FILMS**  
A method for the deposition of beta-silicon carbide by isoeptaxy  
[NASA-CASE-ERC-10120] c 26 N69-33482
- Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c 35 N82-31659
- Ingot slicing machine and method  
[NASA-CASE-NPO-15483-1] c 37 N85-21650
- Diamond composite films for protective coatings on metals and method of formation  
[NASA-CASE-NPO-18501-1-CU] c 27 N93-28426
- SILICON JUNCTIONS**  
Radiation resistant silicon semiconductor devices Patent  
[NASA-CASE-XGS-07801] c 09 N71-12513
- SILICON NITRIDES**  
Method and apparatus for stable silicon dioxide layers on silicon grown in silicon nitride ambient  
[NASA-CASE-ERC-10073-1] c 24 N74-19769
- Silicon nitride coated, plastic covered solar cell  
[NASA-CASE-LEW-11496-1] c 44 N77-14580
- Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c 37 N81-25371
- Sintering silicon nitride  
[NASA-CASE-LEW-15489-1] c 27 N93-17062
- SILICON OXIDES**  
Three-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-2] c 27 N76-23426
- SILICON POLYMERS**  
Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers  
[NASA-CASE-ARC-10915-2] c 27 N79-18052
- Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-1-SB] c 27 N88-29040
- Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-2-SB] c 27 N90-21177



Boron-carbon-silicon polymers and ceramic and a process for the production thereof  
[NASA-CASE-ARC-11891-2-SB] c 27 N92-34160

**SILICON RADIATION DETECTORS**  
Thin window, drifted silicon, charged particle detector  
[NASA-CASE-XLE-10529] c 14 N69-23191  
Biomedical radiation detecting probe Patent  
[NASA-CASE-XMS-01177] c 05 N71-19440  
Imaging X-ray spectrometer  
[NASA-CASE-GSC-12682-1] c 35 N84-33765

**SILICON TRANSISTORS**  
Tungsten contacts on silicon substrates  
[NASA-CASE-GSC-10695-1] c 09 N72-25259  
Method and apparatus for detecting surface ions on silicon diodes and transistors  
[NASA-CASE-ERC-10325] c 15 N72-25457

**SILICONE RESINS**  
Vacuum pressure molding technique  
[NASA-CASE-LAR-10073-1] c 37 N76-24575

**SILICONE RUBBER**  
Glove attachment  
[NASA-CASE-MS-C-21632-1] c 54 N92-34210

**SILICONES**  
Silicone containing solid propellant  
[NASA-CASE-NPO-14477-1] c 28 N80-28536

**SILICONIZING**  
Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00284] c 15 N71-16075

**SILOXANES**  
Synthesis of siloxane-containing epoxy polymers Patent  
[NASA-CASE-MFS-13994-1] c 06 N71-11240  
Method of producing alternating ether siloxane copolymers Patent  
[NASA-CASE-XMF-02584] c 06 N71-20905  
Siloxane containing epoxide compounds  
[NASA-CASE-MFS-13994-2] c 06 N72-25148  
Silphenylenesiloxane polymers having in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20979] c 06 N72-25151  
Low outgassing polydimethylsiloxane material and preparation thereof  
[NASA-CASE-GSC-11358-1] c 06 N73-26100  
Acetylene (ethynyl) terminated polyimide siloxane and process for preparation thereof  
[NASA-CASE-LAR-13318-1] c 27 N87-14516

**SILVER**  
Method of making dry electrodes  
[NASA-CASE-FRC-10029-2] c 05 N72-25121  
Method for forming hermetic seals  
[NASA-CASE-NPO-16423-1-CU] c 37 N87-21334  
Carbide-fluoride-silver self-lubricating composite  
[NASA-CASE-LEW-14196-2] c 37 N87-25585

**SILVER ALLOYS**  
Brazing alloy composition  
[NASA-CASE-MSC-06053] c 26 N75-27126

**SILVER CHLORIDES**  
Electrode for biological recording  
[NASA-CASE-XMS-02872] c 05 N69-21925  
Bonding graphite with fused silver chloride  
[NASA-CASE-XGS-00963] c 15 N69-39735

**SILVER COMPOUNDS**  
Water management system and an electrolytic cell thereof Patent  
[NASA-CASE-MS-C-10960-1] c 03 N71-24718  
Method of making carbide/fluoride/silver composites  
[NASA-CASE-LEW-14902-1] c 24 N91-27244

**SILVER ZINC BATTERIES**  
Electric battery and method for operating same Patent  
[NASA-CASE-XGS-01674] c 03 N71-29129  
Additive for zinc electrodes --- electric automobiles  
[NASA-CASE-LEW-13286-1] c 33 N84-14422

**SIMD (COMPUTERS)**  
Highly parallel computer architecture for robotic computation  
[NASA-CASE-NPO-17632-1-CU] c 60 N91-32805  
Special purpose parallel computer architecture for real-time control and simulation in robotic applications  
[NASA-CASE-NPO-17629-1-CU] c 60 N93-29608

**SIMULATION**  
Method and apparatus for simulating gravitational forces on a living organism  
[NASA-CASE-MS-C-20202-1] c 54 N84-16803  
Tissue simulating gel for medical research  
[NASA-CASE-LAR-14036-1] c 27 N91-13562  
Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N91-28184  
Atmospheric pressure flow reactor: Gas phase chemical kinetics under tropospheric conditions without wall effects  
[NASA-CASE-MS-C-21384-1] c 34 N92-16243  
Synchronous parallel system for emulation and discrete event simulation  
[NASA-CASE-NPO-18414-1-CU] c 62 N92-24045

Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N93-24598

**SIMULATORS**  
Method and apparatus of simulating zero gravity conditions Patent  
[NASA-CASE-MFS-12750] c 27 N71-16223  
Phonocardiogram simulator Patent  
[NASA-CASE-XKS-10804] c 05 N71-24606  
Waveform simulator Patent  
[NASA-CASE-NPO-10251] c 10 N71-27365  
Laser Doppler velocity simulator --- to induce frequency shift  
[NASA-CASE-LAR-12176-1] c 36 N80-16321  
Weightlessness simulation system and process  
[NASA-CASE-ARC-11646-1] c 14 N87-25344  
Telerobot control system  
[NASA-CASE-NPO-18116-1-CU] c 37 N91-32509  
Atmospheric pressure flow reactor: Gas phase chemical kinetics under tropospheric conditions without wall effects  
[NASA-CASE-MS-C-21384-1] c 34 N92-16243

**SIMULTANEOUS EQUATIONS**  
Method and apparatus for self-calibration and phasing of array antenna  
[NASA-CASE-NPO-15920-1] c 33 N85-21493

**SINE SERIES**  
Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-10503-1] c 09 N72-21248  
Function generator for synthesizing complex vibration mode patterns  
[NASA-CASE-LAR-10310-1] c 10 N73-20253

**SINE WAVES**  
Waveform simulator Patent  
[NASA-CASE-NPO-10251] c 10 N71-27365  
Wide band doubler and sine wave quadrature generator  
[NASA-CASE-NPO-11133] c 10 N72-20223  
Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-11389-1] c 33 N77-26387

**SINGLE CRYSTALS**  
Production of high purity silicon carbide Patent  
[NASA-CASE-XLA-00158] c 26 N70-36805  
Fabrication of single crystal film semiconductor devices  
[NASA-CASE-ERC-10222] c 09 N72-22199  
Hall effect magnetometer  
[NASA-CASE-LEW-11632-2] c 35 N75-13213  
Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c 25 N75-26043  
Method for the preparation of inorganic single crystal and polycrystalline electronic materials  
[NASA-CASE-XLE-02545-1] c 76 N79-21910  
Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c 76 N79-23798  
Diamondlike flakes  
[NASA-CASE-LEW-13837-2] c 24 N85-21267  
Method of making macrocrystalline or single crystal semiconductor material  
[NASA-CASE-NPO-15904-1] c 76 N86-28760  
Total immersion crystal growth  
[NASA-CASE-NPO-15800-2] c 76 N87-23286  
Laser schlieren crystal monitor  
[NASA-CASE-MFS-28060-1] c 76 N87-25862  
Procedure to prepare transparent silica gels  
[NASA-CASE-LAR-13476-1-CU] c 76 N87-29360  
Method of forming three-dimensional semiconductor structures  
[NASA-CASE-NPO-17835-1-CU] c 76 N90-27518  
Method of making single crystal fibers  
[NASA-CASE-LEW-14921-1] c 24 N91-13502  
Process for the controlled growth of single-crystal films of silicon carbide polytypes on silicon carbide wafers  
[NASA-CASE-LEW-15222-1] c 76 N91-26966  
Process for the homoepitaxial growth of single-crystal silicon carbide films on silicon carbide wafers  
[NASA-CASE-LEW-15223-1] c 76 N91-26967  
Method of intercalating large quantities of fibrous structures  
[NASA-CASE-LEW-15077-1] c 24 N92-16025  
Fabrication of nanometer single crystal metallic CoSi<sub>2</sub> structures on Si  
[NASA-CASE-NPO-17736-2-CU] c 24 N92-18561  
Anode for rechargeable ambient temperature lithium cells  
[NASA-CASE-NPO-18580-1-CU] c 33 N93-17278  
Process for the controlled growth of single-crystal films of silicon carbide polytypes on silicon carbide wafers  
[NASA-CASE-LEW-15222-3] c 76 N93-17413  
Motion-sensitive optical correlator  
[NASA-CASE-NPO-18769-1-CU] c 74 N93-28133

## SINGLE EVENT UPSETS

Method and apparatus for increasing resistance of bipolar buried layer integrated circuit devices to single-event upsets  
[NASA-CASE-NPO-17573-2-CU] c 33 N92-16196

## SINTERING

Condenser - Separator  
[NASA-CASE-XLA-08645] c 15 N69-21465  
Method of producing refractory bodies having controlled porosity Patent  
[NASA-CASE-LEW-10393-1] c 17 N71-15468  
Electrodes for solid state devices  
[NASA-CASE-NPO-15161-1] c 33 N84-16456  
Method of making a light weight battery plaque  
[NASA-CASE-LEW-13349-1] c 26 N84-22734  
Method of making single crystal fibers  
[NASA-CASE-LEW-14921-1] c 24 N91-13502  
Method of making contamination-free ceramic bodies  
[NASA-CASE-LEW-14984-1] c 27 N92-16122  
Sintering silicon nitride  
[NASA-CASE-LEW-15489-1] c 27 N93-17062

## SIS (SUPERCONDUCTORS)

Edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-1-CU] c 76 N90-17456  
Edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-3-CU] c 76 N92-22041

## SITTING POSITION

Passive zero-gravity leg restraint  
[NASA-CASE-ARC-11882-1-CU] c 54 N93-14713  
Portable seat lift  
[NASA-CASE-MFS-28610-1] c 54 N93-17045

## SIZE (DIMENSIONS)

Apparatus for producing metal powders  
[NASA-CASE-XLE-06461-2] c 17 N72-28535  
Torso sizing ring construction for hard space suit  
[NASA-CASE-ARC-11616-1] c 54 N86-28618

## SIZE DETERMINATION

Impact measuring technique  
[NASA-CASE-LAR-10913] c 14 N72-16282  
Small conductive particle sensor --- microfiber size determination  
[NASA-CASE-LAR-12552-1] c 35 N82-11431  
Method for non-destructive estimation of waveguide directional coupler dimensions  
[NASA-CASE-NPO-18454-1-CU] c 33 N93-18285

## SIZE SEPARATION

Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-2] c 15 N71-26148  
Material handling device Patent  
[NASA-CASE-NXP-09770-3] c 11 N71-27036  
Acoustic particle separation  
[NASA-CASE-NPO-15559-1] c 71 N85-30765

## SIZING (SHAPING)

Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114] c 15 N71-17650

## SIZING SCREENS

Method of making screen by casting Patent  
[NASA-CASE-XLE-00953] c 15 N71-15966  
Screen particle separator  
[NASA-CASE-XNP-09770-2] c 15 N72-22483

## SKEWNESS

Tape guidance system and apparatus for the provision thereof Patent  
[NASA-CASE-XNP-09453] c 08 N71-19420  
Automatic character skew and spacing checking network --- of digital tape drive systems  
[NASA-CASE-GSC-11925-1] c 33 N76-18353

## SKID LANDINGS

Nose gear steering system for vehicle with main skids Patent  
[NASA-CASE-XLA-01804] c 02 N70-34160

## SKIN (ANATOMY)

Process for conditioning tanned sharkskin and articles made therefrom Patent  
[NASA-CASE-XMS-09691-1] c 18 N71-15545  
Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c 52 N77-14738  
Medical diagnosis system and method with multispectral imaging --- depth of burns and optical density of the skin  
[NASA-CASE-NPO-14402-1] c 52 N81-27783

## SKIN (STRUCTURAL MEMBER)

Flexibly connected support and skin Patent  
[NASA-CASE-XLA-01027] c 31 N71-24035  
Fire extinguishing apparatus having a slidable mass for a penetrator nozzle --- for penetrating aircraft and shuttle orbiter skin  
[NASA-CASE-KSC-11064-1] c 31 N81-14137  
Control and augmentation of passive porosity through transpiration control  
[NASA-CASE-LAR-14682-1] c 34 N92-30387

## SKIN FRICTION

- Skin friction measuring device for aircraft  
[NASA-CASE-FRC-11029-1] c 06 N81-17057
- Hot foil transducer skin friction sensor  
[NASA-CASE-LAR-12321-1] c 35 N82-24470
- Dual-beam skin friction interferometer  
[NASA-CASE-ARC-11354-1] c 74 N83-21949
- Two-axis, self-nulling skin friction balance  
[NASA-CASE-LAR-13294-1] c 35 N86-32696
- Skin friction balance  
[NASA-CASE-LAR-13710-1] c 35 N90-17117
- Hydrodynamic skin-friction reduction  
[NASA-CASE-LAR-14078-1-CU] c 34 N90-27071
- Polymer/riblet combination for hydrodynamic skin friction reduction  
[NASA-CASE-LAR-14271-1-CU] c 27 N91-13558
- Active thermal isolation for temperature responsive sensors  
[NASA-CASE-LAR-14612-1] c 34 N92-29954
- Reflection type skin friction meter  
[NASA-CASE-LAR-14520-1-SB] c 02 N93-18275

## SKIN TEMPERATURE (BIOLOGY)

- Thermistor holder for skin temperature measurements  
[NASA-CASE-ARC-10855-1] c 52 N77-10780

## SKIN TEMPERATURE (NON-BIOLOGICAL)

- Heat flux measuring system Patent  
[NASA-CASE-XFR-03802] c 33 N71-23085

## SKIIS

- Inflatable transpiration cooled nozzle  
[NASA-CASE-MFS-20619] c 28 N72-11708

## SKY BRIGHTNESS

- Cloud cover sensor  
[NASA-CASE-NPO-14936-1] c 47 N83-32232

## SLEEP

- EEG sleep analyzer and method of operation Patent  
[NASA-CASE-MSC-13282-1] c 05 N71-24729

## SLEEVES

- Energy absorbing device Patent  
[NASA-CASE-XMF-10040] c 15 N71-22877
- System for enhancing tool-exchange capabilities of a portable wrench  
[NASA-CASE-MFS-22283-1] c 37 N75-33395
- Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c 52 N79-26772
- Fire extinguishing apparatus having a slidable mass for a penetrator nozzle --- for penetrating aircraft and shuttle orbiter skin  
[NASA-CASE-KSC-11064-1] c 31 N81-14137
- Tapered, tubular polyester fabric  
[NASA-CASE-MSC-21082-1] c 27 N87-29672

## SLENDER BODIES

- A support technique for vertically oriented launch vehicles  
[NASA-CASE-XLA-02704] c 11 N69-21540

## SLEWING

- Noncircular rolling joints for vibrational reduction in slewing maneuvers  
[NASA-CASE-LAR-14515-1-CU] c 37 N92-33031

## SLICING

- Method and apparatus for slicing crystals  
[NASA-CASE-GSC-12291-1] c 76 N80-18951
- System for slicing silicon wafers  
[NASA-CASE-NPO-14406-1] c 37 N80-29703
- Scriber for silicon wafers  
[NASA-CASE-NPO-15539-1] c 37 N82-11469
- Workpiece positioning vise  
[NASA-CASE-GSC-12762-1] c 37 N84-28083

## SLIDING

- Hybrid butterfly valve  
[NASA-CASE-SSC-00004-1] c 37 N91-14609
- Terminal slider control of nonlinear robotic systems  
[NASA-CASE-NPO-18584-1-CU] c 37 N93-11177

## SLIDING CONTACT

- Electrical connector pin with wiping action  
[NASA-CASE-XMF-04238] c 09 N69-39734
- Continuous turning slip ring assembly Patent  
[NASA-CASE-XMF-01049] c 15 N71-23049
- Electrical rotary joint apparatus for large space structures  
[NASA-CASE-MFS-23981-1] c 07 N83-20944

## SLIDING FRICTION

- Bearing material --- composite material with low friction surface for rolling or sliding contact  
[NASA-CASE-LEW-11930-1] c 24 N76-22309

## SLIP CASTING

- Process of casting heavy slips Patent  
[NASA-CASE-XLE-00106] c 15 N71-16076
- Improved ceramic slip casting technique --- application to aircraft model fabrication  
[NASA-CASE-LAR-14471-1] c 27 N93-20041

## SLITS

- Slit regulated gas journal bearing Patent  
[NASA-CASE-XNP-00476] c 15 N70-38620
- Method of fabricating an object with a thin wall having a precisely shaped slit  
[NASA-CASE-LAR-10409-1] c 31 N74-21059

- Dual acting slit control mechanism  
[NASA-CASE-LAR-11370-1] c 35 N80-28686

## SLOPES

- Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c 35 N77-27367
- Family of airfoil shapes for rotating blades --- for increased power efficiency and blade stability  
[NASA-CASE-LAR-12843-1] c 02 N84-11136

## SLOT ANTENNAS

- Virtual wall slot circularly polarized planar array antenna  
[NASA-CASE-NPO-10301] c 07 N72-11148
- Omnidirectional slot antenna for mounting on cylindrical space vehicle  
[NASA-CASE-LAR-10163-1] c 09 N72-25247
- Circularly polarized antenna  
[NASA-CASE-ERC-10214] c 09 N72-31235
- Turnstile slot antenna  
[NASA-CASE-GSC-11428-1] c 32 N74-20864
- Horn antenna having V-shaped corrugated slots  
[NASA-CASE-LAR-11112-1] c 32 N76-15330
- Spiral slotted phased antenna array  
[NASA-CASE-MSC-18532-1] c 32 N82-27558

## SLOTS

- Belleville spring assembly with elastic guides  
[NASA-CASE-XNP-09452] c 15 N69-27504
- Direct lift control system Patent  
[NASA-CASE-LAR-10249-1] c 02 N71-26110
- Fine adjustment mount  
[NASA-CASE-MFS-20249] c 15 N72-11386
- Method and tool for machining a transverse slot about a bore  
[NASA-CASE-LAR-11855-1] c 37 N81-14319
- Radial spline assembly for antifriction bearings  
[NASA-CASE-MFS-28629-1] c 37 N93-17084
- Radial spline assembly for antifriction bearings  
[NASA-CASE-MFS-28629-1] c 37 N93-26001

## SLUDGE

- Sewage sludge additive  
[NASA-CASE-NPO-13877-1] c 45 N82-11634

## SLURRIES

- Silicon-slurry/aluminate coating --- protecting gas turbine engine vanes and blades  
[NASA-CASE-LEW-13343] c 26 N83-31795
- Preparing composite materials from matrices of processable aromatic polyimide thermoplastic blends  
[NASA-CASE-LAR-14107-1] c 24 N91-25200
- Method for producing oxygen from lunar materials  
[NASA-CASE-MSC-21759-1] c 25 N93-29617

## SLURRY PROPELLANTS

- Apparatus for making a metal slurry product Patent  
[NASA-CASE-XLE-00010] c 15 N70-33382

## SMOKE

- Method and construction for protecting heat sensitive bodies from thermal radiation and convective heat Patent  
[NASA-CASE-XNP-01310] c 33 N71-28852
- Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c 45 N76-17656
- Smoke generator  
[NASA-CASE-ARC-10905-1] c 37 N77-13418
- Continuous laminar smoke generator  
[NASA-CASE-LAR-13014-1] c 09 N85-21178

## SOAPS

- Guanidine based vehicle/binders for use with oxides, metals, and ceramics  
[NASA-CASE-LEW-15314-1] c 27 N92-23461

## SODIUM CHLORIDES

- Diffuse reflective coating  
[NASA-CASE-GSC-11214-1] c 06 N73-13128
- Separator for alkaline electric batteries and method of making  
[NASA-CASE-GSC-10018-1] c 44 N82-24644

## SODIUM VAPOR

- Method of producing silicon --- gas phase reactor multiple injector liquid feed system  
[NASA-CASE-NPO-14382-1] c 31 N80-18231

## SOFT LANDING

- Non-reusable kinetic energy absorber Patent  
[NASA-CASE-XLE-00810] c 15 N70-34861
- Space craft soft landing system Patent  
[NASA-CASE-XMF-02108] c 31 N70-36845
- Omnidirectional multiple impact landing system Patent  
[NASA-CASE-XLA-09881] c 31 N71-16085

## SOFT LANDING SPACECRAFT

- Pivotal shock absorbing pad assembly Patent  
[NASA-CASE-XMF-03856] c 31 N70-34159

## SOFTWARE ENGINEERING

- Encyclopedia of software components  
[NASA-CASE-NPO-18435-1-CU] c 61 N92-30543

## SOFTWARE REUSE

- Encyclopedia of software components  
[NASA-CASE-NPO-18435-1-CU] c 61 N92-30543

## SOFTWARE TOOLS

- Encyclopedia of software components  
[NASA-CASE-NPO-18435-1-CU] c 61 N92-30543

## SOIL MECHANICS

- Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c 35 N77-27367

## SOIL MOISTURE

- Radar target for remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c 43 N80-18498

## SOIL SCIENCE

- Soil penetrometer  
[NASA-CASE-XNP-05530] c 14 N73-32321
- System for plotting subsoil structure and method thereof  
[NASA-CASE-NPO-14191-1] c 31 N80-32584
- Active synthetic soil  
[NASA-CASE-MSC-21954-1-NP] c 51 N93-19054

## SOILS

- Screen particle separator  
[NASA-CASE-XNP-09770-2] c 15 N72-22483
- Burrowing apparatus  
[NASA-CASE-XNP-07169] c 15 N73-32362
- Remote sensing of vegetation and soil using microwave ellipsometry  
[NASA-CASE-GSC-11976-1] c 43 N78-10529
- Active synthetic soil  
[NASA-CASE-MSC-21954-1-NP] c 51 N93-19054

## SOL-GEL PROCESSES

- Alkali-metal silicate binders and methods of manufacture  
[NASA-CASE-GSC-12303-1] c 24 N79-31347

## SOLAR ACTIVITY

- Method and apparatus for measuring solar activity and atmospheric radiation effects  
[NASA-CASE-ERC-10276] c 14 N73-26432

## SOLAR ARRAYS

- Deployable solar cell array  
[NASA-CASE-NPO-10883] c 31 N72-22874
- Use of unilluminated solar cells as shunt diodes for a solar array  
[NASA-CASE-GSC-10344-1] c 03 N72-27053
- Solar energy powered heliostropes  
[NASA-CASE-GSC-10945-1] c 21 N72-31637
- Method of making silicon solar cell array --- and mounting on flexible substrate  
[NASA-CASE-LEW-11069-1] c 44 N74-14784
- Solar cell shingle  
[NASA-CASE-LEW-12587-1] c 44 N77-31601
- Hexagon solar power panel  
[NASA-CASE-NPO-12148-1] c 44 N78-27515
- Solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-1] c 44 N79-17314
- Closed Loop solar array-ion thruster system with power control circuitry  
[NASA-CASE-LEW-12780-1] c 20 N79-20179
- Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c 44 N79-24431
- Double-sided solar cell package  
[NASA-CASE-NPO-14199-1] c 44 N79-25482
- Method of construction of a multi-cell solar array  
[NASA-CASE-MFS-23540-1] c 44 N79-26475
- Method for forming a solar array strip  
[NASA-CASE-NPO-13652-3] c 44 N80-14474
- Electrical rotary joint apparatus for large space structures  
[NASA-CASE-MFS-23981-1] c 07 N83-20944
- Electronic system for high power load control --- solar arrays  
[NASA-CASE-NPO-15358-1] c 33 N83-27126
- Solar powered actuator with continuously variable auxiliary power control  
[NASA-CASE-MFS-25637-1] c 44 N85-21769
- Thin solar cell and lightweight array  
[NASA-CASE-LEW-14959-1] c 44 N91-27614
- Selective emitters  
[NASA-CASE-LEW-14731-1] c 44 N92-22037
- Microprocessor control of multiple peak power tracking DC/DC converters for use with solar cell arrays  
[NASA-CASE-GSC-13450-1] c 44 N92-23463
- Self-deploying photovoltaic power system  
[NASA-CASE-LEW-15308-1] c 44 N92-24057

## SOLAR BLANKETS

- Self-deploying photovoltaic power system  
[NASA-CASE-LEW-15308-1] c 44 N92-24057

## SOLAR CELLS

- Method for producing a solar cell having an integral protective covering  
[NASA-CASE-XGS-04531] c 03 N69-24267
- Radiation direction detector including means for compensating for photocell aging Patent  
[NASA-CASE-XLA-00183] c 14 N70-40239
- Attitude control for spacecraft Patent  
[NASA-CASE-XNP-02982] c 31 N70-41855

- Voltage-current characteristic simulator Patent  
[NASA-CASE-XMS-01554] c 10 N71-10578
- Method of making a silicon semiconductor device Patent  
[NASA-CASE-XLE-02792] c 26 N71-10607
- Solar cell including second surface mirrors Patent  
[NASA-CASE-NPO-10109] c 03 N71-11049
- Solar battery with interconnecting means for plural cells Patent  
[NASA-CASE-XNP-06506] c 03 N71-11050
- Solar cell submodule Patent  
[NASA-CASE-XNP-05821] c 03 N71-11056
- Interconnection of solar cells Patent  
[NASA-CASE-XGS-01475] c 03 N71-11058
- Solar cell matrix Patent  
[NASA-CASE-NPO-10821] c 03 N71-19545
- Roll-up solar array Patent  
[NASA-CASE-NPO-10188] c 03 N71-20273
- Method of making electrical contact on silicon solar cell and resultant product Patent  
[NASA-CASE-XLE-04787] c 03 N71-20492
- Solar cell mounting Patent  
[NASA-CASE-XNP-00826] c 03 N71-20895
- Simple method of making photovoltaic junctions Patent  
[NASA-CASE-XNP-01960] c 09 N71-23027
- Gd or Sm doped silicon semiconductor composition Patent  
[NASA-CASE-XLE-10715] c 26 N71-23292
- Protection of serially connected solar cells against open circuits by the use of shunting diode Patent  
[NASA-CASE-XLE-04535] c 03 N71-23354
- Silicon solar cell with cover glass bonded to cell by metal pattern Patent  
[NASA-CASE-XLE-08569] c 03 N71-23449
- Semiconductor material and method of making same Patent  
[NASA-CASE-XLE-02798] c 26 N71-23654
- Method of attaching a cover glass to a silicon solar cell Patent  
[NASA-CASE-XLE-08569-2] c 03 N71-24681
- Solar panel fabrication Patent  
[NASA-CASE-XNP-03413] c 03 N71-26726
- Solar cell Patent  
[NASA-CASE-ARC-10050] c 03 N71-33409
- Solar cell matrix  
[NASA-CASE-NPO-11190] c 03 N71-34044
- Recovery of radiation damaged solar cells through thermal annealing  
[NASA-CASE-XGS-04047-2] c 03 N72-11062
- Optimum performance spacecraft solar cell system  
[NASA-CASE-GSC-10669-1] c 03 N72-20031
- Solar cell assembly test method  
[NASA-CASE-NPO-10401] c 03 N72-20033
- Solid state matrices  
[NASA-CASE-NPO-10591] c 03 N72-22041
- Solar cell panels with light transmitting plate  
[NASA-CASE-NPO-10747] c 03 N72-22042
- Method of coating solar cell with borosilicate glass and resultant product  
[NASA-CASE-GSC-11514-1] c 03 N72-24037
- Apparatus for applying cover slides  
[NASA-CASE-NPO-10575] c 03 N72-25019
- Use of unilluminated solar cells as shunt diodes for a solar array  
[NASA-CASE-GSC-10344-1] c 03 N72-27053
- Stacked solar cell arrays  
[NASA-CASE-NPO-11771] c 03 N73-20040
- Method of making silicon solar cell array --- and mounting on flexible substrate  
[NASA-CASE-LEW-11069-1] c 44 N74-14784
- Covered silicon solar cells and method of manufacture --- with polymeric films  
[NASA-CASE-LEW-11065-2] c 44 N76-14600
- Fabrication of polycrystalline solar cells on low-cost substrates  
[NASA-CASE-GSC-12022-1] c 44 N76-28635
- Solar cell grid patterns  
[NASA-CASE-NPO-13087-2] c 44 N76-31666
- Photovoltaic cell array  
[NASA-CASE-MFS-22458-1] c 44 N77-10635
- Silicon nitride coated, plastic covered solar cell  
[NASA-CASE-LEW-11496-1] c 44 N77-14580
- Solar cell assembly --- for use under high intensity illumination  
[NASA-CASE-LEW-11549-1] c 44 N77-19571
- High voltage, high current Schottky barrier solar cell  
[NASA-CASE-NPO-13482-1] c 44 N78-13526
- Shunt regulation electric power system  
[NASA-CASE-GSC-10135] c 33 N78-17296
- Process for utilizing low-cost graphite substrates for polycrystalline solar cells  
[NASA-CASE-GSC-12022-2] c 44 N78-24609
- Method of making encapsulated solar cell modules  
[NASA-CASE-LEW-12185-1] c 44 N78-25528
- Method for producing solar energy panels by automation  
[NASA-CASE-LEW-12541-1] c 44 N78-25529
- Hexagon solar power panel  
[NASA-CASE-NPO-12148-1] c 44 N78-27515
- Application of semiconductor diffusants to solar cells by screen printing  
[NASA-CASE-LEW-12775-1] c 44 N79-11468
- Method and apparatus for measuring minority carrier lifetimes and bulk diffusion length in P-N junction solar cells  
[NASA-CASE-NPO-14100-1] c 44 N79-12541
- Back wall solar cell  
[NASA-CASE-LEW-12236-2] c 44 N79-14528
- Method for fabricating solar cells having integrated collector grits  
[NASA-CASE-LEW-12819-2] c 44 N79-18444
- Solar cell module assembly jig  
[NASA-CASE-XGS-00829-1] c 44 N79-19447
- Double-sided solar cell package  
[NASA-CASE-NPO-14199-1] c 44 N79-25482
- Solar cell with improved N-region contact and method of forming the same  
[NASA-CASE-NPO-14205-1] c 44 N79-31752
- Solar cell module  
[NASA-CASE-NPO-14467-1] c 44 N79-31753
- Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12586-1] c 44 N80-14472
- Driver for solar cell I-V characteristic plots  
[NASA-CASE-NPO-14096-1] c 44 N80-18551
- Solar cell angular position transducer  
[NASA-CASE-LAR-11999-1] c 44 N80-18552
- Method of mitigating titanium impurities effects in p-type silicon material for solar cells  
[NASA-CASE-NPO-14635-1] c 44 N80-24741
- Induced junction solar cell and method of fabrication  
[NASA-CASE-NPO-13786-1] c 44 N80-29835
- Solar cell system having alternating current output  
[NASA-CASE-LEW-12806-2] c 44 N81-12542
- Method and apparatus for fabricating improved solar cell modules  
[NASA-CASE-NPO-14416-1] c 44 N81-14389
- Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NPO-14670-1] c 44 N81-19558
- Schottky barrier solar cell  
[NASA-CASE-NPO-13689-2] c 44 N81-29525
- Efficiency of silicon solar cells containing chromium  
[NASA-CASE-NPO-15179-1] c 44 N82-26777
- Method of Fabricating Schottky Barrier solar cell  
[NASA-CASE-NPO-13689-4] c 44 N82-28780
- Method of making a high voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c 44 N82-29709
- High voltage planar multijunction solar cell  
[NASA-CASE-LEW-13400-1] c 44 N82-31764
- Solar cell having improved back surface reflector  
[NASA-CASE-LEW-13620-1] c 44 N83-13579
- Heat transparent high intensity high efficiency solar cell  
[NASA-CASE-LEW-12892-1] c 44 N83-14692
- High voltage v-groove solar cell  
[NASA-CASE-LEW-13401-2] c 44 N83-32177
- Screen printed interdigitated back contact solar cell  
[NASA-CASE-LEW-13414-1] c 44 N85-20530
- Lithium counterdoped silicon solar cell  
[NASA-CASE-LEW-14177-1] c 44 N86-32875
- High band gap 2-6 and 3-5 tunneling junctions for silicon multijunction solar cells  
[NASA-CASE-NPO-16526-1CU] c 44 N87-17399
- Floating emitter solar cell  
[NASA-CASE-NPO-16467-1-CU] c 33 N87-23879
- Thin solar cell and lightweight array  
[NASA-CASE-LEW-14959-1] c 44 N91-27614
- Microprocessor control of multiple peak power tracking DC/DC converters for use with solar cell arrays  
[NASA-CASE-GSC-13450-1] c 44 N92-23463
- SOLAR COLLECTORS**
- Connector strips-positive, negative and T tabs  
[NASA-CASE-XGS-01395] c 03 N69-21539
- Device for directionally controlling electromagnetic radiation Patent  
[NASA-CASE-XLE-01716] c 09 N70-40234
- Roll-up solar array Patent  
[NASA-CASE-NPO-10188] c 03 N71-20273
- Thermally activated foaming compositions Patent  
[NASA-CASE-LAR-10373-1] c 18 N71-26155
- Solar cell Patent  
[NASA-CASE-ARC-10050] c 03 N71-33409
- Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking  
[NASA-CASE-MFS-23267-1] c 35 N77-20401
- Solar cell shingle  
[NASA-CASE-LEW-12587-1] c 44 N77-31601
- Solar energy collection system  
[NASA-CASE-NPO-13810-1] c 44 N77-32582
- Three-dimensional tracking solar energy concentrator and method for making same  
[NASA-CASE-NPO-13736-1] c 44 N77-32583
- Portable linear-focused solar thermal energy collecting system  
[NASA-CASE-NPO-13734-1] c 44 N78-10554
- Solar heating system  
[NASA-CASE-LAR-12009-1] c 44 N78-15560
- Low cost solar energy collection system  
[NASA-CASE-NPO-13579-1] c 44 N78-17460
- Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c 44 N78-19599
- Solar cell collector  
[NASA-CASE-LEW-12552-1] c 44 N78-25527
- Non-tracking solar energy collector system  
[NASA-CASE-NPO-13813-1] c 44 N78-31526
- Solar cells having integral collector grids  
[NASA-CASE-LEW-12819-1] c 44 N79-11467
- Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c 44 N79-11469
- Non-tracking solar energy collector system  
[NASA-CASE-NPO-13817-1] c 44 N79-11471
- Solar cell collector and method for producing same  
[NASA-CASE-LEW-12552-2] c 44 N79-11472
- Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOO-00428-1] c 32 N79-19186
- Horizontally mounted solar collector  
[NASA-CASE-MFS-23349-1] c 44 N79-23481
- Primary reflector for solar energy collection systems and method of making same  
[NASA-CASE-NPO-13579-3] c 44 N79-24432
- Solar energy collection system  
[NASA-CASE-NPO-13579-2] c 44 N79-24433
- Solar concentrator  
[NASA-CASE-MFS-23727-1] c 44 N80-14473
- Combined solar collector and energy storage system  
[NASA-CASE-LAR-12205-1] c 44 N80-20810
- Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c 44 N81-17518
- Solar tracking system  
[NASA-CASE-MFS-23999-1] c 44 N81-24520
- Automotive absorption air conditioner utilizing solar and motor waste heat  
[NASA-CASE-NPO-15183-1] c 44 N82-26776
- Method of forming oxide coatings --- for solar collector heating panels  
[NASA-CASE-LEW-13132-1] c 27 N83-29388
- Solar concentrator protective system  
[NASA-CASE-NPO-15662-1] c 44 N84-28204
- Protective telescoping shield for solar concentrator  
[NASA-CASE-NPO-16236-1] c 44 N86-27706
- Wide acceptance angle, high concentration ratio, optical collector  
[NASA-CASE-MFS-28295-1] c 74 N91-13999
- SOLAR ELECTRIC PROPULSION**
- Closed Loop solar array-ion thruster system with power control circuitry  
[NASA-CASE-LEW-12780-1] c 20 N79-20179
- SOLAR ENERGY**
- Stacked solar cell arrays  
[NASA-CASE-NPO-11771] c 03 N73-20040
- Solar energy power system --- using Freon  
[NASA-CASE-MFS-21628-1] c 44 N75-32581
- Thermally controlled non-tracking type solar energy concentrator  
[NASA-CASE-NPO-13497-1] c 44 N76-14602
- Solar photolysis of water  
[NASA-CASE-NPO-13675-1] c 44 N77-32580
- Three-dimensional tracking solar energy concentrator and method for making same  
[NASA-CASE-NPO-13736-1] c 44 N77-32583
- Solar heating system  
[NASA-CASE-LAR-12009-1] c 44 N78-15560
- Method for producing solar energy panels by automation  
[NASA-CASE-LEW-12541-1] c 44 N78-25529
- Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c 44 N79-11469
- Primary reflector for solar energy collection systems  
[NASA-CASE-NPO-13579-4] c 44 N79-14529
- Method of construction of a multi-cell solar array  
[NASA-CASE-MFS-23540-1] c 44 N79-26475
- Solar cell module  
[NASA-CASE-NPO-14467-1] c 44 N79-31753
- Solar energy modulator  
[NASA-CASE-NPO-15388-1] c 44 N84-28203
- Saltless solar pond  
[NASA-CASE-NPO-15808-1] c 44 N84-34792
- Lunar radiator shade  
[NASA-CASE-MSC-21868-1] c 54 N92-21589

Solar thermal energy receiver  
[NASA-CASE-LEW-14949-1] c 44 N92-29143

**SOLAR ENERGY ABSORBERS**  
Panel for selectively absorbing solar thermal energy and the method of producing said panel  
[NASA-CASE-MFS-22562-1] c 44 N76-14595  
Solar energy absorber  
[NASA-CASE-MFS-22743-1] c 44 N76-22657  
Solar energy trap  
[NASA-CASE-MFS-22744-1] c 44 N76-24696  
Solar cell shingle  
[NASA-CASE-LEW-12587-1] c 44 N77-31601  
Low cost solar energy collection system  
[NASA-CASE-NPO-13579-1] c 44 N78-17460  
Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOO-00428-1] c 32 N79-19186  
Aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-3] c 44 N80-16452

**SOLAR ENERGY CONVERSION**  
Solar energy power system  
[NASA-CASE-MFS-21628-2] c 44 N76-23675  
High voltage, high current Schottky barrier solar cell  
[NASA-CASE-NPO-13482-1] c 44 N78-13526  
Process for utilizing low-cost graphite substrates for polycrystalline solar cells  
[NASA-CASE-GSC-12022-2] c 44 N78-24609  
Solar photolysis of water  
[NASA-CASE-NPO-14126-1] c 44 N79-11470  
Thermal energy transformer  
[NASA-CASE-NPO-14058-1] c 44 N79-18443  
Solar concentrator  
[NASA-CASE-MFS-23727-1] c 44 N80-14473  
Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NPO-14670-1] c 44 N81-19558  
Solar energy control system --- temperature measurement  
[NASA-CASE-MFS-25287-1] c 44 N82-18686  
Solar engine  
[NASA-CASE-LAR-12148-1] c 44 N82-24640  
Solar driven liquid metal MHD power generator  
[NASA-CASE-LAR-12495-1] c 44 N83-28573  
Photoelectrochemical electrodes  
[NASA-CASE-NPO-15458-1] c 25 N84-12262  
Solar pumped laser  
[NASA-CASE-LAR-12870-1] c 36 N84-16542  
Wind and solar powered turbine  
[NASA-CASE-NPO-15496-1] c 44 N84-23018  
Solar energy converter using surface plasma waves  
[NASA-CASE-LEW-13827-1] c 44 N85-21768  
Bidirectional control system for energy flow in solar powered flywheel  
[NASA-CASE-MFS-25978-1] c 44 N87-21410

**SOLAR FLUX DENSITY**  
Solar energy modulator  
[NASA-CASE-NPO-15388-1] c 44 N84-28203

**SOLAR FURNACES**  
High temperature lens construction Patent  
[NASA-CASE-XNP-04111] c 14 N71-15622

**SOLAR GENERATORS**  
GaAs solar detector using manganese as a doping agent Patent  
[NASA-CASE-XNP-01328] c 26 N71-18064  
Wind and solar powered turbine  
[NASA-CASE-NPO-15496-1] c 44 N84-23018

**SOLAR GRAVITATION**  
Means for visually indicating flight paths of vehicles between the Earth, Venus, and Mercury Patent  
[NASA-CASE-XNP-00708] c 14 N70-35394

**SOLAR HEATING**  
Portable linear-focused solar thermal energy collecting system  
[NASA-CASE-NPO-13734-1] c 44 N78-10554  
Solar heating system  
[NASA-CASE-LAR-12009-1] c 44 N78-15560  
Combined solar collector and energy storage system  
[NASA-CASE-LAR-12205-1] c 44 N80-20810  
Multi-channel temperature measurement amplification system --- solar heating systems  
[NASA-CASE-MFS-23775-1] c 44 N82-16474  
Solar heated fluidized bed gasification system  
[NASA-CASE-NPO-15071-1] c 44 N82-16475  
Solar energy control system --- temperature measurement  
[NASA-CASE-MFS-25287-1] c 44 N82-18686

**SOLAR OBSERVATORIES**  
Solar optical telescope dome control system Patent  
[NASA-CASE-MSC-10966] c 14 N71-19568

**SOLAR PONDS (HEAT STORAGE)**  
Solar pond  
[NASA-CASE-NPO-13581-2] c 44 N78-31525  
Saltless solar pond  
[NASA-CASE-NPO-15808-1] c 44 N84-34792

**SOLAR POSITION**

Sun angle calculator  
[NASA-CASE-MSC-12617-1] c 35 N76-29552  
Solar tracking system  
[NASA-CASE-MFS-23999-1] c 44 N81-24520

**SOLAR POWERED AIRCRAFT**

Solar powered aircraft  
[NASA-CASE-LAR-12615-1] c 05 N84-12154

**SOLAR RADIATION**

Space simulator Patent  
[NASA-CASE-XNP-00459] c 11 N70-38675  
Solar vane actuator Patent  
[NASA-CASE-XNP-05535] c 14 N71-23040  
Compact solar still Patent  
[NASA-CASE-XMS-04533] c 15 N71-23086  
Wide angle sun sensor --- consisting of cylinder, insulation and pair of detectors  
[NASA-CASE-NPO-13327-1] c 35 N75-23910  
Particulate and solar radiation stable coating for spacecraft  
[NASA-CASE-LAR-10805-2] c 34 N77-18382  
Solar concentrator protective system  
[NASA-CASE-NPO-15662-1] c 44 N84-28204  
Stable density stratification solar pond  
[NASA-CASE-NPO-15419-2] c 44 N85-30474  
Long gain length solar pumped box laser  
[NASA-CASE-LAR-13256-1] c 36 N86-29204

**SOLAR RADIATION SHIELDING**

High temperature glass thermal control structure and coating --- for application to spacecraft reusable heat shielding  
[NASA-CASE-ARC-11164-1] c 44 N83-34448  
Variable anodic thermal control coating  
[NASA-CASE-LAR-12719-1] c 44 N83-34449  
Protective telescoping shield for solar concentrator  
[NASA-CASE-NPO-16236-1] c 44 N86-27706  
Sun shield  
[NASA-CASE-MSC-20162-1] c 37 N87-17036

**SOLAR RADIO EMISSION**

Sidereal frequency generator Patent  
[NASA-CASE-XGS-02610] c 14 N71-23174

**SOLAR REFLECTORS**

Foldable solar concentrator Patent  
[NASA-CASE-XLA-04622] c 03 N70-41580  
Solar cell including second surface mirrors Patent  
[NASA-CASE-NPO-10109] c 03 N71-11049  
Method and apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917] c 15 N71-15597  
Thermal pump-compressor for space use Patent  
[NASA-CASE-XLA-00377] c 33 N71-17610  
Apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917-2] c 15 N71-24836  
Inorganic thermal control coatings  
[NASA-CASE-MFS-20011] c 18 N72-22566  
Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c 74 N77-28933  
Primary reflector for solar energy collection systems  
[NASA-CASE-NPO-13579-4] c 44 N79-14529  
Primary reflector for solar energy collection systems and method of making same  
[NASA-CASE-NPO-13579-3] c 44 N79-24432  
Solar energy collection system  
[NASA-CASE-NPO-13579-2] c 44 N79-24433

**SOLAR SAILS**

Strong thin membrane structure --- solar sails  
[NASA-CASE-NPO-14021-2] c 27 N80-16163  
Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion  
[NASA-CASE-NPO-14170-1] c 37 N81-15364

**SOLAR SENSORS**

Plurality of photosensitive cells on a pyramidal base for planetary trackers  
[NASA-CASE-XNP-04180] c 07 N69-39736  
Space vehicle attitude control Patent  
[NASA-CASE-XNP-00465] c 21 N70-35395  
Sun tracker with rotatable plane-parallel plate and two photocells Patent  
[NASA-CASE-XGS-01159] c 21 N71-10678  
Solar sensor having coarse and fine sensing with matched preirradiated cells and method of selecting cells Patent  
[NASA-CASE-XLA-01584] c 14 N71-23269  
Sun direction detection system  
[NASA-CASE-NPO-13722-1] c 74 N77-22951  
Sun tracking solar energy collector  
[NASA-CASE-NPO-13921-1] c 44 N79-14526  
Solar tracking system  
[NASA-CASE-MFS-23999-1] c 44 N81-24520  
Sun sensing guidance system for high altitude aircraft  
[NASA-CASE-FRC-11052-1] c 04 N82-23231  
Cloud cover sensor  
[NASA-CASE-NPO-14936-1] c 47 N83-32232  
Airborne tracking sunphotometer apparatus and system  
[NASA-CASE-ARC-11622-1] c 44 N88-14492

**SOLAR SIMULATORS**

High temperature lens construction Patent  
[NASA-CASE-XNP-04111] c 14 N71-15622  
High powered arc electrodes --- producing solar simulator radiation  
[NASA-CASE-LEW-11162-1] c 33 N74-12913

**SOLAR-PUMPED LASERS**

Long gain length solar pumped box laser  
[NASA-CASE-LAR-13256-1] c 36 N86-29204

**SOLDERED JOINTS**

Soldering device Patent  
[NASA-CASE-XLA-08911] c 15 N71-27214

**SOLDERING**

Solder flux which leaves corrosion-resistant coating Patent  
[NASA-CASE-XNP-03459-2] c 18 N71-15688  
Soldering with solder flux which leaves corrosion resistant coating Patent  
[NASA-CASE-XNP-03459] c 15 N71-21078  
Method of plating copper on aluminum Patent  
[NASA-CASE-XLA-08966-1] c 17 N71-25903  
Resistance soldering apparatus  
[NASA-CASE-GSC-10913] c 15 N72-22491  
Positive contact resistance soldering unit  
[NASA-CASE-KSC-10242] c 15 N72-23497  
Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c 44 N79-24431  
High temperature solder device for flat cables  
[NASA-CASE-GSC-13344-1] c 26 N92-29094

**SOLDERS**

Method of coating circuit paths on printed circuit boards with solder Patent  
[NASA-CASE-XMF-01599] c 09 N71-20705  
Method for attaching a fused-quartz mirror to a conductive metal substrate  
[NASA-CASE-MFS-23405-1] c 26 N77-29260  
Solder dross removal apparatus  
[NASA-CASE-MFS-28406-1] c 37 N91-13729

**SOLENOID VALVES**

Two-step rocket engine bipropellant valve Patent  
[NASA-CASE-XMS-04890-1] c 15 N70-22192  
Automatic recording McLeod gauge Patent  
[NASA-CASE-XLE-03280] c 14 N71-23093  
Solenoid valve including guide for armature and valve member  
[NASA-CASE-GSC-10607-1] c 15 N72-20442  
Remote fire stack igniter --- with solenoid-controlled valve  
[NASA-CASE-MFS-21675-1] c 25 N74-33378  
Automatically operable self-leveling load table  
[NASA-CASE-MFS-22039-1] c 09 N75-12968  
Self-compensating solenoid valve  
[NASA-CASE-ARC-11620-1] c 37 N87-25573

**SOLENOIDS**

Solenoid construction Patent  
[NASA-CASE-XNP-01951] c 09 N70-41929  
Drive circuit for minimizing power consumption in inductive load Patent  
[NASA-CASE-NPO-10716] c 09 N71-24892  
Rotary solenoid shutter drive assembly and rotary inertia damper and stop plate assembly --- for use with cameras mounted in satellites  
[NASA-CASE-GSC-11560-1] c 33 N74-20861  
Sprag solenoid brake --- development and operations of electrically controlled brake  
[NASA-CASE-MFS-21846-1] c 37 N74-26976  
Low temperature latching solenoid  
[NASA-CASE-MSC-18106-1] c 33 N82-11357

**SOLID CRYOGEN COOLING**

Cooling by conversion of para to ortho-hydrogen  
[NASA-CASE-GSC-12770-1] c 25 N83-29324

**SOLID ELECTRODES**

Polymeric electrolytic hygrometer  
[NASA-CASE-NPO-13948-1] c 35 N78-25391  
Additive for zinc electrodes --- electric automobiles  
[NASA-CASE-LEW-13286-1] c 33 N84-14422

**SOLID ELECTROLYTES**

Secondary Li battery incorporating 12-Crown-4 ether  
[NASA-CASE-NPO-17922-1-CU] c 33 N92-28753

**SOLID LUBRICANTS**

Bonded solid lubricant coating Patent  
[NASA-CASE-XMS-00259] c 18 N70-36400  
Method of lubricating rolling element bearings Patent  
[NASA-CASE-XLE-09527] c 15 N71-17688  
Inorganic solid film lubricants Patent  
[NASA-CASE-XMF-03988] c 15 N71-21403  
Rolling element bearings Patent  
[NASA-CASE-XLE-09527-2] c 15 N71-26189  
Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications  
[NASA-CASE-LEW-11930-4] c 24 N79-17916  
Pretreatment of lubricated surfaces with sputtered cadmium oxide  
[NASA-CASE-LEW-14474-1] c 27 N91-28423

- Solid lubricants on pretreated surfaces  
[NASA-CASE-LEW-14474-2] c 27 N92-11186
- SOLID PHASES**  
Solid electrolyte cell  
[NASA-CASE-NPO-15269-1] c 44 N82-29710  
Cooling apparatus and couplings therefor  
[NASA-CASE-ARC-11921-1] c 34 N92-11286
- SOLID PROPELLANT IGNITION**  
Apparatus for igniting solid propellants Patent  
[NASA-CASE-XLE-00207] c 28 N70-33375  
Method of igniting solid propellants Patent  
[NASA-CASE-XLE-01988] c 27 N71-15634  
Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c 20 N78-24275  
Method and apparatus for suppressing ignition overpressure in solid rocket propulsion systems  
[NASA-CASE-MFS-25843-1] c 20 N83-17588
- SOLID PROPELLANT ROCKET ENGINES**  
Spherical solid-propellant rocket motor Patent  
[NASA-CASE-XLA-00105] c 28 N70-33331  
Mandrel for shaping solid propellant rocket fuel into a motor casing Patent  
[NASA-CASE-XLA-00304] c 27 N70-34783  
Spherically-shaped rocket motor Patent  
[NASA-CASE-XHQ-01897] c 28 N70-35381  
Propellant grain for rocket motors Patent  
[NASA-CASE-XGS-03556] c 27 N70-35534  
Apparatus and method for control of a solid fueled rocket vehicle Patent  
[NASA-CASE-XNP-00217] c 28 N70-38181  
Steerable solid propellant rocket motor Patent  
[NASA-CASE-XNP-00234] c 28 N70-38645  
Method of making a solid propellant rocket motor Patent  
[NASA-CASE-XLA-04126] c 28 N71-26779  
Electrical apparatus for detection of thermal decomposition of insulation Patent  
[NASA-CASE-XMF-03968] c 14 N71-27186  
Solid propellant rocket motor  
[NASA-CASE-XNP-03282] c 28 N72-20758  
Solid propellant rocket motor nozzle  
[NASA-CASE-NPO-11458] c 28 N72-23810  
Solid propellant rocket motor  
[NASA-CASE-NPO-11559] c 28 N73-24784  
Space vehicle  
[NASA-CASE-MFS-22734-1] c 18 N75-19329  
Solid propellant rocket motor and method of making same  
[NASA-CASE-XLA-01349] c 20 N77-17143  
Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c 20 N78-24275  
Solid propellant motor  
[NASA-CASE-NPO-11458A] c 20 N78-32179  
Method and apparatus for suppressing ignition overpressure in solid rocket propulsion systems  
[NASA-CASE-MFS-25843-1] c 20 N83-17588  
Space Shuttle with rail system and aft thrust structure securing solid rocket boosters to external tank  
[NASA-CASE-MFS-25853-1] c 16 N84-27784
- SOLID PROPELLANTS**  
Variable thrust ion engine utilizing thermally decomposable solid fuel Patent  
[NASA-CASE-XMF-00923] c 28 N70-36802  
Means and method of measuring viscoelastic strain Patent  
[NASA-CASE-XNP-01153] c 32 N71-17645  
Processing for producing a sterilized instrument Patent  
[NASA-CASE-XNP-09763] c 14 N71-20461  
Method of forming difunctional polyisobutylene  
[NASA-CASE-NPO-10893] c 27 N73-22710
- SOLID ROCKET BINDERS**  
Solid propellant liner Patent  
[NASA-CASE-XNP-09744] c 27 N71-16392  
Silicone containing solid propellant  
[NASA-CASE-NPO-14477-1] c 28 N80-28536
- SOLID ROCKET PROPELLANTS**  
Process for preparing sterile solid propellants Patent  
[NASA-CASE-XNP-01749] c 27 N70-41897  
Burning rate control of solid propellants Patent  
[NASA-CASE-XLE-03494] c 27 N71-21819  
Hydrazinium nitroformate propellant stabilized with nitroguanidine  
[NASA-CASE-NPO-12000] c 27 N72-25699  
Hydrazinium nitroformate propellant with saturated polymeric hydrocarbon binder  
[NASA-CASE-NPO-12015] c 27 N73-16764  
Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c 28 N74-33209  
Casting propellant in rocket engine  
[NASA-CASE-LAR-11895-1] c 28 N77-10213  
Solid propellant rocket motor and method of making same  
[NASA-CASE-XLA-01349] c 20 N77-17143
- High performance ammonium nitrate propellant  
[NASA-CASE-NPO-14260-1] c 28 N79-28342  
Process for the leaching of AP from propellant  
[NASA-CASE-NPO-14109-1] c 28 N80-23471  
Silicone containing solid propellant  
[NASA-CASE-NPO-14477-1] c 28 N80-28536
- SOLID STATE**  
Solid state chemical source for ammonia beam maser Patent  
[NASA-CASE-XGS-01504] c 16 N70-41578  
Integrated, non-volatile, high-speed analog random access memory  
[NASA-CASE-NPO-17998-1-CU] c 60 N92-12438
- SOLID STATE DEVICES**  
Solid state switch  
[NASA-CASE-XNP-09228] c 09 N69-27500  
Temperature compensated solid state differential amplifier Patent  
[NASA-CASE-XAC-00435] c 09 N70-35440  
Operational integrator Patent  
[NASA-CASE-NPO-10230] c 09 N71-12520  
Microwave power receiving antenna Patent  
[NASA-CASE-MFS-20333] c 09 N71-13486  
Counter and shift register Patent  
[NASA-CASE-XNP-01753] c 08 N71-22897  
Solid state television camera system Patent  
[NASA-CASE-XMF-06092] c 07 N71-24612  
Switching circuit Patent  
[NASA-CASE-XNP-06505] c 10 N71-24799  
Transverse piezoresistance and pinch effect electromechanical transducers Patent  
[NASA-CASE-ERC-10088] c 26 N71-25490  
A solid state acoustic variable time delay line Patent  
[NASA-CASE-ERC-10032] c 10 N71-25900  
Broadband stable power multiplier Patent  
[NASA-CASE-XNP-10854] c 10 N71-26331  
Solid state remote circuit selector switch  
[NASA-CASE-LEW-10387] c 09 N72-22201  
RF controlled solid state switch  
[NASA-CASE-ARC-10136-1] c 09 N72-22202  
Thermal to electrical power conversion system with solid-state switches with Seebeck effect compensation  
[NASA-CASE-NPO-11388] c 03 N72-23048  
Radiation sensitive solid state switch  
[NASA-CASE-NPO-10817-1] c 08 N73-30135  
Full wave modulator-demodulator amplifier apparatus --- for generating rectified output signal  
[NASA-CASE-FRC-10072-1] c 33 N74-14939  
Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility  
[NASA-CASE-HON-10069] c 33 N75-27251  
Solid-state current transformer  
[NASA-CASE-MFS-22560-1] c 33 N77-14335  
Space-charge-limited solid-state triode  
[NASA-CASE-NPO-13064-1] c 33 N79-11314  
Control means for a solid state crossbar switch  
[NASA-CASE-NPO-15066-1] c 33 N82-29538  
Self-correcting electronically scanned pressure sensor  
[NASA-CASE-LAR-12686-1] c 35 N84-14491  
Imaging X-ray spectrometer  
[NASA-CASE-GSC-12682-1] c 35 N84-33765  
Solar energy converter using surface plasma waves  
[NASA-CASE-LEW-13827-1] c 44 N85-21768  
Hermetically sealable package for hybrid solid-state electronic devices and the like  
[NASA-CASE-MSC-20181-1] c 33 N88-23941  
Solid state electrical switch employing materials with reversible phase transistors  
[NASA-CASE-NPO-17621-1-CU] c 33 N90-17010
- SOLID STATE LASERS**  
Cladding for transverse-pumped solid-state laser  
[NASA-CASE-NPO-17355-1-CU] c 36 N91-17360
- SOLID SURFACES**  
Dye penetrant for surfaces subsequently contacted by liquid oxygen Patent  
[NASA-CASE-XMF-02221] c 18 N71-27170  
Control and augmentation of passive porosity through transpiration control  
[NASA-CASE-LAR-14682-1] c 34 N92-30387
- SOLID WASTES**  
Process of forming catalytic surfaces for wet oxidation reactions  
[NASA-CASE-MSC-14831-1] c 25 N78-10225
- SOLID-SOLID INTERFACES**  
Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c 43 N79-25443  
Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c 43 N79-31706
- SOLIDIFICATION**  
Method and apparatus for supercooling and solidifying substances  
[NASA-CASE-MFS-25242-1] c 35 N83-29650  
Hot melt adhesive attachment pad  
[NASA-CASE-LAR-12894-1] c 27 N85-20125
- Method of preparing radially homogeneous mercury cadmium telluride crystals  
[NASA-CASE-MFS-25786-2] c 76 N90-20896  
Solidification processing of alloys using an applied electric field  
[NASA-CASE-MFS-26083-1-CU] c 26 N90-26940
- SOLIDIFIED GASES**  
Cooling by conversion of para to ortho-hydrogen  
[NASA-CASE-GSC-12770-1] c 25 N83-29324
- SOLIDS FLOW**  
Use of glow discharge in fluidized beds  
[NASA-CASE-ARC-11245-1] c 28 N82-18401
- SOLUBILITY**  
Fire resistant coating composition Patent  
[NASA-CASE-GSC-10072] c 18 N71-14014  
Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
[NASA-CASE-NPO-13530-1] c 25 N81-17187  
Method for the preparation of thin-skinned asymmetric reverse osmosis membranes and products thereof  
[NASA-CASE-ARC-11359-1] c 51 N84-28361  
Method for growth of crystals by pressure reduction of supercritical or subcritical solution  
[NASA-CASE-NPO-15772-1] c 76 N85-29800  
Passivation of high temperature superconductors  
[NASA-CASE-NPO-17949-1-CU] c 76 N92-10681  
Slow-release fertilizer  
[NASA-CASE-MSC-21953-1-NP] c 37 N93-17271
- SOLUTES**  
Specific wavelength colorimeter --- for measuring given solute concentration in test sample  
[NASA-CASE-MSC-14081-1] c 35 N74-27860
- SOLUTIONS**  
Method and apparatus for minimizing convection during crystal growth from solution  
[NASA-CASE-NPO-15811-1] c 76 N84-12968  
Preparation of dilute magnetic semiconductor films by metalorganic chemical vapor deposition  
[NASA-CASE-NPO-17399-1-CU] c 76 N89-14120
- SOLVENT EXTRACTION**  
Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c 28 N81-15119  
Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NPO-15767-1] c 23 N84-16255  
Infusion extractor  
[NASA-CASE-MSC-20761-1] c 37 N87-15465
- SOLVENTS**  
Coal desulfurization --- using iron pentacarbonyl  
[NASA-CASE-NPO-14272-1] c 25 N81-33246  
Supercritical solvent coal extraction  
[NASA-CASE-NPO-15210-1] c 25 N84-22709  
Process for producing tris (n-methylamino) methylsilane  
[NASA-CASE-MFS-25721-1] c 25 N85-21280  
Method for growth of crystals by pressure reduction of supercritical or subcritical solution  
[NASA-CASE-NPO-15772-1] c 76 N85-29800  
Production of butanol by fermentation in the presence of cocultures of clostridium  
[NASA-CASE-NPO-16203-1] c 23 N85-35227  
Acetylene terminated aspartimides and resins therefrom  
[NASA-CASE-LAR-14188-1] c 27 N90-23545  
Aromatic polyimides containing a dimethylsilane-linked dianhydride  
[NASA-CASE-LAR-14198-1] c 27 N90-26956  
N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14188-2] c 23 N91-14419  
Hanging drop crystal growth apparatus  
[NASA-CASE-MFS-26061-1] c 76 N91-16815  
Ethynyl terminated imidothioethers and resins therefrom  
[NASA-CASE-LAR-13910-2-CU] c 27 N91-31307  
Imide/arylene ether copolymers  
[NASA-CASE-LAR-14159-1-CU] c 27 N92-31792  
Process for applying a superconductive powder to a wide variety of substrates  
[NASA-CASE-LAR-14729-1-CU] c 33 N93-19051
- SONAR**  
Method for shaping and aiming narrow beams --- sonar mapping and target identification  
[NASA-CASE-NPO-14632-1] c 32 N82-18443  
Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c 32 N82-23376
- SONIC BOOMS**  
Instrumentation for measurement of aircraft noise and sonic boom  
[NASA-CASE-LAR-11173-1] c 35 N75-19614  
Instrumentation for measuring aircraft noise and sonic boom  
[NASA-CASE-LAR-11476-1] c 07 N76-27232
- SORBATES**  
Apparatus for measuring a sorbate dispersed in a fluid stream  
[NASA-CASE-ARC-10896-1] c 35 N78-19465

**SORBENTS**

- Regenerative Cu/La zeolite supported desulfurizing sorbents  
 [NASA-CASE-NPO-17480-1-CU] c 25 N92-10073  
 Multicomponent gas sorption Joule-Thomson refrigeration  
 [NASA-CASE-NPO-17569-1-CU] c 31 N92-15203  
 High temperature sorbents for oxygen  
 [NASA-CASE-NPO-18409-1-CU] c 25 N93-19025

**SORET COEFFICIENT**

- Method of growing composites of the type exhibiting the Soret effect --- improved structure of eutectic alloy crystals  
 [NASA-CASE-MFS-22926-1] c 24 N77-27187

**SORPTION**

- Two stage sorption type cryogenic refrigerator including heat regeneration system  
 [NASA-CASE-NPO-17630-1-CU] c 31 N89-29577  
 Multicomponent gas sorption Joule-Thomson refrigeration  
 [NASA-CASE-NPO-17569-1-CU] c 31 N92-15203  
 Three-stage sorption type cryogenic refrigeration systems and methods employing heat regeneration  
 [NASA-CASE-NPO-18366-1-CU] c 31 N93-13422  
 High temperature sorbents for oxygen  
 [NASA-CASE-NPO-18409-1-CU] c 25 N93-19025

**SOUND FIELDS**

- Acoustic positioning and orientation prediction  
 [NASA-CASE-NPO-17511-1-CU] c 71 N91-14807  
 Motion measurement of acoustically levitated object  
 [NASA-CASE-NPO-18191-1-CU] c 09 N93-24601

**SOUND GENERATORS**

- Ejectable underwater sound source recovery assembly  
 [NASA-CASE-LAR-10595-1] c 35 N74-16135  
 Acoustic suspension system  
 [NASA-CASE-NPO-15435-1] c 71 N83-36846  
 Acoustic agglomeration methods and apparatus  
 [NASA-CASE-NPO-15466-1] c 71 N85-22104

**SOUND LOCALIZATION**

- Resolution enhanced sound detecting apparatus  
 [NASA-CASE-NPO-14134-1] c 71 N79-23753  
 Visual aid for the hearing impaired  
 [NASA-CASE-GSC-13027-1-CU] c 35 N91-27522

**SOUND PRESSURE**

- Instrumentation for measurement of aircraft noise and sonic boom  
 [NASA-CASE-LAR-11173-1] c 35 N75-19614  
 Differential sound level meter  
 [NASA-CASE-LAR-12106-1] c 71 N78-14867  
 Vacuum-isolation vessel and method for measurement of thermal noise in microphones  
 [NASA-CASE-LAR-14567-1-CU] c 33 N92-33021  
 Acoustic device and method for measuring gas densities  
 [NASA-CASE-NPO-18155-1-CU] c 71 N93-13421

**SOUND PROPAGATION**

- System for plotting subsoil structure and method therefor  
 [NASA-CASE-NPO-14191-1] c 31 N80-32584  
 Sound attenuation apparatus  
 [NASA-CASE-LAR-13968-1] c 71 N91-27913  
 Consecutive plate acoustic suppressor apparatus and methods  
 [NASA-CASE-LEW-15430-1] c 71 N93-17051

**SOUND RANGING**

- Echo tracker/range finder for radars and sonars  
 [NASA-CASE-NPO-14361-1] c 32 N82-23376

**SOUND TRANSDUCERS**

- Method for detecting hydrogen gas  
 [NASA-CASE-XMF-03873] c 06 N69-39733  
 Cosmic dust sensor  
 [NASA-CASE-GSC-10503-1] c 14 N72-20381  
 Resolution enhanced sound detecting apparatus  
 [NASA-CASE-NPO-14134-1] c 71 N79-23753  
 Pulse transducer with artifact signal attenuator --- heart rate sensors  
 [NASA-CASE-FRC-11012-1] c 52 N80-23969  
 Acoustic system for material transport  
 [NASA-CASE-NPO-15453-1] c 71 N83-32515  
 Vibrating-chamber levitation systems  
 [NASA-CASE-NPO-16142-1-CU] c 35 N86-20752  
 Calibration apparatus for recess mounted pressure transducers  
 [NASA-CASE-LAR-14724-1] c 35 N92-30030

**SOUND TRANSMISSION**

- Sound attenuation apparatus  
 [NASA-CASE-LAR-13968-1] c 71 N91-27913

**SOUND WAVES**

- Phonocardiograph transducer Patent  
 [NASA-CASE-XMS-05365] c 14 N71-22993  
 Material suspension within an acoustically excited resonant chamber --- at near weightless conditions  
 [NASA-CASE-NPO-13263-1] c 12 N75-24774  
 Acoustic energy shaping  
 [NASA-CASE-NPO-13802-1] c 71 N78-10837

- Acoustic driving of rotor  
 [NASA-CASE-NPO-14005-1] c 71 N79-20827  
 Acoustic bubble removal method  
 [NASA-CASE-NPO-15334-1] c 71 N83-35781  
 Acoustic ground impedance meter  
 [NASA-CASE-LAR-12995-1] c 35 N84-22933  
 Acoustic rotation control  
 [NASA-CASE-NPO-15689-1] c 71 N84-23233  
 Acoustic agglomeration methods and apparatus  
 [NASA-CASE-NPO-15466-1] c 71 N85-22104  
 Dual differential interferometer  
 [NASA-CASE-LAR-12966-1] c 35 N85-30282  
 Acoustic particle separation  
 [NASA-CASE-NPO-15559-1] c 71 N85-30765  
 Acoustic radiation stress measurement  
 [NASA-CASE-LAR-13440-1] c 71 N87-21653  
 Rapidly quantifying the relative distention of a human bladder  
 [NASA-CASE-LAR-13901-1-NP] c 52 N90-21519  
 Impact tolerant material  
 [NASA-CASE-LAR-12887-3] c 24 N90-21822  
 Acoustic positioning and orientation prediction  
 [NASA-CASE-NPO-17511-1-CU] c 71 N91-14807  
 Acoustic transducer apparatus with reduced thermal conduction  
 [NASA-CASE-NPO-17620-1-CU] c 71 N91-14808  
 Acoustophoresis method and apparatus  
 [NASA-CASE-LAR-13388-1] c 25 N92-33611  
 Method and apparatus for evaluating multilayer objects for imperfections  
 [NASA-CASE-LAR-14581-1-SB] c 38 N93-12204  
 System for determining the angle of impact of an object on a structure  
 [NASA-CASE-LAR-14817-1] c 35 N93-17041  
 Jet mixer noise suppressor using acoustic feedback  
 [NASA-CASE-LEW-15170-1] c 71 N93-28953

**SOUNDING ROCKETS**

- Altitude control system for sounding rockets Patent  
 [NASA-CASE-XGS-01654] c 31 N71-24750  
 Method and system for ejecting firing sections from a rocket vehicle  
 [NASA-CASE-GSC-10590-1] c 31 N73-14853

**SPACE CAPSULES**

- Assembly for recovering a capsule Patent  
 [NASA-CASE-XMF-00641] c 31 N70-36410  
 Space capsule Patent  
 [NASA-CASE-XLA-01332] c 31 N71-15664  
 Space capsule ejection assembly Patent  
 [NASA-CASE-XMF-03169] c 31 N71-15675

**SPACE CHARGE**

- Space-charge-limited solid-state triode  
 [NASA-CASE-NPO-13064-1] c 33 N79-11314

**SPACE COMMUNICATION**

- Multiple input radio receiver Patent  
 [NASA-CASE-XLA-00901] c 07 N71-10775  
 Tracking receiver Patent  
 [NASA-CASE-XGS-08679] c 10 N71-21473  
 Apparatus providing a directive field pattern and attitude sensing of a spin stabilized satellite Patent  
 [NASA-CASE-XGS-02607] c 31 N71-23009  
 Space communication system for compressed data with a concatenated Reed-Solomon-Viterbi coding channel  
 [NASA-CASE-NPO-13545-1] c 32 N77-12240

**SPACE DEBRIS**

- Orbital debris sweeper and method  
 [NASA-CASE-MSC-21534-1] c 18 N91-21222  
 Load limiting energy absorbing lightweight debris catcher  
 [NASA-CASE-MSC-21562-1] c 16 N92-16007  
 Space station trash removal system  
 [NASA-CASE-MSC-21723-1] c 18 N92-30315

**SPACE ENVIRONMENT SIMULATION**

- Voltage-current characteristic simulator Patent  
 [NASA-CASE-XMS-01554] c 10 N71-10578  
 Fluid dispensing apparatus and method Patent  
 [NASA-CASE-XLE-01182] c 27 N71-15635  
 Reduced gravity simulator Patent  
 [NASA-CASE-XLA-01787] c 11 N71-16028  
 Apparatus for measuring electric field strength on the surface of a model vehicle Patent  
 [NASA-CASE-XLE-02038] c 09 N71-16086  
 Optical characteristics measuring apparatus Patent  
 [NASA-CASE-XNP-08840] c 23 N71-16365  
 Omni-directional anisotropic molecular trap Patent  
 [NASA-CASE-XGS-00783] c 30 N71-17788  
 Space environmental work simulator Patent  
 [NASA-CASE-XMF-07488] c 11 N71-18773  
 Mechanical simulator of low gravity conditions Patent  
 [NASA-CASE-MFS-10555] c 11 N71-19494  
 Self-lubricating fluoride metal composite materials Patent  
 [NASA-CASE-XLE-08511] c 18 N71-23710  
 Autoignition test cell Patent  
 [NASA-CASE-KSC-10198] c 11 N71-28629

- Illumination system including a virtual light source Patent  
 [NASA-CASE-HQN-10781] c 23 N71-30292  
 Underwater space suit pressure control regulator  
 [NASA-CASE-MFS-20332] c 05 N72-20097  
 Diffuser/ejector system for a very high vacuum environment  
 [NASA-CASE-MFS-25791-1] c 09 N84-27749  
 Variable energy, high flux, ground-state atomic oxygen source  
 [NASA-CASE-NPO-16640-1-CU] c 72 N87-21661  
 Apparatus for simulating an exoatmospheric structure  
 [NASA-CASE-MSC-21975-1] c 14 N93-22016

**SPACE ERECTABLE STRUCTURES**

- Flexible foam erectable space structures Patent  
 [NASA-CASE-XLA-00686] c 31 N70-34135  
 Erectable modular space station Patent  
 [NASA-CASE-XLA-00678] c 31 N70-34296  
 Manned space station Patent  
 [NASA-CASE-XLA-00258] c 31 N70-38676  
 Collapsible loop antenna for space vehicle Patent  
 [NASA-CASE-XMF-00437] c 07 N70-40202  
 Passive communication satellite Patent  
 [NASA-CASE-XLA-00210] c 30 N70-40309  
 Flexible wing deployment device Patent  
 [NASA-CASE-XLA-01220] c 02 N70-41863  
 Capillary radiator Patent  
 [NASA-CASE-XLE-03307] c 33 N71-14035  
 Space manufacturing machine Patent  
 [NASA-CASE-MFS-20410] c 15 N71-19214  
 Roll-up solar array Patent  
 [NASA-CASE-NPO-10188] c 03 N71-20273  
 Collapsible reflector Patent  
 [NASA-CASE-XMS-03454] c 09 N71-20658  
 Inflatable support structure Patent  
 [NASA-CASE-XLA-01731] c 32 N71-21045  
 Radiator deployment actuator Patent  
 [NASA-CASE-MSC-11817-1] c 15 N71-26611  
 Inflatable tether Patent  
 [NASA-CASE-XMS-10993] c 15 N71-28936  
 Expandable space frames  
 [NASA-CASE-ERC-10365-1] c 31 N73-32749  
 Apparatus for assembling space structure  
 [NASA-CASE-MFS-23579-1] c 18 N79-11108  
 Lightweight structural columns --- space erectable trusses  
 [NASA-CASE-LAR-12095-1] c 31 N81-25258  
 Telescoping columns --- parabolic antenna support  
 [NASA-CASE-LAR-12195-1] c 31 N81-27324  
 Joint for deployable structures  
 [NASA-CASE-NPO-16038-1] c 37 N86-19605  
 Foldable self-erecting joint  
 [NASA-CASE-MSC-20635-1] c 18 N87-14373  
 Bi-stem gripping apparatus  
 [NASA-CASE-MFS-28185-1] c 37 N88-23979  
 Space station erectable manipulator placement system  
 [NASA-CASE-MSC-21096-1] c 18 N89-12621  
 Antenna surface contour control system  
 [NASA-CASE-LAR-13798-1] c 32 N89-25363  
 Mechanical end joint system for connecting structural column elements  
 [NASA-CASE-LAR-14465-1] c 37 N91-14614  
 Clevis joint for deployable space structures  
 [NASA-CASE-LAR-13898-1] c 37 N91-15544  
 Robot-friendly connector --- space truss structures  
 [NASA-CASE-MSC-21864-1] c 37 N92-23544  
 Pre-integrated truss space station and method of assembly  
 [NASA-CASE-MSC-22015-1] c 18 N93-20042  
 Robot-friendly connector --- space truss structures  
 [NASA-CASE-MSC-21864-1] c 37 N93-20117

**SPACE EXPLORATION**

- Vehicle for use in planetary exploration  
 [NASA-CASE-NPO-11366] c 11 N73-26238

**SPACE FLIGHT**

- Portable environmental control system Patent  
 [NASA-CASE-XMS-09632-1] c 05 N71-11203  
 Television simulation for aircraft and space flight Patent  
 [NASA-CASE-XFR-03107] c 09 N71-19449  
 Whole body cleaning agent containing N-acyltaurate  
 [NASA-CASE-MSC-21589-1] c 54 N92-29137

**SPACE FLIGHT FEEDING**

- Helmet feedport  
 [NASA-CASE-XMS-09653] c 54 N78-17680  
 Self-charging metering and dispensing device for fluids  
 [NASA-CASE-MSC-20275-1] c 35 N85-21595

**SPACE INDUSTRIALIZATION**

- Apparatus for assembling space structure  
 [NASA-CASE-MFS-23579-1] c 18 N79-11108

**SPACE LABORATORIES**

- Nano-G research laboratory for a spacecraft  
 [NASA-CASE-GSC-13197-1] c 18 N91-27201



## SPACE MAINTENANCE

- Thrustor maintenance system Patent  
[NASA-CASE-MFS-20325] c 28 N71-27095  
Hot melt recharge system --- repairing damaged or missing tiles on space shuttle orbiter  
[NASA-CASE-LAR-12881-1] c 27 N84-14323  
Automatic system for installation and replacement of Space Station components  
[NASA-CASE-LEW-14906-1] c 37 N93-12203

## SPACE MANUFACTURING

- Material suspension within an acoustically excited resonant chamber --- at near weightless conditions  
[NASA-CASE-NPO-13263-1] c 12 N75-24774  
Method for manufacturing mirrors in zero gravity environment  
[NASA-CASE-MSC-12611-1] c 12 N76-15189  
Apparatus for assembling space structure  
[NASA-CASE-MFS-23579-1] c 18 N79-11108  
Structural members, method and apparatus  
[NASA-CASE-MSC-16217-1] c 31 N81-27323  
Low gravity exothermic heating/cooling apparatus  
[NASA-CASE-MSC-25707-1] c 35 N85-29214

## SPACE MISSIONS

- Method of planetary atmospheric investigation using a split-trajectory dual flyby mode Patent  
[NASA-CASE-XAC-08494] c 30 N71-15990  
Deep space monitor communication satellite system Patent  
[NASA-CASE-XAC-06029-1] c 31 N71-24813  
A method of delivering a vehicle to earth orbit and returning the reusable portion thereof to earth  
[NASA-CASE-MSC-12391] c 30 N73-12884

## SPACE NAVIGATION

- Trigonometric vehicle guidance assembly which aligns the three perpendicular axes of two three-axes systems Patent  
[NASA-CASE-XMF-00684] c 21 N71-21688  
Dual purpose momentum wheels for spacecraft with magnetic recording  
[NASA-CASE-NPO-11481] c 21 N73-13644  
Star tracking reticles and process for the production thereof  
[NASA-CASE-GSC-11188-2] c 21 N73-19630

## SPACE ORIENTATION

- Method and apparatus for determining satellite orientation utilizing spatial energy sources Patent  
[NASA-CASE-XGS-00466] c 21 N70-34297

## SPACE PLATFORMS

- Joint for deployable structures  
[NASA-CASE-NPO-16038-1] c 37 N86-19605  
Mobile remote manipulator vehicle system  
[NASA-CASE-LAR-13393-1] c 54 N87-29118  
Expandable pallet for space station interface attachments  
[NASA-CASE-MSC-21117-1] c 18 N88-28958

## SPACE PROBES

- Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-15429-1] c 18 N84-22609

## SPACE PROCESSING

- Exothermic furnace module  
[NASA-CASE-MFS-25707-1] c 35 N82-26631  
High gradient directional solidification furnace  
[NASA-CASE-MFS-25963-1] c 35 N86-20750  
Infusion extractor  
[NASA-CASE-MSC-20761-1] c 37 N87-15465  
Space ultra-vacuum facility and method of operation  
[NASA-CASE-MFS-28139-1] c 29 N87-18679  
Sample levitation and melt in microgravity  
[NASA-CASE-NPO-17022-1-CU] c 29 N87-25489  
Spiral vane bioreactor  
[NASA-CASE-MSC-21361-1] c 51 N91-21701  
Nano-G research laboratory for a spacecraft  
[NASA-CASE-GSC-13197-1] c 18 N91-27201

## SPACE RENDEZVOUS

- Method and apparatus for securing to a spacecraft Patent  
[NASA-CASE-MFS-11133] c 31 N71-16222  
Apparatus for releasably connecting first and second objects in predetermined space relationship  
[NASA-CASE-MSC-18969-1] c 18 N84-22605  
Rotatable electric cable connecting system  
[NASA-CASE-GSC-12899-1] c 33 N86-20669

## SPACE SHUTTLE BOOSTERS

- Space Shuttle with rail system and aft thrust structure securing solid rocket boosters to external tank  
[NASA-CASE-MFS-25853-1] c 16 N84-27784

## SPACE SHUTTLE MAIN ENGINE

- Shuttle orbiter with telescoping main propulsion unit and payload  
[NASA-CASE-LAR-13586-1] c 16 N92-10035  
Shuttle orbiter with telescoping main propulsion unit and payload  
[NASA-CASE-LAR-13586-1] c 16 N93-20115

## SPACE SHUTTLE ORBITERS

- Surface conforming thermal/pressure seal --- tail assemblies of space shuttle orbiters  
[NASA-CASE-MSC-18422-1] c 37 N82-16408  
CAM controlled retractable door latch  
[NASA-CASE-MSC-20304-1] c 37 N82-31690  
High temperature glass thermal control structure and coating --- for application to spacecraft reusable heat shielding  
[NASA-CASE-ARC-11164-1] c 44 N83-34448  
Hot melt recharge system --- repairing damaged or missing tiles on space shuttle orbiter  
[NASA-CASE-LAR-12881-1] c 27 N84-14323  
Pre-stressed thermal protection systems  
[NASA-CASE-MSC-20254-1] c 16 N84-22601  
Space Shuttle with rail system and aft thrust structure securing solid rocket boosters to external tank  
[NASA-CASE-MFS-25853-1] c 16 N84-27784  
Shell tile thermal protection system  
[NASA-CASE-LAR-12862-1] c 27 N84-27886  
Shuttle orbiter with telescoping main propulsion unit and payload  
[NASA-CASE-LAR-13586-1] c 16 N92-10035  
Load limiting energy absorbing lightweight debris catcher  
[NASA-CASE-MSC-21562-1] c 16 N92-16007  
Extra-vehicular activity translation tool  
[NASA-CASE-MSC-21955-1] c 37 N93-14842  
Shuttle orbiter with telescoping main propulsion unit and payload  
[NASA-CASE-LAR-13586-1] c 16 N93-20115

## SPACE SHUTTLE PAYLOADS

- Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612  
Shuttle-launch triangular space station  
[NASA-CASE-MSC-20676-1] c 18 N86-24729  
Payload deployment method and system  
[NASA-CASE-MSC-21330-1] c 16 N88-24660

## SPACE SHUTTLES

- Flight craft Patent  
[NASA-CASE-XAC-02058] c 02 N71-16087  
A method of delivering a vehicle to earth orbit and returning the reusable portion thereof to earth  
[NASA-CASE-MSC-12391] c 30 N73-12884  
Space shuttle vehicle and system  
[NASA-CASE-MSC-12433] c 31 N73-14854  
Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
[NASA-CASE-MSC-14245-1] c 18 N75-27041  
Fused silicide coatings containing discrete particles for protecting niobium alloys --- used in space shuttle thermal protection systems and turbine engine components  
[NASA-CASE-LEW-11179-1] c 27 N76-16229  
Device for coupling a first vehicle to a second vehicle  
[NASA-CASE-GSC-12429-1] c 37 N81-14320  
System for sterilizing objects --- cleaning space vehicle systems  
[NASA-CASE-KSC-11085-1] c 54 N81-24724  
Terminal guidance sensor system --- space shuttle coupling to orbiting satellites  
[NASA-CASE-NPO-14521-1] c 37 N81-27519  
Adjustable high emittance gap filter --- reentry shielding for space shuttle vehicles  
[NASA-CASE-ARC-11310-1] c 27 N82-24339  
Hemispherical latching apparatus  
[NASA-CASE-MFS-25837-1] c 18 N85-29991  
Slide release mechanism --- for space shuttle orbiter/external tank connection device  
[NASA-CASE-MSC-20080-1] c 37 N85-30334  
Preloaded brake disc  
[NASA-CASE-MSC-21132-1] c 37 N88-29181  
Docking mechanism for spacecraft  
[NASA-CASE-MSC-21386-1] c 18 N90-20126  
Emergency egress fixed rocket package  
[NASA-CASE-MSC-21332-1] c 03 N91-15142

## SPACE SIMULATORS

- Space simulator Patent  
[NASA-CASE-XNP-00459] c 11 N70-38675  
Variable geometry manned orbital vehicle Patent  
[NASA-CASE-XLA-03691] c 31 N71-15674  
Space simulation and radiative property testing system and method Patent  
[NASA-CASE-MFS-20096] c 14 N71-30026  
Biocentrifuge system capable of exchanging specimen cages while in operational mode  
[NASA-CASE-MFS-23825-1] c 51 N81-32829

## SPACE STATION FREEDOM

- Pre-integrated truss space station and method of assembly  
[NASA-CASE-MSC-22015-1] c 18 N93-20042

## SPACE STATION STRUCTURES

- Mobile remote manipulator system for a tetrahedral truss  
[NASA-CASE-MSC-20985-1] c 18 N88-26398

- Expandable pallet for space station interface attachments  
[NASA-CASE-MSC-21117-2] c 18 N89-28554  
Smart tunnel: Docking mechanism  
[NASA-CASE-MSC-21360-1] c 18 N91-14374  
Overcenter collet space station truss fastener  
[NASA-CASE-MSC-21504-1] c 18 N91-21221  
Pre-integrated truss space station and method of assembly  
[NASA-CASE-MSC-22015-1] c 18 N93-20042

## SPACE STATIONS

- Manned space station Patent  
[NASA-CASE-XLA-00258] c 31 N70-38676  
Radial module space station Patent  
[NASA-CASE-XMS-01906] c 31 N70-41373  
Serpentaurer Patent  
[NASA-CASE-XMF-05344] c 31 N71-16345  
Space manufacturing machine Patent  
[NASA-CASE-MFS-20410] c 15 N71-19214  
Meteoroid impact position locator aid for manned space station  
[NASA-CASE-LAR-10629-1] c 35 N75-33367  
Multiple in-line docking capability for rotating space stations  
[NASA-CASE-MFS-20855-1] c 15 N77-10112  
Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612  
Shuttle-launch triangular space station  
[NASA-CASE-MSC-20676-1] c 18 N86-24729  
Vapor fragrancier  
[NASA-CASE-LAR-13680-1] c 35 N87-25561  
Locking hinge  
[NASA-CASE-MSC-21056-1] c 18 N88-23827  
Expandable pallet for space station interface attachments  
[NASA-CASE-MSC-21117-1] c 18 N88-28958  
Collet lock joint for space station truss  
[NASA-CASE-MSC-21207-1] c 37 N88-29180  
Space station erectable manipulator placement system  
[NASA-CASE-MSC-21096-1] c 18 N89-12621  
Quick-disconnect inflatable seal assembly  
[NASA-CASE-KSC-11368-1] c 37 N89-13786  
Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-2] c 18 N89-25266  
Docking system for spacecraft  
[NASA-CASE-MSC-21327-1] c 18 N90-11798  
Docking mechanism for spacecraft  
[NASA-CASE-MSC-21386-1] c 18 N90-20126  
Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-2] c 28 N91-14495  
High reliability robot friendly ORU interface  
[NASA-CASE-GSC-13360-1] c 37 N92-23377  
Space station trash removal system  
[NASA-CASE-MSC-21723-1] c 18 N92-30315  
Rotating-unbalanced-mass devices and methods for scanning balloon-borne-experiments, free-flying spacecraft, and space shuttle/space station attached experiments  
[NASA-CASE-MFS-28425-1] c 35 N92-33010  
Automatic system for installation and replacement of Space Station components  
[NASA-CASE-LEW-14906-1] c 37 N93-12203

## SPACE STORAGE

- Hemispherical latching apparatus  
[NASA-CASE-MFS-25837-1] c 18 N85-29991

## SPACE SUITS

- Universal pilot restraint suit and body support therefor Patent  
[NASA-CASE-XAC-00405] c 05 N70-41819  
Space suit pressure stabilizer Patent  
[NASA-CASE-XLA-05332] c 05 N71-11194  
Equipotential space suit Patent  
[NASA-CASE-LAR-10007-1] c 05 N71-11195  
Biological isolation garment Patent  
[NASA-CASE-MSC-12206-1] c 05 N71-17599  
Space environmental work simulator Patent  
[NASA-CASE-XMF-07488] c 11 N71-18773  
Space suit heat exchanger Patent  
[NASA-CASE-XMS-09571] c 05 N71-19439  
G conditioning suit Patent  
[NASA-CASE-XLA-02898] c 05 N71-20268  
Hard space suit Patent  
[NASA-CASE-XAC-07043] c 05 N71-23161  
Evacuation port seal Patent  
[NASA-CASE-XMF-03290] c 15 N71-23256  
Fabric for micrometeoroid protection garment Patent  
[NASA-CASE-MSC-12109] c 18 N71-26285  
Venting device for pressurized space suit helmet Patent  
[NASA-CASE-XMS-09562-1] c 05 N71-26333

Automatic control of liquid cooling garment by cutaneous and external auditory meatus temperatures  
[NASA-CASE-MSC-13917-1] c 05 N72-15098

Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332] c 05 N72-20097

Space suit having improved waist and torso movement  
[NASA-CASE-ARC-10275-1] c 05 N72-22092

Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332-2] c 05 N73-25125

Temperature controller for a fluid cooled garment  
[NASA-CASE-ARC-10599-1] c 05 N73-26071

Space suit  
[NASA-CASE-MSC-12609-1] c 05 N73-32012

Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c 27 N76-24405

Protective garment ventilation system  
[NASA-CASE-XMS-04928] c 54 N78-17679

Emergency space-suit helmet  
[NASA-CASE-MSC-10954-1] c 54 N78-18761

Spacesuit mobility joints  
[NASA-CASE-ARC-11058-1] c 54 N78-31735

Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c 54 N78-31736

Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c 54 N78-32721

Spacesuit mobility knee joints  
[NASA-CASE-ARC-11058-2] c 54 N79-24651

Absorbent product to absorb fluids --- for collection of human wastes  
[NASA-CASE-MSC-18223-1] c 24 N82-29362

Torso sizing ring construction for hard space suit  
[NASA-CASE-ARC-11616-1] c 54 N86-28618

Elbow and knee joint for hard space suits  
[NASA-CASE-ARC-11610-1] c 54 N86-28619

Shoulder and hip joint for hard space suits  
[NASA-CASE-ARC-11543-1] c 54 N86-28620

Shoulder and hip joints for hard space suits and the like  
[NASA-CASE-ARC-11534-1] c 54 N86-29507

Weightlessness simulation system and process  
[NASA-CASE-ARC-11646-1] c 14 N87-25344

Tapered, tubular polyester fabric  
[NASA-CASE-MSC-21082-1] c 27 N87-29672

Don/doff support stand for use with rear entry space suits  
[NASA-CASE-MSC-21364-1] c 54 N89-13889

Suitport extra-vehicular access facility  
[NASA-CASE-ARC-11635-1] c 18 N90-16860

Hazards protection for space suits and spacecraft  
[NASA-CASE-MSC-21366-1] c 54 N90-25498

Glove attachment  
[NASA-CASE-MSC-21632-1] c 54 N92-34210

**SPACE TOOLS**

Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c 54 N81-26718

Quick application/release nut with engagement indicator  
[NASA-CASE-MSC-21799-1] c 37 N92-29150

Extra-vehicular activity translation tool  
[NASA-CASE-MSC-21955-1] c 37 N93-14842

Retractable tool bit having latch type catch mechanism  
[NASA-CASE-GSC-13359-1] c 37 N93-18286

Split rail gripper assembly and tool driver therefor  
[NASA-CASE-GSC-13370-2] c 37 N93-18288

**SPACE TRANSPORTATION SYSTEM**

Coupling device for moving vehicles  
[NASA-CASE-GSC-12322-1] c 37 N80-14398

Three stage rocket vehicle with parallel staging  
[NASA-CASE-MFS-25878-1] c 18 N84-27787

**SPACE VEHICLE CHECKOUT PROGRAM**

Hydraulic support for dynamic testing Patent  
[NASA-CASE-XMF-03248] c 11 N71-10604

Electronic checkout system for space vehicles Patent  
[NASA-CASE-XKS-08012-2] c 31 N71-15566

High pressure gas filter system Patent  
[NASA-CASE-MFS-12806] c 14 N71-17588

**SPACEBORNE EXPERIMENTS**

Space ultra-vacuum facility and method of operation  
[NASA-CASE-MFS-28139-1] c 29 N87-18679

Nano-G research laboratory for a spacecraft  
[NASA-CASE-GSC-13197-1] c 18 N91-27201

**SPACEBORNE LASERS**

Doppler shift compensation system for laser transmitters and receivers  
[NASA-CASE-GSC-13194-1] c 36 N93-18287

**SPACEBORNE TELESCOPES**

Anastigmatic three-mirror telescope  
[NASA-CASE-MFS-23675-1] c 89 N79-10969

Cooled echelle grating spectrometer --- for space telescope applications  
[NASA-CASE-NPO-14372-1] c 35 N80-26635

Extended range X-ray telescope  
[NASA-CASE-MFS-25282-1] c 34 N83-19015

Dual aperture multispectral Schmidt objective  
[NASA-CASE-GSC-12756-1] c 74 N84-23248

Spectral slicing X-ray telescope with variable magnification  
[NASA-CASE-MFS-25942-1] c 74 N86-20124

Self indexing latch system  
[NASA-CASE-MFS-25956-1] c 37 N87-21333

**SPACECRAFT**

Interconnection of solar cells Patent  
[NASA-CASE-XGS-01475] c 03 N71-11058

Altitude sensor for space vehicles Patent  
[NASA-CASE-XLA-00793] c 21 N71-22880

Solar cell and circuit array and process for nullifying magnetic fields Patent  
[NASA-CASE-XGS-03390] c 03 N71-23187

High efficiency ionizer assembly Patent  
[NASA-CASE-XNP-01954] c 28 N71-28850

Altitude simulation chamber for rocket engine testing  
[NASA-CASE-MFS-20620] c 11 N72-27262

Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-15429-1] c 18 N84-22609

**SPACECRAFT ANTENNAS**

Parasitic probe antenna Patent  
[NASA-CASE-XKS-09348] c 09 N71-13521

Millimeter wave antenna system Patent Application  
[NASA-CASE-GSC-10949-1] c 07 N71-28965

Integrated thermoelectric generator/space antenna combination  
[NASA-CASE-XER-09521] c 09 N72-12136

Omnidirectional slot antenna for mounting on cylindrical space vehicle  
[NASA-CASE-LAR-10163-1] c 09 N72-25247

Singly-curved reflector for use in high-gain antennas  
[NASA-CASE-NPO-11361] c 07 N72-32169

Collapsible structure for an antenna reflector  
[NASA-CASE-NPO-11751] c 07 N73-24176

Multi-channel rotating optical interface for data transmission  
[NASA-CASE-NPO-14066-1] c 74 N79-34011

Antenna deployment mechanism for use with a spacecraft --- extensible and retractable telescopic antenna mast  
[NASA-CASE-GSC-12331-1] c 18 N80-14183

Spiral slotted phased antenna array  
[NASA-CASE-MSC-18532-1] c 32 N82-27558

**SPACECRAFT CABIN ATMOSPHERES**

Thermal control wall panel Patent  
[NASA-CASE-XLA-01243] c 33 N71-22792

Nonflammable coating compositions --- for use in high oxygen environments  
[NASA-CASE-MFS-20486-2] c 27 N74-17283

Regenerable device for scrubbing breathable air of CO<sub>2</sub> and moisture without special heat exchanger equipment  
[NASA-CASE-MSC-14771-1] c 54 N77-32722

**SPACECRAFT CABINS**

Suitport extra-vehicular access facility  
[NASA-CASE-ARC-11635-1] c 18 N90-16860

**SPACECRAFT COMMUNICATION**

Time division multiplex system  
[NASA-CASE-XGS-05918] c 07 N69-39974

Phase-shift data transmission system having a pseudo-noise SYNC code modulated with the data in a single channel Patent  
[NASA-CASE-XNP-00911] c 08 N70-41961

Tracking receiver Patent  
[NASA-CASE-XGS-08679] c 10 N71-21473

Omnidirectional microwave spacecraft antenna Patent  
[NASA-CASE-XLA-03114] c 09 N71-22888

VHF/UHF parasitic probe antenna Patent  
[NASA-CASE-XKS-09340] c 07 N71-24614

Rapid sync acquisition system Patent  
[NASA-CASE-NPO-10214] c 10 N71-26577

Turnstile slot antenna  
[NASA-CASE-GSC-11428-1] c 32 N74-20864

Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c 33 N76-27472

Antenna feed system for receiving circular polarization and transmitting linear polarization  
[NASA-CASE-NPO-14362-1] c 32 N80-16261

Common data buffer system --- communication with computational equipment utilized in spacecraft operations  
[NASA-CASE-KSC-11048-1] c 62 N81-24779

Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c 32 N81-27341

Measurement apparatus and procedure for the determination of surface emissivities  
[NASA-CASE-LAR-13455-1] c 32 N87-21206

Reed-Solomon decoder  
[NASA-CASE-NPO-15982-1] c 60 N87-21591

## SPACECRAFT COMPONENTS

Electrical connector Patent Application  
[NASA-CASE-MFS-14741] c 09 N70-20737

Vibration damping system Patent  
[NASA-CASE-XMS-01620] c 23 N71-15673

Intermittent type silica gel adsorption refrigerator Patent  
[NASA-CASE-XNP-00920] c 15 N71-15906

Omni-directional anisotropic molecular trap Patent  
[NASA-CASE-XGS-00783] c 30 N71-17788

Spacecraft airlock Patent  
[NASA-CASE-XLA-02050] c 31 N71-22968

Docking structure for spacecraft Patent  
[NASA-CASE-XMF-05941] c 31 N71-23912

Redundant actuating mechanism Patent  
[NASA-CASE-XGS-08718] c 15 N71-24600

Space simulator Patent  
[NASA-CASE-NPO-10141] c 11 N71-24964

Spacecraft Patent  
[NASA-CASE-MSC-13047-1] c 31 N71-25434

Peak acceleration limiter for vibrational tester Patent  
[NASA-CASE-NPO-10556] c 14 N71-27185

Solid state thermal control polymer coating Patent  
[NASA-CASE-XLA-01745] c 33 N71-28903

Scientific experiment flexible mount  
[NASA-CASE-MSC-12372-1] c 31 N72-25842

Airlock  
[NASA-CASE-MFS-20922-1] c 18 N74-22136

Thrust-isolating mounting --- characteristics of support for loads mounted in spacecraft  
[NASA-CASE-MFS-21680-1] c 18 N74-27397

Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
[NASA-CASE-MSC-14245-1] c 18 N75-27041

High temperature penetrator assembly with bayonet plug and ramp-activated lock  
[NASA-CASE-MSC-18526-1] c 37 N82-24494

Apparatus for releasably connecting first and second objects in predetermined space relationship  
[NASA-CASE-MSC-18969-1] c 18 N84-22605

Aerospace vehicle  
[NASA-CASE-LAR-13155-1] c 05 N86-19310

Spacecraft component heater control system  
[NASA-CASE-MFS-28327-1] c 18 N89-28556

Docking system for spacecraft  
[NASA-CASE-MSC-21327-1] c 18 N90-11798

High reliability robot friendly ORU interface  
[NASA-CASE-GSC-13360-1] c 37 N92-23377

**SPACECRAFT CONFIGURATIONS**

Inflatable honeycomb Patent  
[NASA-CASE-XLA-00204] c 32 N70-36536

Space and atmospheric reentry vehicle Patent  
[NASA-CASE-XGS-00260] c 31 N70-37924

Spacecraft separation system for spinning vehicles and/or payloads Patent  
[NASA-CASE-XLA-02132] c 31 N71-10582

Space shuttle vehicle and system  
[NASA-CASE-MSC-12433] c 31 N73-14854

Space vehicle  
[NASA-CASE-MFS-22734-1] c 18 N75-19329

Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612

Space Shuttle with rail system and aft thrust structure securing solid rocket boosters to external tank  
[NASA-CASE-MFS-25853-1] c 16 N84-27784

Shuttle orbiter with telescoping main propulsion unit and payload  
[NASA-CASE-LAR-13586-1] c 16 N92-10035

Shuttle orbiter with telescoping main propulsion unit and payload  
[NASA-CASE-LAR-13586-1] c 16 N93-20115

**SPACECRAFT CONSTRUCTION MATERIALS**

Pressurized cell micrometeoroid detector Patent  
[NASA-CASE-XLA-00936] c 14 N71-14996

Fluid impervious barrier including liquid metal alloy and method of making same Patent  
[NASA-CASE-XNP-08881] c 17 N71-28747

Method of making a composite sandwich lattice structure  
[NASA-CASE-LAR-11898-2] c 24 N78-17149

Fixture for environmental exposure of structural materials under compression load  
[NASA-CASE-LAR-12602-1] c 39 N83-32081

Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N87-23736

Aluminum alloy  
[NASA-CASE-LAR-13924-1-CU] c 26 N89-28621

Imide/arylene ether copolymers containing phosphine oxide groups  
[NASA-CASE-LAR-14925-1] c 27 N93-20567

**SPACECRAFT CONTROL**

Light sensitive digital aspect sensor Patent  
[NASA-CASE-XGS-00359] c 14 N70-34158

- Space vehicle attitude control Patent  
[NASA-CASE-XNP-00465] c 21 N70-35395
- Parachute glider Patent  
[NASA-CASE-XLA-00898] c 02 N70-36804
- Attitude control for spacecraft Patent  
[NASA-CASE-XNP-00294] c 21 N70-36938
- Attitude orientation of spin-stabilized space vehicles Patent  
[NASA-CASE-XLA-00281] c 21 N70-36943
- Hypersonic reentry vehicle Patent  
[NASA-CASE-XMS-04142] c 31 N70-41631
- Roll attitude star sensor system Patent  
[NASA-CASE-XNP-01307] c 21 N70-41856
- Canopus detector including automotive gain control of photomultiplier tube Patent  
[NASA-CASE-XNP-03914] c 21 N71-10771
- Spacecraft experiment pointing and attitude control system Patent  
[NASA-CASE-XLA-05464] c 21 N71-14132
- Attitude control system Patent  
[NASA-CASE-XGS-04393] c 21 N71-14159
- Reactance control system Patent  
[NASA-CASE-XMF-01598] c 21 N71-15583
- Spacecraft attitude detection system by stellar reference Patent  
[NASA-CASE-XGS-03431] c 21 N71-15642
- Inertial reference apparatus Patent  
[NASA-CASE-XAC-03107] c 23 N71-16098
- Construction and method of arranging a plurality of ion engines to form a cluster Patent  
[NASA-CASE-XNP-02923] c 28 N71-23081
- Ion beam deflector Patent  
[NASA-CASE-LEW-10689-1] c 28 N71-26173
- Heated porous plug microthruster  
[NASA-CASE-GSC-10640-1] c 28 N72-18766
- Flight control system  
[NASA-CASE-MSC-13397-1] c 21 N72-25595
- All sky pointing attitude control system  
[NASA-CASE-ARC-10716-1] c 35 N77-20399
- Propulsion apparatus and method using boil-off gas from a cryogenic liquid  
[NASA-CASE-MFS-25946-1] c 20 N86-26368
- Three axis attitude control system  
[NASA-CASE-GSC-12970-1] c 08 N88-23808
- SPACECRAFT DESIGN**
- Lunar landing flight research vehicle Patent  
[NASA-CASE-XFR-00929] c 31 N70-34966
- Space capsule Patent  
[NASA-CASE-XLA-01332] c 31 N71-15664
- Spacecraft radiator cover Patent  
[NASA-CASE-MSC-12049] c 31 N71-16080
- Method and apparatus for securing to a spacecraft Patent  
[NASA-CASE-MFS-11133] c 31 N71-16222
- Aerodynamic protection for space flight vehicles Patent  
[NASA-CASE-XNP-02507] c 31 N71-17679
- Self supporting space vehicle Patent  
[NASA-CASE-XLA-00117] c 31 N71-17680
- Multi-mission module Patent  
[NASA-CASE-XMF-01543] c 31 N71-17730
- Docking structure for spacecraft Patent  
[NASA-CASE-XMF-05941] c 31 N71-23912
- Spacecraft Patent  
[NASA-CASE-MSC-13047-1] c 31 N71-25434
- Emergency earth orbital escape device  
[NASA-CASE-MSC-13281] c 31 N72-18859
- Space vehicle  
[NASA-CASE-MFS-22734-1] c 18 N75-19329
- Space vehicle system  
[NASA-CASE-MSC-12561-1] c 18 N76-17185
- Method and apparatus for neutralizing potentials induced on spacecraft surfaces  
[NASA-CASE-GSC-11963-1] c 33 N77-10429
- Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612
- Aerospace vehicle  
[NASA-CASE-LAR-13155-1] c 05 N86-19310
- A two-stage earth-to-orbit transport with translating oblique wings for booster recovery  
[NASA-CASE-LAR-14156-1] c 16 N90-16781
- Fluid-loop reaction system  
[NASA-CASE-NPO-17204-1-CU] c 34 N91-25380
- SPACECRAFT DOCKING**
- Expanding center probe and drogue Patent  
[NASA-CASE-XMS-03613] c 31 N71-16346
- Docking structure for spacecraft Patent  
[NASA-CASE-XMF-05941] c 31 N71-23912
- Latching mechanism Patent  
[NASA-CASE-MSC-15474-1] c 15 N71-26162
- Docking structure for spacecraft  
[NASA-CASE-MFS-20863] c 31 N73-26876
- Latch mechanism  
[NASA-CASE-MSC-12549-1] c 37 N74-27903
- Spacecraft docking and alignment system --- using television camera system  
[NASA-CASE-MSC-12559-1] c 18 N76-14186
- Multiple in-line docking capability for rotating space stations  
[NASA-CASE-MFS-20855-1] c 15 N77-10112
- Combined docking and grasping device  
[NASA-CASE-MFS-23088-1] c 37 N77-23483
- Terminal guidance sensor system --- space shuttle coupling to orbiting satellites  
[NASA-CASE-NPO-14521-1] c 37 N81-27519
- Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c 18 N83-29303
- Apparatus for releasably connecting first and second objects in predetermined space relationship  
[NASA-CASE-MSC-18969-1] c 18 N84-22605
- Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612
- Rotatable electric cable connecting system  
[NASA-CASE-GSC-12899-1] c 33 N86-20669
- Preloadable vector sensitive latch  
[NASA-CASE-MSC-20910-1] c 37 N87-25582
- Range and range rate system  
[NASA-CASE-MSC-20867-1] c 36 N88-24958
- Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-2] c 18 N89-25266
- Space module assembly apparatus with docking alignment flexibility and restraint  
[NASA-CASE-MSC-21211-1] c 18 N89-28553
- Docking system for spacecraft  
[NASA-CASE-MSC-21327-1] c 18 N90-11798
- Docking mechanism for spacecraft  
[NASA-CASE-MSC-21386-1] c 18 N90-20126
- Smart tunnel: Docking mechanism  
[NASA-CASE-MSC-21360-1] c 18 N91-14374
- Standard remote manipulator system docking target augmentation for automated docking  
[NASA-CASE-MFS-28419-1] c 18 N91-27200
- Pressure vessel flex joint  
[NASA-CASE-MSC-21748-1] c 37 N92-21727
- Closed-loop autonomous docking system  
[NASA-CASE-MFS-28421-1] c 18 N92-28750
- SPACECRAFT ELECTRONIC EQUIPMENT**
- Dynamic Doppler simulator Patent  
[NASA-CASE-XMS-05454-1] c 07 N71-12391
- Vacuum deposition apparatus Patent  
[NASA-CASE-XMF-01667] c 15 N71-17647
- Nose cone mounted heat resistant antenna Patent  
[NASA-CASE-XMS-04312] c 07 N71-22984
- Electrical self-aligning connector --- orbital servicer vehicles  
[NASA-CASE-MFS-25211-2] c 33 N84-14423
- Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612
- SPACECRAFT ENVIRONMENTS**
- Portable environmental control system Patent  
[NASA-CASE-XMS-09632-1] c 05 N71-11203
- Quick disconnect latch and handle combination Patent  
[NASA-CASE-MFS-11132] c 15 N71-17649
- Dual solid cryogenics for spacecraft refrigeration Patent  
[NASA-CASE-GSC-10188-1] c 23 N71-24725
- Dual stage check valve  
[NASA-CASE-MSC-13587-1] c 15 N73-30459
- Metering gun for dispensing precisely measured charges of fluid  
[NASA-CASE-MFS-21163-1] c 54 N74-17853
- Automatic thermal switch --- spacecraft applications  
[NASA-CASE-GSC-12553-1] c 34 N83-28356
- SPACECRAFT EQUIPMENT**
- Four-terminal electrical testing device --- initiator bridgeway resistance  
[NASA-CASE-MSC-21166-1] c 35 N87-25555
- Range and range rate system  
[NASA-CASE-MSC-20867-1] c 36 N88-24958
- Capillary heat transport and fluid management device  
[NASA-CASE-MFS-28217-1] c 34 N89-14392
- Surface tension confined liquid cryogen cooler  
[NASA-CASE-GSC-13112-1] c 31 N89-29578
- Acoustic convective system  
[NASA-CASE-NPO-17278-1-CU] c 31 N90-21215
- System for connecting fluid couplings  
[NASA-CASE-MFS-26042-1-SB] c 37 N91-14613
- Two fault tolerant toggle-hook release  
[NASA-CASE-MSC-21671-1] c 37 N91-32498
- SPACECRAFT GUIDANCE**
- Ejection unit Patent  
[NASA-CASE-XNP-00676] c 15 N70-38996
- Trigonometric vehicle guidance assembly which aligns the three perpendicular axes of two three-axes systems Patent  
[NASA-CASE-XMF-00684] c 21 N71-21688
- Solar vane actuator Patent  
[NASA-CASE-XNP-05535] c 14 N71-23040
- Azimuth laying system Patent  
[NASA-CASE-XMF-01669] c 21 N71-23289
- Hermetic sealed vibration damper Patent  
[NASA-CASE-MSC-10959] c 15 N71-26243
- Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c 32 N82-23376
- SPACECRAFT INSTRUMENTS**
- Mechanical coordinate converter Patent  
[NASA-CASE-XNP-00614] c 14 N70-36907
- Air bearing Patent  
[NASA-CASE-XMF-00339] c 15 N70-39896
- Folding boom assembly Patent  
[NASA-CASE-XGS-00938] c 32 N70-41367
- Pressurized cell micrometeoroid detector Patent  
[NASA-CASE-XLA-00936] c 14 N71-14996
- Guidance and maneuver analyzer Patent  
[NASA-CASE-XNP-09572] c 14 N71-15621
- Clamping assembly for inertial components Patent  
[NASA-CASE-XMS-02184] c 15 N71-20813
- Optical projector system Patent  
[NASA-CASE-XNP-03853] c 23 N71-21882
- Combined optical attitude and altitude indicating instrument Patent  
[NASA-CASE-XLA-01907] c 14 N71-23268
- Method and apparatus for mapping planets  
[NASA-CASE-NPO-11001] c 07 N72-21118
- Spacecraft attitude control method and apparatus  
[NASA-CASE-HQN-10439] c 21 N72-21624
- Pump for delivering heated fluids  
[NASA-CASE-NPO-11417] c 15 N73-24513
- Deployable pressurized cell structure for a micrometeoroid detector  
[NASA-CASE-LAR-10295-1] c 35 N74-21062
- Distributed-switch Dicke radiometers  
[NASA-CASE-GSC-12219-1] c 35 N80-18359
- Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c 32 N82-12297
- Stirling cycle cryogenic cooler  
[US-PATENT-4,389,849] c 44 N83-28574
- Vibration isolation and pressure compensation apparatus for sensitive instrumentation  
[NASA-CASE-LAR-12728-1] c 35 N83-32026
- Optical system  
[NASA-CASE-NPO-15801-1] c 74 N85-23396
- Fully redundant mechanical release actuator  
[NASA-CASE-LAR-13198-1] c 37 N87-23983
- SPACECRAFT LANDING**
- Non-reusable kinetic energy absorber Patent  
[NASA-CASE-XLE-00810] c 15 N70-34861
- Foam generator Patent  
[NASA-CASE-XLA-00838] c 03 N70-36778
- Discrete local altitude sensing device Patent  
[NASA-CASE-XMS-03792] c 14 N70-41812
- SPACECRAFT LAUNCHING**
- Passive caging mechanism Patent  
[NASA-CASE-GSC-10306-1] c 15 N71-24694
- Disconnect unit  
[NASA-CASE-NPO-11330] c 33 N73-26958
- SPACECRAFT MODELS**
- Apparatus for measuring electric field strength on the surface of a model vehicle Patent  
[NASA-CASE-XLE-02038] c 09 N71-16086
- SPACECRAFT MODULES**
- Radial module space station Patent  
[NASA-CASE-XMS-01906] c 31 N70-41373
- Multi-mission module Patent  
[NASA-CASE-XMF-01543] c 31 N71-17730
- Spacecraft Patent  
[NASA-CASE-MSC-13047-1] c 31 N71-25434
- Thermal control system for a spacecraft modular housing  
[NASA-CASE-GSC-11018-1] c 31 N73-30829
- Robot serviced space facility  
[NASA-CASE-GSC-13408-1] c 18 N92-24244
- SPACECRAFT MOTION**
- Magnetic suspension and pointing system --- on a carrier vehicle  
[NASA-CASE-LAR-11889-1] c 35 N79-26372
- SPACECRAFT POSITION INDICATORS**
- Device for determining relative angular position between a spacecraft and a radiation emitting celestial body  
[NASA-CASE-GSC-11444-1] c 14 N73-28490
- Spacecraft attitude sensor  
[NASA-CASE-GSC-10890-1] c 21 N73-30640
- SPACECRAFT POWER SUPPLIES**
- Spacecraft battery seals  
[NASA-CASE-XGS-03864] c 15 N69-24320
- Space vehicle electrical system Patent  
[NASA-CASE-XMF-00517] c 03 N70-34157

- Ionospheric battery Patent  
[NASA-CASE-XGS-01593] c 03 N70-35408
- Generator for a space power system Patent  
[NASA-CASE-XLE-04250] c 09 N71-20446
- Monostable multivibrator  
[NASA-CASE-GSC-10082-1] c 10 N72-20221
- Stacked solar cell arrays  
[NASA-CASE-NPO-11771] c 03 N73-20040
- Thermoelectric power system --- for spacecraft  
[NASA-CASE-MFS-22002-1] c 44 N76-16612
- Solar energy power system  
[NASA-CASE-MFS-21628-2] c 44 N76-23675
- Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c 33 N79-24254
- Linear magnetic motor/generator --- to generate electric energy using magnetic flux for spacecraft power supply  
[NASA-CASE-GSC-12518-1] c 33 N82-24421
- Solar driven liquid metal MHD power generator  
[NASA-CASE-LAR-12495-1] c 44 N83-28573
- Rotatable electric cable connecting system  
[NASA-CASE-GSC-12899-1] c 33 N86-20669
- Bidirectional control system for energy flow in solar powered flywheel  
[NASA-CASE-MFS-25978-1] c 44 N87-21410
- Arctjet power supply and start circuit  
[NASA-CASE-LEW-14374-1] c 09 N88-28939
- Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-2] c 28 N91-14495
- SPACECRAFT PROPULSION**
- Colloid propulsion method and apparatus Patent  
[NASA-CASE-XLE-00817] c 28 N70-33265
- Trajectory-correction propulsion system Patent  
[NASA-CASE-XNP-01104] c 28 N70-39931
- Ion engine casing construction and method of making same Patent  
[NASA-CASE-XNP-06942] c 28 N71-23293
- Voice operated controller Patent  
[NASA-CASE-XLA-04063] c 31 N71-33160
- Solid propellant motor  
[NASA-CASE-NPO-11458A] c 20 N78-32179
- General purpose rocket furnace  
[NASA-CASE-MFS-23460-1] c 12 N79-26075
- Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion  
[NASA-CASE-NPO-14170-1] c 37 N81-15364
- Shuttle orbiter with telescoping main propulsion unit and payload  
[NASA-CASE-LAR-13586-1] c 16 N92-10035
- Shuttle orbiter with telescoping main propulsion unit and payload  
[NASA-CASE-LAR-13586-1] c 16 N93-20115
- SPACECRAFT RADIATORS**
- Thermal control canister  
[NASA-CASE-GSC-12253-1] c 34 N79-31523
- Thermal control system --- removing waste heat from industrial process spacecraft  
[NASA-CASE-GSC-12771-1] c 34 N84-14461
- Radiative cooler --- spacecraft radiators  
[NASA-CASE-NPO-15465-1] c 34 N84-22903
- Multi-leg heat pipe evaporator  
[NASA-CASE-MSC-20812-1] c 34 N86-27593
- Space vehicle thermal rejection system  
[NASA-CASE-LAR-13738-1] c 18 N87-29586
- Gas particle radiator  
[NASA-CASE-LEW-14297-1] c 35 N89-12048
- Liquid sheet radiator apparatus  
[NASA-CASE-LEW-14295-1] c 31 N91-15424
- SPACECRAFT RECOVERY**
- Assembly for recovering a capsule Patent  
[NASA-CASE-XMF-00641] c 31 N70-36410
- Wing deployment method and apparatus Patent  
[NASA-CASE-XMS-00907] c 02 N70-41630
- Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c 18 N83-29303
- Apparatus and method of capturing an orbiting spacecraft  
[NASA-CASE-MSC-20979-1] c 37 N87-22985
- SPACECRAFT REENTRY**
- Space capsule Patent  
[NASA-CASE-XLA-00149] c 31 N70-37938
- Event recorder Patent  
[NASA-CASE-XLA-01832] c 14 N71-21006
- Ceramic-ceramic shell tile thermal protection system and method thereof  
[NASA-CASE-ARC-11641-1] c 24 N88-18628
- SPACECRAFT SHIELDING**
- Aerodynamic protection for space flight vehicles Patent  
[NASA-CASE-XNP-02507] c 31 N71-17679
- Isothermal cover with thermal reservoirs Patent  
[NASA-CASE-MFS-20355] c 33 N71-25353
- Stabilized zinc oxide coating compositions Patent  
[NASA-CASE-XMF-07770-2] c 18 N71-26772
- Electrically conductive thermal control coatings  
[NASA-CASE-GSC-12207-1] c 24 N79-14156
- Thermal insulation protection means  
[NASA-CASE-MSC-12737-1] c 24 N79-25142
- Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures  
[NASA-CASE-MSC-18134-1] c 37 N81-15363
- High temperature glass thermal control structure and coating --- for application to spacecraft reusable heat shielding  
[NASA-CASE-ARC-11164-1] c 44 N83-34448
- Variable anodic thermal control coating  
[NASA-CASE-LAR-12719-1] c 44 N83-34449
- Shell tile thermal protection system  
[NASA-CASE-LAR-12862-1] c 27 N84-27886
- Mechanical fastener  
[NASA-CASE-LAR-12738-2] c 37 N85-30335
- Thermally isolated deployable shield for spacecraft  
[NASA-CASE-MFS-28524-1] c 18 N91-25167
- Thermally activated retainer means  
[NASA-CASE-MSC-21793-1] c 16 N91-28186
- Method for retarding oxidation of an organic substrate  
[NASA-CASE-LEW-15306-2] c 27 N93-28425
- Ablative shielding for hypervelocity projectiles  
[NASA-CASE-MSC-21884-1] c 27 N93-29088
- SPACECRAFT STABILITY**
- Reaction wheel scanner Patent  
[NASA-CASE-XGS-02629] c 14 N71-21082
- Attitude sensor  
[NASA-CASE-LAR-10586-1] c 19 N74-15089
- Annular momentum control device used for stabilization of space vehicles and the like  
[NASA-CASE-LAR-11051-1] c 15 N76-14158
- Tetherline system for orbiting satellites  
[NASA-CASE-MFS-23564-1] c 15 N78-25119
- Active nutation controller  
[NASA-CASE-GSC-12273-1] c 35 N80-21719
- Method of damping nutation motion with minimum spin axis attitude disturbance  
[NASA-CASE-GSC-12551-1] c 18 N83-28064
- SPACECRAFT STRUCTURES**
- Collapsible loop antenna for space vehicle Patent  
[NASA-CASE-XMF-00437] c 07 N70-40202
- Electro-optical alignment control system Patent  
[NASA-CASE-XMF-00908] c 14 N70-40238
- Spacecraft radiator cover Patent  
[NASA-CASE-MSC-12049] c 31 N71-16080
- Satellite appendage tie down cord Patent  
[NASA-CASE-XGS-02554] c 31 N71-21064
- Thermal control panel Patent  
[NASA-CASE-XLA-07728] c 33 N71-22890
- Inflatable tether Patent  
[NASA-CASE-XMS-10993] c 15 N71-28936
- Delayed simultaneous release mechanism  
[NASA-CASE-GSC-10814-1] c 03 N73-20039
- Pressurized panel  
[NASA-CASE-XLA-08916-2] c 14 N73-28487
- Structural heat pipe --- for spacecraft wall thermal insulation system  
[NASA-CASE-GSC-11619-1] c 34 N75-12222
- Auger attachment method for insulation --- of spacecraft  
[NASA-CASE-MSC-12615-1] c 37 N76-19437
- Particulate and solar radiation stable coating for spacecraft  
[NASA-CASE-LAR-10805-2] c 34 N77-18382
- Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c 54 N81-26718
- Curved cap corrugated sheet  
[NASA-CASE-LAR-12884-1] c 18 N84-33450
- Elastomer toughened polyimide adhesives --- bonding metal and composite material structures for aircraft and spacecraft  
[NASA-CASE-LAR-12775-2] c 27 N85-21349
- Shuttle orbiter with telescoping main propulsion unit and payload  
[NASA-CASE-LAR-13586-1] c 16 N92-10035
- Load limiting energy absorbing lightweight debris catcher  
[NASA-CASE-MSC-21562-1] c 16 N92-16007
- Shuttle orbiter with telescoping main propulsion unit and payload  
[NASA-CASE-LAR-13586-1] c 16 N93-20115
- Apparatus for simulating an exoatmospheric structure  
[NASA-CASE-MSC-21975-1] c 14 N93-22016
- SPACECRAFT TELEVISION**
- Electrically-operated rotary shutter Patent  
[NASA-CASE-XNP-00637] c 14 N70-40273
- Television signal scan rate conversion system Patent  
[NASA-CASE-XMS-07168] c 07 N71-11300
- Optical conversion method --- for spacecraft television  
[NASA-CASE-MSC-12618-1] c 74 N78-17865
- SPACECRAFT TEMPERATURE**
- Space vehicle thermal rejection system  
[NASA-CASE-LAR-13738-1] c 18 N87-29586
- Capillary heat transport and fluid management device  
[NASA-CASE-MFS-28217-1] c 34 N89-14392
- SPACECRAFT TRACKING**
- Ranging system Patent  
[NASA-CASE-NPO-10066] c 09 N71-18598
- Deep space monitor communication satellite system Patent  
[NASA-CASE-XAC-06029-1] c 31 N71-24813
- Optical tracking mount Patent  
[NASA-CASE-MFS-14017] c 14 N71-26627
- Orbital and entry tracking accessory for globes --- to provide range requirements for reentry vehicles to any landing site  
[NASA-CASE-LAR-10626-1] c 19 N74-21015
- Conical scan tracking system employing a large antenna  
[NASA-CASE-NPO-14009-1] c 32 N79-13214
- Efficient detection and signal parameter estimation with application to high dynamic GPS receiver  
[NASA-CASE-NPO-17820-1-CU] c 04 N91-14321
- SPACECREWS**
- Orbital escape device Patent  
[NASA-CASE-XMS-06162] c 31 N71-28851
- Integrated launch and emergency vehicle system  
[NASA-CASE-LAR-13780-1] c 18 N92-33013
- SPACELAB PAYLOADS**
- Hemispherical latching apparatus  
[NASA-CASE-MFS-25837-1] c 18 N85-29991
- SPALLATION**
- Method of producing I-123 --- by bombardment of cesium causing spallation  
[NASA-CASE-LEW-11390-2] c 25 N76-27383
- SPARK CHAMBERS**
- Laser measuring system for incremental assemblies --- measuring wire-wrapped frame assemblies in spark chambers  
[NASA-CASE-GSC-12321-1] c 36 N82-16396
- Inorganic spark chamber frame and method of making the same  
[NASA-CASE-GSC-12354-1] c 35 N82-24471
- SPARK GAPS**
- Protective circuit of the spark gap type  
[NASA-CASE-XAC-08981] c 09 N69-39897
- Measurement of time differences between luminous events Patent  
[NASA-CASE-XLA-01987] c 23 N71-23976
- SPARK IGNITION**
- High temperature spark plug Patent  
[NASA-CASE-XLE-00660] c 28 N70-39925
- Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c 37 N79-11405
- SPARK PLUGS**
- High temperature spark plug Patent  
[NASA-CASE-XLE-00660] c 28 N70-39925
- SPARKS**
- Electronic precipitator control  
[NASA-CASE-LAR-13273-2] c 33 N90-20320
- SPATIAL DISTRIBUTION**
- Propellant mass distribution metering apparatus Patent  
[NASA-CASE-NPO-10185] c 10 N71-26339
- SPATIAL FILTERING**
- Spatial filter for Q-switched lasers  
[NASA-CASE-XLE-12164-1] c 36 N77-32478
- Real-time optical multiple object recognition and tracking system and method  
[NASA-CASE-NPO-17139-1-CU] c 74 N88-25301
- SPATIAL RESOLUTION**
- Wide-angle flat field telescope  
[NASA-CASE-GSC-12825-1] c 74 N86-28732
- SPECIMENS**
- Low temperature storage container for transporting perishables to space station  
[NASA-CASE-MFS-28248-1] c 31 N88-24817
- Method of radiographic inspection of wooden members  
[NASA-CASE-LAR-13724-1] c 38 N90-23756
- SPECTRAL BANDS**
- Multispectral linear array multiband selection device  
[NASA-CASE-GSC-12911-1] c 74 N86-29650
- Programmable hyperspectral image mapper with on-array processing  
[NASA-CASE-NPO-17794-1-CU] c 74 N92-30104
- SPECTRAL CORRELATION**
- Correlation spectrometer having high resolution and multiplexing capability  
[NASA-CASE-NPO-15558-1] c 35 N84-34705
- SPECTRAL REFLECTANCE**
- Single reflector interference spectrometer and drive system therefor  
[NASA-CASE-NPO-11932-1] c 35 N74-23040
- SPECTRAL SENSITIVITY**
- Method and apparatus for enhancing laser absorption sensitivity  
[NASA-CASE-NPO-16567-1-CU] c 36 N87-28006

## SPECTRAL SIGNATURES

## SUBJECT INDEX

## SPECTRAL SIGNATURES

Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c 43 N79-17288

## SPECTROMETERS

Photoelectric energy spectrometer Patent  
[NASA-CASE-XNP-04161] c 14 N71-15599  
Variable frequency nuclear magnetic resonance spectrometer Patent  
[NASA-CASE-XNP-09830] c 14 N71-26266  
Maksutov spectrograph Patent  
[NASA-CASE-XLA-10402] c 14 N71-29041  
Dual purpose optical instrument capable of simultaneously acting as spectrometer and diffractometer  
[NASA-CASE-XNP-05231] c 14 N73-28491  
Compton scatter attenuation gamma ray spectrometer  
[NASA-CASE-MFS-21441-1] c 14 N73-30392  
Mossbauer spectrometer radiation detector  
[NASA-CASE-LAR-11155-1] c 35 N74-15091  
Single reflector interference spectrometer and drive system therefor  
[NASA-CASE-NPO-11932-1] c 35 N74-23040  
Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c 35 N75-19613  
Resonant waveguide stark cell --- using microwave spectrometers  
[NASA-CASE-LAR-11352-1] c 33 N75-26245  
Ion and electron detector for use in an ICR spectrometer  
[NASA-CASE-NPO-13479-1] c 35 N77-10492  
Frequency-scanning particle size spectrometer  
[NASA-CASE-NPO-13606-2] c 35 N80-18364  
Velocity servo for continuous scan Fourier interference spectrometer  
[NASA-CASE-NPO-14093-1] c 35 N80-20563  
Visible and infrared polarization ratio spectrophotometer  
[NASA-CASE-LAR-12285-1] c 35 N80-28687  
Portable reflectance spectrometer  
[NASA-CASE-NPO-13556-1] c 35 N84-33766  
Correlation spectrometer having high resolution and multiplexing capability  
[NASA-CASE-NPO-15558-1] c 35 N84-34705  
FET charge sensor and voltage probe  
[NASA-CASE-NPO-16045-1] c 76 N87-13313  
Method of fabricating an imaging X-ray spectrometer  
[NASA-CASE-GSC-12956-1] c 35 N87-14671

## SPECTROPHOTOMETERS

Apparatus for producing three-dimensional recordings of fluorescence spectra Patent  
[NASA-CASE-XGS-01231] c 14 N70-41676  
High resolution Fourier interferometer-spectrophotopolarimeter  
[NASA-CASE-NPO-13604-1] c 35 N76-31490  
Differential optoacoustic absorption detector  
[NASA-CASE-NPO-13759-1] c 74 N78-17867

## SPECTRORADIOMETERS

Compact spectroradiometer  
[NASA-CASE-HQN-10683] c 14 N71-34389

## SPECTROSCOPIC ANALYSIS

Spectroscopic equipment using a slender cylindrical reflector as a substitute for a slit Patent  
[NASA-CASE-XGS-08269] c 23 N71-26206  
Method and apparatus for determining optical absorption and emission characteristics of a crystal or non-crystalline fiber  
[NASA-CASE-LAR-13963-1] c 76 N90-24150  
Spectroscopic wear detector  
[NASA-CASE-LEW-15200-1] c 20 N93-18856

## SPECTROSCOPIC TELESCOPES

Variable magnification variable dispersion glancing incidence imaging x ray spectroscopic telescope  
[NASA-CASE-MFS-28013-3] c 89 N90-27594

## SPECTROSCOPY

Non-mechanical optical path switching and its application to dual beam spectroscopy including gas filter correlation radiometry  
[NASA-CASE-LAR-14588-1-CU] c 74 N92-29117

## SPECTRUM ANALYSIS

Photoelectric energy spectrometer Patent  
[NASA-CASE-XNP-04161] c 14 N71-15599  
Spectral method for monitoring atmospheric contamination of inert-gas welding shields Patent  
[NASA-CASE-XMF-02039] c 15 N71-15871  
Method and apparatus for high resolution spectral analysis  
[NASA-CASE-NPO-10748] c 08 N72-20177  
Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c 25 N81-14015  
Method and apparatus for frequency spectrum analysis  
[NASA-CASE-NPO-17759-1-CU] c 32 N92-29124

Method and circuit for controlling the evolution time interval of a laser output pulse  
[NASA-CASE-LAR-13772-1] c 36 N92-31788

## SPECULAR REFLECTION

Real time reflectometer --- measurement of specular reflectance  
[NASA-CASE-MFS-23118-1] c 35 N77-31465

## SPEECH BASEBAND COMPRESSION

Method and apparatus for telemetry adaptive bandwidth compression  
[NASA-CASE-MSC-20821-1] c 17 N87-25348

## SPEECH RECOGNITION

Speech analyzer  
[NASA-CASE-GSC-11898-1] c 32 N77-30309

## SPEED CONTROL

System for maintaining a motor at a predetermined speed utilizing digital feedback means Patent  
[NASA-CASE-XMF-06892] c 09 N71-24805  
Optimal control system for an electric motor driven vehicle  
[NASA-CASE-NPO-11210] c 11 N72-20244  
Two speed drive system --- mechanical device for changing speed on rotating vehicle wheel  
[NASA-CASE-MFS-20645-1] c 37 N74-23070  
Low speed phaselock speed control system --- for brushless dc motor  
[NASA-CASE-GSC-11127-1] c 09 N75-24758  
Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion  
[NASA-CASE-NPO-14170-1] c 37 N81-15364  
Variable speed drive  
[NASA-CASE-GSC-12643-1] c 37 N83-26078

## SPEED INDICATORS

Miniature electrooptical air flow sensor  
[NASA-CASE-LAR-13065-1] c 35 N85-20295

## SPEED REGULATORS

A dc motor speed control system Patent  
[NASA-CASE-MFS-14610] c 09 N71-28886

## SPENT FUELS

Gamma ray collimator  
[NASA-CASE-SSC-00013-1] c 38 N91-32515

## SPHERES

Guidance and maneuver analyzer Patent  
[NASA-CASE-XNP-09572] c 14 N71-15621  
Radar calibration sphere  
[NASA-CASE-XLA-11154] c 07 N72-21117  
Method of forming frozen spheres in a force-free drop tower  
[NASA-CASE-NPO-14845-1] c 27 N82-28442  
Sphere forming method and apparatus  
[NASA-CASE-NPO-15070-1] c 31 N83-35176  
Contactless pellet fabrication  
[NASA-CASE-NPO-15592-1] c 71 N84-16940  
Process for making a noble metal on tin oxide catalyst  
[NASA-CASE-LAR-13741-1-SB] c 25 N90-20180  
Fingered bola body, bola with same, and methods of use  
[NASA-CASE-MSC-21967-1] c 37 N92-30026

## SPHERICAL SHELLS

Electrode and insulator with shielded dielectric junction  
[NASA-CASE-XLE-03778] c 09 N69-21542  
Spherical measurement device  
[NASA-CASE-XLA-06683] c 14 N72-28436  
Method and apparatus for growing crystals  
[NASA-CASE-MFS-28137-1] c 76 N88-24544  
Multi-element spherical shell generation  
[NASA-CASE-NPO-17203-1-CU] c 34 N90-23700

## SPHERICAL TANKS

Spherical tank gauge Patent  
[NASA-CASE-XMS-06236] c 14 N71-21007

## SPHERICAL WAVES

Shock wave convergence apparatus  
[NASA-CASE-MFS-20890] c 14 N72-22439

## SPHEROIDS

Three-dimensional cultured glioma cell lines  
[NASA-CASE-MSC-21843-1-NP] c 51 N92-24052

## SPHYGMOGRAPHY

Logic-controlled occlusive cuff system  
[NASA-CASE-MSC-14836-1] c 52 N82-11770

## SPIKE NOZZLES

Aerodynamic spike nozzle Patent  
[NASA-CASE-XGS-01143] c 31 N71-15647

## SPIKE POTENTIALS

Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c 33 N81-19393

## SPILLING

Spillage detector for liquid chromatography systems  
[NASA-CASE-MSC-20206-1] c 25 N86-27431

## SPIN DYNAMICS

Nutation damper  
[NASA-CASE-GSC-11205-1] c 15 N73-25513  
Stabilization of He2(a 3 Sigma u+) molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c 72 N79-13826

Dual towline spin-recovery device  
[NASA-CASE-LAR-13076-1] c 08 N85-35200  
Miniaturization of flight deflection measurement system  
[NASA-CASE-LAR-13628-1] c 35 N90-23707

## SPIN REDUCTION

Optical spin compensator  
[NASA-CASE-XGS-02401] c 14 N69-27485  
Despin weight release Patent  
[NASA-CASE-XLA-00679] c 15 N70-38601  
Stretch de-spin mechanism Patent  
[NASA-CASE-XGS-00619] c 30 N70-40016  
Spacecraft separation system for spinning vehicles and/or payloads Patent  
[NASA-CASE-XLA-02132] c 31 N71-10582  
Method and means for damping nutation in a satellite Patent  
[NASA-CASE-XMF-00442] c 31 N71-10747

## SPIN STABILIZATION

Dynamic precession damper for spin stabilized vehicles Patent  
[NASA-CASE-XLA-01989] c 21 N70-34295  
Attitude orientation of spin-stabilized space vehicles Patent  
[NASA-CASE-XLA-00281] c 21 N70-36943  
Spacecraft attitude detection system by stellar reference Patent  
[NASA-CASE-XGS-03431] c 21 N71-15642  
Cartwheel satellite synchronization system Patent  
[NASA-CASE-XGS-05579] c 31 N71-15676  
Velocity package Patent  
[NASA-CASE-XLA-01339] c 31 N71-15692  
Passive dual spin misalignment compensators --- gyro stabilized device  
[NASA-CASE-GSC-11479-1] c 35 N74-28097  
Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c 08 N74-30421  
Active nutation controller  
[NASA-CASE-GSC-12273-1] c 35 N80-21719  
Thrust augmented spin recovery device  
[NASA-CASE-LAR-11970-2] c 08 N81-19130  
Scanner --- photography from a spin stabilized synchronous satellite  
[NASA-CASE-GSC-12032-2] c 43 N82-13465  
Apparatus for simulating an exoatmospheric structure  
[NASA-CASE-MSC-21975-1] c 14 N93-22016

## SPINDLES

Variable contour securing system  
[NASA-CASE-MSC-16270-1] c 37 N78-27423  
Noncircular rolling joints for vibrational reduction in slewing maneuvers  
[NASA-CASE-LAR-14515-1-CU] c 37 N92-33031

## SPINE

Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c 52 N81-25662

## SPIRAL ANTENNAS

Spiral slotted phased antenna array  
[NASA-CASE-MSC-18532-1] c 32 N82-27558

## SPIRAL WRAPPING

Adjustable tension wire guide Patent  
[NASA-CASE-XMS-02383] c 15 N71-15918  
Continuous self-locking spiral wound seal --- for maintaining pressure between chambers in cryogenic wind tunnels  
[NASA-CASE-LAR-12315-1] c 37 N82-24490  
Modified spiral wound retaining ring  
[NASA-CASE-LAR-12361-1] c 37 N83-19091

## SPIRALS (CONCENTRATORS)

Spiral groove seal --- for hydraulic rotating shaft  
[NASA-CASE-LEW-10326-3] c 37 N74-10474  
Fluid separator  
[NASA-CASE-MFS-28658-1] c 34 N93-17039

## SPIROMETERS

Balanced bellows spirometer  
[NASA-CASE-XAR-01547] c 05 N69-21473

## SPLICING

Optimized bolted joint  
[NASA-CASE-LAR-13250-1] c 37 N86-27630  
Permanent wire splicing by an explosive joining process  
[NASA-CASE-LAR-13825-1] c 31 N92-16162

## SPLINES

Radial spline assembly for antifriction bearings  
[NASA-CASE-MFS-28629-1] c 37 N93-17084  
Radial spline assembly for antifriction bearings  
[NASA-CASE-MFS-28629-1] c 37 N93-26001  
Spline screw autochanger  
[NASA-CASE-GSC-13435-1] c 37 N93-29505

## SPLINTS

Stretcher Patent  
[NASA-CASE-XMF-06589] c 05 N71-23159

## SPOILERS

Hydraulic actuator mechanism to control aircraft spoiler movements through dual input commands  
[NASA-CASE-LAR-12412-1] c 08 N82-24205

## SUBJECT INDEX

### SPOKES

Torque sensor having a spoked sensor element support structure  
[NASA-CASE-NPO-17461-1-CU] c 35 N91-17350

### SPORES

Lyophilized spore dispenser  
[NASA-CASE-LAR-10544-1] c 37 N74-13178

### SPOT WELDS

Electric arc welding Patent  
[NASA-CASE-XMF-00392] c 15 N70-34814  
Automatic closed circuit television arc guidance control Patent  
[NASA-CASE-MFS-13046] c 07 N71-19433

### SPRAY CHARACTERISTICS

Constant-output atomizer --- Inhalation therapy and aerosol research  
[NASA-CASE-MFS-25631-1] c 34 N84-12406

### SPRAY NOZZLES

Rocket injector head  
[NASA-CASE-XMF-04592-1] c 20 N79-21125  
Fire extinguishing apparatus having a slidable mass for a penetrator nozzle --- for penetrating aircraft and shuttle orbiter skin  
[NASA-CASE-KSC-11064-1] c 31 N81-14137  
Controlled overspray spray nozzle  
[NASA-CASE-MFS-25139-1] c 34 N82-13376  
Remotely controlled spray gun  
[NASA-CASE-MFS-28110-1] c 37 N87-24689

### SPRAYED COATINGS

Method of making a diffusion bonded refractory coating Patent  
[NASA-CASE-XLE-01604-2] c 15 N71-15610  
Thermal protection ablation spray system Patent  
[NASA-CASE-XLA-04251] c 18 N71-26100  
Peen plating  
[NASA-CASE-GSC-11163-1] c 15 N73-32360  
Sprayable low density ablator and application process  
[NASA-CASE-MFS-23506-1] c 24 N78-24290  
Spray coating apparatus having a rotatable workpiece holder  
[NASA-CASE-ARC-11110-1] c 37 N82-24492  
Thermal barrier coating system having improved adhesion  
[NASA-CASE-LEW-1335901] c 27 N83-31855  
Spray applicator for spraying coatings and other fluids in space  
[NASA-CASE-MS-C-18852-1] c 37 N85-29283  
Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N86-32550  
Plasma sprayed ceramic thermal barrier coating for NiAl-based intermetallic alloys  
[NASA-CASE-LEW-15535-1] c 26 N93-31294

### SPRAYERS

External liquid-spray cooling of turbine blades Patent  
[NASA-CASE-XLE-00037] c 28 N70-33372  
Method and apparatus for attaching physiological monitoring electrodes Patent  
[NASA-CASE-XFR-07658-1] c 05 N71-26293  
Liquid spray cooling method Patent  
[NASA-CASE-XLE-00027] c 33 N71-29152  
Closed loop spray cooling apparatus --- for particle accelerator targets  
[NASA-CASE-LEW-11981-1] c 31 N78-17237  
Spray coating apparatus having a rotatable workpiece holder  
[NASA-CASE-ARC-11110-1] c 37 N82-24492  
Spray applicator for spraying coatings and other fluids in space  
[NASA-CASE-MS-C-18852-1] c 37 N85-29283  
Liquid seeding atomizer  
[NASA-CASE-ARC-11631-1] c 34 N87-21255  
Remotely controlled spray gun  
[NASA-CASE-MFS-28110-1] c 37 N87-24689  
Warm fog dissipation using large volume water sprays  
[NASA-CASE-MFS-25962-1] c 09 N89-25242  
Tissue simulating gel for medical research  
[NASA-CASE-LAR-14036-1] c 27 N91-13562  
Sprayable lightweight ablative coating  
[NASA-CASE-MFS-28372-1] c 27 N92-16123

### SPRAYING

Aircraft wheel spray drag alleviator Patent  
[NASA-CASE-XLA-01583] c 02 N70-36825  
Closed loop spray cooling apparatus  
[NASA-CASE-LEW-11981-2] c 34 N79-20336  
Method and apparatus for suppressing ignition overpressure in solid rocket propulsion systems  
[NASA-CASE-MFS-25843-1] c 20 N83-17588

### SPREAD SPECTRUM TRANSMISSION

Navigation system and method  
[NASA-CASE-GSC-12508-1] c 04 N84-22546  
Multipath noise reduction spread spectrum signals  
[NASA-CASE-NPO-18970-1-CU] c 32 N93-28126

### SPREADING

Tool attachment for spreading loose elements away from work Patent  
[NASA-CASE-XMF-02107] c 15 N71-10809

### SPRINGS (ELASTIC)

Belleville spring assembly with elastic guides  
[NASA-CASE-XNP-09452] c 15 N69-27504  
Multiple Belleville spring assembly Patent  
[NASA-CASE-XNP-00840] c 15 N70-38225  
Switching mechanism with energy storage means Patent  
[NASA-CASE-XGS-00473] c 03 N70-38713  
Load cell protection device Patent  
[NASA-CASE-XMS-06782] c 32 N71-15974  
Vibration isolation system using compression springs  
[NASA-CASE-NPO-11012] c 15 N72-11391  
Spring operated accelerator and constant force spring mechanism therefor  
[NASA-CASE-ARC-10898-1] c 35 N77-18417  
Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c 44 N80-29834  
Resilient seal ring assembly with spring means applying force to wedge member --- cryogenic applications  
[NASA-CASE-MFS-25678-1] c 37 N84-11497  
Unidirectional flexural pivot  
[NASA-CASE-GSC-12622-1] c 37 N84-12492  
Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797  
Rotary stepping device with memory metal actuator  
[NASA-CASE-NPO-15482-1] c 37 N87-23970  
Locking hinge  
[NASA-CASE-MS-C-21056-1] c 18 N88-23827

### SPUTTERING

A method for the deposition of beta-silicon carbide by isoeptaxy  
[NASA-CASE-ERC-10120] c 26 N69-33482  
Method of forming transparent films of ZnO  
[NASA-CASE-FRC-10019] c 15 N73-12487  
Method and apparatus for sputtering utilizing an apertured electrode and a pulsed substrate bias  
[NASA-CASE-LEW-10920-1] c 17 N73-24569  
Sputtering holes with ion beamlets  
[NASA-CASE-LEW-11646-1] c 20 N74-31269  
Multitarget sequential sputtering apparatus  
[NASA-CASE-NPO-13345-1] c 37 N75-19684  
Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c 37 N81-19455  
Refractory coatings and method of producing the same  
[NASA-CASE-LEW-13169-1] c 26 N82-29415  
Ion sputter textured graphite --- anode collector plates in electron tube devices  
[NASA-CASE-LEW-12919-1] c 24 N83-10117  
Mechanical bonding of metal method  
[NASA-CASE-LEW-12941-1] c 26 N83-10170  
Diamondlike flake composites  
[NASA-CASE-LEW-13837-1] c 24 N84-22695  
Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095  
Ion sputter textured graphite electrode plates  
[NASA-CASE-LEW-12919-2] c 70 N84-28565  
Diamondlike flakes  
[NASA-CASE-LEW-13837-2] c 24 N85-21267  
Liquid crystal light valve structures  
[NASA-CASE-MS-C-20036-1] c 76 N85-33826  
Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-1] c 27 N86-19458  
Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587  
Ion beam sputter etching  
[NASA-CASE-LEW-13899-1] c 31 N87-21160

### SQUARE WAVES

High speed phase detector Patent  
[NASA-CASE-XNP-01306-2] c 09 N71-24596

### SQUARES (MATHEMATICS)

Apparatus for computing square roots Patent  
[NASA-CASE-XGS-04768] c 08 N71-19437

### SQUEEZE FILMS

Dual clearance squeeze film damper  
[NASA-CASE-LEW-13506-1] c 37 N85-33490

### SQUIBS

Separation nut Patent  
[NASA-CASE-XGS-01971] c 15 N71-15922

### SQUID (DETECTORS)

Planar thin film SQUID with integral flux concentrator  
[NASA-CASE-MFS-28282-1] c 76 N88-29602

### STABILITY

Variable friction secondary seal for face seals  
[NASA-CASE-LEW-14170-1] c 37 N86-25790  
Optical distance measuring instrument  
[NASA-CASE-GSC-12761-1] c 74 N86-32266

## STAGE SEPARATION

Reflection oscillators employing series resonant crystals  
[NASA-CASE-GSC-13173-1] c 33 N90-23635

Vinyl capped addition polyimides  
[NASA-CASE-LEW-15027-1] c 27 N91-13566

Adjustable steam producing flexible orifice independent of fluid pressure  
[NASA-CASE-NPO-17625-1-CU] c 34 N92-21724

Sintering silicon nitride  
[NASA-CASE-LEW-15489-1] c 27 N93-17062

Enhanced fatigue and retention in ferroelectric thin film memory capacitors by post-top electrode anneal treatment  
[NASA-CASE-NPO-18551-1-CU] c 33 N93-17277

### STABILITY AUGMENTATION

Velocity vector control system augmented with direct lift control  
[NASA-CASE-LAR-12268-1] c 08 N81-24106

Leading edge flap system for aircraft control augmentation  
[NASA-CASE-LAR-12787-2] c 08 N85-19985

### STABILITY TESTS

Method and apparatus for checking the stability of a setup for making reflection type holograms  
[NASA-CASE-MFS-21455-1] c 35 N74-15146

### STABILIZATION

Ultrastable calibrated light source  
[NASA-CASE-MS-C-12293-1] c 14 N72-27411

System for stabilizing torque between a balloon and gondola  
[NASA-CASE-GSC-11077-1] c 02 N73-13008

Suppression of flutter  
[NASA-CASE-LAR-10682-1] c 02 N73-26004

Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential  
[NASA-CASE-GSC-11425-2] c 76 N75-25730

Arc control in compact arc lamps  
[NASA-CASE-NPO-10870-1] c 33 N77-22386

Self-stabilizing radial face seal  
[NASA-CASE-LEW-12991-1] c 37 N81-24442

Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333

Stabilization and oscillation of an acoustically levitated object  
[NASA-CASE-NPO-16896-1-CU] c 71 N89-13236

Device for mechanically stabilizing web ribbon buttons during growth initiation  
[NASA-CASE-NPO-17074-2-CU] c 76 N92-21499

### STABILIZED PLATFORMS

Hydraulic drive mechanism Patent  
[NASA-CASE-XMS-03252] c 15 N71-10658

Failure detection and control means for improved drift performance of a gimbalized platform system  
[NASA-CASE-MFS-23551-1] c 04 N76-26175

Rotary leveling base platform  
[NASA-CASE-ARC-10981-1] c 37 N78-27425

Magnetic bearing and motor  
[NASA-CASE-GSC-12726-1] c 37 N83-34323

### STABILIZERS

Satellite despin device Patent  
[NASA-CASE-XMF-08523] c 31 N71-20396

### STABILIZERS (AGENTS)

Hydrazinium nitroformate propellant stabilized with nitrogen  
[NASA-CASE-NPO-12000] c 27 N72-25699

### STABILIZERS (FLUID DYNAMICS)

Assembly for recovering a capsule Patent  
[NASA-CASE-XMF-00641] c 31 N70-36410

Mechanical stability augmentation system Patent  
[NASA-CASE-XLA-06339] c 02 N71-13422

Apparatus for automatically stabilizing the attitude of a nonrigid vehicle  
[NASA-CASE-ARC-10134] c 30 N72-17873

Life raft stabilizer  
[NASA-CASE-MS-C-12393-1] c 02 N73-26006

Externally supported internally stabilized flexible duct joint  
[NASA-CASE-MFS-19194-1] c 37 N76-14460

Apparatus and method for improving spin recovery on aircraft  
[NASA-CASE-LAR-14747-1] c 08 N93-20039

### STABLE OSCILLATIONS

Amplifier drift tester  
[NASA-CASE-XMS-05562-1] c 09 N69-39986

Real-time dynamic holographic image storage device  
[NASA-CASE-LAR-13989-1] c 35 N91-13694

### STACKS

Remote fire stack igniter --- with solenoid-controlled valve  
[NASA-CASE-MFS-21675-1] c 25 N74-33378

### STAGE SEPARATION

Tubular coupling having frangible connecting means  
[NASA-CASE-XLA-02854] c 15 N69-27490



- Missile stage separation indicator and stage initiator Patent  
[NASA-CASE-XLA-00791] c 03 N70-39930
- Quick release separation mechanism Patent  
[NASA-CASE-XLA-01441] c 15 N70-41679
- Spacecraft separation system for spinning vehicles and/or payloads Patent  
[NASA-CASE-XLA-02132] c 31 N71-10582
- Payload/burned-out motor case separation system Patent  
[NASA-CASE-XLA-05369] c 31 N71-15687
- Single action separation mechanism Patent  
[NASA-CASE-XLA-00188] c 15 N71-22874
- Lateral displacement system for separated rocket stages Patent  
[NASA-CASE-XLA-04804] c 31 N71-23008
- Separation simulator Patent  
[NASA-CASE-XKS-04631] c 10 N71-23663
- Frangible link  
[NASA-CASE-MSC-11849-1] c 15 N72-22488
- Tanker orbit transfer vehicle and method  
[NASA-CASE-MSC-20543-1] c 18 N84-22610
- STAGNATION PRESSURE**
- Traversing probe Patent  
[NASA-CASE-XFR-02007] c 12 N71-24692
- Stagnation pressure probe --- for measuring pressure of supersonic gas streams  
[NASA-CASE-LAR-11139-1] c 35 N74-32878
- STAGNATION TEMPERATURE**
- Enthalpy and stagnation temperature determination of a high temperature laminar flow gas stream Patent  
[NASA-CASE-XLE-00266] c 14 N70-34156
- STAINING**
- Automated single-slide staining device  
[NASA-CASE-LAR-11649-1] c 51 N77-27677
- STAINLESS STEELS**
- Method of joining aluminum to stainless steel Patent  
[NASA-CASE-MFS-07369] c 15 N71-20443
- Ultrasonic scanning system for in-place inspection of brazed tube joints  
[NASA-CASE-MFS-20767-1] c 38 N74-15130
- Method of forming a wick for a heat pipe  
[NASA-CASE-NPO-13391-1] c 34 N76-27515
- Method of making reinforced composite structure  
[NASA-CASE-LEW-12619-1] c 24 N77-19171
- Moving body velocity arresting line --- stainless steel cables with energy absorbing sleeves  
[NASA-CASE-LAR-12372-1] c 37 N82-18601
- Method of forming dynamic membrane on stainless steel support  
[NASA-CASE-MSC-18172-3] c 31 N88-29052
- Sharps container  
[NASA-CASE-MSC-21776-1] c 31 N92-33612
- STAIRWAYS**
- Platform stair lift  
[NASA-CASE-MFS-28772-1] c 54 N93-29845
- STAMPING**
- Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c 37 N84-12491
- Ultrasonic angle beam standard reflector --- ultrasonic nondestructive inspection  
[NASA-CASE-LAR-13153-1] c 71 N86-21276
- STANDARDS**
- Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MFS-23845-1] c 33 N81-17348
- Ultrasonic angle beam standard reflector --- ultrasonic nondestructive inspection  
[NASA-CASE-LAR-13153-1] c 71 N86-21276
- A reference standard for bidirectional reflection distribution function and bidirectional transmission distribution function measurement  
[NASA-CASE-MFS-28183-1] c 74 N89-13253
- STARTING WAVES**
- Method and apparatus for shaping and enhancing acoustical levitation forces  
[NASA-CASE-MFS-25050-1] c 71 N81-15767
- Image readout device with electronically variable spatial resolution  
[NASA-CASE-LAR-12633-1] c 33 N82-24416
- Acoustic levitation methods and apparatus  
[NASA-CASE-NPO-15562-1] c 71 N82-27086
- System for controlled acoustic rotation of objects  
[NASA-CASE-NPO-15522-1] c 71 N83-32516
- Vibrating-chamber levitation systems  
[NASA-CASE-NPO-16142-1-CU] c 35 N86-20752
- Motion measurement of acoustically levitated object  
[NASA-CASE-NPO-18191-1-CU] c 09 N93-24601
- STAR TRACKERS**
- Roll attitude star sensor system Patent  
[NASA-CASE-XNP-01307] c 21 N70-41856
- Sun tracker with rotatable plane-parallel plate and two photocells Patent  
[NASA-CASE-XGS-01159] c 21 N71-10678
- Canopus detector including automotive gain control of photomultiplier tube Patent  
[NASA-CASE-XNP-03914] c 21 N71-10771
- Spacecraft attitude detection system by stellar reference Patent  
[NASA-CASE-XGS-03431] c 21 N71-15642
- Reference voltage switching unit  
[NASA-CASE-NPO-11253] c 09 N72-17157
- Star tracking reticles and process for the production thereof  
[NASA-CASE-GSC-11188-2] c 21 N73-19630
- Star tracking reticles  
[NASA-CASE-GSC-11188-1] c 14 N73-32320
- Formation of star tracking reticles  
[NASA-CASE-GSC-11188-3] c 74 N74-20008
- Star scanner --- with a reticle with a pair of slits having differing separation  
[NASA-CASE-GSC-11569-1] c 89 N74-30886
- Programmable scan/read circuitry for charge coupled device imaging detectors --- spacecraft attitude control and star trackers  
[NASA-CASE-NPO-15345-1] c 74 N84-23247
- STAR EFFECT**
- Resonant waveguide stark cell --- using microwave spectrometers  
[NASA-CASE-LAR-11352-1] c 33 N75-26245
- Stark-effect modulation of CO<sub>2</sub> laser with NH<sub>2</sub>D  
[NASA-CASE-NPO-11945-1] c 36 N76-18427
- Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c 25 N81-14015
- Stark effect spectrophone for continuous absorption spectra monitoring --- a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c 25 N81-25159
- STARTERS**
- Starting circuit for vapor lamps and the like Patent  
[NASA-CASE-XNP-01058] c 09 N71-12540
- Motor run-up system --- power lines  
[NASA-CASE-NPO-13374-1] c 33 N75-19524
- Motor power factor controller with a reduced voltage starter  
[NASA-CASE-MFS-25586-1] c 33 N82-11360
- STARTING**
- Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c 33 N80-26599
- Arcjet power supply and start circuit  
[NASA-CASE-LEW-14374-1] c 09 N88-28939
- STATIC DEFORMATION**
- Acoustic radiation stress measurement  
[NASA-CASE-LAR-13440-1] c 71 N87-21653
- STATIC DISCHARGERS**
- Use of glow discharge in fluidized beds  
[NASA-CASE-ARC-11245-1] c 28 N82-18401
- STATIC FRICTION**
- Friction measuring apparatus Patent  
[NASA-CASE-XNP-08680] c 14 N71-22995
- Static coefficient test method and apparatus  
[NASA-CASE-GSC-11893-1] c 35 N76-31489
- STATIC INVERTERS**
- Static inverters which sum a plurality of waves Patent  
[NASA-CASE-XMF-00663] c 08 N71-18752
- Static inverter Patent  
[NASA-CASE-XGS-05289] c 09 N71-19470
- STATIC LOADS**
- Instrument for measuring torsional creep and recovery Patent  
[NASA-CASE-XLE-01481] c 14 N71-10781
- Tension measurement device Patent  
[NASA-CASE-XMS-04545] c 15 N71-22878
- Static feed water electrolysis subsystem development  
[NASA-CASE-MSC-21577-1-SB] c 25 N91-23271
- STATIC PRESSURE**
- Aerodynamic measuring device Patent  
[NASA-CASE-XLA-00481] c 14 N70-36824
- Check valve assembly for a probe Patent  
[NASA-CASE-XLA-00128] c 15 N70-37925
- Static pressure probe  
[NASA-CASE-LAR-11552-1] c 35 N76-14429
- Static pressure orifice system testing method and apparatus  
[NASA-CASE-LAR-12269-1] c 35 N80-18358
- Apparatus and method for jet noise suppression  
[NASA-CASE-LAR-11903-2] c 71 N84-14873
- Porous plug for reducing orifice induced pressure error in airfoils  
[NASA-CASE-LAR-13569-1] c 35 N89-12841
- Dynamic tester for rotor seals and bearings  
[NASA-CASE-MFS-28493-1] c 09 N91-25155
- Water cooled static pressure probe  
[NASA-CASE-LAR-14340-1-CU] c 35 N92-21586
- STATIONKEEPING**
- Station keeping of a gravity gradient stabilized satellite Patent  
[NASA-CASE-XLA-03132] c 31 N71-22969
- STATISTICAL ANALYSIS**
- Multistage estimation of received carrier signal parameters under very high dynamic conditions of the receiver  
[NASA-CASE-NPO-17911-1-CU] c 32 N90-27016
- STATISTICAL CORRELATION**
- Optical probing of supersonic flows with statistical correlation  
[NASA-CASE-MFS-20642] c 14 N72-21407
- STATOR BLADES**
- Stator rotor tools  
[NASA-CASE-MSC-16000-1] c 37 N78-24544
- STATORS**
- Nickel base alloy --- for gas turbine engine stator vanes  
[NASA-CASE-LEW-12270-1] c 26 N77-32280
- Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c 44 N80-29834
- Brushless DC motor control system responsive to control signals generated by a computer or the like  
[NASA-CASE-NPO-16420-1] c 33 N86-20681
- Damping seal for turbomachinery  
[NASA-CASE-MFS-25842-2] c 37 N86-20788
- Radial and torsionally controlled magnetic bearing  
[NASA-CASE-GSC-12957-1] c 37 N87-17038
- Turbomachinery rotor support with damping  
[NASA-CASE-MFS-28345-1] c 37 N91-14608
- STEADY STATE**
- Steady state thermal radiometers  
[NASA-CASE-MFS-21108-1] c 34 N74-27861
- Predictive sensor method and apparatus  
[NASA-CASE-SSC-00006-1] c 35 N91-13691
- STEAM**
- Steam cooled rich-burn combustor liner  
[NASA-CASE-LEW-13609-1] c 25 N90-11824
- Wet atmospheric generation apparatus  
[NASA-CASE-MFS-28177-1] c 35 N91-21496
- STEAM TURBINES**
- Boiler for generating high quality vapor Patent  
[NASA-CASE-XLE-00785] c 33 N71-16104
- STEELS**
- Potassium silicate zinc coatings  
[NASA-CASE-GSC-10361-1] c 18 N72-23581
- Ion-beam nitriding of steels  
[NASA-CASE-LEW-14104-2] c 26 N88-14179
- Magneto acoustic emission apparatus for testing materials for embrittlement  
[NASA-CASE-LAR-13817-1] c 26 N90-21170
- Method and apparatus for using magneto-acoustic remanence to determine embrittlement  
[NASA-CASE-LAR-13817-5] c 39 N92-28757
- Magnetic remanence method and apparatus to test materials for embrittlement  
[NASA-CASE-LAR-13817-4] c 39 N92-29101
- Magneto acoustic emission method for testing materials for embrittlement  
[NASA-CASE-LAR-13817-2] c 39 N92-29155
- STEERABLE ANTENNAS**
- Array phasing device Patent  
[NASA-CASE-ERC-10046] c 10 N71-18722
- Satellite communication system Patent  
[NASA-CASE-XNP-02389] c 07 N71-28900
- Amplitude steered array  
[NASA-CASE-GSC-11446-1] c 33 N74-20860
- Phased array antenna control  
[NASA-CASE-MSC-14939-1] c 32 N79-11264
- Switched steerable multiple beam antenna system  
[NASA-CASE-MSC-20873-1-SB] c 32 N89-11961
- STEERING**
- Steerable solid propellant rocket motor Patent  
[NASA-CASE-XNP-00234] c 28 N70-38645
- Closed-loop autonomous docking system  
[NASA-CASE-MFS-28421-1] c 18 N92-28750
- STELLAR LUMINOSITY**
- Radiant energy intensity measurement system Patent  
[NASA-CASE-XNP-06510] c 14 N71-23797
- STELLAR SPECTRA**
- Radiant energy intensity measurement system Patent  
[NASA-CASE-XNP-06510] c 14 N71-23797
- STENCIL PROCESSES**
- Method of tracing contour patterns for use in making gradual contour resin matrix composites  
[NASA-CASE-ARC-11246-1] c 31 N83-34073
- STEPPING MOTORS**
- Scanner --- photography from a spin stabilized synchronous satellite  
[NASA-CASE-GSC-12032-2] c 43 N82-13465
- STEREOPHOTOGRAPHY**
- Stereo photomicrography system  
[NASA-CASE-LAR-10176-1] c 14 N72-20380
- Optical stereo video signal processor  
[NASA-CASE-MFS-25752-1] c 74 N86-21348

Stereoscopic camera and viewing systems with undistorted depth presentation and reduced or eliminated erroneous acceleration and deceleration perceptions, or with perceptions produced or enhanced for special effects  
[NASA-CASE-NPO-18028-1-CU] c 74 N92-16809

**STEREOSCOPIC VISION**

Stereoscopic television system and apparatus  
[NASA-CASE-ARC-10160-1] c 23 N72-27728  
Television monitor field shifter and an opto-electronic method for obtaining a stereo image of optimal depth resolution and reduced depth distortion on a single screen  
[NASA-CASE-NPO-17249-1-CU] c 32 N89-28676  
Near real-time stereo vision system  
[NASA-CASE-NPO-18593-1-CU] c 74 N93-18276

**STEREOSCOPY**

Real-time 3-D X-ray and gamma-ray viewer  
[NASA-CASE-GSC-12640-1] c 74 N84-11920

**STERILIZATION**

Process for preparing sterile solid propellants Patent  
[NASA-CASE-XNP-01749] c 27 N70-41897  
Processing for producing a sterilized instrument Patent  
[NASA-CASE-XNP-09763] c 14 N71-20461  
Air conditioned suit  
[NASA-CASE-LAR-10076-1] c 05 N73-20137  
Protein sterilization method of firefly luciferase using reduced pressure and molecular sieves  
[NASA-CASE-GSC-10225-1] c 06 N73-27086  
Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c 54 N75-27761  
Portable heatable container  
[NASA-CASE-NPO-14237-1] c 44 N80-20808  
System for sterilizing objects --- cleaning space vehicle systems  
[NASA-CASE-KSC-11085-1] c 54 N81-24724

**STERILIZATION EFFECTS**

Electrical connector  
[NASA-CASE-NPO-10694] c 09 N72-20200

**STIFFENING**

Metal matrix composite structural panel construction  
[NASA-CASE-LAR-12807-1] c 24 N84-11214

**STIFFNESS**

Modified face seal for positive film stiffness  
[NASA-CASE-LEW-12989-1] c 37 N82-12442

**STILBENE**

Vinyl stilbazoles  
[NASA-CASE-ARC-11429-3CU] c 27 N87-16908

**STIMULATED EMISSION**

Repetitively pulsed, wavelength selective laser Patent  
[NASA-CASE-ERC-10178] c 16 N71-24832  
A quality monitor and monitoring technique employing optically stimulated electron emission  
[NASA-CASE-LAR-15063-1] c 38 N93-30414

**STIMULATED EMISSION DEVICES**

A quality monitor and monitoring technique employing optically stimulated electron emission  
[NASA-CASE-LAR-15063-1] c 38 N93-30414

**STIRLING CYCLE**

Stirling cycle engine and refrigeration systems  
[NASA-CASE-NPO-13613-1] c 37 N76-29590  
Power control for hot gas engines  
[NASA-CASE-NPO-14220-1] c 37 N81-14318  
Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c 37 N81-17432  
Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c 44 N81-17518  
Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c 37 N81-25370  
Stirling cycle cryogenic cooler  
[US-PATENT-4,389,849] c 44 N83-28574  
Magnetically actuated compressor  
[NASA-CASE-GSC-12799-1] c 31 N85-21404

**STIRLING ENGINES**

Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c 37 N81-17432  
Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c 44 N81-17518  
Solar thermal energy receiver  
[NASA-CASE-LEW-14949-1] c 44 N92-29143

**STIRRING**

Stirring apparatus for plural test tubes Patent  
[NASA-CASE-XAC-06956] c 15 N71-21177  
Planar oscillatory stirring apparatus  
[NASA-CASE-MFS-26002-1-CU] c 35 N86-26598

**STOICHIOMETRY**

Sulfone-ester polymers containing pendent ethynyl groups  
[NASA-CASE-LAR-13316-1] c 27 N86-27450  
The 5-(4-Ethynylphenoxy) isophthalic chloride  
[NASA-CASE-LAR-13316-2] c 27 N87-14515  
MBE growth technology for high quality strained III-V layers  
[NASA-CASE-NPO-17723-1-CU] c 76 N90-26685

Method of forming three-dimensional semiconductor structures

[NASA-CASE-NPO-17835-1-CU] c 76 N90-27518  
Growth of III-V films by control of MBE growth front stoichiometry  
[NASA-CASE-NPO-17724-1-CU] c 76 N92-22035  
Polyimide molding powder, coating, adhesive, and matrix resin  
[NASA-CASE-LAR-14163-1] c 27 N92-33014  
Polyimides with improved compression moldability  
[NASA-CASE-LAR-14457-1] c 27 N93-25997

**STOPPING**

Obstacle avoidance for redundant robots using configuration control  
[NASA-CASE-NPO-17852-1-CU] c 63 N92-33019

**STORAGE**

Fluid sample collector Patent  
[NASA-CASE-XMS-06767-1] c 14 N71-20435  
Sodium storage and injection system  
[NASA-CASE-NPO-14384-1] c 37 N80-10494

**STORAGE BATTERIES**

Bonded elastomeric seal for electrochemical cells Patent  
[NASA-CASE-XGS-02631] c 03 N71-23006  
Automatic battery charger Patent  
[NASA-CASE-XNP-04758] c 03 N71-24605  
Electric battery and method for operating same Patent  
[NASA-CASE-XGS-01674] c 03 N71-29129  
Electric storage battery  
[NASA-CASE-NPO-11021] c 03 N72-20032  
Hydrogen-bromine secondary battery  
[NASA-CASE-NPO-13237-1] c 44 N76-18641  
Rechargeable battery which combats shape change of the zinc anode  
[NASA-CASE-HQN-10862-1] c 44 N76-29699  
Electrically rechargeable REDOX flow cell  
[NASA-CASE-LEW-12220-1] c 44 N77-14581  
Formulated plastic separators for soluble electrode cells --- rubber-ion transport membranes  
[NASA-CASE-LEW-12358-1] c 44 N79-17313  
Toroidal cell and battery --- storage battery for high amp-hour load applications  
[NASA-CASE-LEW-12918-1] c 44 N81-24521  
Secondary Li battery incorporating 12-Crown-4 ether  
[NASA-CASE-NPO-17922-1-CU] c 33 N92-28753  
Overcharge and overdischarge protection of ambient temperature secondary lithium cells  
[NASA-CASE-NPO-18343-1-CU] c 33 N93-11456

**STORAGE STABILITY**

Thermally activated foaming compositions Patent  
[NASA-CASE-LAR-10373-1] c 18 N71-26155  
Gas diffusion liquid storage bag and method of use for storing blood  
[NASA-CASE-NPO-13930-1] c 52 N79-14749  
Method for retarding dye fading during archival storage of developed color photographic film --- inert atmosphere  
[NASA-CASE-MFS-23250-1] c 35 N82-11432

**STORAGE TANKS**

Expulsion bladder-equipped storage tank structure Patent  
[NASA-CASE-XNP-00612] c 11 N70-38182  
Method for leakage testing of tanks Patent  
[NASA-CASE-XMF-02392] c 32 N71-24285  
Zero gravity shadow shield aligner  
[NASA-CASE-KSC-10622-1] c 31 N72-21893  
Cryogenic container compound suspension strap  
[NASA-CASE-ARC-11157-1] c 37 N80-18393  
System for venting gas from a liquid storage tank  
[NASA-CASE-MSC-21253-1] c 31 N90-20254  
Dual diaphragm tank with telltale drain  
[NASA-CASE-MSC-21703-1] c 31 N91-25305  
Reusable cryogenic liquid rocket propellant tank  
[NASA-CASE-LAR-14172-1] c 20 N93-31295

**STOWAGE (ONBOARD EQUIPMENT)**

Hemispherical latching apparatus  
[NASA-CASE-MFS-25837-1] c 18 N85-29991  
Locking hinge  
[NASA-CASE-MSC-21056-1] c 18 N88-23827  
Expandable pallet for space station interface attachments  
[NASA-CASE-MSC-21117-1] c 18 N88-28958

**STRAIN DISTRIBUTION**

Mechanical strain isolator mount  
[NASA-CASE-LAR-13580-1] c 37 N91-21541

**STRAIN GAGE ACCELEROMETERS**

Accelerometer with FM output Patent  
[NASA-CASE-XLA-00492] c 14 N70-34799  
Angular accelerometer Patent  
[NASA-CASE-XMS-05936] c 14 N70-41682

**STRAIN GAGE BALANCES**

Self-balancing strain gage transducer Patent  
[NASA-CASE-MFS-12827] c 14 N71-17656  
Dual strain gage balance system for measuring light loads  
[NASA-CASE-LAR-14419-1] c 35 N92-10185

**STRAIN GAGES**

Semiconductor p-n junction stress and strain sensor  
[NASA-CASE-XLA-04980] c 09 N69-27422  
Wire grid forming apparatus Patent  
[NASA-CASE-XLE-00023] c 15 N70-33330  
Force measuring instrument Patent  
[NASA-CASE-XMF-00456] c 14 N70-34705  
Strain gage Patent Application  
[NASA-CASE-FRC-10053] c 14 N70-35587  
Difference circuit Patent  
[NASA-CASE-XNP-08274] c 10 N71-13537  
Strain sensor for high temperatures Patent  
[NASA-CASE-XNP-09205] c 14 N71-17657  
Extensometer Patent  
[NASA-CASE-XMF-04680] c 15 N71-19489  
Strain gauge measuring techniques Patent  
[NASA-CASE-XGS-04478] c 14 N71-24233  
Method of temperature compensating semiconductor strain gages Patent  
[NASA-CASE-XLA-04555-1] c 14 N71-25892  
Pulsed excitation voltage circuit for transducers  
[NASA-CASE-FRC-10036] c 09 N72-22200  
Method of making semiconductor p-n junction stress and strain sensor  
[NASA-CASE-XLA-04980-2] c 14 N72-28438  
Device for monitoring a change in mass in varying gravimetric environments  
[NASA-CASE-MFS-21556-1] c 35 N74-26945  
Strain gauge ambiguity sensor for segmented mirror active optical system  
[NASA-CASE-MFS-20506-1] c 35 N75-12273  
Subminiature insertable force transducer --- including a strain gage to measure forces in muscles  
[NASA-CASE-NPO-13423-1] c 33 N75-31329  
Self-supporting strain transducer  
[NASA-CASE-LAR-11263-1] c 35 N75-33369  
Strain gage mounting assembly  
[NASA-CASE-NPO-13170-1] c 35 N76-14430  
High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c 35 N76-24523  
Miniature biaxial strain transducer  
[NASA-CASE-LAR-11648-1] c 35 N77-14407  
CW ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c 39 N78-15512  
Attaching of strain gages to substrates  
[NASA-CASE-FRC-10093-1] c 35 N80-20560  
Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c 39 N81-25400  
Pulsed phase locked loop strain monitor --- voltage controlled oscillators  
[NASA-CASE-LAR-12772-1] c 33 N83-16626  
Inflatable device for installing strain gage bridges  
[NASA-CASE-FRC-11068-1] c 35 N84-12443  
Thin film strain transducer  
[NASA-CASE-WLP-10055-1] c 35 N84-28015  
Strain gage calibration  
[NASA-CASE-LAR-12743-1] c 35 N84-28019  
Thin film strain transducer --- suitable for in-flight measurement of scientific balloon strain  
[NASA-CASE-WLP-10055-2] c 35 N85-21598  
Method of attaching strain gauges to various materials  
[NASA-CASE-LAR-13797-1] c 35 N88-30108  
Wind tunnel balance  
[NASA-CASE-ARC-11877-1-SB] c 09 N91-14357  
Treadmill for space flight  
[NASA-CASE-MSC-21752-1] c 54 N92-17910  
Compensated high temperature strain gage  
[NASA-CASE-LAR-14776-1] c 35 N93-12205

**STRAIN MEASUREMENT**

Thin film strain transducer --- suitable for in-flight measurement of scientific balloon strain  
[NASA-CASE-WLP-10055-2] c 35 N85-21598  
Radio Frequency (RF) strain monitor  
[NASA-CASE-LAR-13705-1] c 39 N88-25011  
Optical fiber strain sensor with improved linearity  
[NASA-CASE-LAR-14857-1-SB] c 74 N93-19374  
Discrete optical fiber strain sensor  
[NASA-CASE-LAR-14810-1-SB] c 35 N93-19492

**STRAIN RATE**

Light intensity strain analysis  
[NASA-CASE-LAR-10765-1] c 32 N73-20740  
Strain gage calibration  
[NASA-CASE-LAR-12743-1] c 35 N84-28019  
Discrete optical fiber strain sensor  
[NASA-CASE-LAR-14810-1-SB] c 35 N93-19492

**STRAKES**

Helicopter anti-torque system using strakes  
[NASA-CASE-LAR-13233-1] c 05 N84-33400  
Helicopter anti-torque system using fuselage strakes  
[NASA-CASE-LAR-13630-1] c 08 N88-23809  
Actuated forebody strakes  
[NASA-CASE-LAR-13983-1] c 05 N90-23390  
Helicopter low-speed yaw control  
[NASA-CASE-LAR-14219-1] c 08 N93-25998

## STRANDS

Convergent strand array liquid pumping system  
[NASA-CASE-NPO-17301-1-CU] c 31 N90-23587

## STRAPDOWN INERTIAL GUIDANCE

All sky pointing attitude control system  
[NASA-CASE-ARC-10716-1] c 35 N77-20399

## STRAPS

Meter for use in detecting tension in straps having predetermined elastic characteristics  
[NASA-CASE-MFS-22189-1] c 35 N75-19615

Cryogenic container compound suspension strap  
[NASA-CASE-ARC-11157-1] c 37 N80-18393

Load limiting energy absorbing lightweight debris catcher  
[NASA-CASE-MSC-21562-1] c 16 N92-16007

## STRATIGRAPHY

System for plotting subsoil structure and method therefor  
[NASA-CASE-NPO-14191-1] c 31 N80-32584

## STREAMS

Apparatus for measuring a sorbate dispersed in a fluid stream  
[NASA-CASE-ARC-10896-1] c 35 N78-19465

## STRESS ANALYSIS

Method and apparatus for measuring the damping characteristics of a structure  
[NASA-CASE-ARC-10154-1] c 14 N72-22440

Light intensity strain analysis  
[NASA-CASE-LAR-10765-1] c 32 N73-20740

High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c 35 N76-24523

Method and apparatus for determination of material residual stress  
[NASA-CASE-GSC-13451-1] c 39 N92-23549

Method of characterizing residual stress in ferromagnetic materials using a pulse histogram of acoustic emission signals  
[NASA-CASE-LAR-14239-1] c 26 N93-14705

Method and apparatus for determination of material residual stress  
[NASA-CASE-GSC-13451-1] c 39 N93-20118

## STRESS CONCENTRATION

Self-supporting strain transducer  
[NASA-CASE-LAR-11263-1] c 35 N75-33369

## STRESS CORROSION

Method of inhibiting stress corrosion cracks in titanium alloys Patent  
[NASA-CASE-NPO-10271] c 17 N71-16393

Controlled glass bead peening Patent  
[NASA-CASE-XLA-07390] c 15 N71-18616

## STRESS DISTRIBUTION

Combined load test apparatus for flat panels  
[NASA-CASE-LAR-14698-1] c 39 N92-30028

Shear sensitive monomer-polymer laminate structure and method of using same  
[NASA-CASE-LAR-14654-1-CU] c 39 N93-29613

## STRESS MEASUREMENT

Semiconductor p-n junction stress and strain sensor  
[NASA-CASE-XLA-04980] c 09 N69-27422

Force measuring instrument Patent  
[NASA-CASE-XMF-00456] c 14 N70-34705

Self-balancing strain gage transducer Patent  
[NASA-CASE-MFS-12827] c 14 N71-17656

Strain coupled servo control system Patent  
[NASA-CASE-XLA-08530] c 32 N71-25360

Amplifying ribbon extensometer  
[NASA-CASE-LAR-11825-1] c 35 N77-22449

CW ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c 39 N78-15512

Acoustic radiation stress measurement  
[NASA-CASE-LAR-13440-1] c 71 N87-21653

Shear sensitive monomer-polymer laminate structure and method of using same  
[NASA-CASE-LAR-14654-1-CU] c 39 N93-29613

## STRESS RELAXATION

Method for alleviating thermal stress damage in laminates --- metal matrix composites  
[NASA-CASE-LEW-12493-1] c 24 N81-17170

## STRESS RELIEVING

All-directional fastener Patent  
[NASA-CASE-XLA-01807] c 15 N71-10799

Steam cooled rich-burn combustor liner  
[NASA-CASE-LEW-13609-1] c 25 N90-11824

## STRESS WAVES

Method for advanced material characterization by laser induced eddy current imaging  
[NASA-CASE-GSC-13386-1] c 38 N92-29154

## STRESSES

Tape recorder Patent  
[NASA-CASE-XGS-08259] c 14 N71-23698

Strain gauge measuring techniques Patent  
[NASA-CASE-XGS-04478] c 14 N71-24233

Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
[NASA-CASE-MSC-14182-1] c 27 N76-14264

Fixture for environmental exposure of structural materials under compression load  
[NASA-CASE-LAR-12602-1] c 39 N83-32081

## STRETCHERS

Rescue litter flotation assembly Patent  
[NASA-CASE-XMS-04170] c 05 N71-22748

Stretcher Patent  
[NASA-CASE-XMF-06589] c 05 N71-23159

## STRETCHING

Fastener stretcher  
[NASA-CASE-GSC-11149-1] c 15 N73-30457

## STRINGERS

Preloaded space structural coupling joints  
[NASA-CASE-LAR-13489-1] c 18 N87-27713

## STRINGS

Omnidirectional joint Patent  
[NASA-CASE-XMS-09635] c 05 N71-24623

## STRIP TRANSMISSION LINES

Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MFS-23845-1] c 33 N81-17348

Microwave switching power divider --- antenna feeds  
[NASA-CASE-GSC-12420-1] c 33 N82-16340

## STROBOSCOPES

Synchronous strobe apparatus for flow visualization  
[NASA-CASE-LAR-14556-1] c 36 N91-25392

## STRONTIUM OXIDES

Silicon carbide fiber reinforced strontium aluminosilicate glass-ceramic matrix composite  
[NASA-CASE-LEW-15263-1] c 24 N93-11543

## STRUCTURAL ANALYSIS

Window defect planar mapping technique  
[NASA-CASE-MSC-19442-1] c 74 N77-10899

## STRUCTURAL DESIGN

Life raft Patent  
[NASA-CASE-XMS-00863] c 05 N70-34857

High pressure regulator valve Patent  
[NASA-CASE-XNP-00710] c 15 N71-10778

Lifting body Patent Application  
[NASA-CASE-FRC-10063] c 01 N71-12217

Ring wing tension vehicle Patent  
[NASA-CASE-XLA-04901] c 31 N71-24315

Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c 35 N77-27366

Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c 74 N77-28933

Horizontally mounted solar collector  
[NASA-CASE-MFS-23349-1] c 44 N79-23481

Fluid flow meter for measuring the rate of fluid flow in a conduit  
[NASA-CASE-MFS-28030-1] c 35 N86-25752

Remotely controlled spray gun  
[NASA-CASE-MFS-28110-1] c 37 N87-24689

Improved method and apparatus for waste collection and storage  
[NASA-CASE-MSC-21025-1] c 31 N87-25495

Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-2] c 18 N89-25266

Suitport extra-vehicular access facility  
[NASA-CASE-ARC-11635-1] c 18 N90-16860

Noncontact temperature pattern measuring device  
[NASA-CASE-NPO-17824-1-CU] c 36 N90-17132

Releasable clamping apparatus  
[NASA-CASE-MFS-28192-1] c 37 N90-17154

Cable suspended windmill  
[NASA-CASE-LAR-13434-1] c 37 N90-23742

Composite passive damping struts for large precision structures  
[NASA-CASE-NPO-17914-1-CU] c 39 N91-13767

Hybrid butterfly valve  
[NASA-CASE-SSC-00004-1] c 37 N91-14609

Bio-reactor chamber  
[NASA-CASE-MSC-20929-1] c 51 N91-14703

High-pressure promoted combustion chamber  
[NASA-CASE-MSC-21470-1] c 09 N91-21157

Synchronous demodulator  
[NASA-CASE-GSC-13179-1] c 33 N91-26438

Robotic tool change mechanism  
[NASA-CASE-GSC-13239-1] c 37 N91-31656

Mechanized fluid connector and assembly tool system with ball detents  
[NASA-CASE-MSC-21434-1] c 37 N92-10197

Composite passive damping struts for large precision structures  
[NASA-CASE-NPO-17914-1-CU] c 39 N93-24596

## STRUCTURAL DESIGN CRITERIA

Compliant hydrodynamic fluid journal bearing  
[NASA-CASE-LEW-13670-1] c 37 N86-19606

Geometries for roughness shapes in laminar flow  
[NASA-CASE-LAR-13255-1] c 02 N87-16793

## STRUCTURAL ENGINEERING

Beam connector apparatus and assembly  
[NASA-CASE-MFS-25134-1] c 31 N83-31895

## STRUCTURAL FAILURE

Method and apparatus for nondestructive testing of pressure vessels  
[NASA-CASE-NPO-12142-1] c 38 N76-28563

## STRUCTURAL MEMBERS

Broadband choke for antenna structure  
[NASA-CASE-XMS-05303] c 07 N69-27462

Optical alignment system Patent  
[NASA-CASE-XNP-02029] c 14 N70-41955

All-directional fastener Patent  
[NASA-CASE-XLA-01807] c 15 N71-10799

Frictionless universal joint Patent  
[NASA-CASE-NPO-10646] c 15 N71-28467

Fastener stretcher  
[NASA-CASE-GSC-11149-1] c 15 N73-30457

Method of laminating structural members  
[NASA-CASE-XLA-11028-1] c 24 N74-27035

Folding structure fabricated of rigid panels  
[NASA-CASE-XHO-02146] c 18 N75-27040

Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
[NASA-CASE-MSC-14182-1] c 27 N76-14264

Mechanical end joint system for structural column elements  
[NASA-CASE-LAR-12482-1] c 37 N82-32732

Daze fasteners  
[NASA-CASE-LAR-13009-1] c 37 N85-29285

Daze fasteners  
[NASA-CASE-LAR-13009-2] c 37 N87-22976

Method of recertifying a loaded bearing member using a phase point  
[NASA-CASE-LAR-14741-1] c 39 N92-11384

Slip joint connector  
[NASA-CASE-MFS-28659-1] c 37 N93-17080

## STRUCTURAL STABILITY

Latching device  
[NASA-CASE-MFS-21606-1] c 37 N75-19685

Flanged major modular assembly jig  
[NASA-CASE-MSC-19372-1] c 39 N76-31562

Deployable M-braced truss structure  
[NASA-CASE-LAR-13081-1] c 37 N86-32737

## STRUCTURAL VIBRATION

Electrical connector Patent Application  
[NASA-CASE-MFS-14741] c 09 N70-20737

Seismic displacement transducer Patent  
[NASA-CASE-XMF-00479] c 14 N70-34794

Vibrating structure displacement measuring instrument Patent  
[NASA-CASE-XLA-03135] c 32 N71-16428

Active notch filter network with variable notch depth, width and frequency  
[NASA-CASE-FRC-11055-1] c 33 N80-29583

Method and apparatus for minimizing multiple degree of freedom vibration transmission between two regions of a structure  
[NASA-CASE-LAR-14508-1-CU] c 39 N93-13420

## STRUCTURES

Arbitrarily shaped model survey system Patent  
[NASA-CASE-LAR-10098] c 32 N71-26681

## STRUTS

Energy absorbing structure Patent Application  
[NASA-CASE-MSC-12279-1] c 15 N70-35679

Collapsible structure for an antenna reflector  
[NASA-CASE-NPO-11751] c 07 N73-24176

Locking redundant link  
[NASA-CASE-LAR-11900-1] c 37 N79-14382

Multiple pure tone elimination strut assembly --- air breathing engines  
[NASA-CASE-FRC-11062-1] c 71 N82-16800

Variable length strut with longitudinal compliance and locking capability  
[NASA-CASE-MFS-25907-1] c 37 N85-34401

Composite passive damping struts for large precision structures  
[NASA-CASE-NPO-17914-1-CU] c 39 N91-13767

Composite passive damping struts for large precision structures  
[NASA-CASE-NPO-17914-1-CU] c 39 N93-24596

## STUDS (STRUCTURAL MEMBERS)

Safety-type locking pin  
[NASA-CASE-MFS-18495] c 15 N72-11385

Stud-bonding gun  
[NASA-CASE-MFS-20299] c 15 N72-11392

Insert facing tool --- manually operated cutting tool for forming studs in honeycomb material  
[NASA-CASE-MFS-21485-1] c 37 N74-25968

## STYRENES

Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-1] c 27 N78-32256

Compound oxidized styrylphosphine --- flame resistant vinyl polymers  
[NASA-CASE-MSC-14903-2] c 27 N80-10358

Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-3] c 27 N80-24438

Stabilized unsaturated polyesters  
[NASA-CASE-NPO-16103-1] c 27 N85-29043

## SUBASSEMBLIES

- Multistage spent particle collector and a method for making same  
[NASA-CASE-LEW-13914-1] c 37 N85-33489  
Backward assembly planning with DFA analysis  
[NASA-CASE-NPO-18817-1-CU] c 31 N93-12202

## SUBCRITICAL FLOW

- Method for growth of crystals by pressure reduction of supercritical or subcritical solution  
[NASA-CASE-NPO-15772-1] c 76 N85-29800

## SUBLIMATION

- Tubular sublimatory evaporator heat sink  
[NASA-CASE-ARC-10912-1] c 34 N77-19353  
Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics  
[NASA-CASE-NPO-10424-1] c 27 N81-24258

## SUBMARINES

- Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
[NASA-CASE-ARC-11040-2] c 24 N78-27184

## SUBMERGING

- Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c 37 N82-12441  
Liquid-immersible electrostatic ultrasonic transducer  
[NASA-CASE-LAR-12465-1] c 33 N82-26572

## SUBMILLIMETER WAVES

- Ladder supported ring bar circuit  
[NASA-CASE-LEW-13570-1] c 33 N84-16452  
Double photon excitation of high-Rydberg atoms as a long-lived submillimeter detector  
[NASA-CASE-NPO-16372-1] c 72 N86-33127  
Millimeter-wave monolithic diode-grid frequency multiplier  
[NASA-CASE-NPO-17258-1-CU] c 33 N91-14551  
Whiskerless Schottky diode  
[NASA-CASE-GSC-13063-2-CU] c 33 N92-16197

## SUBMINIATURIZATION

- Micro current measuring device using plural logarithmic response heated filamentary type diodes Patent  
[NASA-CASE-XNP-00384] c 09 N71-13530

## SUBREFLECTORS

- Dish antenna having switchable beamwidth --- with truncated concave ellipsoid subreflector  
[NASA-CASE-GSC-11760-1] c 33 N75-19516  
Double-loop frequency-selected surfaces for multifrequency division multiplexing in a dual-reflector antenna  
[NASA-CASE-NPO-18701-1-CU] c 32 N92-30391

## SUBSONIC SPEED

- Landing arrangement for aerospace vehicle Patent  
[NASA-CASE-XLA-00805] c 31 N70-38010  
Leading edge curvature based on convective heating Patent  
[NASA-CASE-XLA-01486] c 01 N71-23497  
Airfoil shape for flight at subsonic speeds --- design analysis and aerodynamic characteristics of the GAW-1 airfoil  
[NASA-CASE-LAR-10585-1] c 02 N76-22154  
Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c 05 N79-24976

## SUBSONIC WIND TUNNELS

- Variable geometry wind tunnels  
[NASA-CASE-XLA-07430] c 11 N72-22246

## SUBSTRATES

- Means and methods of depositing thin films on substrates Patent  
[NASA-CASE-XNP-00595] c 15 N70-34967  
Solar cell mounting Patent  
[NASA-CASE-XNP-00826] c 03 N71-20895  
Solar panel fabrication Patent  
[NASA-CASE-XNP-03413] c 03 N71-26726  
Fabrication of polycrystalline solar cells on low-cost substrates  
[NASA-CASE-GSC-12022-1] c 44 N76-28635  
Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polymethyl methacrylate lenses  
[NASA-CASE-ARC-11039-1] c 74 N78-32854  
Attaching of strain gages to substrates  
[NASA-CASE-FRC-10093-1] c 35 N80-20560  
Method for applying photographic resists to otherwise incompatible substrates  
[NASA-CASE-MS-C-18107-1] c 27 N81-25209  
Refractory coatings  
[NASA-CASE-LEW-13169-2] c 26 N82-30371  
Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c 35 N82-31659  
Method for depositing an oxide coating  
[NASA-CASE-LEW-13131-1] c 44 N83-10494  
Densification of porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MS-C-18737-1] c 24 N83-13171

Method of forming oxide coatings --- for solar collector heating panels

- [NASA-CASE-LEW-13132-1] c 27 N83-29388  
Method and apparatus for coating substrates using a laser  
[NASA-CASE-LEW-13526-1] c 36 N84-22944  
Coating with overlay metallic-cermet alloy systems  
[NASA-CASE-LEW-13639-2] c 26 N84-27855  
Overlay metallic-cermet alloy coating systems  
[NASA-CASE-LEW-13639-1] c 26 N84-33555  
Increased voltage photovoltaic cell  
[NASA-CASE-NPO-16155-1] c 44 N85-30475  
Liquid crystal light valve structures  
[NASA-CASE-MS-C-20036-1] c 76 N85-33826  
Thermal barrier coating system  
[NASA-CASE-LEW-14057-1] c 24 N85-35233  
Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267  
Oxygen diffusion barrier coating  
[NASA-CASE-LAR-13474-1-SB] c 26 N87-25455  
Process for making a noble metal on tin oxide catalyst  
[NASA-CASE-LAR-13741-1-SB] c 25 N90-20180  
Alternating gradient photodetector  
[NASA-CASE-NPO-17235-1-CU] c 35 N90-21358  
MBE growth technology for high quality strained III-V layers  
[NASA-CASE-NPO-17723-1-CU] c 76 N90-26685  
Etching method for photoresists or polymers  
[NASA-CASE-ARC-11873-2] c 25 N91-31258  
Whiskerless Schottky diode  
[NASA-CASE-GSC-13063-2-CU] c 33 N92-16197  
Fabrication of nanometer single crystal metallic CoSi<sub>2</sub> structures on Si  
[NASA-CASE-NPO-17736-2-CU] c 24 N92-18561  
Pressure transducer and system for cryogenic environments  
[NASA-CASE-LAR-14579-1] c 35 N92-29097  
Method of forming silicon structures with selectable optical characteristics  
[NASA-CASE-NPO-18625-1-CU] c 76 N92-30102  
A method of making a single layer multi-color luminescent display  
[NASA-CASE-LAR-14811-1] c 33 N92-30389  
Multi-layer light-weight protective coating and method for application  
[NASA-CASE-LAR-14448-1] c 27 N93-11912  
Compensated high temperature strain gage  
[NASA-CASE-LAR-14776-1] c 35 N93-12205  
Method of applying a thermal barrier coating system to a substrate  
[NASA-CASE-LEW-15020-2] c 24 N93-14706  
Process for applying a superconductive powder to a wide variety of substrates  
[NASA-CASE-LAR-14729-1-CU] c 33 N93-19051  
Oxidation resistant overlay coatings for low expansion substrates  
[NASA-CASE-LEW-15154-1] c 27 N93-19332  
A method of making a single layer multi-color luminescent display  
[NASA-CASE-LAR-14811-1] c 33 N93-20119

## SUBSTRUCTURES

- Support structure for irradiated elements Patent  
[NASA-CASE-XNP-06031] c 15 N71-15606  
Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c 35 N77-27366  
System for detecting substructure microfractures and method therefore  
[NASA-CASE-NPO-14192-1] c 39 N80-10507  
Elevated waterproof access floor system and method of making the same  
[NASA-CASE-ARC-11363-1] c 31 N87-16918

## SUCTION

- Method for maintaining precise suction strip porosities  
[NASA-CASE-LAR-13638-1] c 31 N90-19427

## SUGARS

- Production of butanol by fermentation in the presence of cocultures of clostridium  
[NASA-CASE-NPO-16203-1] c 23 N85-35227  
Apparatus and method for cellulose processing using microwave pretreatment  
[NASA-CASE-MS-C-21936-1-SB] c 25 N93-22036

## SULFATES

- Intumescent paints Patent  
[NASA-CASE-ARC-10099-1] c 18 N71-15469

## SULFIDES

- Stabilized lanthanum sulphur compounds --- thermoelectric materials  
[NASA-CASE-NPO-16135-1] c 25 N83-24572

## SULFONES

- Electrolytic cell structure  
[NASA-CASE-LAR-11042-1] c 33 N75-27252  
Solvent resistant thermoplastic aromatic poly(midesulfone) and process for preparing same  
[NASA-CASE-LAR-12858-1] c 27 N83-34041

## SUPERCONDUCTING MAGNETS

- Ethynyl and substituted ethynyl-terminated polysulfones  
[NASA-CASE-LAR-12931-1] c 27 N84-22747  
Process for preparing solvent resistant, thermoplastic aromatic poly(midesulfone)  
[NASA-CASE-LAR-12858-2] c 27 N85-20124  
Ethynyl and substituted ethynyl-terminated polysulfones  
[NASA-CASE-LAR-12931-2] c 27 N86-21675  
Sulfone-ester polymers containing pendent ethynyl groups  
[NASA-CASE-LAR-13316-1] c 27 N86-27450  
Semi-2-interpenetrating networks of high temperature systems  
[NASA-CASE-LAR-13450-1] c 27 N87-28657  
Ethynyl terminated imidothioethers and resins therefrom  
[NASA-CASE-LAR-13910-2-CU] c 27 N91-31307  
Helmet of a laminate construction of polycarbonate and polysulfone polymeric material  
[NASA-CASE-MS-C-21503-1] c 27 N92-10091
- SULFONIC ACID**  
Intumescent coatings containing 4,4'-dinitrosulfanilide  
[NASA-CASE-ARC-11042-1] c 24 N78-14096  
The 1,1,1-triaryl-2,2,2-trifluoroethanes and process for their synthesis  
[NASA-CASE-ARC-11097-1] c 25 N82-24312
- SULFUR COMPOUNDS**  
Polymeric vehicles as carriers for sulfonic acid salt of nitrosubstituted aromatic amines  
[NASA-CASE-ARC-10325] c 06 N72-25147
- SULFUR DIOXIDES**  
Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c 45 N76-17656  
Simultaneous treatment of SO<sub>2</sub> containing stack gases and waste water  
[NASA-CASE-MS-C-16258-1] c 45 N79-12584
- SULFURIC ACID**  
Synthesis of 2,4,8,10-tetroxaspiro[5.5]undecane  
[NASA-CASE-ARC-11243-2] c 23 N85-33187
- SUM RULES**  
Computing apparatus Patent  
[NASA-CASE-XGS-04765] c 08 N71-18693
- SUN**  
Sun tracking solar energy collector  
[NASA-CASE-NPO-13921-1] c 44 N79-14526
- SUNGLASSES**  
Soft frame adjustable eyeglasses Patent  
[NASA-CASE-XMS-06064] c 05 N71-23096
- SUNLIGHT**  
Illumination system including a virtual light source Patent  
[NASA-CASE-HQN-10781] c 23 N71-30292  
Illumination control apparatus for compensating solar light  
[NASA-CASE-KSC-11010-1] c 74 N79-12890  
Cloud cover sensor  
[NASA-CASE-NPO-14936-1] c 47 N83-32232  
Sun shield  
[NASA-CASE-MS-C-20162-1] c 37 N87-17036  
Lunar radiator shade  
[NASA-CASE-MS-C-21868-1] c 54 N92-21589
- SUPERCHARGERS**  
Supercharged topping rocket propellant feed system  
[NASA-CASE-XLE-02062-1] c 20 N80-14188  
Diesel engine catalytic combustor system --- aircraft engines  
[NASA-CASE-LEW-12995-1] c 37 N84-33808
- SUPERCONDUCTING DEVICES**  
Epitaxial heterojunctions of oxide semiconductors and metals on high temperature superconductors  
[NASA-CASE-NPO-18483-1-CU] c 76 N93-15151
- SUPERCONDUCTING FILMS**  
Method of producing high T(subc) superconducting NBN films  
[NASA-CASE-NPO-16681-1-CU] c 76 N88-24543  
Method for producing edge geometry superconducting tunnel junctions utilizing an Nbn/MgO/Nbn thin film structure  
[NASA-CASE-NPO-17812-2-CU] c 76 N92-22040  
Edge geometry superconducting tunnel junctions utilizing an Nbn/MgO/Nbn thin film structure  
[NASA-CASE-NPO-17812-3-CU] c 76 N92-22041  
An improved SNS superconducting junction with weak link barrier and method of producing  
[NASA-CASE-NPO-18552-1-CU] c 33 N92-24246
- SUPERCONDUCTING MAGNETS**  
Cryogenic apparatus for measuring the intensity of magnetic fields  
[NASA-CASE-XAC-02407] c 14 N69-27423  
Superconducting alternator  
[NASA-CASE-XLE-02824] c 03 N69-39890  
Segmented superconducting magnet for a broadband traveling wave maser Patent  
[NASA-CASE-XGS-10518] c 16 N71-28554

Superconducting magnet Patent  
[NASA-CASE-XNP-06503] c 23 N71-29049

Magnetometer using superconducting rotating body  
[NASA-CASE-NPO-13388-1] c 35 N76-16390

Stable superconducting magnet --- high current levels below critical temperature  
[NASA-CASE-XMF-05373-1] c 33 N79-21264

Reciprocating magnetic refrigerator employing tandem porous matrices within a reciprocating displacer  
[NASA-CASE-NPO-16257-1] c 31 N85-29082

Superconducting bearings with levitation control configurations  
[NASA-CASE-GSC-13346-1] c 37 N92-29099

**SUPERCONDUCTIVITY**

Superconducting alternator Patent  
[NASA-CASE-XLE-02823] c 09 N71-23443

System for improving signal-to-noise ratio of a communication signal  
[NASA-CASE-MSC-12259-2] c 07 N72-33146

Superconductive magnetic-field-trapping device  
[NASA-CASE-XNP-01185] c 26 N73-28710

Doped Josephson tunneling junction for use in a sensitive IR detector  
[NASA-CASE-NPO-13348-1] c 33 N75-31332

Method of producing high T(subc) superconducting NBN films  
[NASA-CASE-NPO-16681-1-CU] c 76 N88-24543

Planar thin film SQUID with integral flux concentrator  
[NASA-CASE-MFS-28282-1] c 76 N88-29602

Method of performing and assembling superconducting circuit elements  
[NASA-CASE-LAR-14395-1-CU] c 33 N91-28490

Low cost, formable, high T(sub c) superconducting wire  
[NASA-CASE-LEW-14676-1] c 33 N91-31529

Passivation of high temperature superconductors  
[NASA-CASE-NPO-17949-1-CU] c 76 N92-10681

Electromagnetic Meissner effect launcher  
[NASA-CASE-MFS-28323-1] c 14 N92-15081

Monolithic mm-wave phase shifter using optically activated superconducting switches  
[NASA-CASE-LEW-14878-1] c 74 N92-28571

Superconducting bearings with levitation control configurations  
[NASA-CASE-GSC-13346-1] c 37 N92-29099

**SUPERCONDUCTORS**

Superconductive accelerometer Patent  
[NASA-CASE-XMF-01099] c 14 N71-15969

Twisted multifilament superconductor  
[NASA-CASE-LEW-11726-1] c 26 N73-26752

Method of fabricating a twisted composite superconductor  
[NASA-CASE-LEW-11015] c 26 N73-32571

Germanium coated microbridge and method  
[NASA-CASE-MFS-23274-1] c 33 N78-13320

Method of forming low cost, formable High T(subc) superconducting wire  
[NASA-CASE-LEW-14676-2] c 76 N90-17454

Method of performing and assembling superconducting circuit elements  
[NASA-CASE-LAR-14395-1-CU] c 33 N91-28490

Low cost, formable, high T(sub c) superconducting wire  
[NASA-CASE-LEW-14676-1] c 33 N91-31529

**SUPERCOOLING**

Method and apparatus for supercooling and solidifying substances  
[NASA-CASE-MFS-25242-1] c 35 N83-29650

**SUPERCRITICAL FLUIDS**

Method for growth of crystals by pressure reduction of supercritical or subcritical solution  
[NASA-CASE-NPO-15772-1] c 76 N85-29800

**SUPERCRITICAL PRESSURES**

Oil shale extraction using super-critical extraction  
[NASA-CASE-NPO-15656-1] c 43 N84-23012

**SUPERFLUIDITY**

Helium refining by superfluidity Patent  
[NASA-CASE-XNP-00733] c 06 N70-34946

Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback  
[NASA-CASE-NPO-13346-1] c 36 N76-29575

**SUPERHEATING**

Thermal energy storage system --- operating on superheating of liquids  
[NASA-CASE-MFS-23167-1] c 44 N76-31667

**SUPERHIGH FREQUENCIES**

Dual band combiner for horn antenna  
[NASA-CASE-NPO-14519-1] c 32 N80-23524

**SUPERLATTICES**

Tailorable infrared sensing device with strain layer superlattice structure  
[NASA-CASE-NPO-16607-1-CU] c 76 N88-14836

Tailorable infrared sensing device with strain layer superlattice structure  
[NASA-CASE-NPO-16617-2-CU] c 35 N90-17118

INAS hole-immobilized doping superlattice long-wave-infrared detector  
[NASA-CASE-NPO-17880-1-CU] c 76 N93-11056

**SUPERPLASTICITY**

Superplastically formed diffusion bonded metallic structure  
[NASA-CASE-FRC-11026-1] c 24 N82-24296

**SUPERSATURATION**

Crystal growth in a microgravity environment  
[NASA-CASE-MFS-28473-1] c 76 N93-14707

**SUPERSONIC AIRCRAFT**

Variable sweep wing configuration Patent  
[NASA-CASE-XLA-00230] c 02 N70-33255

Variable sweep aircraft wing Patent  
[NASA-CASE-XLA-00350] c 02 N70-38011

Variable sweep aircraft Patent  
[NASA-CASE-XLA-03659] c 02 N71-11041

Translating horizontal tail Patent  
[NASA-CASE-XLA-08801-1] c 02 N71-11043

Supersonic aircraft Patent  
[NASA-CASE-XLA-04451] c 02 N71-12243

Absorptive splitter for closely spaced supersonic engine air inlets Patent  
[NASA-CASE-XLA-02865] c 28 N71-15563

Oblique-wing supersonic aircraft  
[NASA-CASE-ARC-10470-3] c 05 N76-29217

Passive venting technique for shallow cavities  
[NASA-CASE-LAR-14031-1] c 05 N90-20079

Passive venting technique for shallow cavities  
[NASA-CASE-LAR-13875-1] c 05 N91-27156

**SUPERSONIC COMBUSTION**

Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c 20 N74-13502

Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c 15 N78-32168

**SUPERSONIC DRAG**

Annular supersonic decelerator or drogue Patent  
[NASA-CASE-XLE-00222] c 02 N70-37939

**SUPERSONIC FLIGHT**

Variable sweep wing aircraft Patent  
[NASA-CASE-XLA-00221] c 02 N70-33266

High speed flight vehicle control Patent  
[NASA-CASE-XLA-08967] c 02 N71-27088

**SUPERSONIC FLOW**

Optical probing of supersonic flows with statistical correlation  
[NASA-CASE-MFS-20642] c 14 N72-21407

Stagnation pressure probe --- for measuring pressure of supersonic gas streams  
[NASA-CASE-LAR-11139-1] c 35 N74-32878

Multi-body aircraft with an all-movable center fuselage actively controlling fuselage pressure drag  
[NASA-CASE-LAR-13511-1] c 05 N88-23765

Compression pylon  
[NASA-CASE-LAR-13777-1] c 05 N90-20078

Boundary layer relaminarization device  
[NASA-CASE-LAR-14470-1] c 02 N93-11876

**SUPERSONIC INLETS**

Airflow control system for supersonic inlets  
[NASA-CASE-LEW-11188-1] c 02 N74-20646

Shock position sensor for supersonic inlets --- measuring pressure in the throat of a supersonic inlet  
[NASA-CASE-LEW-11915-1] c 35 N76-14431

Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c 15 N78-32168

**SUPERSONIC JET FLOW**

Water cooled static pressure probe  
[NASA-CASE-LAR-14340-1-CU] c 35 N92-21586

**SUPERSONIC NOZZLES**

Penshape exhaust nozzle for supersonic engine Patent  
[NASA-CASE-XLE-00057] c 28 N70-38711

Telescoping-spike supersonic inlet for aircraft engines Patent  
[NASA-CASE-XLE-00005] c 28 N70-39899

Electric arc apparatus Patent  
[NASA-CASE-XAC-01677] c 09 N71-20816

Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c 07 N80-32392

**SUPERSONIC SPEED**

Continuously operating induction plasma accelerator Patent  
[NASA-CASE-XLA-01354] c 25 N70-36946

Static pressure probe  
[NASA-CASE-LAR-11552-1] c 35 N76-14429

**SUPERSONIC TRANSPORTS**

Position location system and method Patent  
[NASA-CASE-GSC-10087-2] c 21 N71-13958

Traffic control system and method Patent  
[NASA-CASE-GSC-10087-1] c 02 N71-19287

Position location system and method  
[NASA-CASE-GSC-10087-3] c 07 N72-12080

Doppler compensation by shifting transmitted object frequency within limits  
[NASA-CASE-GSC-10087-4] c 07 N73-20174

Supersonic transport --- using canard surfaces  
[NASA-CASE-LAR-11932-1] c 05 N78-32086

**SUPERSONIC WIND TUNNELS**

Wind tunnel  
[NASA-CASE-LAR-10135-1] c 09 N79-21083

Sound shield  
[NASA-CASE-LAR-12883-1] c 71 N83-17235

**SUPPLYING**

Integrated launch and emergency vehicle system  
[NASA-CASE-LAR-13780-1] c 18 N92-33013

**SUPPORT INTERFERENCE**

Spherical bearing --- to reduce vibration effects  
[NASA-CASE-MFS-23447-1] c 37 N79-11404

**SUPPORT SYSTEMS**

Hydraulic support for dynamic testing Patent  
[NASA-CASE-XMF-03248] c 11 N71-10604

Support structure for irradiated elements Patent  
[NASA-CASE-XNP-06031] c 15 N71-15606

Multilegged support system Patent  
[NASA-CASE-XLA-01326] c 11 N71-21481

Adjustable support  
[NASA-CASE-NPO-10721] c 15 N72-27484

Hydrostatic bearing support  
[NASA-CASE-LEW-11158-1] c 37 N77-28486

Metric half-span model support system  
[NASA-CASE-LAR-12441-1] c 09 N82-23254

**SUPPORTS**

A support technique for vertically oriented launch vehicles  
[NASA-CASE-XLA-02704] c 11 N69-21540

Pneumatic mirror support system  
[NASA-CASE-XLA-03271] c 11 N69-24321

Optical spin compensator  
[NASA-CASE-XGS-02401] c 14 N69-27485

Extensible cable support Patent  
[NASA-CASE-XMF-07587] c 15 N71-18701

Swivel support for gas bearings Patent  
[NASA-CASE-XMF-07808] c 15 N71-23812

Optical tracking mount Patent  
[NASA-CASE-MFS-14017] c 14 N71-26627

Angular displacement indicating gas bearing support system Patent  
[NASA-CASE-XLA-09346] c 15 N71-28740

Adjustable mount for a trihedral mirror Patent  
[NASA-CASE-XNP-08907] c 23 N71-29123

Fine adjustment mount  
[NASA-CASE-MFS-20249] c 15 N72-11386

Expandable support means  
[NASA-CASE-NPO-11059] c 15 N72-17454

Optical system support apparatus  
[NASA-CASE-XER-07896-2] c 23 N72-22673

Fixture for supporting articles during vibration tests  
[NASA-CASE-MFS-20523] c 14 N72-27412

Test stand system for vacuum chambers  
[NASA-CASE-MFS-21362] c 11 N73-20267

Collapsible structure for an antenna reflector  
[NASA-CASE-NPO-11751] c 07 N73-24176

Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils  
[NASA-CASE-GSC-11367-1] c 44 N74-19692

Thrust-isolating mounting --- characteristics of support for loads mounted in spacecraft  
[NASA-CASE-MFS-21680-1] c 18 N74-27397

Variable contour securing system  
[NASA-CASE-MSC-16270-1] c 37 N78-27423

Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c 26 N80-28492

Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c 52 N81-25661

Model mount system for testing flutter  
[NASA-CASE-LAR-12950-1] c 09 N84-34448

Portable pallet weighing apparatus  
[NASA-CASE-GSC-12789-1] c 35 N85-20294

Drop foot corrective device  
[NASA-CASE-LAR-12259-2] c 54 N86-22112

Remote pivot decoupler pylon: Wing/store flutter suppressor  
[NASA-CASE-LAR-13173-1] c 05 N87-14314

Airfoil flutter model suspension system  
[NASA-CASE-LAR-13522-1-SB] c 09 N87-25334

Method of forming dynamic membrane on stainless steel support  
[NASA-CASE-MSC-18172-3] c 31 N88-29052

Don/doff support stand for use with rear entry space suits  
[NASA-CASE-MSC-21364-1] c 54 N89-13889

Almond test body --- for microwave anechoic chambers  
[NASA-CASE-LAR-13747-1-CU] c 32 N89-28672

Tensile film clamps and mounting block for the rheovibron and autovibron viscoelastometer  
[NASA-CASE-LAR-13696-1] c 37 N90-20409

Turbomachinery rotor support with damping  
[NASA-CASE-MFS-28345-1] c 37 N91-14608

Post clamp  
[NASA-CASE-LEW-14862-1] c 37 N91-14617

## SUBJECT INDEX

## SUSPENDING (HANGING)

- Mechanical strain isolator mount  
[NASA-CASE-LAR-13580-1] c 37 N91-21541
- Alignment positioning mechanism  
[NASA-CASE-MSC-21502-1] c 37 N91-21543
- End effector with astronaut foot restraint  
[NASA-CASE-MSC-21721-1] c 54 N92-16559
- High reliability robot friendly ORU interface  
[NASA-CASE-GSC-13360-1] c 37 N92-23377
- Shaft mount for data coupler system  
[NASA-CASE-LAR-13805-1] c 37 N92-30097
- SUPPRESSORS**
- Electronic background suppression method and apparatus for a field scanning sensor  
[NASA-CASE-XGS-05211] c 07 N69-39980
- Measurand transient signal suppressor  
[NASA-CASE-MSC-22027-1] c 63 N93-17056
- SURFACE ACOUSTIC WAVE DEVICES**
- Distributed feedback acoustic surface wave oscillator  
[NASA-CASE-NPO-13673-1] c 71 N77-26919
- SURFACE CRACKS**
- Elastomer coated filler and composites thereof comprising at least 60% by weight of a hydrated filler and an elastomer containing an acid substituent  
[NASA-CASE-NPO-14857-1] c 27 N83-19900
- SURFACE DEFECTS**
- Microwave flaw detector Patent  
[NASA-CASE-ARC-10009-1] c 15 N71-17822
- Method and device for detection of surface discontinuities or defects  
[NASA-CASE-MSC-14187-1] c 35 N74-32879
- SURFACE DIFFUSION**
- Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-01765] c 18 N71-10772
- Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NPO-14657-1] c 74 N81-17887
- SURFACE DISTORTION**
- Method for detecting surface motions and mapping small terrestrial or planetary surface deformations with synthetic aperture radar  
[NASA-CASE-NPO-17831-1-CU] c 43 N91-14642
- SURFACE EMITTING LASERS**
- Means for phase locking the outputs of a surface emitting laser diode array  
[NASA-CASE-NPO-16542-1-CU] c 36 N87-23960
- Quantum well, beam deflecting surface emitting lasers  
[NASA-CASE-NPO-18243-1-CU] c 36 N93-13418
- SURFACE FINISHING**
- Method of forming transparent films of ZnO  
[NASA-CASE-FRC-10019] c 15 N73-12487
- Device and method for determining X ray reflection efficiency of optical surfaces  
[NASA-CASE-MFS-20243] c 23 N73-13662
- Surface finishing --- for aircraft wings  
[NASA-CASE-MSC-12631-1] c 24 N77-28225
- Modification of the electrical and optical properties of polymers --- ion irradiation to create texture  
[NASA-CASE-LEW-13027-1] c 27 N80-24437
- Surface finishing  
[NASA-CASE-MSC-12631-3] c 27 N81-14077
- Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c 37 N81-19455
- Surface texturing of fluoropolymers  
[NASA-CASE-LEW-13028-1] c 27 N82-33521
- Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c 18 N83-20996
- Electrodes for solid state devices  
[NASA-CASE-NPO-15161-1] c 33 N84-16456
- Diamondlike flakes  
[NASA-CASE-LEW-13837-2] c 24 N85-21267
- Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587
- Method and apparatus for making an optical element having a dielectric film  
[NASA-CASE-ARC-11611-1] c 74 N87-28416
- Ion-beam nitriding of steels  
[NASA-CASE-LEW-14104-2] c 26 N88-14179
- Metallic seal for thermal barrier coating systems  
[NASA-CASE-LEW-15020-1] c 27 N91-15412
- Microporous structure with layered interstitial surface treatment, and method and apparatus for preparation thereof  
[NASA-CASE-MSC-21487-1] c 25 N92-33009
- SURFACE GEOMETRY**
- Cylindrical surface profile and diameter measuring tool and method  
[NASA-CASE-MFS-28287-1] c 35 N88-23959
- SURFACE IONIZATION**
- Field ionization electrodes Patent  
[NASA-CASE-ERC-10013] c 09 N71-26678
- Method and apparatus for detecting surface ions on silicon diodes and transistors  
[NASA-CASE-ERC-10325] c 15 N72-25457

## SURFACE LAYERS

- Bismuth-lead coatings for gas bearings used in atmospheric environments and vacuum chambers Patent  
[NASA-CASE-XGS-02011] c 15 N71-20739
- Method and apparatus for stable silicon dioxide layers on silicon grown in silicon nitride ambient  
[NASA-CASE-ERC-10073-1] c 24 N74-19769
- Method of neutralizing the corrosive surface of amine-cured epoxy resins  
[NASA-CASE-GSC-12686-1] c 27 N83-34039
- Pretreatment of lubricated surfaces with sputtered cadmium oxide  
[NASA-CASE-LEW-14474-1] c 27 N91-28423
- SURFACE PROPERTIES**
- Pretreatment method for anti-wettable materials  
[NASA-CASE-XMS-03537] c 15 N69-21471
- Ablation article and method  
[NASA-CASE-LAR-10439-1] c 33 N73-27796
- Dual measurement ablation sensor  
[NASA-CASE-LAR-10105-1] c 34 N74-15652
- Apparatus for scanning the surface of a cylindrical body  
[NASA-CASE-NPO-11861-1] c 36 N74-20009
- Apparatus for microbiological sampling --- including automatic swabbing  
[NASA-CASE-LAR-11069-1] c 35 N75-12272
- Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c 35 N77-27367
- Device for measuring the contour of a surface  
[NASA-CASE-LAR-11869-1] c 74 N78-27904
- Displacement probes with self-contained exciting medium  
[NASA-CASE-LAR-11690-1] c 35 N80-14371
- Apparatus for electrolytically tapered or contoured cavities  
[NASA-CASE-XNP-08835-1] c 37 N80-14395
- Mechanical bonding of metal method  
[NASA-CASE-LEW-12941-1] c 26 N83-10170
- Apparatus and method for inspecting a bearing ball  
[NASA-CASE-MFS-25833-1] c 35 N86-32698
- Ion beam sputter etching  
[NASA-CASE-LEW-13899-1] c 31 N87-21160
- Liquid thickness gauge  
[NASA-CASE-LAR-13826-1] c 35 N88-29150
- Solid lubricants on pretreated surfaces  
[NASA-CASE-LEW-14474-2] c 27 N92-11186
- Polymer-coated surfaces to control surface zeta potential  
[NASA-CASE-MFS-26050-1] c 27 N92-25397
- SURFACE REACTIONS**
- Nondestructive spot test method for magnesium and magnesium alloys  
[NASA-CASE-LAR-10953-1] c 17 N73-27446
- Means for phase locking the outputs of a surface emitting laser diode array  
[NASA-CASE-NPO-16542-1-CU] c 36 N87-23960
- Quantitative surface temperature measurement using two-color thermographic phosphors and video equipment  
[NASA-CASE-LAR-13740-1] c 35 N90-22770
- Arc-textured high emittance radiator surfaces  
[NASA-CASE-LEW-14679-1] c 27 N91-25296
- Etching method for photoresists or polymers  
[NASA-CASE-ARC-11873-2] c 25 N91-31258
- SURFACE ROUGHNESS**
- Surface roughness detector Patent  
[NASA-CASE-XLA-00203] c 14 N70-34161
- Optical inspection apparatus Patent  
[NASA-CASE-XMF-00462] c 14 N70-34298
- Contour surveying system Patent  
[NASA-CASE-XLA-08646] c 14 N71-17586
- Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c 35 N79-10391
- Texturing polymer surfaces by transfer casting --- cardiovascular prosthesis  
[NASA-CASE-LEW-13120-1] c 27 N82-28440
- Ion sputter textured graphite --- anode collector plates in electron tube devices  
[NASA-CASE-LEW-12919-1] c 24 N83-10117
- Ion sputter textured graphite electrode plates  
[NASA-CASE-LEW-12919-2] c 70 N84-28565
- SURFACE ROUGHNESS EFFECTS**
- Meteorological balloon Patent  
[NASA-CASE-XMF-04163] c 02 N71-23007
- SURFACE TEMPERATURE**
- Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c 34 N83-27144
- Multiwavelength pyrometer for gray and non-gray surfaces in the presence of interfering radiation  
[NASA-CASE-LEW-15250-1] c 35 N93-17060

## SURFACE TREATMENT

- Polymer-coated surfaces to control surface zeta potential  
[NASA-CASE-MFS-26050-1] c 27 N92-25397
- Metal etching composition  
[NASA-CASE-MFS-29576-1] c 25 N92-25399
- Method for preparation of a microporous structure with layered interstitial surface treatment  
[NASA-CASE-MSC-21487-2] c 24 N93-29023
- SURFACE VEHICLES**
- Optimal control system for an electric motor driven vehicle  
[NASA-CASE-NPO-11210] c 11 N72-20244
- Vehicle for use in planetary exploration  
[NASA-CASE-NPO-11366] c 11 N73-26238
- Short range laser obstacle detector --- for surface vehicles using laser diode array  
[NASA-CASE-NPO-11856-1] c 36 N74-15145
- Vehicle locating system utilizing AM broadcasting station carriers  
[NASA-CASE-NPO-13217-1] c 32 N75-26194
- Vehicular impact absorption system  
[NASA-CASE-NPO-14014-1] c 37 N79-10420
- Personnel emergency carrier vehicle  
[NASA-CASE-KSC-11282-1] c 85 N87-21755
- Articulated suspension system  
[NASA-CASE-NPO-17354-1-CU] c 37 N90-17153
- A method for surmounting an obstacle by a robot vehicle  
[NASA-CASE-NPO-18764-1-CU] c 37 N93-17272
- SURFACE WAVES**
- Antenna design for surface wave suppression Patent  
[NASA-CASE-XLA-10772] c 07 N71-28980
- Solar energy converter using surface plasma waves  
[NASA-CASE-LEW-13827-1] c 44 N85-21768
- Dual differential interferometer  
[NASA-CASE-LAR-12966-1] c 35 N85-30282
- SURFACES**
- Recoverable rocket vehicle Patent  
[NASA-CASE-XMF-00389] c 31 N70-34176
- Friction measuring apparatus Patent  
[NASA-CASE-XNP-08680] c 14 N71-22995
- Three-axis adjustable loading structure  
[NASA-CASE-FRC-10051-1] c 35 N74-13129
- Photoelectron spectrometer with means for stabilizing sample surface potential  
[NASA-CASE-NPO-13772-1] c 35 N78-10429
- SURFACTANTS**
- Surfactant-assisted liquefaction of particulate carbonaceous substances  
[NASA-CASE-NPO-13904-1] c 25 N79-11152
- SURGERY**
- Tissue macerating instrument  
[NASA-CASE-LEW-12668-1] c 52 N78-14773
- Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12955-1] c 52 N80-14684
- Process of making medical clip  
[NASA-CASE-LAR-12650-2] c 52 N84-28389
- Optical joint correlator for real-time image tracking and retinal surgery  
[NASA-CASE-MSC-21509-1] c 74 N91-25840
- SURGES**
- Transient-compensated SCR inverter  
[NASA-CASE-XLA-08507] c 09 N69-39984
- Turn on transient limiter Patent  
[NASA-CASE-GSC-10413] c 10 N71-26531
- SURGICAL INSTRUMENTS**
- Ophthalmic method and apparatus  
[NASA-CASE-LEW-11669-1] c 05 N73-27062
- Ophthalmic liquefaction pump  
[NASA-CASE-LEW-12051-1] c 52 N75-33640
- Cutting head for ultrasonic lithotripsy  
[NASA-CASE-GSC-12944-1] c 52 N86-19885
- Device for removing foreign objects from anatomic organs  
[NASA-CASE-GSC-13306-1] c 52 N92-33032
- SURVIVAL EQUIPMENT**
- Survival couch Patent  
[NASA-CASE-XLA-00118] c 05 N70-33285
- Life preserver Patent  
[NASA-CASE-XMS-00864] c 05 N70-36493
- Soft frame adjustable eyeglasses Patent  
[NASA-CASE-XMS-06064] c 05 N71-23096
- SUSPENDING (HANGING)**
- Parallel motion suspension device Patent  
[NASA-CASE-XNP-01567] c 15 N70-41310
- Reduced gravity simulator Patent  
[NASA-CASE-XLA-01787] c 11 N71-16028
- Suspended mass impact damper Patent  
[NASA-CASE-LAR-10193-1] c 15 N71-27146
- Airfoil flutter model suspension system  
[NASA-CASE-LAR-13522-1-SB] c 09 N87-25334
- Hanging drop crystal growth apparatus and method  
[NASA-CASE-MFS-28206-1-SB] c 76 N90-23242



## SUSPENSION SYSTEMS (VEHICLES)

- Cable suspended windmill  
[NASA-CASE-LAR-13434-1] c 37 N90-23742
- Suspension mechanism and method  
[NASA-CASE-LAR-14142-1] c 37 N90-27116
- Electrostatically suspended rotor for angular encoder  
[NASA-CASE-MFS-28294-1] c 31 N91-14508
- Torsional suspension system for testing space structures  
[NASA-CASE-LAR-14149-1-SB] c 14 N91-21176

## SUSPENSION SYSTEMS (VEHICLES)

- Suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NPO-14395-1] c 37 N82-21587
- Articulated suspension system  
[NASA-CASE-NPO-17354-1-CU] c 37 N90-17153

## SWEAT

- Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c 52 N81-29763

## SWEAT COOLING

- Transpiration cooled turbine blade manufactured from wires Patent  
[NASA-CASE-XLE-00020] c 15 N70-33226
- Transpirationally cooled heat ablation system Patent  
[NASA-CASE-XMS-02677] c 31 N70-42075
- Method of electroforming a rocket chamber  
[NASA-CASE-LEW-11118-1] c 20 N74-32919

## SWEEP CIRCUITS

- Multiple slope sweep generator Patent  
[NASA-CASE-XMS-03542] c 09 N71-28926

## SWEET EFFECT

- High speed flight vehicle control Patent  
[NASA-CASE-XLA-08967] c 02 N71-27088
- Acoustically swept rotor --- helicopter noise reduction  
[NASA-CASE-ARC-11106-1] c 05 N80-14107

## SWEET FREQUENCY

- Swept group delay measurement  
[NASA-CASE-NPO-13909-1] c 33 N78-25319
- Method and apparatus for frequency spectrum analysis  
[NASA-CASE-NPO-17759-1-CU] c 32 N92-29124

## SWELLING

- Intumescent composition, foamed product prepared therewith, and process for making same  
[NASA-CASE-ARC-10304-1] c 18 N73-26572

## SWEPT FORWARD WINGS

- High performance forward swept wing aircraft  
[NASA-CASE-ARC-11636-1] c 05 N88-28914

## SWEPT WINGS

- Supersonic aircraft Patent  
[NASA-CASE-XLA-04451] c 02 N71-12243
- Natural flow wing  
[NASA-CASE-LAR-14281-1] c 02 N92-28729
- Boundary layer relaminarization device  
[NASA-CASE-LAR-14470-1] c 02 N93-11876
- Swept wing attachment line contamination fence  
[NASA-CASE-LAR-13400-1] c 02 N93-22015

## SWIRLING

- Slosh alleviator Patent  
[NASA-CASE-XLA-05749] c 15 N71-19569
- Swirl can primary combustor  
[NASA-CASE-LEW-11326-1] c 23 N73-30665
- Flow modifying device  
[NASA-CASE-LEW-13562-2] c 07 N85-35195
- Vortex motion phase separator for zero gravity liquid transfer  
[NASA-CASE-KSC-11387-1] c 29 N90-20236

## SWITCHES

- Switching mechanism with energy storage means Patent  
[NASA-CASE-XGS-00473] c 03 N70-38713
- Digital memory in which the driving of each word location is controlled by a switch core Patent  
[NASA-CASE-XNP-01466] c 10 N71-26434
- RF controlled solid state switch  
[NASA-CASE-ARC-10136-1] c 09 N72-22202
- High power RF coaxial switch  
[NASA-CASE-NPO-14229-1] c 33 N80-18285
- Automatic thermal switch  
[NASA-CASE-GSC-12415-1] c 33 N82-24419
- Fiber optic crossbar switch for automatically patching optical signals  
[NASA-CASE-KSC-11104-1] c 74 N83-29032
- Triac failure detector  
[NASA-CASE-MFS-25607-1] c 33 N83-34190
- Heat pipe thermal switch  
[NASA-CASE-GSC-12812-1] c 34 N83-35307
- Three-phase power factor controller with induced EMF sensing  
[NASA-CASE-MFS-25852-1] c 33 N84-33661
- Laser activated MTOS microwave device  
[NASA-CASE-NPO-16112-1] c 33 N86-19516
- Self-actuating heat switches for redundant refrigeration systems  
[NASA-CASE-NPO-17085-1-CU] c 31 N89-12785

Solid state electrical switch employing materials with reversible phase transistors

- [NASA-CASE-NPO-17621-1-CU] c 33 N90-17010
- Long period pseudo random number sequence generator  
[NASA-CASE-NPO-17241-1-CU] c 33 N90-23636
- Thermal switch disc for short circuit protection of batteries  
[NASA-CASE-MSC-21428-1] c 33 N91-14537
- Synchronous demodulator  
[NASA-CASE-GSC-13179-1] c 33 N91-26438
- Asymmetric soft-error resistant memory  
[NASA-CASE-NPO-17394-1-CU] c 60 N91-31810
- Monolithic mm-wave phase shifter using optically activated superconducting switches  
[NASA-CASE-LEW-14878-1] c 74 N92-28571
- Cascaded transformerless DC-DC voltage amplifier with optically isolated switching devices  
[NASA-CASE-NPO-17994-1-CU] c 33 N93-18278

## SWITCHING

- Phase detector for three-phase power factor controller  
[NASA-CASE-MFS-25854-1] c 33 N84-27975
- Long period pseudo random number sequence generator  
[NASA-CASE-NPO-17241-1-CU] c 33 N90-23636
- Asymmetric soft-error resistant memory  
[NASA-CASE-NPO-17394-1-CU] c 60 N91-31810

## SWITCHING CIRCUITS

- Solid state switch  
[NASA-CASE-XNP-09228] c 09 N69-27500
- Power control circuit  
[NASA-CASE-XNP-02713] c 10 N69-39888
- A method for selective gold diffusion of monolithic silicon devices and/or circuits Patent application  
[NASA-CASE-ERC-10072] c 09 N70-11148
- Space vehicle electrical system Patent  
[NASA-CASE-XMF-00517] c 03 N70-34157
- High speed low level electrical stepping switch Patent  
[NASA-CASE-XAC-00060] c 09 N70-39915
- Switching circuit employing regeneratively connected complementary transistors Patent  
[NASA-CASE-XNP-02654] c 10 N70-42032
- Electronic beam switching commutator Patent  
[NASA-CASE-XGS-01451] c 09 N71-10677
- Electronic amplifier with power supply switching Patent  
[NASA-CASE-XMS-00945] c 09 N71-10798
- SCR blocking pulse gate amplifier Patent  
[NASA-CASE-XLA-07497] c 09 N71-12514
- Magnetic core current steering commutator Patent  
[NASA-CASE-NPO-10201] c 08 N71-18694
- A dc-coupled noninverting one-shot Patent  
[NASA-CASE-XNP-09450] c 10 N71-18723
- Reversible current control apparatus Patent  
[NASA-CASE-XLA-09371] c 10 N71-18724
- Exclusive-Or digital logic module Patent  
[NASA-CASE-XLA-07732] c 08 N71-18751
- Polarization diversity monopulse tracking receiver Patent  
[NASA-CASE-XGS-03501] c 09 N71-20864
- Sight switch using an infrared source and sensor Patent  
[NASA-CASE-XMF-03934] c 09 N71-22985
- Complementary regenerative switch Patent  
[NASA-CASE-XGS-02751] c 09 N71-23015
- Drive circuit utilizing two cores Patent  
[NASA-CASE-XNP-01318] c 10 N71-23033
- Pulse modulator providing fast rise and fall times Patent  
[NASA-CASE-XMS-04919] c 09 N71-23270
- Polarity sensitive circuit Patent  
[NASA-CASE-XNP-00952] c 10 N71-23271
- Increasing efficiency of switching type regulator circuits Patent  
[NASA-CASE-XMS-09352] c 09 N71-23316
- Indexing microwave switch Patent  
[NASA-CASE-NPO-06507] c 09 N71-23548
- Multialarm summary alarm Patent  
[NASA-CASE-XLE-03061-1] c 10 N71-24798
- Switching circuit Patent  
[NASA-CASE-XNP-06505] c 10 N71-24799
- Inverter with means for base current shaping for sweeping charge carriers from base region Patent  
[NASA-CASE-XGS-06226] c 10 N71-25950
- Current steering switch Patent  
[NASA-CASE-XNP-08567] c 09 N71-26000
- Control apparatus for applying pulses of selectively predetermined duration to a sequence of loads Patent  
[NASA-CASE-XGS-04224] c 10 N71-26418
- Turn on transient limiter Patent  
[NASA-CASE-GSC-10413] c 10 N71-26531
- Method and means for providing an absolute power measurement capability Patent  
[NASA-CASE-ERC-11020] c 14 N71-26774
- Transistor drive regulator Patent  
[NASA-CASE-LEW-10233] c 10 N71-27126

Compensating bandwidth switching transients in an amplifier circuit Patent

- [NASA-CASE-XNP-01107] c 10 N71-28859
- Monostable multivibrator with complementary NOR gates Patent  
[NASA-CASE-MSC-13492-1] c 10 N71-28860
- Digital memory sense amplifying means Patent  
[NASA-CASE-XNP-01012] c 08 N71-28925
- Current regulating voltage divider  
[NASA-CASE-MFS-20935] c 09 N71-34212
- Reference voltage switching unit  
[NASA-CASE-NPO-11253] c 09 N72-17157
- Optimum performance spacecraft solar cell system  
[NASA-CASE-GSC-10669-1] c 03 N72-20031
- Flow rate switch  
[NASA-CASE-NPO-10722] c 09 N72-20199
- Switching regulator  
[NASA-CASE-LEW-11005-1] c 09 N72-21243
- Data multiplexer using tree switching configuration  
[NASA-CASE-NPO-11333] c 08 N72-22162
- Pulse coupling circuit  
[NASA-CASE-LEW-10433-1] c 09 N72-22197
- Solid state remote circuit selector switch  
[NASA-CASE-LEW-10387] c 09 N72-22201
- Pressure operated electrical switch responsive to a pressure decrease after a pressure increase  
[NASA-CASE-LAR-10137-1] c 09 N72-22204
- Fast response low power drain logic circuits  
[NASA-CASE-GSC-10878-1] c 10 N72-22236
- CRT blanking and brightness control circuit  
[NASA-CASE-KSC-10647-1] c 10 N72-31273
- Electronic video editor  
[NASA-CASE-KSC-10003] c 10 N73-13235
- Radiation sensitive solid state switch  
[NASA-CASE-NPO-10817-1] c 08 N73-30135
- Transparent switchboard  
[NASA-CASE-MSC-13746-1] c 10 N73-32143
- High isolation RF signal selection switches  
[NASA-CASE-NPO-13081-1] c 33 N74-22814
- Isolated output system for a class D switching-mode amplifier  
[NASA-CASE-MFS-21616-1] c 33 N75-30429
- Dual digital video switcher  
[NASA-CASE-KSC-10782-1] c 33 N75-30431
- Multi-computer multiple data path hardware exchange system  
[NASA-CASE-NPO-13422-1] c 60 N76-14818
- Sustained arc ignition system  
[NASA-CASE-LEW-12444-1] c 33 N77-28385
- Window comparator  
[NASA-CASE-FRC-10090-1] c 33 N78-18308
- Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c 33 N79-24254
- System for automatically switching transformer coupled lines  
[NASA-CASE-MSC-16697-1] c 33 N79-28415
- Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12586-1] c 44 N80-14472
- Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c 33 N81-33404
- Microwave switching power divider --- antenna feeds  
[NASA-CASE-GSC-12420-1] c 33 N82-16340
- Control means for a solid state crossbar switch  
[NASA-CASE-NPO-15066-1] c 33 N82-29538
- Active lamp pulse driver circuit --- optical pumping of laser media  
[NASA-CASE-GSC-12566-1] c 33 N83-34189
- Pulsed thyristor trigger control circuit  
[NASA-CASE-MFS-25616-1] c 33 N84-16455
- Simplified dc to dc converter  
[NASA-CASE-LEW-13495-1] c 33 N84-33663
- Hybrid power semiconductor  
[NASA-CASE-LEW-13922-1] c 33 N86-20672
- Four quadrant control circuit for a brushless three-phase dc motor  
[NASA-CASE-MFS-28080-1] c 33 N87-21233
- Optical shutter switching matrix  
[NASA-CASE-KSC-11392-1] c 74 N90-22383

## SWITCHING THEORY

- Multiple circuit switch apparatus with improved pivot actuator structure Patent  
[NASA-CASE-XAC-03777] c 10 N71-15909

## SWIVELS

- Swivel support for gas bearings Patent  
[NASA-CASE-XMF-07808] c 15 N71-23812
- Double swivel toggle release  
[NASA-CASE-MSC-21436-1] c 37 N90-21390

## SYMBOLS

- Multiple symbol differential detection  
[NASA-CASE-NPO-17896-1-CU] c 32 N91-27439

## SUBJECT INDEX

## SYMMETRY

Transversely polarized source cladding for an optical fiber  
[NASA-CASE-LAR-14652-1-SB] c 74 N93-22039

## SYNCHRONISM

Time division multiplex system  
[NASA-CASE-XGS-05918] c 07 N69-39974  
Means for generating a sync signal in an FM communication system Patent  
[NASA-CASE-XNP-10830] c 07 N71-11281  
Method of resolving clock synchronization error and means therefor Patent  
[NASA-CASE-XNP-08875] c 10 N71-23099  
Passive synchronized spike generator with high input impedance and low output impedance and capacitor power supply Patent  
[NASA-CASE-XGS-03632] c 09 N71-23311  
Time synchronization system utilizing moon reflected coded signals Patent  
[NASA-CASE-NPO-10143] c 10 N71-26326  
Rapid sync acquisition system Patent  
[NASA-CASE-NPO-10214] c 10 N71-26577  
Synchronized voltage contrast display analysis system  
[NASA-CASE-NPO-14567-1] c 33 N83-18996  
Digitized synchronous demodulator  
[NASA-CASE-GSC-12327-1] c 33 N91-14550  
Synchronized computational architecture for generalized bilateral control of robot arms  
[NASA-CASE-NPO-17401-1-CU] c 63 N91-31885

## SYNCHRONIZED OSCILLATORS

Phase demodulation system with two phase locked loops Patent  
[NASA-CASE-XNP-00777] c 10 N71-19469  
Phase locked phase modulator including a voltage controlled oscillator Patent  
[NASA-CASE-XNP-05382] c 10 N71-23544  
Automatic frequency control loop including synchronous switching circuits  
[NASA-CASE-KSC-10393] c 09 N72-21247

## SYNCHRONIZERS

Burst synchronization detection system Patent  
[NASA-CASE-XMS-05605-1] c 10 N71-19468  
Time division radio relay synchronizing system using different sync code words for in sync and out of sync conditions Patent  
[NASA-CASE-GSC-10373-1] c 07 N71-19773  
Synchronous servo loop control system Patent  
[NASA-CASE-XNP-03744] c 10 N71-20448  
Digital synchronizer Patent  
[NASA-CASE-NPO-10851] c 07 N71-24613  
Video sync processor Patent  
[NASA-CASE-KSC-10002] c 10 N71-25865  
Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12462-1] c 32 N74-20809  
Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12494-1] c 32 N74-20810  
System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c 33 N75-19519  
Telemetry synchronizer  
[NASA-CASE-GSC-11868-1] c 17 N76-22245  
Memory-based frame synchronizer --- for digital communication systems  
[NASA-CASE-GSC-12430-1] c 60 N82-16747

## SYNCHRONOUS MOTORS

Synchronous dc direct drive system Patent  
[NASA-CASE-GSC-10065-1] c 10 N71-27136  
Motor run-up system --- power lines  
[NASA-CASE-NPO-13374-1] c 33 N75-19524

## SYNCHRONOUS SATELLITES

Position location system and method Patent  
[NASA-CASE-GSC-10087-2] c 21 N71-13958  
Serrordyne frequency converter re-entrant amplifier system Patent  
[NASA-CASE-XGS-01022] c 07 N71-16088  
Traffic control system and method Patent  
[NASA-CASE-GSC-10087-1] c 02 N71-19287  
Tracking antenna system Patent  
[NASA-CASE-GSC-10553-1] c 07 N71-19854  
Satellite interface synchronization system  
[NASA-CASE-GSC-10390-1] c 07 N72-11149  
Synchronous orbit battery cyclor  
[NASA-CASE-GSC-11211-1] c 03 N72-25020  
Systems and methods for determining radio frequency interference  
[NASA-CASE-GSC-12150-1] c 32 N79-11265  
Satellite personal communications system  
[NASA-CASE-NPO-14480-1] c 32 N80-20448

## SYNTHESIS

Synthesis of polymeric schiff bases by schiff-base exchange reactions Patent  
[NASA-CASE-XMF-08651] c 06 N71-11236  
Preparation of ordered poly /arylenesiloxane/ polymers  
[NASA-CASE-XMF-10753] c 06 N71-11237  
Imidazopyrrolone/imide copolymers Patent  
[NASA-CASE-XLA-08802] c 06 N71-11238

Preparation of polyimides from mixtures of monomeric diamines and esters of polycarboxylic acids  
[NASA-CASE-LEW-11325-1] c 06 N73-27980

## SYNTHESIS (CHEMISTRY)

Prepolymer dianhydrides  
[NASA-CASE-NPO-13899-1] c 27 N80-32515  
Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c 27 N81-15104  
Bifunctional monomers having terminal oxime and cyano or amide groups  
[NASA-CASE-ARC-11253-3] c 27 N81-24256  
Synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c 23 N82-16174  
Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c 25 N82-26396  
Polyvinyl alcohol cross-linked with two aldehydes  
[NASA-CASE-LEW-13504-1] c 25 N83-13188  
Synthesis of dawsonites --- for use in fire extinguishing operations  
[NASA-CASE-ARC-11326-1] c 25 N83-33977  
Solvent resistant thermoplastic aromatic poly(imidesulfone) and process for preparing same  
[NASA-CASE-LAR-12858-1] c 27 N83-34041  
Polyphenylene ethers with imide linking groups  
[NASA-CASE-LAR-12980-1] c 27 N84-22749  
Phenoxy resins containing pendent ethynyl groups and cured resins obtained therefrom  
[NASA-CASE-LAR-13262-1] c 23 N85-28973  
Synthesis of 2,4,8,10-tetroxaspiro[5,5]undecane  
[NASA-CASE-ARC-11243-2] c 23 N85-33187  
Fire-resistant phosphorus containing polyimides and copolymers  
[NASA-CASE-ARC-11522-2] c 27 N85-34280  
Metal phthalocyanine intermediates for the preparation of polymers  
[NASA-CASE-ARC-11405-2] c 27 N86-19455  
Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
[NASA-CASE-ARC-11429-1-CU] c 27 N86-20560  
Perfluoro (Imidoylamidene) diamidines  
[NASA-CASE-ARC-11402-3] c 23 N86-21582  
Ethynyl and substituted ethynyl-terminated polysulfones  
[NASA-CASE-LAR-12931-2] c 27 N86-21675  
Sulfone-ester polymers containing pendent ethynyl groups  
[NASA-CASE-LAR-13316-1] c 27 N86-27450  
Polymer of phosphonylmethyl-2,4- and -2,6-diamino benzene and polyfunctional monomer  
[NASA-CASE-ARC-11506-2] c 23 N86-32525  
Polyarylene ethers with improved properties  
[NASA-CASE-LAR-13555-1] c 23 N86-32526  
The 5-(4-Ethynylphenoxy) isophthalic chloride  
[NASA-CASE-LAR-13316-2] c 27 N87-14515  
Acetylene (ethynyl) terminated polyimide siloxane and process for preparation thereof  
[NASA-CASE-LAR-13318-1] c 27 N87-14516  
Ethynyl terminated ester oligomers and polymers therefrom  
[NASA-CASE-LAR-13118-2] c 27 N87-16907  
Process for preparing phthalocyanine polymer from imide containing bisphthalonitrile  
[NASA-CASE-ARC-11511-2] c 27 N87-21112  
Polyenamines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-1-CU] c 27 N87-22847  
Preparation of B-trichloroborazine  
[NASA-CASE-ARC-11643-1-SB] c 23 N87-23698  
Fire and heat resistant laminating resins based on maleimide and citraconimido substituted 1-(diorgano oxyphosphonyl) methyl -2,4- and -2,6- diaminobenzenes  
[NASA-CASE-ARC-11533-3] c 27 N87-24564  
Polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-13633-1] c 27 N87-24575  
Aminophenoxy cyclotriphosphazene cured epoxy resins and the composites, laminates, adhesives and structures thereof  
[NASA-CASE-ARC-11548-1] c 27 N87-25469  
Process for developing crystallinity in linear aromatic polyimides  
[NASA-CASE-LAR-13732-1] c 27 N87-25474  
Aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-3] c 23 N88-24692  
Substituted 1,1,1-Triaryl-2,2,2-Trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-1] c 23 N88-26404  
Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-1-SB] c 27 N88-29040  
Polyphenylquinoxalines via aromatic nucleophilic displacement  
[NASA-CASE-LAR-13988-1] c 23 N89-11814

Polyenamines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-2-CU] c 23 N89-12667  
Polyphenylquinoxalines containing alkylendioxy groups  
[NASA-CASE-LAR-13601-1-CU] c 27 N89-14337  
Novel polyimide compositions based on 4,4'-Isophthaloyldipthalic anhydride (IDPA)  
[NASA-CASE-LAR-14194-1] c 24 N90-15148  
Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14162-1] c 27 N90-15259  
Copolyimide with a combination of flexibilizing groups  
[NASA-CASE-LAR-13821-1] c 27 N90-16950  
New Condensation polyimides containing 1,1,1-triaryl-2,2,2-trifluoroethane structures  
[NASA-CASE-LEW-14346-1] c 23 N90-19300  
The 1-(diorganooxyphosphonyl)-methyl-2,4- and -2,6-diamido benzenes  
[NASA-CASE-ARC-11425-4] c 23 N90-20133  
Process for making a noble metal on tin oxide catalyst  
[NASA-CASE-LAR-13741-1-SB] c 25 N90-20180  
Human serum albumin crystals and method of preparation  
[NASA-CASE-MFS-28234-1] c 52 N90-20616  
Bis(4-(3,4-dimethylenepyrrolidyl)-phenyl) methane  
[NASA-CASE-LAR-13965-1-CU] c 23 N90-21118  
Apparatus for mixing solutions in low gravity environments  
[NASA-CASE-MFS-26047-1] c 29 N90-21209  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-2] c 25 N90-23497  
Acetylene terminated aspartimides and resins therefrom  
[NASA-CASE-LAR-14188-1] c 27 N90-23545  
Process for lowering the dielectric constant of polyimides using diamine acid additives  
[NASA-CASE-LAR-13902-1] c 27 N90-23546  
Aromatic polyimides containing a dimethylsilane-linked dianhydride  
[NASA-CASE-LAR-14198-1] c 27 N90-26956  
N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14188-2] c 23 N91-14419  
Ladder polymers for use as high temperature stable resins or coatings  
[NASA-CASE-LEW-14203-1] c 27 N91-15402  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-3] c 23 N91-17141  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-4] c 23 N91-25185  
Polyimides via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14145-1] c 27 N92-28751  
Poly(1,3,4-oxadiazoles) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14427-1] c 23 N92-29141  
Imide/arylene ether copolymers  
[NASA-CASE-LAR-14159-1-CU] c 27 N92-31792  
Polyimides with carbonyl and ether connecting groups between the aromatic rings  
[NASA-CASE-LAR-14001-1] c 27 N92-33008  
Microporous structure with layered interstitial surface treatment, and method and apparatus for preparation thereof  
[NASA-CASE-MSC-21487-1] c 25 N92-33009  
Graphite fluoride from iodine intercalated graphitized carbon  
[NASA-CASE-LEW-15360-1] c 25 N92-34206  
Substituted 1,1,1-triaryl 2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-7] c 23 N93-17412  
Poly(1,2,4-triazole) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14440-1] c 23 N93-18283  
High temperature polymer from maleimide-acetylene terminated monomers  
[NASA-CASE-LAR-14475-1] c 27 N93-19327  
Crosslinked polyimides prepared from N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14774-1] c 27 N93-19388  
Polyimide from bis(n-isoprenyl)s of aryl diamides  
[NASA-CASE-LAR-14330-2-CU] c 27 N93-22033  
Polyimides prepared from 3,5-diamino benzo trifluoride  
[NASA-CASE-LAR-14206-1] c 27 N93-29083  
Diphenylmethane-containing dianhydride and polyimides prepared therefrom  
[NASA-CASE-LAR-14487-1] c 27 N93-29085  
Process to prepare 1,3-diamino-5-pentafluorosulfanylbenzene  
[NASA-CASE-LAR-14773-2-CU] c 25 N93-29506  
Ion exchange polymers and method for making  
[NASA-CASE-LEW-15576-1] c 27 N93-31316

## SYNTHESIZERS

Digitally controlled frequency synthesizer Patent  
[NASA-CASE-XGS-02317] c 09 N71-23525

## SYNTHETIC APERTURE RADAR

- Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c 35 N79-10391
- Azimuth correlator for real-time synthetic aperture radar image processing  
[NASA-CASE-NPO-14019-1] c 32 N79-14268
- Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-1] c 32 N79-19195
- Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c 32 N82-12297
- Servomechanism for Doppler shift compensation in optical correlator for synthetic aperture radar  
[NASA-CASE-NPO-14998-1] c 32 N83-18975
- Clutter free synthetic aperture radar correlator  
[NASA-CASE-NPO-14035-1] c 32 N83-19968
- Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c 32 N83-31918
- Synthetic aperture radar target simulator  
[NASA-CASE-NPO-15024-1] c 32 N84-27951
- Pipelined digital SAR azimuth correlator using hybrid FFT-transversal filter  
[NASA-CASE-NPO-15519-1] c 32 N84-34651
- Method and apparatus for Delta Kappa synthetic aperture radar measurement of ocean current  
[NASA-CASE-NPO-15704-1] c 32 N85-34327
- Method and apparatus for contour mapping using synthetic aperture radar  
[NASA-CASE-NPO-15939-1] c 43 N86-19711
- Data volume reduction for imaging radar polarimetry  
[NASA-CASE-NPO-17184-1-CU] c 32 N88-26541
- Method for providing a polarization filter for processing synthetic aperture radar image data  
[NASA-CASE-NPO-17904-1-CU] c 32 N91-13594
- Pipeline synthetic aperture radar data compression utilizing systolic binary tree-searched architecture for vector quantization  
[NASA-CASE-NPO-17941-1-CU] c 32 N91-13595
- Method for detecting surface motions and mapping small terrestrial or planetary surface deformations with synthetic aperture radar  
[NASA-CASE-NPO-17831-1-CU] c 43 N91-14642
- System and method for measuring ocean surface currents at locations remote from land masses using synthetic aperture radar  
[NASA-CASE-NPO-17937-1-CU] c 43 N91-21621
- Generation of topographic terrain models utilizing synthetic aperture radar and surface level data  
[NASA-CASE-GSC-13212-1] c 43 N91-32546

## SYNTHETIC FIBERS

- Fluid containers and resealable septum therefor Patent  
[NASA-CASE-NPO-10123] c 15 N71-24835
- Fabric for micrometeoroid protection garment Patent  
[NASA-CASE-MSC-12109] c 18 N71-26285
- Fluid impervious barrier including liquid metal alloy and method of making same Patent  
[NASA-CASE-XNP-08881] c 17 N71-28747
- Polymeric electrolytic hygrometer  
[NASA-CASE-NPO-13948-1] c 35 N78-25391
- Process for spinning flame retardant elastomeric compositions --- fabricating synthetic fibers for high oxygen environments  
[NASA-CASE-MSC-14331-3] c 27 N78-32262
- Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
[NASA-CASE-NPO-13530-1] c 25 N81-17187
- Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14489-1] c 37 N91-27562

## SYNTHETIC FUELS

- Molten salt pyrolysis of latex --- synthetic hydrocarbon fuel production using the Guayule shrub  
[NASA-CASE-NPO-14315-1] c 27 N81-17261
- Solar heated fluidized bed gasification system  
[NASA-CASE-NPO-15071-1] c 44 N82-16475

## SYNTHETIC RESINS

- Coating process  
[NASA-CASE-XNP-06508] c 18 N69-39895
- Phosphorus-containing bisimide resins  
[NASA-CASE-ARC-11321-1] c 27 N81-27272
- Method for forming pyrrone molding powders and products of said method  
[NASA-CASE-LAR-10423-1] c 23 N82-29358
- Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
[NASA-CASE-ARC-11429-1-CU] c 27 N86-20560
- Acetylene terminated aspartimides and resins therefrom  
[NASA-CASE-LAR-14188-1] c 27 N90-23545
- N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14188-2] c 23 N91-14419

## SYNTHETIC RUBBERS

- Process for the preparation of polycarbonylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c 27 N81-27271

## SYRINGES

- Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c 51 N81-14605
- Automated syringe sampler --- remote sampling of air and water  
[NASA-CASE-LAR-12308-1] c 35 N81-29407

## SYSTEM EFFECTIVENESS

- System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
[NASA-CASE-MFS-23513-1] c 74 N79-11865
- Dynamic pattern matcher using incomplete data  
[NASA-CASE-MSC-21415-1-SB] c 61 N93-18858

## SYSTEM FAILURES

- Tape recorder Patent  
[NASA-CASE-XGS-08259] c 14 N71-23698
- Fault tolerant clock apparatus utilizing a controlled minority of clock elements  
[NASA-CASE-MSC-12531-1] c 35 N75-30504
- Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c 07 N81-19115
- Hidden Markov models for fault detection in dynamic systems  
[NASA-CASE-NPO-18982-1-CU] c 38 N93-30413

## SYSTEMS ANALYSIS

- Analog-to-digital converter analyzing system  
[NASA-CASE-NPO-10560] c 08 N72-22166

## SYSTEMS ENGINEERING

- Magnetohydrodynamic induction machine  
[NASA-CASE-XNP-07481] c 25 N69-21929
- Gravity stabilized flying vehicle Patent  
[NASA-CASE-MSC-12111-1] c 02 N71-11039
- Solar battery with interconnecting means for plural cells Patent  
[NASA-CASE-XNP-06506] c 03 N71-11050
- Helmet assembly and latch means therefor Patent  
[NASA-CASE-XMS-04935] c 05 N71-11190
- Multi-feed cone Cassegrain antenna Patent  
[NASA-CASE-NPO-10539] c 07 N71-11285
- Viscous-pendulum-damper Patent  
[NASA-CASE-XLA-02079] c 12 N71-16894
- Out of tolerance warning alarm system for plurality of monitored circuits Patent  
[NASA-CASE-XMS-10984-1] c 10 N71-19417
- Wide range data compression system Patent  
[NASA-CASE-XGS-02612] c 08 N71-19435
- Space suit heat exchanger Patent  
[NASA-CASE-XMS-09571] c 05 N71-19439
- Biomedical radiation detecting probe Patent  
[NASA-CASE-XMS-01177] c 05 N71-19440
- High speed binary to decimal conversion system Patent  
[NASA-CASE-XGS-01230] c 08 N71-19544
- Evaporant source for vapor deposition Patent  
[NASA-CASE-XMF-06065] c 15 N71-20395
- Method and apparatus for making a heat insulating and ablative structure Patent  
[NASA-CASE-XMS-02009] c 33 N71-20834
- Polarization diversity monopulse tracking receiver Patent  
[NASA-CASE-XGS-03501] c 09 N71-20864
- Inflatable support structure Patent  
[NASA-CASE-XLA-01731] c 32 N71-21045
- Fast opening diaphragm Patent  
[NASA-CASE-XLA-03660] c 15 N71-21060
- Portable superclean air column device Patent  
[NASA-CASE-XMF-03212] c 15 N71-22721
- Apparatus for machining geometric cones Patent  
[NASA-CASE-XMS-04292] c 15 N71-22722
- Spin forming tubular elbows Patent  
[NASA-CASE-XMF-01083] c 15 N71-22723
- Spacecraft airlock Patent  
[NASA-CASE-XLA-02050] c 31 N71-22968
- Station keeping of a gravity gradient stabilized satellite Patent  
[NASA-CASE-XLA-03132] c 31 N71-22969
- Filler valve Patent  
[NASA-CASE-XNP-01747] c 15 N71-23024
- Refrigeration apparatus Patent  
[NASA-CASE-XNP-08877] c 15 N71-23025
- Reduced bandwidth video communication system utilizing sampling techniques Patent  
[NASA-CASE-XNP-02791] c 07 N71-23026
- Multiple environment materials test chamber having a multiple port X-ray tube for irradiating a plurality of samples Patent  
[NASA-CASE-XMS-02930] c 11 N71-23042
- Variable duration pulse integrator Patent  
[NASA-CASE-XLA-01219] c 10 N71-23084

- Sealed electrochemical cell provided with a flexible casing Patent  
[NASA-CASE-XGS-01513] c 03 N71-23336
- Extended area semiconductor radiation detectors and a novel readout arrangement Patent  
[NASA-CASE-XGS-03230] c 14 N71-23401
- Floating two force component measuring device Patent  
[NASA-CASE-XAC-04885] c 14 N71-23790
- Transducer circuit and catheter transducer Patent  
[NASA-CASE-ARC-10132-1] c 09 N71-24597
- Method of attaching a cover glass to a silicon solar cell Patent  
[NASA-CASE-XLE-08569-2] c 03 N71-24681
- Attitude control system for sounding rockets Patent  
[NASA-CASE-XGS-01654] c 31 N71-24750
- Temperature telemetric transmitter Patent  
[NASA-CASE-NPO-10649] c 07 N71-24840
- Tuning arrangement for an electron discharge device or the like Patent  
[NASA-CASE-XNP-09771] c 09 N71-24841
- Broadband modified turnstile antenna Patent  
[NASA-CASE-MSC-12209] c 09 N71-24842
- Apparatus for determining the deflection of an electron beam impinging on a target Patent  
[NASA-CASE-XMF-06617] c 09 N71-24843
- BCD to decimal decoder Patent  
[NASA-CASE-XKS-06167] c 08 N71-24890
- Noninterruptible digital counting system Patent  
[NASA-CASE-XNP-09759] c 08 N71-24891
- Duct coupling for single-handed operation Patent  
[NASA-CASE-MFS-20395] c 15 N71-24903
- Brushless direct current tachometer Patent  
[NASA-CASE-MFS-20385] c 09 N71-24904
- Quick release hook tape Patent  
[NASA-CASE-XMS-10660-1] c 15 N71-25975
- Internal work light Patent  
[NASA-CASE-XKS-05932] c 09 N71-26787
- Apparatus for inspecting microfilm Patent  
[NASA-CASE-MFS-20240] c 14 N71-26788
- Apparatus for remote measurement of displacement of marks on a specimen undergoing a tensile test  
[NASA-CASE-NPO-10778] c 14 N72-11364
- Optimum performance spacecraft solar cell system  
[NASA-CASE-GSC-10669-1] c 03 N72-20031
- Electric storage battery  
[NASA-CASE-NPO-11021] c 03 N72-20032
- Spacecraft attitude control method and apparatus  
[NASA-CASE-HQN-10439] c 21 N72-21624
- Light sensor  
[NASA-CASE-NPO-11311] c 14 N72-25414
- Flight control system  
[NASA-CASE-MSC-13397-1] c 21 N72-25595
- Program for computer aided reliability estimation  
[NASA-CASE-NPO-13086-1] c 15 N73-12495
- Measurement system  
[NASA-CASE-MFS-20658-1] c 14 N73-30386
- Alignment apparatus using a laser having a gravitationally sensitive cavity reflector  
[NASA-CASE-ARC-10444-1] c 16 N73-33397
- System for calibrating pressure transducer  
[NASA-CASE-LAR-10910-1] c 35 N74-13132
- Three mirror glancing incidence system for X-ray telescope  
[NASA-CASE-MFS-21372-1] c 74 N74-27866
- Holographic system for nondestructive testing  
[NASA-CASE-MFS-21704-1] c 35 N75-25124
- Compact pulsed laser having improved heat conduction  
[NASA-CASE-NPO-13147-1] c 36 N77-25502
- Tetherline system for orbiting satellites  
[NASA-CASE-MFS-23564-1] c 15 N78-25119
- Non-tracking solar energy collector system  
[NASA-CASE-NPO-13813-1] c 44 N78-31526
- Horizontally mounted solar collector  
[NASA-CASE-MFS-23349-1] c 44 N79-23481
- Contour measurement system  
[NASA-CASE-MFS-23726-1] c 43 N79-26439
- Redundant motor drive system  
[NASA-CASE-MFS-23777-1] c 37 N80-32716
- System for sterilizing objects --- cleaning space vehicle systems  
[NASA-CASE-KSC-11085-1] c 54 N81-24724
- A system for controlling the oxygen content of a gas produced by combustion  
[NASA-CASE-LAR-13257-1] c 25 N84-32447
- Multiplex electric discharge gas laser system  
[NASA-CASE-NPO-16433-1] c 36 N87-23961
- Convergent strand array liquid pumping system  
[NASA-CASE-NPO-17301-1-CU] c 31 N90-23587

## SYSTOLIC ARRAYS

- Systolic VLSI array for implementing the Kalman filter algorithm  
[NASA-CASE-NPO-17108-1-CU] c 33 N89-28713

Pipeline synthetic aperture radar data compression utilizing systolic binary tree-searched architecture for vector quantization  
[NASA-CASE-NPO-17941-1-CU] c 32 N91-13595

## T

## TABS (CONTROL SURFACES)

Aircraft rotor blade with passive tuned tab  
[NASA-CASE-ARC-11444-1] c 05 N85-29947  
Robotic tool change mechanism  
[NASA-CASE-GSC-13239-1] c 37 N91-31656

## TACHOMETERS

Digital cardiotaachometer system Patent  
[NASA-CASE-XMS-02399] c 05 N71-22896  
Brushless direct current tachometer Patent  
[NASA-CASE-MFS-20385] c 09 N71-24904  
Rateometer  
[NASA-CASE-MFS-20418] c 14 N73-24473  
Tachometer  
[NASA-CASE-MFS-23175-1] c 35 N77-30436  
Shaft transducer having dc output proportional to angular velocity  
[NASA-CASE-NPO-15706-1] c 35 N84-28017

## TACTILE SENSORS (ROBOTICS)

Tactile sensing means for prosthetic limbs  
[NASA-CASE-MFS-16570-1] c 05 N73-32013  
Optical fiber tactile sensor  
[NASA-CASE-NPO-15375-1] c 74 N84-11921

## TAIL ASSEMBLIES

Surface conforming thermal/pressure seal --- tail assemblies of space shuttle orbiters  
[NASA-CASE-MSC-18422-1] c 37 N82-16408  
Missile rolling tail brake torque system --- simulating bearing friction on canard controlled missiles  
[NASA-CASE-LAR-12751-1] c 15 N84-16231  
Apparatus and method for improving spin recovery on aircraft  
[NASA-CASE-LAR-14747-1] c 08 N93-20039

## TAKEOFF

Airplane take-off performance indicator Patent  
[NASA-CASE-XLA-00100] c 14 N70-36807  
Aircraft instrument Patent  
[NASA-CASE-XLA-00487] c 14 N70-40157  
Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13734-1-CU] c 09 N90-20096

## TANGENTS

Derivation of a tangent function using an integrated circuit four-quadrant multiplier  
[NASA-CASE-MSC-13907-1] c 10 N73-26230

## TANK GEOMETRY

Tank construction for space vehicles Patent  
[NASA-CASE-XMF-01899] c 31 N70-41948

## TANKERS

Tanker orbit transfer vehicle and method  
[NASA-CASE-MSC-20543-1] c 18 N84-22610

## TANKS (COMBAT VEHICLES)

Tank tread assemblies with track-linking mechanism  
[NASA-CASE-NPO-16321-1-CU] c 37 N87-17034

## TANKS (CONTAINERS)

Penetrating radiation system for detecting the amount of liquid in a tank Patent  
[NASA-CASE-MSC-12280] c 27 N71-16348  
Method for leakage testing of tanks Patent  
[NASA-CASE-XMF-02392] c 32 N71-24285  
Floating baffle to improve efficiency of liquid transfer from tanks  
[NASA-CASE-KSC-10639] c 15 N73-26472  
Method of producing a storage bulb for an atomic hydrogen maser  
[NASA-CASE-NPO-13050-1] c 36 N75-15029  
Tank gauging apparatus and method  
[NASA-CASE-MSC-21059-2] c 35 N91-15511

## TANTALUM

Thermionic tantalum emitter doped with oxygen Patent Application  
[NASA-CASE-NPO-11138] c 03 N70-34646  
Arc electrode of graphite with ball tip Patent  
[NASA-CASE-XLE-04788] c 09 N71-22987  
Trialkyl-dihalotantalum and niobium compounds Patent  
[NASA-CASE-XNP-04023] c 06 N71-28808  
Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c 35 N77-32454

## TANTALUM ALLOYS

Evaporant holder  
[NASA-CASE-XLA-03105] c 15 N69-27483  
Tantalum modified ferritic iron base alloys  
[NASA-CASE-LEW-12095-1] c 26 N78-18182

## TANTALUM CARBIDES

Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c 27 N78-17206

## TANTALUM OXIDES

Thin film temperature sensor and method of making same  
[NASA-CASE-NPO-11775] c 26 N72-28761

## TAPE RECORDERS

Plural recorder system  
[NASA-CASE-XMS-06949] c 09 N69-21467  
Endless tape transport mechanism Patent  
[NASA-CASE-XGS-01223] c 07 N71-10609  
Low friction magnetic recording tape Patent  
[NASA-CASE-XGS-00373] c 23 N71-15978  
Tape guidance system and apparatus for the provision thereof Patent  
[NASA-CASE-XNP-09453] c 08 N71-19420  
Synchronous servo loop control system Patent  
[NASA-CASE-XNP-03744] c 10 N71-20448  
Incremental tape recorder and data rate converter Patent  
[NASA-CASE-XNP-02778] c 08 N71-22710  
Digital telemetry system Patent  
[NASA-CASE-XGS-01812] c 07 N71-23001  
Tape recorder Patent  
[NASA-CASE-XGS-08259] c 14 N71-23698  
A dc servosystem including an ac motor Patent  
[NASA-CASE-NPO-10700] c 07 N71-33613  
Recorder using selective noise filter  
[NASA-CASE-ERC-01112] c 07 N72-21119  
Method of and means for testing a tape record/playback system  
[NASA-CASE-MFS-22671-2] c 35 N77-17426

## TAPERED COLUMNS

Method of making a rocket motor casing Patent  
[NASA-CASE-XLE-00409] c 28 N71-15658  
Rocket motor casing Patent  
[NASA-CASE-XLE-05689] c 28 N71-15659

## TAPERING

Tapered, tubular polyester fabric  
[NASA-CASE-MSC-21082-1] c 27 N87-29672

## TAPES

High density tape casting system  
[NASA-CASE-NPO-16901-1-CU] c 31 N90-19425  
Method for non-destructive estimation of waveguide directional coupler dimensions  
[NASA-CASE-NPO-18454-1-CU] c 33 N92-17865

## TARGET ACQUISITION

Acquisition and tracking system for optical radar  
[NASA-CASE-MFS-20125] c 16 N72-13437  
Target acquisition antenna  
[NASA-CASE-GSC-10064-1] c 10 N72-22235  
Intruder detection system  
[NASA-CASE-ARC-10097-2] c 07 N73-25160

## TARGET RECOGNITION

Electronic background suppression method and apparatus for a field scanning sensor  
[NASA-CASE-XGS-05211] c 07 N69-39980  
Real-time optical multiple object recognition and tracking system and method  
[NASA-CASE-NPO-17139-1-CU] c 74 N88-25301

## TARGET SIMULATORS

Simulator method and apparatus for practicing the mating of an observer-controlled object with a target  
[NASA-CASE-MFS-23052-2] c 74 N79-13855  
Synthetic aperture radar target simulator  
[NASA-CASE-NPO-15024-1] c 32 N84-27951

## TARGETS

Method and apparatus for producing concentric hollow spheres --- inertial confinement fusion targets  
[NASA-CASE-NPO-14596-1] c 31 N81-33319  
Method and apparatus for producing gas-filled hollow spheres --- target pellets for inertial confinement fusion  
[NASA-CASE-NPO-14596-3] c 31 N83-31896  
Optical distance measuring instrument  
[NASA-CASE-GSC-12761-1] c 74 N86-32266  
Motion detection, novelty filtering, and target tracking using an interferometric technique with a GaAs phase conjugate mirror  
[NASA-CASE-NPO-17784-1-CU] c 74 N91-13998  
Standard remote manipulator system docking target augmentation for automated docking  
[NASA-CASE-MFS-28419-1] c 18 N91-27200  
Apparatus for precision focussing and positioning of a beam waist on a target  
[NASA-CASE-ARC-11916-1-SB] c 74 N92-16811

## TECHNOLOGY UTILIZATION

Induction-type metal detector with increased scanning area capability  
[NASA-CASE-KSC-11386-1] c 35 N90-22023

## TECTONICS

Method for detecting surface motions and mapping small terrestrial or planetary surface deformations with synthetic aperture radar  
[NASA-CASE-NPO-17831-1-CU] c 43 N91-14642

## TEETH

Acoustic tooth cleaner  
[NASA-CASE-LAR-12471-1] c 52 N82-29862

## TEFLON (TRADEMARK)

Bonding of reinforced Teflon to metals  
[NASA-CASE-MFS-20482] c 15 N72-22492  
Method of producing a storage bulb for an atomic hydrogen maser  
[NASA-CASE-NPO-13050-1] c 36 N75-15029  
Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c 44 N76-27664

## TELECOMMUNICATION

Adaptive compression of communication signals Patent  
[NASA-CASE-XLA-03076] c 07 N71-11266  
Means for generating a sync signal in an FM communication system Patent  
[NASA-CASE-XNP-10830] c 07 N71-11281  
Signal-to-noise ratio estimating by taking ratio of mean and standard deviation of integrated signal samples Patent  
[NASA-CASE-XNP-05254] c 07 N71-20791  
Digital synchronizer Patent  
[NASA-CASE-NPO-10851] c 07 N71-24613  
Minimal logic block encoder Patent  
[NASA-CASE-NPO-10595] c 10 N71-25917  
Two carrier communication system with single transmitter  
[NASA-CASE-NPO-11548] c 07 N73-26118  
Pseudonoise (PN) synchronization of data system with derivation of clock frequency from received signal for clocking receiver PN generator  
[NASA-CASE-XNP-03623] c 09 N73-28084  
Coherent receiver employing nonlinear coherence detection for carrier tracking  
[NASA-CASE-NPO-11921-1] c 32 N74-30523  
Pseudo-noise test set for communication system evaluation --- test signals  
[NASA-CASE-MFS-22671-1] c 35 N75-21582  
Modulator for tone and binary signals --- phase of modulation of tone and binary signals on carrier waves in communication systems  
[NASA-CASE-GSC-11743-1] c 32 N75-24981  
Method and apparatus for quadriphase-shift-key and linear phase modulation  
[NASA-CASE-NPO-14444-1] c 33 N81-15192  
Random digital encryption secure communication system  
[NASA-CASE-MSC-16462-1] c 32 N82-31583

## TELEMETRY

Pressure variable capacitor  
[NASA-CASE-XNP-09752] c 14 N69-21541  
Telemetry word forming unit  
[NASA-CASE-XNP-09225] c 09 N69-24333  
Position location and data collection system and method Patent  
[NASA-CASE-GSC-10083-1] c 30 N71-16090  
Telespectrograph Patent  
[NASA-CASE-XLA-03273] c 14 N71-18699  
Digitally controlled frequency synthesizer Patent  
[NASA-CASE-XGS-02317] c 09 N71-23525  
Programmable telemetry system Patent  
[NASA-CASE-GSC-10131-1] c 07 N71-24624  
Temperature telemetric transmitter Patent  
[NASA-CASE-NPO-10649] c 07 N71-24840  
Rapid sync acquisition system Patent  
[NASA-CASE-NPO-10214] c 10 N71-26577  
Telemetry actuated switch  
[NASA-CASE-ARC-10105] c 09 N72-17153  
Flexible computer accessed telemetry  
[NASA-CASE-NPO-11358] c 07 N72-25172  
Digital control and information system  
[NASA-CASE-NPO-11016] c 08 N72-31226  
Multichannel telemetry system  
[NASA-CASE-NPO-11572] c 07 N73-16121  
Receiver with an improved phase lock loop in a multichannel telemetry system with suppressed carrier  
[NASA-CASE-NPO-11593-1] c 07 N73-28012  
Telemetry synchronizer  
[NASA-CASE-GSC-11868-1] c 17 N76-22245  
Memory-based parallel data output controller  
[NASA-CASE-GSC-12447-2] c 60 N84-28491  
Single frequency multitransmitter telemetry  
[NASA-CASE-LAR-13006-1] c 17 N87-16863  
Method and apparatus for telemetry adaptive bandwidth compression  
[NASA-CASE-MSC-20821-1] c 17 N87-25348  
VLSI single-chip (255,223) Reed-Solomon encoder with interleaver  
[NASA-CASE-NPO-17280-1-CU] c 17 N90-21061  
Adaptive data acquisition multiplexing system and method  
[NASA-CASE-MSC-21170-1] c 17 N91-14371

## TELEOPERATORS

Cooperative multiaxis sensor for teleoperation of article manipulating apparatus  
[NASA-CASE-NPO-13386-1] c 54 N75-27758

Method and apparatus for positioning a robotic end effector  
[NASA-CASE-MSC-21476-1] c 37 N91-21542

Telerobot control system  
[NASA-CASE-NPO-18116-1-CU] c 37 N91-32509

A generalized compliant motion primitive  
[NASA-CASE-NPO-18134-1-CU] c 37 N91-32510

Composite video and graphics display for multiple camera viewing system in robotics and teleoperation  
[NASA-CASE-NPO-17836-1-CU] c 32 N92-10126

Bilevel shared control for teleoperators  
[NASA-CASE-NPO-17800-1-CU] c 37 N92-22036

Operator-tailored adjustable control station with movable monitors and cameras for viewing systems in robotics and teleoperations  
[NASA-CASE-NPO-17837-1-CU] c 74 N93-17273

Composite video and graphics display for camera viewing systems in robotics and teleoperation  
[NASA-CASE-NPO-17836-1-CU] c 32 N93-18284

Force reflecting hand controller  
[NASA-CASE-NPO-17851-1-CU] c 37 N93-23078

**TELEPHONES**  
Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c 32 N79-23310

**TELEPHONY**  
Digital communication system  
[NASA-CASE-MSC-13912-1] c 32 N74-30524

**TELEROBOTICS**  
Composite video and graphics display for multiple camera viewing system in robotics and teleoperation  
[NASA-CASE-NPO-17836-1-CU] c 32 N92-10126

Operator-tailored adjustable control station with movable monitors and cameras for viewing systems in robotics and teleoperations  
[NASA-CASE-NPO-17837-1-CU] c 74 N93-17273

Composite video and graphics display for camera viewing systems in robotics and teleoperation  
[NASA-CASE-NPO-17836-1-CU] c 32 N93-18284

**TELESCOPES**  
Pneumatic mirror support system  
[NASA-CASE-XLA-03271] c 11 N69-24321

Solar optical telescope dome control system Patent  
[NASA-CASE-MSC-10966] c 14 N71-19568

Optical tracking mount Patent  
[NASA-CASE-MFS-14017] c 14 N71-26627

Method and apparatus for aligning a laser beam projector Patent  
[NASA-CASE-NPO-11087] c 23 N71-29125

Rotable accurate reflector system for telescopes Patent  
[NASA-CASE-NPO-10468] c 23 N71-33229

Star image motion compensator  
[NASA-CASE-LAR-10523-1] c 14 N72-22444

Light direction sensor  
[NASA-CASE-NPO-11201] c 14 N72-27409

Boreoscope with variable angle scope  
[NASA-CASE-MFS-15162] c 14 N72-32452

Ritchey-Chretien Telescope  
[NASA-CASE-GSC-11487-1] c 14 N73-30393

Servo-controlled intravital microscope system  
[NASA-CASE-NPO-13214-1] c 35 N75-25123

Compensation for primary reflector wavefront error  
[NASA-CASE-NPO-16869-1CU] c 74 N86-33138

Method and apparatus for phasing segmented mirror arrays  
[NASA-CASE-NPO-18095-1-CU] c 74 N92-29122

**TELETYPEWRITER SYSTEMS**  
Video communication system and apparatus Patent  
[NASA-CASE-XNP-06611] c 07 N71-26102

**TELEVISION CAMERAS**  
Electrically-operated rotary shutter Patent  
[NASA-CASE-XNP-00637] c 14 N70-40273

Digital television camera control system Patent  
[NASA-CASE-XNP-01472] c 14 N70-41807

Solid state television camera system Patent  
[NASA-CASE-XMF-06092] c 07 N71-24612

Color television system  
[NASA-CASE-MSC-12146-1] c 07 N72-17109

TV fatigue crack monitoring system  
[NASA-CASE-LAR-11490-1] c 39 N78-16387

Optical conversion method --- for spacecraft television  
[NASA-CASE-MSC-12618-1] c 74 N78-17865

Automatic weld torch guidance control system  
[NASA-CASE-MFS-25807] c 37 N83-20154

Television camera video level control system  
[NASA-CASE-MSC-18578-1] c 32 N85-21427

Wind dynamic range video camera  
[NASA-CASE-MFS-25750-1] c 32 N86-20647

Automated weld torch guidance control system  
[NASA-CASE-MFS-25807-2] c 37 N86-21850

Composite video and graphics display for multiple camera viewing system in robotics and teleoperation  
[NASA-CASE-NPO-17836-1-CU] c 32 N92-10126

Composite video and graphics display for camera viewing systems in robotics and teleoperation  
[NASA-CASE-NPO-17836-1-CU] c 32 N93-18284

**TELEVISION EQUIPMENT**  
Television signal scan rate conversion system Patent  
[NASA-CASE-XMS-07168] c 07 N71-11300

Automatic closed circuit television arc guidance control Patent  
[NASA-CASE-MFS-13046] c 07 N71-19433

Color television systems using a single gun color cathode ray tube Patent  
[NASA-CASE-ERC-10098] c 09 N71-28618

Television multiplexing system  
[NASA-CASE-KSC-10654-1] c 07 N73-30115

Rotating raster generator  
[NASA-CASE-FRC-10071-1] c 32 N74-20813

Auditory display for the blind  
[NASA-CASE-HQN-10832-1] c 71 N74-21014

Spacecraft docking and alignment system --- using television camera system  
[NASA-CASE-MSC-12559-1] c 18 N76-14186

System for producing chroma signals  
[NASA-CASE-MSC-14683-1] c 74 N77-18893

**TELEVISION RECEIVERS**  
Narrow bandwidth video Patent  
[NASA-CASE-XMS-06740-1] c 07 N71-26579

**TELEVISION RECEPTION**  
Retinally stabilized differential resolution television display  
[NASA-CASE-NPO-15432-1] c 32 N85-29117

**TELEVISION SYSTEMS**  
Method and means for an improved electron beam scanning system Patent  
[NASA-CASE-ERC-10552] c 09 N71-12539

Burst synchronization detection system Patent  
[NASA-CASE-XMS-05605-1] c 10 N71-19468

Narrow bandwidth video Patent  
[NASA-CASE-XMS-06740-1] c 07 N71-26579

Stereoscopic television system and apparatus  
[NASA-CASE-ARC-10160-1] c 23 N72-27728

Large TV display system  
[NASA-CASE-NPO-16932-1CU] c 33 N87-15413

Optical joint correlator for real-time image tracking and retinal surgery  
[NASA-CASE-MSC-21509-1] c 74 N91-25840

Composite video and graphics display for multiple camera viewing system in robotics and teleoperation  
[NASA-CASE-NPO-17836-1-CU] c 32 N92-10126

Real-time edge-enhanced optical correlator  
[NASA-CASE-NPO-18379-1-CU] c 74 N92-33022

Large area projection liquid-crystal video display system with inherent grid pattern optically removed  
[NASA-CASE-NPO-16932-2-CU] c 74 N93-13711

Composite video and graphics display for camera viewing systems in robotics and teleoperation  
[NASA-CASE-NPO-17836-1-CU] c 32 N93-18284

**TELEVISION TRANSMISSION**  
Television simulation for aircraft and space flight Patent  
[NASA-CASE-XFR-03107] c 09 N71-19449

Automatic frequency control for FM transmitter  
[NASA-CASE-MFS-21540-1] c 32 N74-19790

Television noise reduction device  
[NASA-CASE-MSC-12607-1] c 32 N75-21485

**TELLURIUM**  
Targets for producing high purity I-123  
[NASA-CASE-LEW-10518-3] c 25 N78-27226

**TEMPERATURE**  
Fluorinated esters of polycarboxylic acids  
[NASA-CASE-MFS-21040-1] c 06 N73-30098

**TEMPERATURE COMPENSATION**  
Temperature compensated solid state differential amplifier Patent  
[NASA-CASE-XAC-00435] c 09 N70-35440

Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00458] c 09 N70-38604

Matched thermistors for microwave power meters Patent  
[NASA-CASE-NPO-10348] c 10 N71-12554

Precision thrust gage Patent  
[NASA-CASE-XGS-02319] c 14 N71-22965

Variable frequency oscillator with temperature compensation Patent  
[NASA-CASE-XNP-03916] c 09 N71-28810

Omnidirectional acceleration device Patent  
[NASA-CASE-HQN-10780] c 14 N71-30265

Thermal compensating structural member  
[NASA-CASE-MFS-20433] c 15 N72-28496

Temperature compensated light source using a light emitting diode  
[NASA-CASE-ARC-10467-1] c 09 N73-14214

Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c 35 N77-27366

Temperature compensated current source  
[NASA-CASE-MSC-11235] c 33 N78-17294

**TEMPERATURE CONTROL**

Method and apparatus for wavelength tuning of liquid lasers  
[NASA-CASE-ERC-10187] c 16 N69-31343

Alkali-metal silicate protective coating  
[NASA-CASE-XGS-04119] c 18 N69-39979

Thermal control of space vehicles Patent  
[NASA-CASE-XLA-01291] c 33 N70-36617

Thermal switch Patent  
[NASA-CASE-XNP-00463] c 33 N70-36847

Sandwich panel construction Patent  
[NASA-CASE-XLA-00349] c 33 N70-37979

Device for suppressing sound and heat produced by high-velocity exhaust jets Patent  
[NASA-CASE-XMF-01813] c 28 N70-41582

Solar cell including second surface mirrors Patent  
[NASA-CASE-NPO-10109] c 03 N71-11049

Excessive temperature warning system Patent  
[NASA-CASE-XLA-01926] c 14 N71-15620

Intermittent type silica gel adsorption refrigerator Patent  
[NASA-CASE-XNP-00920] c 15 N71-15906

Method and apparatus for controllably heating fluid Patent  
[NASA-CASE-XMF-04237] c 33 N71-16278

Mount for thermal control system Patent  
[NASA-CASE-NPO-10138] c 33 N71-16357

Transmission line thermal short Patent  
[NASA-CASE-XNP-09775] c 09 N71-20445

Thermal control wall panel Patent  
[NASA-CASE-XLA-01243] c 33 N71-22792

Thermal control panel Patent  
[NASA-CASE-XLA-07728] c 33 N71-22890

Method and apparatus for varying thermal conductivity Patent  
[NASA-CASE-XNP-05524] c 33 N71-24876

Temperature regulation circuit Patent  
[NASA-CASE-XNP-02792] c 14 N71-28958

Automatic control of liquid cooling garment by cutaneous and external auditory meatus temperatures  
[NASA-CASE-MSC-13917-1] c 05 N72-15098

Method for controlling vapor content of a gas  
[NASA-CASE-NPO-10633] c 03 N72-28025

Atomic hydrogen maser with bulb temperature control to remove wall shift in maser output frequency  
[NASA-CASE-HQN-10654-1] c 16 N73-13489

Pump for delivering heated fluids  
[NASA-CASE-NPO-11417] c 15 N73-24513

Temperature controller for a fluid cooled garment  
[NASA-CASE-ARC-10599-1] c 05 N73-26071

Temperature control system with a pulse width modulated bridge  
[NASA-CASE-NPO-11304] c 14 N73-26430

Thermal control system for a spacecraft modular housing  
[NASA-CASE-GSC-11018-1] c 31 N73-30829

Apparatus for controlling the temperature of balloon-borne equipment  
[NASA-CASE-GSC-11620-1] c 34 N74-23039

Self-regulating proportionally controlled heating apparatus and technique  
[NASA-CASE-GSC-11752-1] c 77 N75-20140

Rocket chamber and method of making  
[NASA-CASE-LEW-11118-2] c 20 N76-14191

Thermostatically controlled non-tracking type solar energy concentrator  
[NASA-CASE-NPO-13497-1] c 44 N76-14602

Multi-chamber controllable heat pipe  
[NASA-CASE-ARC-10199] c 34 N78-17337

Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c 31 N79-17029

Low heat leak connector for cryogenic system  
[NASA-CASE-XLE-02367-1] c 31 N79-21225

Thermal control canister  
[NASA-CASE-GSC-12253-1] c 34 N79-31523

Automatic thermal switch  
[NASA-CASE-GSC-12415-1] c 33 N82-24419

Automatic thermal switch --- spacecraft applications  
[NASA-CASE-GSC-12553-1] c 34 N83-28356

Magnetic heat pumping  
[NASA-CASE-LEW-12508-3] c 34 N83-29625

Heating and cooling system --- for fatigue test specimens  
[NASA-CASE-LAR-12393-1] c 34 N83-34221

Heat pipe thermal switch  
[NASA-CASE-GSC-12812-1] c 34 N83-35307

Method and apparatus for minimizing convection during crystal growth from solution  
[NASA-CASE-NPO-15811-1] c 76 N84-12968

Thermal control system --- removing waste heat from industrial process spacecraft  
[NASA-CASE-GSC-12771-1] c 34 N84-14461

High temperature acoustic levitator  
[NASA-CASE-NPO-16022-1] c 71 N85-22105

- Method and apparatus for growing crystals  
[NASA-CASE-MFS-28137-1] c 76 N88-24544
- Capillary heat transport and fluid management device  
[NASA-CASE-MFS-28217-1] c 34 N89-14392
- Method and apparatus for maintaining thermal control in plasma conditions  
[NASA-CASE-MFS-28368-1] c 75 N90-10717
- Thermal switch disc for short circuit protection of batteries  
[NASA-CASE-MSC-21428-1] c 33 N91-14537
- Mechanized fluid connector and assembly tool system with ball detents  
[NASA-CASE-MSC-21434-1] c 37 N92-10197
- Active thermal isolation for temperature responsive sensors  
[NASA-CASE-LAR-14612-1] c 34 N92-29954
- TEMPERATURE DISTRIBUTION**
- Heat shield oven  
[NASA-CASE-XMS-04318] c 15 N69-27871
- Apparatus for supplying conditioned air at a substantially constant temperature and humidity  
[NASA-CASE-GSC-12191-1] c 31 N80-32583
- Noncontact temperature pattern measuring device  
[NASA-CASE-NPO-17024-1-CU] c 35 N88-24943
- Method of remotely characterizing thermal properties of a sample  
[NASA-CASE-LAR-13508-3-CU] c 09 N93-11057
- TEMPERATURE EFFECTS**
- Variable stiffness polymeric damper  
[NASA-CASE-XAC-11225] c 14 N69-27486
- Differential pressure cell Patent  
[NASA-CASE-XAC-00042] c 14 N70-34816
- Fluid flow control valve Patent  
[NASA-CASE-XLE-00703] c 15 N71-15967
- Temperature sensitive flow regulator Patent  
[NASA-CASE-MFS-14259] c 15 N71-19213
- Thermally cycled magnetometer Patent  
[NASA-CASE-XAC-03740] c 14 N71-26135
- Radiometric temperature reference Patent  
[NASA-CASE-MSC-13276-1] c 14 N71-27058
- Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-2] c 27 N83-29392
- High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1SB] c 24 N86-21590
- Poly(carbonate-mide) polymer  
[NASA-CASE-LAR-13292-1] c 27 N86-24841
- Process for curing bismaleimide resins  
[NASA-CASE-ARC-11429-4CU] c 27 N87-15304
- Method for forming hermetic seals  
[NASA-CASE-NPO-16423-1-CU] c 37 N87-21334
- Predictive aging of polymers  
[NASA-CASE-NPO-17524-1-CU] c 27 N90-10261
- Pressure rig for repetitive casting  
[NASA-CASE-LAR-14050-1] c 31 N90-21216
- Flexible diaphragm-extreme temperature usage  
[NASA-CASE-MSC-20797-2] c 35 N91-21494
- High temperature, flexible, fiber-preform seal  
[NASA-CASE-LEW-15085-1] c 37 N92-22043
- Compensated high temperature strain gage  
[NASA-CASE-LAR-14776-1] c 35 N93-12205
- A tough high performance composite matrix  
[NASA-CASE-LAR-14338-1] c 24 N93-13416
- TEMPERATURE GRADIENTS**
- Differential temperature transducer Patent  
[NASA-CASE-XAC-00812] c 14 N71-15598
- Temperature compensated light source using a light emitting diode  
[NASA-CASE-ARC-10467-1] c 09 N73-14214
- Method for compression molding of thermosetting plastics utilizing a temperature gradient across the plastic to cure the article  
[NASA-CASE-LAR-10489-1] c 31 N74-18124
- Method and apparatus for checking fire detectors  
[NASA-CASE-GSC-11600-1] c 35 N74-21019
- Dual laser optical system and method for studying fluid flow  
[NASA-CASE-MFS-25315-1] c 36 N83-29680
- Temperature averaging thermal probe  
[NASA-CASE-GSC-12795-1] c 35 N86-19580
- High gradient directional solidification furnace  
[NASA-CASE-MFS-25963-1] c 35 N86-20750
- TEMPERATURE MEASUREMENT**
- Motion picture camera for optical pyrometry Patent  
[NASA-CASE-XLA-00062] c 14 N70-33254
- Apparatus for measuring thermal conductivity Patent  
[NASA-CASE-XGS-01052] c 14 N71-15992
- Thermocouple assembly Patent  
[NASA-CASE-XNP-01659] c 14 N71-23039
- Cavity radiometer Patent  
[NASA-CASE-XNP-08961] c 14 N71-24809
- Sensing probe  
[NASA-CASE-LEW-10281-1] c 14 N72-17327
- Apparatus for sensing temperature  
[NASA-CASE-XLE-05230] c 14 N72-27410
- Method of making apparatus for sensing temperature  
[NASA-CASE-XLE-05230-2] c 14 N73-13417
- Heat detection and compositions and devices therefor  
[NASA-CASE-NPO-10764-1] c 14 N73-14428
- Method of fabricating an article with cavities --- with thin bottom walls  
[NASA-CASE-LAR-10318-1] c 31 N74-18089
- Method for determining thermo-physical properties of specimens --- photographic recording of changes in thin film phase-change temperature indicating material in wind tunnel  
[NASA-CASE-LAR-11053-1] c 25 N74-18551
- Wind sensor  
[NASA-CASE-NPO-13462-1] c 35 N76-24524
- Miniature ingestible telemeter devices to measure deep-body temperature  
[NASA-CASE-ARC-10583-1] c 52 N76-29894
- Thermocouple, multiple junction reference oven  
[NASA-CASE-FRC-10112-1] c 35 N81-26431
- Multi-channel temperature measurement amplification system --- solar heating systems  
[NASA-CASE-MFS-23775-1] c 44 N82-16474
- Solar energy control system --- temperature measurement  
[NASA-CASE-MFS-25287-1] c 44 N82-18686
- Method of and apparatus for measuring temperature and pressure --- atmospheric sounding  
[NASA-CASE-GSC-12558-1] c 36 N85-21639
- Method of measuring sea surface water temperature with a satellite including wideband passive synthetic-aperture multichannel receiver  
[NASA-CASE-NPO-15651-1] c 43 N85-21723
- Method for thermal monitoring subcutaneous tissue  
[NASA-CASE-LAR-13028-1] c 52 N85-30618
- Temperature sensitive oscillator  
[NASA-CASE-GSC-12958-1] c 33 N86-32624
- Noncontact temperature pattern measuring device  
[NASA-CASE-NPO-17824-1-CU] c 36 N90-17132
- Quantitative surface temperature measurement using two-color thermographic phosphors and video equipment  
[NASA-CASE-LAR-13740-1] c 35 N90-22770
- Tank gauging apparatus and method  
[NASA-CASE-MSC-21059-3] c 35 N91-21495
- Plug-type heat flux gage  
[NASA-CASE-LEW-14967-1] c 35 N91-31608
- Method and apparatus for thermographically and quantitatively analyzing a structure for disbands and/or inclusions  
[NASA-CASE-LAR-14559-1] c 38 N92-29829
- Sub-Kelvin resistance thermometer  
[NASA-CASE-GSC-13406-1] c 35 N92-33614
- Method of remotely characterizing thermal properties of a sample  
[NASA-CASE-LAR-13508-3-CU] c 09 N93-11057
- Multiwavelength pyrometer for gray and non-gray surfaces in the presence of interfering radiation  
[NASA-CASE-LEW-15250-1] c 35 N93-17060
- Correction-free pyrometry in radiant wall furnaces  
[NASA-CASE-NPO-18655-1-CU] c 35 N93-28322
- High temperature, oxidation resistant noble metal-Al alloy thermocouple  
[NASA-CASE-LEW-15515-1] c 35 N93-31298
- TEMPERATURE MEASURING INSTRUMENTS**
- Excessive temperature warning system Patent  
[NASA-CASE-XLA-01926] c 14 N71-15620
- Condition and condition duration indicator Patent  
[NASA-CASE-XMF-01097] c 10 N71-16058
- Thermal detector of electromagnetic energy by means of a vibrating electrode Patent  
[NASA-CASE-XAC-10768] c 09 N71-18830
- Method and means for providing an absolute power measurement capability Patent  
[NASA-CASE-ERC-11020] c 14 N71-26774
- High intensity radiant energy pulse source having means for opening shutter when light flux has reached a desired level  
[NASA-CASE-ARC-10178-1] c 09 N72-17152
- Thermocouple tape  
[NASA-CASE-LEW-11072-1] c 14 N73-24472
- Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c 35 N77-32454
- Temperature averaging thermal probe  
[NASA-CASE-GSC-12795-1] c 35 N86-19580
- TEMPERATURE PROBES**
- Temperature-compensating means for cavity resonator of amplifier Patent  
[NASA-CASE-XNP-00449] c 14 N70-35220
- Sensing probe  
[NASA-CASE-LEW-10281-1] c 14 N72-17327
- Temperature averaging thermal probe  
[NASA-CASE-GSC-12795-1] c 35 N86-19580
- TEMPERATURE PROFILES**
- Exothermic furnace module  
[NASA-CASE-MFS-25707-1] c 35 N82-26631
- Microwave temperature profiler for clear air turbulence prediction  
[NASA-CASE-NPO-18115-1-CU] c 47 N92-29148
- TEMPERATURE SENSORS**
- Compensating radiometer  
[NASA-CASE-XLA-04556] c 14 N69-27484
- Thermobulb mount Patent  
[NASA-CASE-NPO-10158] c 33 N71-16356
- Mount for thermal control system Patent  
[NASA-CASE-NPO-10138] c 33 N71-16357
- Heat flux measuring system Patent  
[NASA-CASE-XFR-03802] c 33 N71-23085
- Temperature telemetric transmitter Patent  
[NASA-CASE-NPO-10649] c 07 N71-24840
- Conically shaped cavity radiometer with a dual purpose cone winding Patent  
[NASA-CASE-XNP-09701] c 14 N71-26475
- Thin film capacitive bolometer and temperature sensor Patent  
[NASA-CASE-NPO-10607] c 09 N71-27232
- Thin film temperature sensor and method of making same  
[NASA-CASE-NPO-11775] c 26 N72-28761
- Heat detection and compositions and devices therefor  
[NASA-CASE-NPO-10764-2] c 35 N75-25122
- Optical crystal temperature gauge with fiber optic connections  
[NASA-CASE-MSC-18627-1] c 74 N82-30071
- Temperature sensitive oscillator  
[NASA-CASE-GSC-12958-1] c 33 N86-32624
- Wind tunnel balance  
[NASA-CASE-ARC-11877-1-SB] c 09 N91-14357
- Ultra-high temperature stability Joule-Thomson cooler with capability to accommodate pressure variations  
[NASA-CASE-NPO-18184-1-CU] c 35 N92-29156
- Active thermal isolation for temperature responsive sensors  
[NASA-CASE-LAR-14612-1] c 34 N92-29954
- TEMPERING**
- Gradient tempering process  
[NASA-CASE-MFS-28496-1] c 26 N92-34239
- TEMPLATES**
- Microcircuit negative cutter  
[NASA-CASE-XLA-09843] c 15 N72-27485
- Method of inseting predesigned disbond areas into composite laminates  
[NASA-CASE-LAR-13225-1] c 24 N90-25197
- TENSILE PROPERTIES**
- Tensile film clamps and mounting block for the rheovibron and autovibron viscoelastometer  
[NASA-CASE-LAR-13696-1] c 37 N90-20409
- Furnace for tensile/fatigue testing  
[NASA-CASE-LEW-14848-1] c 14 N91-27175
- Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14489-1] c 37 N91-27562
- Imide/arylene ether copolymers  
[NASA-CASE-LAR-14159-1-CU] c 27 N92-31792
- TENSILE STRENGTH**
- Method of making fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-00231] c 17 N70-38198
- Reinforced metallic composites Patent  
[NASA-CASE-XLE-00228] c 17 N70-38490
- Apparatus for tensile testing Patent  
[NASA-CASE-XKS-06250] c 14 N71-15600
- Method for fiberizing ceramic materials Patent  
[NASA-CASE-XNP-00597] c 18 N71-23088
- Tensile strength testing device Patent  
[NASA-CASE-XNP-05634] c 15 N71-24834
- Device for use in loading tension members --- characterized by elongated elastic body  
[NASA-CASE-MFS-21488-1] c 14 N75-24794
- Method of carbonizing polyacrylonitrile fibers  
[NASA-CASE-ARC-11261-1] c 24 N83-25789
- Cryogenic insulation strength and bond tester  
[NASA-CASE-MFS-25910-1] c 39 N86-20841
- Polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-13633-1] c 27 N87-24575
- Heat treatment for superalloy  
[NASA-CASE-LEW-14262-1] c 26 N87-28647
- Directional solidification of superalloys  
[NASA-CASE-MFS-28314-1] c 26 N91-14462
- TENSILE STRESS**
- Rocket nozzle test method Patent  
[NASA-CASE-NPO-10311] c 31 N71-15643
- Device for measuring tensile forces  
[NASA-CASE-MFS-21728-1] c 35 N74-27865
- Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c 44 N74-33379
- High temperature fiber optic microphone having a pressure-sensing reflective membrane under tensile stress  
[NASA-CASE-LAR-14402-1-CU] c 74 N92-33017



## TENSILE TESTS

### TENSILE TESTS

- Apparatus for tensile testing Patent  
[NASA-CASE-XKS-06250] c 14 N71-15600
- Tension measurement device Patent  
[NASA-CASE-XMS-04545] c 15 N71-22878
- Tensile strength testing device Patent  
[NASA-CASE-XNP-05634] c 15 N71-24834
- Apparatus for remote measurement of displacement of marks on a specimen undergoing a tensile test  
[NASA-CASE-NPO-10778] c 14 N72-11364
- Anti-buckling fatigue test assembly --- for subjecting metal specimen to tensile and compressive loads at constant temperature  
[NASA-CASE-LAR-10426-1] c 09 N74-19528
- Method and apparatus for tensile testing of metal foil  
[NASA-CASE-LAR-10208-1] c 35 N76-18400
- Device for tensioning test specimens within an hermetically sealed chamber  
[NASA-CASE-MFS-23281-1] c 35 N77-22450
- Method and apparatus for gripping uniaxial fibrous composite materials  
[NASA-CASE-LEW-13758-1] c 24 N84-27829
- Tensile testing apparatus  
[NASA-CASE-LAR-13243-1] c 35 N85-34375
- Fatigue testing a plurality of test specimens and method  
[NASA-CASE-MFS-28118-1] c 39 N87-25601
- Device for measuring hole elongation in a bolted joint  
[NASA-CASE-LAR-13453-1] c 37 N88-14361
- Bearing-bypass material system test  
[NASA-CASE-LAR-13458-1] c 35 N88-23967
- Furnace for tensile/fatigue testing  
[NASA-CASE-LEW-14848-1] c 14 N91-27175
- Method and apparatus for gripping test specimens  
[NASA-CASE-LEW-15345-1] c 37 N93-12327

### TENSION

- Meter for use in detecting tension in straps having predetermined elastic characteristics  
[NASA-CASE-MFS-22189-1] c 35 N75-19615
- Apparatus for elevated temperature compression or tension testing of specimens  
[NASA-CASE-LAR-14775-1] c 39 N92-30099

### TENSORS

- Method and apparatus for second-rank tensor generation  
[NASA-CASE-NPO-17512-1-CU] c 74 N91-26918

### TERMINAL GUIDANCE

- Energy management system for glider type vehicle Patent  
[NASA-CASE-XFR-00756] c 02 N71-13421
- Terminal guidance system --- for guiding aircraft into preselected altitude and/or heading at terminal point  
[NASA-CASE-FRC-10049-1] c 04 N74-13420
- Terminal guidance sensor system --- space shuttle coupling to orbiting satellites  
[NASA-CASE-NPO-14521-1] c 37 N81-27519

### TERNARY SYSTEMS

- Nicral ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LEW-13339-1] c 26 N82-31505
- Liquid encapsulated crystal growth  
[NASA-CASE-NPO-16808-1-CU] c 76 N87-25868

### TERRAIN

- Landing gear Patent  
[NASA-CASE-XMF-01174] c 02 N70-41589
- Generation of topographic terrain models utilizing synthetic aperture radar and surface level data  
[NASA-CASE-GSC-13212-1] c 43 N91-32546

### TERRAIN ANALYSIS

- Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c 35 N79-10391
- Method for observing the features characterizing the surface of a land mass  
[NASA-CASE-FRC-11013-1] c 43 N81-17499
- Improving the geometric fidelity of imaging systems employing sensor arrays  
[NASA-CASE-NPO-17970-1-CU] c 43 N90-26384
- Digital parallel processor array for optimum path planning  
[NASA-CASE-NPO-18727-1-CU] c 62 N93-28427

### TEST CHAMBERS

- Exposure system for animals Patent  
[NASA-CASE-XAC-05333] c 11 N71-22875
- Multiple environment materials test chamber having a multiple port X-ray tube for irradiating a plurality of samples Patent  
[NASA-CASE-XMS-02930] c 11 N71-23042
- Flammability test chamber Patent  
[NASA-CASE-KSC-10126] c 11 N71-24985
- Pressure seal Patent  
[NASA-CASE-NPO-10796] c 15 N71-27068
- Autoignition test cell Patent  
[NASA-CASE-KSC-10198] c 11 N71-28629

- Orifice gross leak tester Patent  
[NASA-CASE-ERC-10150] c 14 N71-28992
- Method for measuring biaxial stress in a body subjected to stress inducing loads  
[NASA-CASE-MFS-23299-1] c 39 N77-28511
- Device and method for frictionally testing materials for ignitability  
[NASA-CASE-MSC-20622-1] c 25 N86-19413
- High velocity gas particulate sampling system  
[NASA-CASE-MSC-21729-1] c 34 N92-16241

### TEST EQUIPMENT

- Dynamic Doppler simulator Patent  
[NASA-CASE-XMS-05454-1] c 07 N71-12391
- Apparatus for tensile testing Patent  
[NASA-CASE-XKS-06250] c 14 N71-15600
- Black-body furnace Patent  
[NASA-CASE-XLE-01399] c 33 N71-15625
- Thermocouple assembly Patent  
[NASA-CASE-XNP-01659] c 14 N71-23039
- Automatic fatigue test temperature programmer Patent  
[NASA-CASE-XLA-02059] c 33 N71-24276
- Pulse rise time and amplitude detector Patent  
[NASA-CASE-XMF-08804] c 09 N71-24717
- Resilience testing device Patent  
[NASA-CASE-XLA-08254] c 14 N71-26161
- Validation device for spacecraft checkout equipment Patent  
[NASA-CASE-XKS-10543] c 07 N71-26292
- Apparatus for testing wiring harness by vibration generating means  
[NASA-CASE-MSC-15158-1] c 14 N72-17325
- Atmospheric sampling devices  
[NASA-CASE-NPO-11373] c 13 N72-25323
- Burn rate testing apparatus  
[NASA-CASE-XMS-09690] c 33 N72-25913
- Linear explosive comparison  
[NASA-CASE-LAR-10800-1] c 33 N72-27959
- Apparatus for vibrational testing of articles  
[NASA-CASE-GSC-11302-1] c 14 N73-13416
- Test stand system for vacuum chambers  
[NASA-CASE-MFS-21362] c 11 N73-20267
- Rocket borne instrument to measure electric fields inside electrified clouds  
[NASA-CASE-KSC-10730-1] c 14 N73-32318
- Compression test assembly  
[NASA-CASE-LAR-10440-1] c 14 N73-32323
- Wind tunnel model and method  
[NASA-CASE-LAR-10812-1] c 09 N74-17955
- Anti-buckling fatigue test assembly --- for subjecting metal specimen to tensile and compressive loads at constant temperature  
[NASA-CASE-LAR-10426-1] c 09 N74-19528
- Method and apparatus for checking fire detectors  
[NASA-CASE-GSC-11600-1] c 35 N74-21019
- Battery testing device --- for testing cells of multiple-cell battery  
[NASA-CASE-MFS-20761-1] c 44 N74-27519
- Signal conditioner test set  
[NASA-CASE-KSC-10750-1] c 35 N75-12270
- Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c 35 N76-22509
- High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c 35 N76-24523
- Method of and means for testing a tape record/playback system  
[NASA-CASE-MFS-22671-2] c 35 N77-17426
- Method of and means for testing a glancing-incidence mirror system of an X-ray telescope  
[NASA-CASE-MFS-22409-2] c 74 N78-15880
- Ignitability test method and apparatus  
[NASA-CASE-LAR-13996-1-SB] c 25 N90-15161
- Electro-optical spin measurement system  
[NASA-CASE-LAR-13629-1] c 09 N91-14356
- Slow positron beam generator for lifetime studies  
[NASA-CASE-LAR-14250-1-SB] c 72 N91-27936
- Method and apparatus for using magneto-acoustic remanence to determine embrittlement  
[NASA-CASE-LAR-13817-5] c 39 N92-28757
- Magneto acoustic emission method for testing materials for embrittlement  
[NASA-CASE-LAR-13817-2] c 39 N92-29155
- Method and apparatus for gripping test specimens  
[NASA-CASE-LEW-15345-1] c 37 N93-12327
- An apparatus for gripping test specimens  
[NASA-CASE-LEW-15345-2] c 37 N93-28127

### TEST FACILITIES

- Electric propulsion engine test chamber Patent  
[NASA-CASE-XLE-00252] c 11 N70-34844
- High temperature testing apparatus Patent  
[NASA-CASE-XLE-00335] c 14 N70-35368
- Gas analyzer for bi-gaseous mixtures Patent  
[NASA-CASE-XLA-01131] c 14 N71-10774
- Model launcher for wind tunnels Patent  
[NASA-CASE-XNP-03578] c 11 N71-23030
- Shock tube bypass piston tunnel  
[NASA-CASE-NPO-12109] c 11 N72-22245

## SUBJECT INDEX

### TEST STANDS

- Automatic balancing device Patent  
[NASA-CASE-LAR-10774] c 10 N71-13545
- Micro-pound extended range thrust stand Patent  
[NASA-CASE-GSC-10710-1] c 28 N71-27094
- Device for quick changeover between wind tunnel force and pressure testing  
[NASA-CASE-LAR-13512-1] c 35 N87-28884

### TEST VEHICLES

- Longwall shearer tracking system  
[NASA-CASE-MFS-25717-1] c 35 N84-33768

### TETHERED SATELLITES

- Tetherline system for orbiting satellites  
[NASA-CASE-MFS-23564-1] c 15 N78-25119

### TETHERING

- Cable arrangement for rigid tethering Patent  
[NASA-CASE-XLA-02332] c 32 N71-17609
- Inflatable tether Patent  
[NASA-CASE-XMS-10993] c 15 N71-28936
- Fingered bola body, bola with same, and methods of use  
[NASA-CASE-MSC-21967-1] c 37 N92-30026

### TETHERLINES

- Flexible/rigidifiable cable assembly  
[NASA-CASE-MSC-13512-1] c 15 N72-22485
- Tetherline system for orbiting satellites  
[NASA-CASE-MFS-23564-1] c 15 N78-25119
- Non-backdrivable free wheeling coupling  
[NASA-CASE-MSC-20475-1] c 37 N87-17037

### TETRAETHYL ORTHOSILICATE

- Densification of porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MSC-18737-1] c 24 N83-13171
- Method of repairing surface damage to porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MSC-18736-1] c 24 N83-13172

### TETRAPHENYLS

- Metal containing polymers from cyclic tetrameric phenylphosphonitridamides Patent  
[NASA-CASE-HQN-10364] c 06 N71-27363

### TETRAZOLES

- Kinetic tetrazolium microtiter assay  
[NASA-CASE-MSC-21979-1] c 51 N93-17049

### TEXTILES

- Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c 27 N76-24405

### TEXTS

- Braille reading system  
[NASA-CASE-LAR-13306-1] c 82 N87-29372

### TEXTURES

- Modification of the electrical and optical properties of polymers --- ion irradiation to create texture  
[NASA-CASE-LEW-13027-1] c 27 N80-24437
- Texturing polymer surfaces by transfer casting --- cardiovascular prosthesis  
[NASA-CASE-LEW-13120-1] c 27 N82-28440
- Surface texturing of fluoropolymers  
[NASA-CASE-LEW-13028-1] c 27 N82-33521
- Ion sputter textured graphite --- anode collector plates in electron tube devices  
[NASA-CASE-LEW-12919-1] c 24 N83-10117

### THERAPY

- Hyperthermia heating apparatus --- cancer therapy  
[NASA-CASE-NPO-14549-2] c 52 N82-33996
- Bright light delivery system  
[NASA-CASE-MFS-28723-1] c 52 N93-17058

### THERMAL ABSORPTION

- Constant temperature heat sink for calorimeters Patent  
[NASA-CASE-XMF-04208] c 33 N71-29051
- Solar pond  
[NASA-CASE-NPO-13581-2] c 44 N78-31525

### THERMAL ANALYSIS

- Thermal remote anemometer system  
[NASA-CASE-LAR-13508-1] c 35 N92-21710
- Method of remotely characterizing thermal properties of a sample  
[NASA-CASE-LAR-13508-3-CU] c 09 N93-11057

### THERMAL COMFORT

- Thermal garment  
[NASA-CASE-XMS-03694-1] c 54 N82-29002

### THERMAL CONDUCTIVITY

- Enthalpy and stagnation temperature determination of a high temperature laminar flow gas stream Patent  
[NASA-CASE-XLE-00266] c 14 N70-34156
- Apparatus for measuring thermal conductivity Patent  
[NASA-CASE-XGS-01052] c 14 N71-15592
- Heated element fluid flow sensor Patent  
[NASA-CASE-MSC-12084-1] c 12 N71-17569
- Method and apparatus for varying thermal conductivity Patent  
[NASA-CASE-XNP-05524] c 33 N71-24876
- Thermally conductive polymers  
[NASA-CASE-GSC-11304-1] c 06 N72-21105

- Electrostatically controlled heat shutter  
[NASA-CASE-NPO-11942-1] c 33 N73-32818
- Thermal barrier coating system  
[NASA-CASE-LEW-12554-1] c 34 N78-18355
- Support assembly for cryogenically coolable low-noise choke waveguide  
[NASA-CASE-NPO-14253-1] c 32 N80-32605
- Automatic thermal switch --- spacecraft applications  
[NASA-CASE-GSC-12553-1] c 34 N83-28356
- Heat transfer device and method of making the same  
[NASA-CASE-LEW-14162-1] c 34 N91-13668
- Flexible thermal apparatus for mounting of thermoelectric cooler  
[NASA-CASE-NPO-17806-1-CU] c 31 N91-27385
- Coupling device with improved thermal interface  
[NASA-CASE-GSC-13251-1] c 37 N92-29120
- Heat transfer device  
[NASA-CASE-LEW-14162-4] c 24 N93-20568
- Semiconductor cooling apparatus  
[NASA-CASE-LEW-14162-3] c 24 N93-29614

**THERMAL CONDUCTORS**

- Thermal conductive connection and method of making same Patent  
[NASA-CASE-XMS-02087] c 09 N70-41717

- Solar energy absorber  
[NASA-CASE-MFS-22743-1] c 44 N76-22657

**THERMAL CONTROL COATINGS**

- Thermal control coating Patent  
[NASA-CASE-XLA-01995] c 18 N71-23047

- Stabilized zinc oxide coating compositions Patent  
[NASA-CASE-XMF-07770-2] c 18 N71-26772

- Inorganic thermal control coatings  
[NASA-CASE-MFS-20011] c 18 N72-22566

- Polymeric vehicles as carriers for sulfonic acid salt of nitrosubstituted aromatic amines  
[NASA-CASE-ARC-10325] c 06 N72-25147

- Refractory porcelain enamel passive control coating for high temperature alloys  
[NASA-CASE-MFS-22324-1] c 27 N75-27160

- Particulate and solar radiation stable coating for spacecraft  
[NASA-CASE-LAR-10805-2] c 34 N77-18382

- Method of preparing zinc orthotitanate pigment  
[NASA-CASE-MFS-23345-1] c 24 N77-30237

- Intumescent coatings containing 4,4'-dinitrosulfanilide  
[NASA-CASE-ARC-11042-1] c 24 N78-14096

- Thermal barrier coating system  
[NASA-CASE-LEW-12554-1] c 34 N78-18355

- High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c 27 N78-19302

- Intumescent-ablator coatings using endothermic fillers  
[NASA-CASE-ARC-11043-1] c 24 N78-27180

- Lightweight electrically-powered flexible thermal laminate --- made of metal and nonconductive yarns  
[NASA-CASE-MSC-12662-1] c 33 N79-12331

- Electrically conductive thermal control coatings  
[NASA-CASE-GSC-12207-1] c 24 N79-14156

- High temperature glass thermal control structure and coating --- for application to spacecraft reusable heat shielding  
[NASA-CASE-ARC-11164-1] c 44 N83-34448

- Variable anodic thermal control coating  
[NASA-CASE-LAR-12719-1] c 44 N83-34449

- Metallic seal for thermal barrier coating systems  
[NASA-CASE-LEW-15020-1] c 27 N91-15412

- Composite thermal barrier coating  
[NASA-CASE-LEW-14999-1] c 24 N92-21725

- Method of applying a thermal barrier coating system to a substrate  
[NASA-CASE-LEW-15020-2] c 24 N93-14706

- Oxidation resistant overlay coatings for low expansion substrates  
[NASA-CASE-LEW-15154-1] c 27 N93-19332

- Plasma sprayed ceramic thermal barrier coating for NiAl-based intermetallic alloys  
[NASA-CASE-LEW-15535-1] c 26 N93-31294

**THERMAL DEGRADATION**

- Protection for energy conversion systems  
[NASA-CASE-XGS-04808] c 03 N69-25146

- Electrical apparatus for detection of thermal decomposition of insulation Patent  
[NASA-CASE-XMF-03968] c 14 N71-27186

- Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-2-SB] c 27 N90-21177

**THERMAL DIFFUSION**

- A method of making a single layer multi-color luminescent display  
[NASA-CASE-LAR-14811-1] c 33 N92-30389

- Crystal growth in a microgravity environment  
[NASA-CASE-MFS-28473-1] c 76 N93-14707

- A method of making a single layer multi-color luminescent display  
[NASA-CASE-LAR-14811-1] c 33 N93-20119

**THERMAL DIFFUSIVITY**

- Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NPO-14657-1] c 74 N81-17887

**THERMAL EMISSION**

- Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOO-00428-1] c 32 N79-19186

- Continuous laminar smoke generator  
[NASA-CASE-LAR-13014-1] c 09 N85-21178

- Arc-textured high emittance radiator surfaces  
[NASA-CASE-LEW-14679-1] c 27 N91-25296

**THERMAL ENERGY**

- Energy conversion apparatus Patent  
[NASA-CASE-XLE-00212] c 03 N70-34134

- Device for directionally controlling electromagnetic radiation Patent  
[NASA-CASE-XLE-01716] c 09 N70-40234

- Thermally activated foaming compositions Patent  
[NASA-CASE-LAR-10373-1] c 18 N71-26155

- Gas core nuclear reactor Patent  
[NASA-CASE-LEW-10250-1] c 22 N71-28759

- Electrostatically controlled heat shutter  
[NASA-CASE-NPO-11942-1] c 33 N73-32818

- Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c 44 N74-33379

- Panel for selectively absorbing solar thermal energy and the method of producing said panel  
[NASA-CASE-MFS-22562-1] c 44 N76-14595

- Thermal energy storage system --- operating on superheating of liquids  
[NASA-CASE-MFS-23167-1] c 44 N76-31667

- Low to high temperature energy conversion system  
[NASA-CASE-NPO-13510-1] c 44 N77-32581

- Thermal energy transformer  
[NASA-CASE-NPO-14058-1] c 44 N79-18443

- Apparatus for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-1] c 07 N83-36029

- Method for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-2] c 07 N86-20389

- Thermal power transfer system using applied potential difference to sustain operating pressure difference  
[NASA-CASE-NPO-18034-1-CU] c 44 N92-16457

- Selective emitters  
[NASA-CASE-LEW-14731-1] c 44 N92-22037

- Pulse thermal energy transport/storage system  
[NASA-CASE-LEW-15235-1] c 34 N92-29125

- Solar thermal energy receiver  
[NASA-CASE-LEW-14949-1] c 44 N92-29143

**THERMAL EXPANSION**

- Thermally operated valve Patent  
[NASA-CASE-XLE-00815] c 15 N70-35407

- Adjustable mount for a trihedral mirror Patent  
[NASA-CASE-XNP-08907] c 23 N71-29123

- Thermal motor  
[NASA-CASE-NPO-11283] c 09 N72-25260

- Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c 37 N74-21063

- Daze fasteners  
[NASA-CASE-LAR-13009-1] c 37 N85-29285

- High effectiveness contour matching contact heat exchanger  
[NASA-CASE-MSC-20840-1] c 34 N88-29132

- Seamless metal-clad fiber-reinforced organic matrix composite structures and process for their manufacture  
[NASA-CASE-LAR-13562-1] c 24 N90-25196

- Thermal compensating mount  
[NASA-CASE-LAR-14207-1] c 35 N91-14590

- Method of fabricating composite structures  
[NASA-CASE-MFS-28390-1] c 24 N91-15333

- A process for preparing an assembly of an article and a polyimide which resists dimensional change, delamination, and debonding when exposed to changes in temperature  
[NASA-CASE-LAR-14538-1] c 27 N92-11201

- A process for preparing an assembly of an article and a soluble polyimide which resists dimensional change, delamination, and debonding when exposed to changes in temperature  
[NASA-CASE-LAR-14763-1] c 27 N92-12121

- Hybridization of detector array and integrated circuit for readout  
[NASA-CASE-NPO-18062-1-CU] c 33 N92-30542

- Flush mounting of thin film sensors  
[NASA-CASE-LAR-14446-1] c 31 N92-33020

- Oxidation resistant overlay coatings for low expansion substrates  
[NASA-CASE-LEW-15154-1] c 27 N93-19332

**THERMAL FATIGUE**

- Automatic fatigue test temperature programmer Patent  
[NASA-CASE-XLA-02059] c 33 N71-24276

**THERMAL INSULATION**

- Piping arrangement through a double chamber structure  
[NASA-CASE-XNP-08882] c 15 N69-39935

- Insulating structure Patent  
[NASA-CASE-XMF-00341] c 15 N70-33323

- Unfired-ceramic flame-resistant insulation and method of making the same Patent  
[NASA-CASE-XMF-01030] c 18 N70-41583

- Techniques for insulating cryogenic fuel containers Patent  
[NASA-CASE-XLA-01967] c 31 N70-42015

- Lightweight refractory insulation and method of preparing the same Patent  
[NASA-CASE-XMF-05279] c 18 N71-16124

- Heat protection apparatus Patent  
[NASA-CASE-XLA-00892] c 33 N71-17897

- Cryogenic insulation system Patent  
[NASA-CASE-XLE-04222] c 23 N71-22881

- Insulation system Patent  
[NASA-CASE-XLE-02647] c 18 N71-23658

- Filament wound container Patent  
[NASA-CASE-XLE-03803] c 15 N71-23816

- Panelized high performance multilayer insulation Patent  
[NASA-CASE-MFS-14023] c 33 N71-25351

- Isothermal cover with thermal reservoirs Patent  
[NASA-CASE-MFS-20355] c 33 N71-25353

- Fabric for micrometeoroid protection garment Patent  
[NASA-CASE-MSC-12109] c 18 N71-26285

- Thickness measuring and injection device Patent  
[NASA-CASE-MFS-20261] c 14 N71-27005

- Cryogenic thermal insulation Patent  
[NASA-CASE-XMF-05046] c 33 N71-28892

- Intumescent composition, foamed product prepared therewith, and process for making same  
[NASA-CASE-ARC-10304-1] c 18 N73-26572

- Thermal control system for a spacecraft modular housing  
[NASA-CASE-GSC-11018-1] c 31 N73-30829

- Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c 35 N74-15093

- Intumescent composition, foamed product prepared therewith and process for making same  
[NASA-CASE-ARC-10304-2] c 27 N74-27037

- High current electrical lead --- for thermionic converters  
[NASA-CASE-LEW-10950-1] c 33 N74-27683

- Structural heat pipe --- for spacecraft wall thermal insulation system  
[NASA-CASE-GSC-11619-1] c 34 N75-12222

- Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
[NASA-CASE-MSC-14182-1] c 27 N76-14264

- Auger attachment method for insulation --- of spacecraft  
[NASA-CASE-MSC-12615-1] c 37 N76-19437

- Flexible pile thermal barrier insulator  
[NASA-CASE-MSC-19568-1] c 34 N78-25350

- Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles  
[NASA-CASE-MSC-12619-2] c 27 N79-12221

- Fibrous refractory composite insulation --- shielding reusable spacecraft  
[NASA-CASE-ARC-11169-1] c 24 N79-24062

- Thermal insulation protection means  
[NASA-CASE-MSC-12737-1] c 24 N79-25142

- Installing fiber insulation  
[NASA-CASE-MSC-16973-1] c 37 N81-14317

- Process for the preparation of polycarboranylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c 27 N81-27271

- Carboranylchlorophosphazenes and their polymers --- thermal insulation  
[NASA-CASE-ARC-11176-1] c 27 N82-18389

- A method and technique for installing light-weight fragile, high-temperature fiber insulation  
[NASA-CASE-MSC-18934-3] c 24 N82-26387

- Thermal garment  
[NASA-CASE-XMS-03694-1] c 54 N82-29002

- Method and technique for installing light-weight, fragile, high-temperature fiber insulation  
[NASA-CASE-MSC-16934-3] c 24 N84-16262

- Insulation bonding test system  
[NASA-CASE-MFS-25862-1] c 27 N85-20126

- Cryogenic insulation strength and bond tester  
[NASA-CASE-MFS-25910-1] c 39 N86-20841

- Ceramic-ceramic shell tile thermal protection system and method thereof  
[NASA-CASE-ARC-11641-1] c 24 N88-18628

- Lightweight ceramic insulation and method  
[NASA-CASE-MSC-20782-1] c 27 N90-23566

- Helmet of a laminate construction of polycarbonate and polysulfone polymeric material  
[NASA-CASE-MSC-21503-1] c 27 N92-10091

## THERMAL MAPPING

### THERMAL MAPPING

Noncontact temperature pattern measuring device  
[NASA-CASE-NPO-17024-1-CU] c 35 N88-24943

### THERMAL NOISE

Vacuum-isolation vessel and method for measurement of thermal noise in microphones  
[NASA-CASE-LAR-14567-1-CU] c 33 N92-33021

### THERMAL PLASMAS

Continuous plasma light source  
[NASA-CASE-XNP-04167-2] c 25 N72-24753

### THERMAL PROTECTION

Thermo-protective device for balances Patent  
[NASA-CASE-XAC-00648] c 14 N70-40400

Ablation structures Patent  
[NASA-CASE-XMS-01816] c 33 N71-15623

Spacecraft radiator cover Patent  
[NASA-CASE-MS-12049] c 31 N71-16080

Foamed in place ceramic refractory insulating material Patent  
[NASA-CASE-XGS-02435] c 18 N71-22998

Ceramic insulation for radiant heating environments and method of preparing the same Patent  
[NASA-CASE-MFS-14253] c 33 N71-24858

Solid state thermal control polymer coating Patent  
[NASA-CASE-XLA-01745] c 33 N71-28903

Temperature reducing coating for metals subject to flame exposure Patent  
[NASA-CASE-XLE-00035] c 33 N71-29151

Stand-off type ablative heat shield  
[NASA-CASE-MS-12143-1] c 33 N72-17947

Flexible fire retardant polyisocyanate modified neoprene foam --- for thermal protective devices  
[NASA-CASE-ARC-10180-1] c 27 N74-12814

Adjustable securing base  
[NASA-CASE-MS-19666-1] c 37 N78-17383

Reaction cured glass and glass coatings  
[NASA-CASE-ARC-11051-1] c 27 N78-32260

Corrosion resistant thermal barrier coating --- protecting gas turbines and other engine parts  
[NASA-CASE-LEW-13088-1] c 26 N81-25188

Attachment system for silica tiles --- thermal protection for space shuttle orbiter  
[NASA-CASE-MS-18741-1] c 27 N82-29456

Multilayer thermal protection system  
[NASA-CASE-LAR-12620-1] c 24 N82-32417

High temperature silicon carbide impregnated insulating fabrics  
[NASA-CASE-MS-18832-1] c 27 N83-18908

Silicon-slurry/aluminate coating --- protecting gas turbine engine vanes and blades  
[NASA-CASE-LEW-13343] c 26 N83-31795

Thermal barrier coating system having improved adhesion  
[NASA-CASE-LEW-1335901] c 27 N83-31855

Covering solid, film cooled surfaces with a duplex thermal barrier coating  
[NASA-CASE-LEW-13450-1] c 31 N83-35177

Pre-stressed thermal protection systems  
[NASA-CASE-MS-20254-1] c 16 N84-22601

Shell tile thermal protection system  
[NASA-CASE-LAR-12862-1] c 27 N84-27886

Propulsion apparatus and method using boil-off gas from a cryogenic liquid  
[NASA-CASE-MFS-25946-1] c 20 N86-26368

Process for preparing essentially colorless polyimide film containing phenoxy-linked diamines  
[NASA-CASE-LAR-13353-1] c 27 N86-29039

Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-31727

Thermal stress minimized, two component, turbine shroud seal  
[NASA-CASE-LEW-14212-1] c 37 N88-23978

Thermal switch disc for short circuit protection of batteries  
[NASA-CASE-MS-21428-1] c 33 N91-14537

Metallic seal for thermal barrier coating systems  
[NASA-CASE-LEW-15020-1] c 27 N91-15412

Thermally isolated deployable shield for spacecraft  
[NASA-CASE-MFS-28524-1] c 18 N91-25167

High-temperature, flexible, thermal barrier seal  
[NASA-CASE-LEW-14672-1] c 37 N91-27560

**THERMAL RADIATION**

Compensating radiometer  
[NASA-CASE-XLA-04556] c 14 N69-27484

Temperature sensitive capacitor device  
[NASA-CASE-XNP-09750] c 14 N69-39937

High temperature heat source Patent  
[NASA-CASE-XLE-00490] c 33 N70-34545

Thermal radiation shielding Patent  
[NASA-CASE-XLE-03432] c 33 N71-24145

Cavity radiometer Patent  
[NASA-CASE-XNP-08961] c 14 N71-24809

Method and construction for protecting heat sensitive bodies from thermal radiation and convective heat Patent  
[NASA-CASE-XNP-01310] c 33 N71-28852

Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373

### THERMAL REACTORS

Non-equilibrium radiation nuclear reactor  
[NASA-CASE-HQN-10841-1] c 73 N78-19920

### THERMAL RESISTANCE

Diode and protection fuse unit Patent  
[NASA-CASE-XKS-03381] c 09 N71-22796

Polyimide foam for the thermal insulation and fire protection  
[NASA-CASE-ARC-10464-1] c 27 N74-12812

Dual measurement ablation sensor  
[NASA-CASE-LAR-10105-1] c 34 N74-15652

Self-regulating proportionally controlled heating apparatus and technique  
[NASA-CASE-GSC-11752-1] c 77 N75-20140

Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MS-14903-1] c 27 N78-32256

Ambient cure polyimide foams --- thermal resistant foams  
[NASA-CASE-ARC-11170-1] c 27 N79-11215

The 1,2,4-oxadiazole elastomers --- heat resistant polymers  
[NASA-CASE-ARC-11253-1] c 27 N81-17262

Surface conforming thermal/pressure seal --- tail assemblies of space shuttle orbiters  
[NASA-CASE-MS-18422-1] c 37 N82-16408

Heat resistant protective hand covering  
[NASA-CASE-MS-20261-2] c 54 N84-23113

Heat resistant protective hand covering  
[NASA-CASE-MS-20261-1] c 54 N84-28484

Thermal barrier coating system  
[NASA-CASE-LEW-13324-2] c 24 N85-21266

High temperature polyimide film laminates and process for preparation thereof  
[NASA-CASE-LAR-13384-1] c 27 N86-20561

Fire resistant polyamide based on 1-(diorganooxyphosphonyl)methyl-2,4- and -2,6-diaminobenzene  
[NASA-CASE-ARC-11512-2] c 27 N86-32568

Fire and heat resistant laminating resins based on maleimido substituted aromatic cyclotriphosphazene polymer  
[NASA-CASE-ARC-11428-2] c 27 N87-16909

Fire and heat resistant laminating resins based on maleimido and citraconimido substituted 1-2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-1] c 27 N87-23751

Method of making a flexible diaphragm  
[NASA-CASE-MS-20797-1] c 37 N87-23981

Fire and heat resistant laminating resins based on maleimido and citraconimido substituted 1-(diorganooxyphosphonyl) methyl -2,4- and -2,6- diaminobenzenes  
[NASA-CASE-ARC-11533-3] c 27 N87-24564

Fire and heat resistant laminating resin based on maleimido and citraconimido substituted 1-(diorganooxyphosphonyl)methyl-2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-2] c 27 N89-16042

**THERMAL SHOCK**

Thermal shock apparatus Patent  
[NASA-CASE-XLE-02024] c 14 N71-22964

Thermal shock resistant hafnia ceramic material  
[NASA-CASE-LAR-10894-1] c 18 N73-14584

Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c 27 N78-17206

Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c 18 N83-20996

**THERMAL SIMULATION**

Thermopile vacuum gage tube simulator Patent  
[NASA-CASE-XLA-02758] c 14 N71-18481

**THERMAL STABILITY**

Bonded solid lubricant coating Patent  
[NASA-CASE-XMS-00259] c 18 N70-36400

Portable environmental control system Patent  
[NASA-CASE-XMS-09632-1] c 05 N71-11203

Metal containing polymers from cyclic tetrameric phenylphosphonitrimides Patent  
[NASA-CASE-HQN-10364] c 06 N71-27363

Method of making a cermet Patent  
[NASA-CASE-LEW-10219-1] c 18 N71-28729

Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c 27 N74-21156

Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c 27 N76-32315

Sound-suppressing structure with thermal relief  
[NASA-CASE-LEW-12658-1] c 71 N79-14871

Infusible silazane polymer and process for producing same --- protective coatings  
[NASA-CASE-XMF-02526-1] c 27 N79-21190

Catalytic trimerization of aromatic nitriles and triaryl-s-triazine ring cross-linked high temperature resistant polymers and copolymers made thereby  
[NASA-CASE-LEW-12053-2] c 27 N79-28307

Aluminum ion-containing polyimide adhesives  
[NASA-CASE-LAR-12640-1] c 27 N82-11206

Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-2] c 27 N83-29392

Metal phthalocyanine polymers  
[NASA-CASE-ARC-11405-1] c 27 N84-27884

High temperature resistant polyimide from tetra ester, diamine, diester and N-arylnadimide  
[NASA-CASE-LEW-13864-1] c 27 N86-19457

Ethynyl and substituted ethynyl-terminated polysulfones  
[NASA-CASE-LAR-12931-2] c 27 N86-21675

Sulfone-ester polymers containing pendent ethynyl groups  
[NASA-CASE-LAR-13316-1] c 27 N86-27450

Polyimides containing amide and perfluoroisopropyl connecting groups  
[NASA-CASE-LAR-14608-1] c 27 N92-17676

Tough, high performance, addition-type thermoplastic polymers  
[NASA-CASE-LAR-14346-1] c 27 N92-22044

Vinyl capped addition polyimides  
[NASA-CASE-LEW-15027-2] c 27 N92-24053

Ultra-high temperature stability Joule-Thomson cooler with capability to accommodate pressure variations  
[NASA-CASE-NPO-18184-1-CU] c 35 N92-29156

Polybenzimidazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14643-1] c 27 N92-29953

**THERMAL STRESSES**

Strain gage Patent Application  
[NASA-CASE-FRC-10053] c 14 N70-35587

Multilegged support system Patent  
[NASA-CASE-XLA-01326] c 11 N71-21481

Low cycle fatigue testing machine  
[NASA-CASE-LAR-10270-1] c 32 N72-25877

Apparatus and method for reducing thermal stress in a turbine rotor  
[NASA-CASE-LEW-12232-1] c 07 N79-10057

Method for alleviating thermal stress damage in laminates --- metal matrix composites  
[NASA-CASE-LEW-12493-1] c 24 N81-17170

Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c 24 N81-26179

Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-2] c 37 N82-26674

Daze fasteners  
[NASA-CASE-LAR-13009-1] c 37 N85-29285

Thermal stress minimized, two component, turbine shroud seal  
[NASA-CASE-LEW-14212-1] c 37 N88-23978

Method for advanced material characterization by laser induced eddy current imaging  
[NASA-CASE-GSC-13386-1] c 38 N92-29154

**THERMIONIC CATHODES**

Cavity emitter for thermionic converter Patent  
[NASA-CASE-NPO-10412] c 09 N71-28421

**THERMIONIC CONVERTERS**

Triode thermionic energy converter  
[NASA-CASE-XLE-01015] c 03 N69-39898

Thermionic converter with current augmented by self induced magnetic field Patent  
[NASA-CASE-XLE-01903] c 22 N71-23599

Cavity emitter for thermionic converter Patent  
[NASA-CASE-NPO-10412] c 09 N71-28421

Solar cell Patent  
[NASA-CASE-ARC-10050] c 03 N71-33409

Uninsulated in-core thermionic diode  
[NASA-CASE-NPO-10542] c 09 N72-27228

High current electrical lead --- for thermionic converters  
[NASA-CASE-LEW-10950-1] c 33 N74-27683

Electric power generation system directory from laser power  
[NASA-CASE-NPO-13308-1] c 36 N75-30524

Nuclear thermionic converter --- tungsten-thorium oxide rods  
[NASA-CASE-NPO-13121-1] c 73 N77-18891

High thermal power density heat transfer --- thermionic converters  
[NASA-CASE-LEW-12950-1] c 34 N82-11399

Thermionic energy converters  
[NASA-CASE-LEW-12443-1] c 44 N83-32175

**THERMIONIC DIODES**

Heat pipe thermionic diode power system Patent  
[NASA-CASE-XMF-05843] c 03 N71-11055

## SUBJECT INDEX

Thermionic diode switch Patent  
[NASA-CASE-NPO-10404] c 03 N71-12255

Micro current measuring device using plural logarithmic response heated filamentary type diodes Patent  
[NASA-CASE-XNP-00384] c 09 N71-13530

Power system with heat pipe liquid coolant lines Patent  
[NASA-CASE-MFS-14114] c 33 N71-27862

Uninsulated in-core thermionic diode  
[NASA-CASE-NPO-10542] c 09 N72-27228

**THERMIONIC EMITTERS**

Thermionic tantalum emitter doped with oxygen Patent Application  
[NASA-CASE-NPO-11138] c 03 N70-34646

**THERMIONIC POWER GENERATION**

Control for nuclear thermionic power source  
[NASA-CASE-NPO-13114-2] c 73 N78-28913

High thermal power density heat transfer apparatus providing electrical isolation at high temperature using heat pipes  
[NASA-CASE-LEW-12950-2] c 34 N85-29179

Thermionic photovoltaic energy converter  
[NASA-CASE-LEW-14077-1] c 44 N85-34441

**THERMISTORS**

Matched thermistors for microwave power meters Patent  
[NASA-CASE-NPO-10348] c 10 N71-12554

Thermistor holder for skin temperature measurements  
[NASA-CASE-ARC-10855-1] c 52 N77-10780

Wedge immersed thermistor bolometers  
[NASA-CASE-XGS-01245-1] c 35 N79-33449

**THERMOCHEMISTRY**

Thermochemical generation of hydrogen  
[NASA-CASE-NPO-15015-1] c 25 N82-28368

**THERMOCHROMATIC MATERIALS**

Heat detection and compositions and devices therefor  
[NASA-CASE-NPO-10764-1] c 14 N73-14428

Heat detection and compositions and devices therefor  
[NASA-CASE-NPO-10764-2] c 35 N75-25122

**THERMOCOUPLE PYROMETERS**

Dual measurement ablation sensor  
[NASA-CASE-LAR-10105-1] c 34 N74-15652

**THERMOCOUPLES**

Heat flux sensor assembly  
[NASA-CASE-XMS-05909-1] c 14 N69-27459

Gas cooled high temperature thermocouple Patent  
[NASA-CASE-XLE-09475-1] c 33 N71-15568

Weld control system using thermocouple wire Patent  
[NASA-CASE-MFS-06074] c 15 N71-20393

Heat sensing instrument Patent  
[NASA-CASE-XLA-01551] c 14 N71-22989

Thermocouple assembly Patent  
[NASA-CASE-XNP-01659] c 14 N71-23039

Fluid phase analyzer Patent  
[NASA-CASE-NPO-10691] c 14 N71-26199

Apparatus for sensing temperature  
[NASA-CASE-XLE-05230] c 14 N72-27410

Method of making apparatus for sensing temperature  
[NASA-CASE-XLE-05230-2] c 14 N73-13417

Butt welder for fine gauge tungsten/rhenium thermocouple wire  
[NASA-CASE-LAR-10103-1] c 15 N73-14468

Thermocouple tape  
[NASA-CASE-LEW-11072-1] c 14 N73-24472

Thermocouple tape --- developed from thermoelectrically different metals  
[NASA-CASE-LEW-11072-2] c 35 N76-15434

Thermocouple installation  
[NASA-CASE-NPO-13540-1] c 35 N77-14409

Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c 35 N77-32454

Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c 35 N79-14346

Thermocouple, multiple junction reference oven  
[NASA-CASE-FRC-10112-1] c 35 N81-26431

Solar energy control system --- temperature measurement  
[NASA-CASE-MFS-25287-1] c 44 N82-18686

Joining lead wires to thin platinum alloy films  
[NASA-CASE-LEW-13934-1] c 35 N83-35338

Thermocouple for heating and cooling of memory metal actuators  
[NASA-CASE-NPO-17068-1-CU] c 35 N88-29151

Plug-type heat flux gauge  
[NASA-CASE-LEW-14967-1] c 35 N91-31608

Method of producing a plug-type heat flux gauge  
[NASA-CASE-LEW-14967-2] c 35 N92-22038

High temperature, oxidation resistant noble metal-Al alloy thermocouple  
[NASA-CASE-LEW-15515-1] c 35 N93-31298

**THERMODYNAMIC CYCLES**

Solar engine  
[NASA-CASE-LAR-12148-1] c 44 N82-24640

**THERMODYNAMIC EFFICIENCY**

Automatic compression adjusting mechanism for internal combustion engines  
[NASA-CASE-MSC-18807-1] c 37 N83-36483

**THERMODYNAMIC PROPERTIES**

Thermal shock apparatus Patent  
[NASA-CASE-XLE-02024] c 14 N71-22964

Foamed in place ceramic refractory insulating material Patent  
[NASA-CASE-XGS-02435] c 18 N71-22998

Superconducting magnet Patent  
[NASA-CASE-XNP-06503] c 23 N71-29049

Cobalt-base alloy  
[NASA-CASE-LEW-10436-1] c 17 N73-32415

High stability amplifier  
[NASA-CASE-GSC-12646-1] c 33 N83-34191

Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-5] c 27 N85-21352

Fire resistant polyamide based on 1-(diorganooxyphosphonyl)methyl-2,4- and -2,6-diamino benzene  
[NASA-CASE-ARC-11512-2] c 27 N86-32568

Method of remotely characterizing thermal properties of a sample  
[NASA-CASE-LAR-13508-3-CU] c 09 N93-11057

**THERMODYNAMICS**

Joule Thomson refrigerator  
[NASA-CASE-NPO-17143-1-CU] c 31 N89-14351

**THERMOELECTRIC GENERATORS**

Protection for energy conversion systems  
[NASA-CASE-XGS-04808] c 03 N69-25146

Segmenting lead telluride-silicon germanium thermoelements Patent  
[NASA-CASE-XGS-05718] c 26 N71-16037

Integrated thermoelectric generator/space antenna combination  
[NASA-CASE-XER-09521] c 09 N72-12136

Thermally cascaded thermoelectric generator  
[NASA-CASE-NPO-10753] c 03 N72-26031

AMTEC vapor-vapor series connected cells  
[NASA-CASE-NPO-18667-1-CU] c 33 N93-19330

**THERMOELECTRIC MATERIALS**

Bonding thermoelectric elements to nonmagnetic refractory metal electrodes  
[NASA-CASE-XGS-04554] c 15 N69-39786

Segmenting lead telluride-silicon germanium thermoelements Patent  
[NASA-CASE-XGS-05718] c 26 N71-16037

Stabilized lanthanum sulphur compounds --- thermoelectric materials  
[NASA-CASE-NPO-16135-1] c 25 N83-24572

**THERMOELECTRIC POWER GENERATION**

Two-fluid magnetohydrodynamic system and method for thermal-electric power conversion Patent  
[NASA-CASE-XNP-00644] c 03 N70-36803

Combined electrolysis device and fuel cell and method of operation Patent  
[NASA-CASE-XLE-01645] c 03 N71-20904

Thermoelectric power system --- for spacecraft  
[NASA-CASE-MFS-22002-1] c 44 N76-16612

**THERMOELECTRICITY**

Thermocouple tape  
[NASA-CASE-LEW-11072-1] c 14 N73-24472

Apparatus and method for measuring the Seebeck coefficient and resistivity of materials  
[NASA-CASE-NPO-11749] c 14 N73-28486

Annealing group III-V compound doped silicon-germanium alloy for improved thermo-electric conversion efficiency  
[NASA-CASE-NPO-17259-1-CU] c 76 N90-19884

Flexible thermal apparatus for mounting of thermoelectric cooler  
[NASA-CASE-NPO-17806-1-CU] c 31 N91-27385

**THERMOLUMINESCENCE**

Method of detecting oxygen in a gas  
[NASA-CASE-LAR-10668-1] c 06 N73-16106

Thermoluminescent aerosol analysis  
[NASA-CASE-LAR-12046-1] c 25 N78-15210

**THERMOMAGNETIC EFFECTS**

Thermomagnetic recording and magneto-optic playback system having constant intensity laser beam control  
[NASA-CASE-NPO-11317-2] c 36 N74-13205

Thermomagnetic recording and magnetic-optic playback system  
[NASA-CASE-NPO-10872-1] c 35 N79-16246

**THERMOMETERS**

Platinum resistance thermometer circuit  
[NASA-CASE-MSC-12327-1] c 35 N77-27368

Temperature sensitive oscillator  
[NASA-CASE-GSC-12958-1] c 33 N86-32624

**THERMOPHYSICAL PROPERTIES**

Method for determining thermo-physical properties of specimens --- photographic recording of changes in thin film phase-change temperature indicating material in wind tunnel  
[NASA-CASE-LAR-11053-1] c 25 N74-18551

Apparatus for determining thermophysical properties of test specimens  
[NASA-CASE-LAR-11883-1] c 09 N77-27131

**THERMOPILES**

Differential temperature transducer Patent  
[NASA-CASE-XAC-00812] c 14 N71-15598

Horizon sensor with a plurality of fixedly positioned radiation compensated radiation sensitive detectors Patent  
[NASA-CASE-XNP-06957] c 14 N71-21088

Irradiance measuring device  
[NASA-CASE-NPO-11493] c 14 N73-12447

**THERMOPLASTIC FILMS**

Advanced inorganic separators for alkaline batteries  
[NASA-CASE-LEW-13171-1] c 44 N82-29708

Hot melt recharge system --- repairing damaged or missing tiles on space shuttle orbiter  
[NASA-CASE-LAR-12881-1] c 27 N84-14323

Heat sealable, flame and abrasion resistant coated fabric  
[NASA-CASE-MSC-18382-2] c 27 N84-14324

Induction heating gun  
[NASA-CASE-LAR-13181-1] c 31 N85-29083

Polyphenylquinoxalines via aromatic nucleophilic displacement  
[NASA-CASE-LAR-13988-1] c 23 N89-11814

**THERMOPLASTIC RESINS**

Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c 27 N78-31233

Thermoplastic rubber comprising ethylene-vinyl acetate copolymer, asphalt and fluxing oil  
[NASA-CASE-NPO-08835-1] c 27 N78-33228

Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c 27 N81-14076

Method of making formulated plastic separators for soluble electrode cells  
[NASA-CASE-LEW-12358-2] c 25 N82-21268

One-step dual purpose joining technique  
[NASA-CASE-LAR-12595-1] c 33 N82-26571

Advanced inorganic separators for alkaline batteries  
[NASA-CASE-LEW-13171-1] c 44 N82-29708

Advanced inorganic separators for alkaline batteries and method of making the same  
[NASA-CASE-LEW-13171-2] c 44 N83-32176

Polyphenylquinoxalines containing pendant phenylethynyl and ethynyl groups --- for thermoplastic resins  
[NASA-CASE-LAR-12838-1] c 27 N83-34040

Solvent resistant thermoplastic aromatic poly(imidesulfone) and process for preparing same  
[NASA-CASE-LAR-12858-1] c 27 N83-34041

Ethynyl and substituted ethynyl-terminated polysulfones  
[NASA-CASE-LAR-12931-1] c 27 N84-22747

Hot melt adhesive attachment pad  
[NASA-CASE-LAR-12894-1] c 27 N85-20125

Phenoxy resins containing pendant ethynyl groups and cured resins obtained therefrom  
[NASA-CASE-LAR-13262-1] c 23 N85-28973

Process for crosslinking and extending conjugated diene-containing polymers  
[NASA-CASE-LAR-13452-1] c 27 N87-22848

Pultrusion die assembly  
[NASA-CASE-LAR-13719-1] c 37 N89-12867

Continuous fiber thermoplastic prepreg  
[NASA-CASE-LAR-14459-1] c 24 N91-15334

Semi-interpenetrating polymer network for tougher and more microcracking resistant high temperature polymers  
[NASA-CASE-LAR-13925-1] c 27 N92-21711

A tough high performance composite matrix  
[NASA-CASE-LAR-14338-1] c 24 N93-13416

Imide/arylene ether copolymers containing phosphine oxide groups  
[NASA-CASE-LAR-14925-1] c 27 N93-20567

Continuous fiber thermoplastic prepreg  
[NASA-CASE-LAR-14459-1] c 24 N93-24597

**THERMOPLASTICITY**

Process for preparing thermoplastic aromatic polyimides  
[NASA-CASE-LAR-11828-1] c 27 N78-32261

Heat sealable, flame and abrasion resistant coated fabric --- clothing and containers for space exploration  
[NASA-CASE-MSC-18382-1] c 27 N82-16238

Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-2] c 27 N84-22746

- Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
 [NASA-CASE-LAR-12723-1] c 27 N85-20123  
 Process for preparing solvent resistant, thermoplastic aromatic poly(imidesulfone)  
 [NASA-CASE-LAR-12858-2] c 27 N85-20124  
 A tough performance simultaneous semi-interpenetrating polymer network  
 [NASA-CASE-LAR-14339-1] c 27 N90-26955  
 Tough, high performance, addition-type thermoplastic polymers  
 [NASA-CASE-LAR-14346-1] c 27 N92-22044  
 Semi-interpenetrating polymer network for tougher and more microcracking resistant high temperature polymers  
 [NASA-CASE-LAR-13925-2] c 27 N93-11059

**THERMOREGULATION**

- Garments for controlling the temperature of the body Patent  
 [NASA-CASE-XMS-10269] c 05 N71-24147

**THERMOSETTING RESINS**

- Method for molding compounds Patent  
 [NASA-CASE-XLA-01091] c 15 N71-10672  
 Method and apparatus for bonding a plastics sleeve onto a metallic body Patent  
 [NASA-CASE-XLA-01262] c 15 N71-21404  
 Honeycomb panel and method of making same Patent  
 [NASA-CASE-XMF-01402] c 18 N71-21651  
 Method of forming shapes from planar sheets of thermosetting materials  
 [NASA-CASE-NPO-11036] c 15 N72-24522  
 Highly fluorinated polyurethanes  
 [NASA-CASE-NPO-10767-2] c 06 N72-27151  
 Evacuated displacement compression molding  
 [NASA-CASE-LAR-10782-1] c 31 N74-14133  
 Method for compression molding of thermosetting plastics utilizing a temperature gradient across the plastic to cure the article  
 [NASA-CASE-LAR-10489-1] c 31 N74-18124  
 Evacuated, displacement compression mold --- of tubular bodies from thermosetting plastics  
 [NASA-CASE-LAR-10782-2] c 31 N75-13111  
 Cork-resin ablative insulation for complex surfaces and method for applying the same  
 [NASA-CASE-MFS-23626-1] c 24 N80-26388  
 Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics  
 [NASA-CASE-NPO-10424-1] c 27 N81-24258  
 Elastomer toughened polyimide adhesives  
 [NASA-CASE-LAR-12775-1] c 27 N83-28240  
 Cellular thermosetting fluoropolymers and process for making them  
 [NASA-CASE-GSC-13008-1] c 27 N88-23894  
 Method of controlling a resin curing process --- for fiber reinforced composites  
 [NASA-CASE-MS-21169-1] c 27 N89-29539  
 Cellular thermosetting fluorodiepoxy polymers  
 [NASA-CASE-GSC-13008-2] c 27 N90-16949  
 Semi-interpenetrating polymer network for tougher and more microcracking resistant high temperature polymers  
 [NASA-CASE-LAR-13925-1] c 27 N92-21711  
 A tough high performance composite matrix  
 [NASA-CASE-LAR-14338-1] c 24 N93-13416

**THERMOSTATS**

- Thermal switch Patent  
 [NASA-CASE-XNP-00463] c 33 N70-36847  
 Thermostatic actuator  
 [NASA-CASE-NPO-10637] c 15 N72-12409  
 Thermostatically controlled non-tracking type solar energy concentrator  
 [NASA-CASE-NPO-13497-1] c 44 N76-14602

**THICK FILMS**

- Screened circuit capacitors  
 [NASA-CASE-LAR-10294-1] c 26 N72-28762

**THICKNESS**

- Myocardium wall thickness transducer and measuring method  
 [NASA-CASE-NPO-13644-1] c 52 N76-29895  
 Thickness measurement system  
 [NASA-CASE-MFS-23721-1] c 31 N79-28370  
 Strong thin membrane structure --- solar sails  
 [NASA-CASE-NPO-14021-2] c 27 N80-16163  
 Ice detector  
 [NASA-CASE-LAR-13776-1] c 35 N88-29149  
 Liquid thickness gauge  
 [NASA-CASE-LAR-13826-1] c 35 N88-29150

**THIN FILMS**

- Temperature sensitive capacitor device  
 [NASA-CASE-XNP-09750] c 14 N69-39937  
 Means and methods of depositing thin films on substrates Patent  
 [NASA-CASE-XNP-00595] c 15 N70-34967  
 Method of forming thin window drifted silicon charged particle detector Patent  
 [NASA-CASE-XLE-00808] c 24 N71-10560

- Vacuum deposition apparatus Patent  
 [NASA-CASE-XMF-01667] c 15 N71-17647  
 GaAs solar detector using manganese as a doping agent Patent  
 [NASA-CASE-XNP-01328] c 26 N71-18064  
 Stable amplifier having a stable quiescent point Patent  
 [NASA-CASE-XGS-02812] c 09 N71-19466  
 Evaporant source for vapor deposition Patent  
 [NASA-CASE-XMF-06065] c 15 N71-20395  
 Method of electrolytically binding a layer of semiconductors together Patent  
 [NASA-CASE-XNP-01959] c 26 N71-23043  
 Vacuum evaporator with electromagnetic ion steering Patent  
 [NASA-CASE-NPO-10331] c 09 N71-26701  
 Magnetic recording head and method of making same Patent  
 [NASA-CASE-GSC-10097-1] c 08 N71-27210  
 Thin film capacitive bolometer and temperature sensor Patent  
 [NASA-CASE-NPO-10607] c 09 N71-27232  
 Microelectronic module package Patent  
 [NASA-CASE-XMS-02182] c 10 N71-28783  
 Fabrication of single crystal film semiconductor devices  
 [NASA-CASE-ERC-10222] c 09 N72-22199  
 Active microwave irises and windows  
 [NASA-CASE-LAR-10513-1] c 07 N72-25170  
 Light regulator  
 [NASA-CASE-LAR-10836-1] c 26 N72-27784  
 Thin film microwave iris  
 [NASA-CASE-LAR-10511-1] c 09 N72-29172  
 Method of forming transparent films of ZnO  
 [NASA-CASE-FRC-10019] c 15 N73-12487  
 Light intensity strain analysis  
 [NASA-CASE-LAR-10765-1] c 32 N73-20740  
 Monitoring deposition of films  
 [NASA-CASE-MFS-20675] c 26 N73-26751  
 Holographic thin film analyzer  
 [NASA-CASE-MFS-20823-1] c 16 N73-30476  
 Transparent switchboard  
 [NASA-CASE-MS-13746-1] c 10 N73-32143  
 Method for determining thermo-physical properties of specimens --- photographic recording of changes in thin film phase-change temperature indicating material in wind tunnel  
 [NASA-CASE-LAR-11053-1] c 25 N74-18551  
 Method of preparing water purification membranes --- polymerization of allyl amine as thin films in plasma discharge  
 [NASA-CASE-ARC-10643-1] c 25 N75-12087  
 System for depositing thin films  
 [NASA-CASE-MFS-20775-1] c 31 N75-12161  
 Method of producing a storage bulb for an atomic hydrogen maser  
 [NASA-CASE-NPO-13050-1] c 36 N75-15029  
 Integrated structure vacuum tube  
 [NASA-CASE-ARC-10445-1] c 31 N76-31365  
 Method of forming metal hydride films  
 [NASA-CASE-LEW-12083-1] c 37 N78-13436  
 Strong thin membrane structure --- solar sails  
 [NASA-CASE-NPO-14021-2] c 27 N80-16163  
 Partial interlaminar separation system for composites  
 [NASA-CASE-LAR-12065-1] c 24 N81-14000  
 Thin film strain transducer  
 [NASA-CASE-WLP-10055-1] c 35 N84-28015  
 Integrating IR detector imaging systems  
 [NASA-CASE-NPO-15805-1] c 74 N84-28590  
 Glass heating panels and method for preparing the same from architectural reflective glass  
 [NASA-CASE-NPO-15753-1] c 27 N84-33589  
 Epitaxial thinning process  
 [NASA-CASE-NPO-15786-1] c 76 N84-35112  
 Deposition of diamondlike carbon films  
 [NASA-CASE-LEW-14080-1] c 31 N85-20153  
 Method and apparatus for making an optical element having a dielectric film  
 [NASA-CASE-ARC-11611-1] c 74 N87-28416  
 Method of producing high T(subc) superconducting NBN films  
 [NASA-CASE-NPO-16681-1-CU] c 76 N88-24543  
 Preparation of dilute magnetic semiconductor films by metalorganic chemical vapor deposition  
 [NASA-CASE-NPO-17399-1-CU] c 76 N89-14120  
 Edge geometry superconducting tunnel junctions utilizing an Nbn/MgO/Nbn thin film structure  
 [NASA-CASE-NPO-17812-1-CU] c 76 N90-17456  
 High density tape casting system  
 [NASA-CASE-NPO-16901-1-CU] c 31 N90-19425  
 Liquid sheet radiator apparatus  
 [NASA-CASE-LEW-14295-1] c 31 N91-15424  
 Process for the controlled growth of single-crystal films of silicon carbide polytypes on silicon carbide wafers  
 [NASA-CASE-LEW-15222-1] c 76 N91-26966

- Slow positron beam generator for lifetime studies  
 [NASA-CASE-LAR-14250-1-SB] c 72 N91-27936  
 Low cost, formable, high T(sub c) superconducting wire  
 [NASA-CASE-LEW-14676-1] c 33 N91-31529  
 Biofilm monitoring coupon system and method of use  
 [NASA-CASE-MS-21585-1] c 51 N91-31755  
 Solid lubricants on pretreated surfaces  
 [NASA-CASE-LEW-14474-2] c 27 N92-11186  
 Polyimides containing amide and perfluoroisopropyl connecting groups  
 [NASA-CASE-LAR-14608-1] c 27 N92-17676  
 Method for producing edge geometry superconducting tunnel junctions utilizing an Nbn/MgO/Nbn thin film structure  
 [NASA-CASE-NPO-17812-3-CU] c 76 N92-22041  
 Flush mounting of thin film sensors  
 [NASA-CASE-LAR-14446-1] c 31 N92-33020  
 Method of forming a multiple layer dielectric and a hot film sensor therewith  
 [NASA-CASE-LAR-13678-3] c 35 N93-14714  
 Enhanced fatigue and retention in ferroelectric thin film memory capacitors by post-top electrode anneal treatment  
 [NASA-CASE-NPO-18551-1-CU] c 33 N93-17277  
 Multiple layer dielectrics, hot film sensors, and methods of producing same  
 [NASA-CASE-LAR-14591-1] c 35 N93-19493  
 Shear sensitive monomer-polymer laminate structure and method of using same  
 [NASA-CASE-LAR-14654-1-CU] c 39 N93-29613

**THIN PLATES**

- Dichroic plate --- as bandpass filters  
 [NASA-CASE-NPO-13506-1] c 35 N76-15435  
 Adjustable securing base  
 [NASA-CASE-MS-19666-1] c 37 N78-17383  
 Birefringent filter design  
 [NASA-CASE-LAR-13887-1] c 36 N92-16290  
 High speed thin plate fatigue crack monitor  
 [NASA-CASE-LAR-14816-1-SB] c 39 N93-19329

**THIN WALLED SHELLS**

- Thin-walled pressure vessel Patent  
 [NASA-CASE-XLE-04677] c 15 N71-10577  
 Method and apparatus for producing microshells  
 [NASA-CASE-NPO-16635-1-CU] c 31 N91-32240

**THIN WALLS**

- Channel-type shell construction for rocket engines and the like Patent  
 [NASA-CASE-XLE-00144] c 28 N70-34860  
 Sealed separable connection Patent  
 [NASA-CASE-NPO-10064] c 15 N71-17693  
 Low mass truss structure  
 [NASA-CASE-LAR-10546-1] c 11 N72-25287  
 Differential pressure control  
 [NASA-CASE-MFS-14216] c 14 N73-13418  
 Method of fabricating an article with cavities --- with thin bottom walls  
 [NASA-CASE-LAR-10318-1] c 31 N74-18089  
 Method of fabricating an object with a thin wall having a precisely shaped slit  
 [NASA-CASE-LAR-10409-1] c 31 N74-21059

**THORIUM FLUORIDES**

- Ultraviolet filter  
 [NASA-CASE-NXP-02340] c 23 N69-24332

**THORIUM OXIDES**

- Nuclear thermionic converter --- tungsten-thorium oxide rods  
 [NASA-CASE-NPO-13121-1] c 73 N77-18891

**THREADS**

- Inspection gage for boss Patent  
 [NASA-CASE-XMF-04966] c 14 N71-17658  
 Threadless fastener apparatus Patent  
 [NASA-CASE-XFR-05302] c 15 N71-23254  
 Quick application/release nut with engagement indicator  
 [NASA-CASE-MS-21799-1] c 37 N92-29150  
 Blind fastening apparatus  
 [NASA-CASE-LAR-14542-1] c 37 N93-22384

**THREE AXIS STABILIZATION**

- Three axis attitude control system  
 [NASA-CASE-GSC-12970-1] c 08 N88-23808

**THREE DIMENSIONAL FLOW**

- Three-dimensional laser velocimeter simultaneity detector  
 [NASA-CASE-ARC-11876-1] c 36 N90-25340

**THREE DIMENSIONAL MODELS**

- Generation of animation sequences of three dimensional models  
 [NASA-CASE-MS-21379-1-SB] c 61 N90-27340  
 Digital data registration and differencing compression system  
 [NASA-CASE-SSC-00010-1] c 82 N91-23976

- Digital data registration and differencing compression system  
[NASA-CASE-SSC-00010-2] c 82 N92-23550
- THREE DIMENSIONAL MOTION**  
Solid state controller three axes controller  
[NASA-CASE-MS-C-12394-1] c 08 N74-10942  
Improved docking alignment system  
[NASA-CASE-MS-C-21372-1] c 35 N89-12842  
Three dimensional moire pattern alignment  
[NASA-CASE-MS-C-21416-1] c 74 N91-32922
- THRESHOLD GATES**  
Method and apparatus for data compression by a decreasing slope threshold test  
[NASA-CASE-NPO-10769] c 08 N72-11171  
Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential  
[NASA-CASE-GSC-11425-2] c 76 N75-25730
- THRESHOLD LOGIC**  
SCR blocking pulse gate amplifier Patent  
[NASA-CASE-XLA-07497] c 09 N71-12514
- THROATS**  
Method of making a rocket nozzle  
[NASA-CASE-XMF-06884-1] c 20 N79-21123
- THROTTLING**  
Hybrid butterfly valve  
[NASA-CASE-SSC-00004-1] c 37 N91-14609
- THRUST AUGMENTATION**  
Nozzle Patent  
[NASA-CASE-XLA-00154] c 28 N70-33374  
Construction and method of arranging a plurality of ion engines to form a cluster Patent  
[NASA-CASE-XNP-02923] c 28 N71-23081  
Reversed cowl flap inlet thrust augmentor --- with adjustable airfoil  
[NASA-CASE-ARC-10754-1] c 07 N75-24736  
Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c 07 N80-18039  
Thrust augmented spin recovery device  
[NASA-CASE-LAR-11970-2] c 08 N81-19130
- THRUST BEARINGS**  
Thrust bearing  
[NASA-CASE-LEW-11949-1] c 37 N76-29588  
Hybrid bearings for turbopumps and the like  
[NASA-CASE-MFS-28491-1] c 37 N93-28326
- THRUST CHAMBER PRESSURE**  
Pitch attitude stabilization system utilizing engine pressure ratio feedback signals  
[NASA-CASE-LAR-12562-1] c 08 N81-26152
- THRUST CHAMBERS**  
Rocket chamber leak test fixture  
[NASA-CASE-XFR-09479] c 14 N69-27503  
Supporting and protecting device Patent  
[NASA-CASE-XMF-00580] c 11 N70-35383  
Rocket thrust chamber Patent  
[NASA-CASE-XLE-00145] c 28 N70-36806  
Method of making a rocket motor casing Patent  
[NASA-CASE-XLE-00409] c 28 N71-15658  
Rocket motor casing Patent  
[NASA-CASE-XLE-05689] c 28 N71-15659  
Rocket engine injector Patent  
[NASA-CASE-XLE-03157] c 28 N71-24736  
Injection head for delivering liquid fuel and oxidizers  
[NASA-CASE-NPO-10046] c 28 N72-17843  
Fluidic proportional thruster system  
[NASA-CASE-ARC-10106-1] c 28 N72-22769  
Ion thruster  
[NASA-CASE-LEW-10770-1] c 28 N72-22770  
Thermal flux transfer system  
[NASA-CASE-NPO-12070-1] c 28 N73-32606  
Heat exchanger --- rocket combustion chambers and cooling systems  
[NASA-CASE-LEW-12252-1] c 34 N79-13288  
Heat exchanger and method of making --- bonding rocket chambers with a porous metal matrix  
[NASA-CASE-LEW-12441-1] c 34 N79-13289  
Method of injecting fluid propellants into a rocket combustion chamber  
[NASA-CASE-LEW-14846-2] c 20 N91-26200
- THRUST CONTROL**  
Electromechanical actuator  
[NASA-CASE-XNP-05975] c 15 N69-23185  
Apparatus and method for control of a solid fueled rocket vehicle Patent  
[NASA-CASE-XNP-00217] c 28 N70-38181  
Thrust and direction control apparatus Patent  
[NASA-CASE-XLE-03583] c 31 N71-17629  
Continuous detonation reaction engine Patent  
[NASA-CASE-XMF-06926] c 28 N71-22983  
High efficiency ionizer assembly Patent  
[NASA-CASE-XNP-01954] c 28 N71-28850  
Heated porous plug microthruster  
[NASA-CASE-GSC-10640-1] c 28 N72-18766  
Multi-purpose wind tunnel reaction control model block  
[NASA-CASE-MS-C-19706-1] c 09 N78-31129
- Fluid thrust control system --- for liquid propellant rocket engines  
[NASA-CASE-XMF-05964-1] c 20 N79-21124
- THRUST LOADS**  
Thrust measurement  
[NASA-CASE-XMS-05731] c 35 N75-29382
- THRUST MEASUREMENT**  
Thrust dynamometer Patent  
[NASA-CASE-XLE-00702] c 14 N70-40203  
Thrust dynamometer Patent  
[NASA-CASE-XLE-05260] c 14 N71-20429  
Precision thrust gage Patent  
[NASA-CASE-XGS-02319] c 14 N71-22965  
Micro-pound extended range thrust stand Patent  
[NASA-CASE-GSC-10710-1] c 28 N71-27094
- THRUST REVERSAL**  
Thrust reverser for a long duct fan engine --- for turbofan engines  
[NASA-CASE-LEW-13199-1] c 07 N82-26293
- THRUST VECTOR CONTROL**  
Thrust vector control apparatus Patent  
[NASA-CASE-XLE-00208] c 28 N70-34294  
Velocity package Patent  
[NASA-CASE-XLA-01339] c 31 N71-15692  
Ion beam deflector Patent  
[NASA-CASE-LEW-10689-1] c 28 N71-26173  
Tertiary flow injection thrust vectoring system Patent  
[NASA-CASE-MFS-20831] c 28 N71-29153  
Flight control system  
[NASA-CASE-MS-C-13397-1] c 21 N72-25595  
Rocket thrust throttling system  
[NASA-CASE-LEW-10374-1] c 28 N73-13773  
System for imposing directional stability on a rocket-propelled vehicle  
[NASA-CASE-MFS-21311-1] c 20 N76-21275  
Hybrid plume plasma rocket  
[NASA-CASE-MS-C-20476-2] c 20 N89-25279
- THRUST-WEIGHT RATIO**  
Missile launch release system Patent  
[NASA-CASE-XMF-03198] c 30 N70-40353
- THULIUM**  
Tm:Ho:YLF laser end-pumped by a semiconductor diode laser array  
[NASA-CASE-NPO-17282-1-CU] c 36 N91-15528
- THYRISTORS**  
Electrical power generating system --- for windpowered generation  
[NASA-CASE-MFS-24368-3] c 33 N81-22280  
Pulsed thyristor trigger control circuit  
[NASA-CASE-MFS-25616-1] c 33 N84-16455  
Phase detector for three-phase power factor controller  
[NASA-CASE-MFS-25854-1] c 33 N84-27975  
Three-phase power factor controller with induced EMF sensing  
[NASA-CASE-MFS-25852-1] c 33 N84-33661
- TILES**  
Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
[NASA-CASE-MS-C-14182-1] c 27 N76-14264  
Attachment system for silica tiles --- thermal protection for space shuttle orbiter  
[NASA-CASE-MS-C-18741-1] c 27 N82-29456  
Method for repair of thin glass coatings --- on space shuttle orbiter tiles  
[NASA-CASE-KSC-11097-1] c 27 N82-33520  
Densification of porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MS-C-18737-1] c 24 N83-13171  
Method of repairing surface damage to porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MS-C-18736-1] c 24 N83-13172  
Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MS-C-18791-1] c 37 N83-36482  
Shell tile thermal protection system  
[NASA-CASE-LAR-12862-1] c 27 N84-27886  
Mechanical fastener  
[NASA-CASE-LAR-12738-2] c 37 N85-30335  
Ceramic-ceramic shell tile thermal protection system and method thereof  
[NASA-CASE-ARC-11641-1] c 24 N88-18628  
Thermally activated retainer means  
[NASA-CASE-MS-C-21793-1] c 16 N91-28186
- TILT WING AIRCRAFT**  
Free wing assembly for an aircraft  
[NASA-CASE-FRC-10092-1] c 05 N79-12061
- TIME**  
Apparatus for using a time interval counter to measure frequency stability  
[NASA-CASE-NPO-17325-1-CU] c 32 N90-17005
- TIME CONSTANT**  
Variable time constant smoothing circuit Patent  
[NASA-CASE-XGS-01983] c 10 N70-41964
- TIME DEPENDENCE**  
Instrument for determining coincidence and elapse time between independent sources of random sequential events  
[NASA-CASE-LAR-12531-1] c 35 N83-29651  
Fast temporal neural learning using teacher forcing  
[NASA-CASE-NPO-18553-1-CU] c 63 N92-30085  
Neural network training by integration of adjoint systems of equations forward in time  
[NASA-CASE-NPO-18586-1-CU] c 63 N93-17276
- TIME DISCRIMINATION**  
Ultra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit Patent  
[NASA-CASE-XGS-00381] c 09 N70-34819
- TIME DIVISION MULTIPLEXING**  
Time division multiplex system  
[NASA-CASE-XGS-05918] c 07 N69-39974  
Time-division multiplexer Patent  
[NASA-CASE-XNP-00431] c 09 N70-38998  
Data processor having multiple sections activated at different times by selective power coupling to the sections Patent  
[NASA-CASE-XGS-04767] c 08 N71-12494  
Data compression system with a minimum time delay unit Patent  
[NASA-CASE-XNP-08832] c 08 N71-12506  
Time division radio relay synchronizing system using different sync code words for in sync and out of sync conditions Patent  
[NASA-CASE-GSC-10373-1] c 07 N71-19773  
Signal processing apparatus for multiplex transmission Patent  
[NASA-CASE-NPO-10388] c 07 N71-24622  
Programmable telemetry system Patent  
[NASA-CASE-GSC-10131-1] c 07 N71-24624  
High dynamic global positioning system receiver  
[NASA-CASE-NPO-16171-1-CU] c 04 N86-27270
- TIME FUNCTIONS**  
Single or joint amplitude distribution analyzer Patent  
[NASA-CASE-XNP-01383] c 09 N71-10659
- TIME LAG**  
Closed loop ranging system Patent  
[NASA-CASE-XNP-01501] c 21 N70-41930  
Data compression system with a minimum time delay unit Patent  
[NASA-CASE-XNP-08832] c 08 N71-12506  
Signal phase estimator  
[NASA-CASE-NPO-11203] c 10 N72-20224  
Automatic transponder --- measurement of the internal delay time of a transponder  
[NASA-CASE-GSC-12075-1] c 32 N77-31350  
Time delay and integration detectors using charge transfer devices  
[NASA-CASE-GSC-12324-1] c 33 N81-33403
- TIME MEASUREMENT**  
Time domain phase measuring apparatus  
[NASA-CASE-GSC-12228-1] c 33 N79-10338  
Synchronization tracking in pulse position modulation receiver  
[NASA-CASE-NPO-16256-1] c 32 N87-21207
- TIME MEASURING INSTRUMENTS**  
Measurement of time differences between luminous events Patent  
[NASA-CASE-XLA-01987] c 23 N71-23976  
Error correction method and apparatus for electronic timepieces  
[NASA-CASE-LAR-12654-1] c 33 N83-36357
- TIME OF FLIGHT SPECTROMETERS**  
Time of flight mass spectrometer with feedback means from the detector to the low source and a specific counter Patent  
[NASA-CASE-XNP-01056] c 14 N71-23041
- TIME SERIES ANALYSIS**  
Apparatus for statistical time-series analysis of electrical signals  
[NASA-CASE-MS-C-12428-1] c 10 N73-25240  
Solid sorbent air sampler  
[NASA-CASE-MS-C-20653-1] c 35 N86-26595
- TIME SHARING**  
Integrated time shared instrumentation display Patent  
[NASA-CASE-XLA-01952] c 08 N71-12507
- TIME SIGNALS**  
System for monitoring signal amplitude ranges  
[NASA-CASE-XMS-04061-1] c 09 N69-39885  
Method of resolving clock synchronization error and means therefor Patent  
[NASA-CASE-XNP-08875] c 10 N71-23099  
Time synchronization system utilizing moon reflected coded signals Patent  
[NASA-CASE-NPO-10143] c 10 N71-26326  
Counter Patent  
[NASA-CASE-XNP-06234] c 10 N71-27137  
System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c 33 N75-19519



Precise RF timing signal distribution to remote stations  
--- fiber optics  
[NASA-CASE-NPO-14749-1] c 32 N81-14186

**TIMING DEVICES**

Synchronous servo loop control system Patent  
[NASA-CASE-XNP-03744] c 10 N71-20448  
Method of resolving clock synchronization error and means therefor Patent  
[NASA-CASE-XNP-08875] c 10 N71-23099  
Resettable monostable pulse generator Patent  
[NASA-CASE-GSC-11139] c 09 N71-27016  
Data transfer system Patent  
[NASA-CASE-NPO-12107] c 08 N71-27255  
High speed photo-optical time recording  
[NASA-CASE-KSC-10294] c 14 N72-18411  
Timing control system  
[NASA-CASE-NPO-16882-1-CU] c 33 N88-24863  
Measurand transient signal suppressor  
[NASA-CASE-MSC-22027-1] c 63 N93-17056

**TIN OXIDES**

Process for making a noble metal on tin oxide catalyst  
[NASA-CASE-LAR-13741-1-SB] c 25 N90-20180

**TIPS**

Thin wire pointing method  
[NASA-CASE-NPO-15789-1] c 31 N83-19947

**TIRES**

Excessive temperature warning system Patent  
[NASA-CASE-XLA-01926] c 14 N71-15620  
Resilient wheel Patent  
[NASA-CASE-MFS-13929] c 15 N71-27091  
Method and apparatus for cleaning rubber deposits from airport runways and roadways  
[NASA-CASE-LAR-14483-1] c 31 N93-22035

**TISSUES (BIOLOGY)**

Servo-controlled intravital microscope system  
[NASA-CASE-NPO-13214-1] c 35 N75-25123  
Method and system for in vivo measurement of bone tissue using a two level energy source  
[NASA-CASE-MSC-14276-1] c 52 N77-14737  
System for and method of freezing biological tissue  
[NASA-CASE-GSC-12173-1] c 51 N79-10694  
Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c 52 N79-14751  
Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means  
[NASA-CASE-NPO-13910-1] c 52 N79-27836  
Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c 52 N81-20703  
Enhancement of in vitro guayule propagation  
[NASA-CASE-NPO-15213-1] c 51 N83-17045  
Method for thermal monitoring subcutaneous tissue  
[NASA-CASE-LAR-13028-1] c 52 N85-30618  
Spiral vane bioreactor  
[NASA-CASE-MSC-21361-1] c 51 N91-21701  
Horizontally rotated cell culture system with a coaxial tubular oxygenator  
[NASA-CASE-MSC-21294-1] c 51 N91-30667  
Three-dimensional co-culture process  
[NASA-CASE-MSC-21560-1] c 51 N92-34229  
Three-dimensional cell to tissue assembly process  
[NASA-CASE-MSC-21559-1] c 51 N92-34231  
Method for culturing mammalian cells in a perfused bioreactor  
[NASA-CASE-MSC-21293-2] c 51 N93-10109  
Method for culturing mammalian cells in a horizontally rotated bioreactor  
[NASA-CASE-MSC-21294-2] c 51 N93-10110  
High density cell culture system  
[NASA-CASE-MSC-22060-1] c 51 N93-19037

**TITANATES**

Synthesis of zinc titanate pigment and coatings containing the same  
[NASA-CASE-MFS-13532] c 18 N72-17532

**TITANIUM**

Method of joining aluminum to stainless steel Patent  
[NASA-CASE-MFS-07369] c 15 N71-20443  
Weld-bonded titanium structures  
[NASA-CASE-LAR-11549-1] c 37 N77-11397  
Method of mitigating titanium impurities effects in p-type silicon material for solar cells  
[NASA-CASE-NPO-14635-1] c 44 N80-24741  
Method and apparatus for coating substrates using a laser  
[NASA-CASE-LEW-13526-1] c 36 N84-22944  
Oxygen diffusion barrier coating  
[NASA-CASE-LAR-13474-1-SB] c 26 N87-25455

**TITANIUM ALLOYS**

Method of inhibiting stress corrosion cracks in titanium alloys Patent  
[NASA-CASE-NPO-10271] c 17 N71-16393  
Nondestructive spot test method for titanium and titanium alloys  
[NASA-CASE-LAR-10539-1] c 17 N73-12547

Method and apparatus for coating substrates using a laser  
[NASA-CASE-LEW-13526-1] c 36 N84-22944

Oxidation resistant coating for titanium alloys and titanium alloy matrix composites  
[NASA-CASE-LEW-15155-1] c 27 N92-29090

Multi-layer light-weight protective coating and method for application  
[NASA-CASE-LAR-14448-1] c 27 N93-11912

**TITANIUM NITRIDES**

Improved refractory coatings --- sputtered coatings on substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c 26 N81-16209

**TITANIUM OXIDES**

Method of preparing zinc orthotitanate pigment  
[NASA-CASE-MFS-23345-1] c 27 N77-30237

**TOILETS**

Hydraulic lifting device  
[NASA-CASE-SSC-00008-1] c 37 N91-13733  
Valve for waste collection and storage  
[NASA-CASE-MSC-21025-4] c 54 N91-14723  
Method for waste collection and storage  
[NASA-CASE-MSC-21025-2] c 54 N91-14724  
Method and apparatus for waste collection and storage  
[NASA-CASE-MSC-21025-3] c 54 N91-26747

**TOLERANCES (MECHANICS)**

Universal restrainer and joint Patent  
[NASA-CASE-XNP-02278] c 15 N71-28951  
A tough performance simultaneous semi-interpenetrating polymer network  
[NASA-CASE-LAR-14339-1] c 27 N90-26955  
Mold bolt and means for achieving close tolerances between bolts and bolt holes  
[NASA-CASE-MFS-28720-1] c 37 N93-30567

**TOLUENE**

Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NPO-15767-1] c 23 N84-16255

**TOMOGRAPHY**

System for plotting subsoil structure and method therefor  
[NASA-CASE-NPO-14191-1] c 31 N80-32584  
Three-dimensional and tomographic imaging device for X-ray and gamma-ray emitting objects  
[NASA-CASE-GSC-12851-1] c 35 N85-30281

**TOOLS**

Tool attachment for spreading loose elements away from work Patent  
[NASA-CASE-XMF-02107] c 15 N71-10809  
Adjustable attitude guide device Patent  
[NASA-CASE-XLA-07911] c 15 N71-15571  
Tube dimpling tool Patent  
[NASA-CASE-XMS-06876] c 15 N71-21536  
Stud-bonding gun  
[NASA-CASE-MFS-20299] c 15 N72-11392  
Insert facing tool --- manually operated cutting tool for forming studs in honeycomb material  
[NASA-CASE-MFS-21485-1] c 37 N74-25968  
Stator rotor tools  
[NASA-CASE-MSC-16000-1] c 37 N78-24544  
Computer circuit card puller  
[NASA-CASE-FRC-11042-1] c 60 N82-24839  
Open ended tubing cutters  
[NASA-CASE-MSC-18538-1] c 37 N82-26672  
Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MSC-18791-1] c 37 N83-36482  
Tubing and cable cutting tool  
[NASA-CASE-LAR-12786-1] c 37 N84-28085  
Connection system --- insuring against loss of a tool component without using multiple tethers  
[NASA-CASE-MSC-20319-1] c 37 N85-21649  
Tool and process for miniature explosive joining of tubes  
[NASA-CASE-LAR-13662-1] c 37 N88-14359  
Adjustable depth gage  
[NASA-CASE-LEW-14880-1] c 35 N92-21723  
Bearing servicing tool  
[NASA-CASE-MSC-21881-1] c 37 N93-14871  
Retractable tool bit having latch type catch mechanism  
[NASA-CASE-GSC-13359-1] c 37 N93-18286  
Split rail gripper assembly and tool driver therefor  
[NASA-CASE-GSC-13370-2] c 37 N93-18288

**TOOTH DISEASES**

Process for the preparation of brushite crystals  
[NASA-CASE-ERC-10338] c 04 N72-33072

**TOPOGRAPHY**

Method for observing the features characterizing the surface of a land mass  
[NASA-CASE-FRC-11013-1] c 43 N81-17499  
Generation of topographic terrain models utilizing synthetic aperture radar and surface level data  
[NASA-CASE-GSC-13212-1] c 43 N91-32546

Phase-stepping fiber-optic projected fringe system for surface topography measurements  
[NASA-CASE-LEW-14996-1] c 74 N93-11058

**TORCHES**

Apparatus for welding torch angle and seam tracking control Patent  
[NASA-CASE-XMF-03287] c 15 N71-15607  
Electric welding torch Patent  
[NASA-CASE-XMF-02330] c 15 N71-23798  
Computerized system for translating a torch head  
[NASA-CASE-MFS-23620-1] c 37 N79-10421  
Welding torch with arc light reflector  
[NASA-CASE-MFS-29134-1] c 74 N87-17493  
Welding torch gas cup extension  
[NASA-CASE-MFS-29252-1] c 37 N88-23980  
Internal wire guide for GTAW welding  
[NASA-CASE-MFS-29489-1] c 31 N90-23586  
Electrode carrying wire for GTAW welding  
[NASA-CASE-MFS-29491-1] c 31 N90-26168

**TOROIDAL SHELLS**

Toroidal cell and battery --- storage battery for high amp-hour load applications  
[NASA-CASE-LEW-12918-1] c 44 N81-24521

**TOROIDS**

Flux sensing device using a tubular core with toroidal gating coil and solenoidal output coil wound thereon Patent  
[NASA-CASE-XGS-01881] c 09 N70-40123  
Shaft transducer having dc output proportional to angular velocity  
[NASA-CASE-NPO-15706-1] c 35 N84-28017  
Improved high power/high frequency inductor  
[NASA-CASE-NPO-17830-1-CU] c 33 N91-14539

**TORQUE**

Bidirectional step torque filter with zero backlash characteristic Patent  
[NASA-CASE-XGS-04227] c 15 N71-21744  
Isolation coupling arrangement for a torque measuring system  
[NASA-CASE-XLA-04897] c 15 N72-22482  
High-torque open-end wrench  
[NASA-CASE-NPO-13541-1] c 37 N79-14383  
Acoustic driving of rotor  
[NASA-CASE-NPO-14005-1] c 71 N79-20827  
Magnetic field control --- electromechanical torquing device  
[NASA-CASE-MFS-23828-1] c 33 N82-26569  
Missile rolling tail brake torque system --- simulating bearing friction on canard controlled missiles  
[NASA-CASE-LAR-12751-1] c 15 N84-16231  
Directional gear ratio transmissions  
[NASA-CASE-LAR-12644-1] c 37 N84-28084  
Helicopter anti-torque system using strakes  
[NASA-CASE-LAR-13233-1] c 05 N84-33400  
Dual towline spin-recovery device  
[NASA-CASE-LAR-13076-1] c 08 N85-35200  
Helicopter anti-torque system using fuselage strakes  
[NASA-CASE-LAR-13630-1] c 08 N88-23809  
Metallic threaded composite fastener  
[NASA-CASE-MSC-21580-1] c 37 N92-21726  
Roller locking brake  
[NASA-CASE-GSC-13376-1] c 37 N92-21728

**TORQUE MOTORS**

Low speed phaselock speed control system --- for brushless dc motor  
[NASA-CASE-GSC-11127-1] c 09 N75-24758  
Magnetic bearing and motor  
[NASA-CASE-GSC-12726-1] c 37 N83-34323  
A universal computer control system for motors  
[NASA-CASE-NPO-17134-1-CU] c 33 N91-31528

**TORQUE SENSORS (ROBOTICS)**

Torque sensor having a spoked sensor element support structure  
[NASA-CASE-NPO-17461-1-CU] c 35 N91-17350

**TORQUEMETERS**

Optical torqueometer Patent  
[NASA-CASE-XLE-00503] c 14 N70-34818  
Balance torqueometer Patent  
[NASA-CASE-XGS-01013] c 14 N71-23725  
System for stabilizing torque between a balloon and gondola  
[NASA-CASE-GSC-11077-1] c 02 N73-13008  
Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c 54 N82-26987

**TORSION**

Torsional suspension system for testing space structures  
[NASA-CASE-LAR-14149-1-SB] c 14 N91-21176  
Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N91-28184  
Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N93-24598

**TORSO**

Restraint torso for a pressurized suit  
[NASA-CASE-MSC-12397-1] c 05 N72-25119

## SUBJECT INDEX

Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c 54 N78-31736

Torso sizing ring construction for hard space suit  
[NASA-CASE-ARC-11616-1] c 54 N66-28618

**TOUCH**

Mechanically actuated triggered hand  
[NASA-CASE-MFS-20413] c 15 N72-21463

Method for measuring cutaneous sensory perception  
[NASA-CASE-MSC-13609-1] c 05 N72-25122

Tactile sensing means for prosthetic limbs  
[NASA-CASE-MFS-16570-1] c 05 N73-32013

**TOUGHNESS**

Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-1] c 24 N86-19380

High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1SB] c 24 N86-21590

Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-2] c 27 N86-27451

Gradient tempering process  
[NASA-CASE-MFS-28496-1] c 26 N92-34239

Semi-interpenetrating polymer network for tougher and more microcracking resistant high temperature polymers  
[NASA-CASE-LAR-13925-2] c 27 N93-11059

**TOWERS**

Aerial capsule emergency separation device Patent  
[NASA-CASE-XLA-00115] c 03 N70-33343

**TOXICITY**

Glass compositions with a high modulus of elasticity --- nontoxic glass fibers  
[NASA-CASE-HQN-10274-1] c 27 N82-29451

Low toxicity high temperature PMR polyimide  
[NASA-CASE-LAR-14639-1] c 27 N93-14709

**TOXICITY AND SAFETY HAZARD**

Apparatus for remote handling of materials --- mixing or analyzing dangerous chemicals  
[NASA-CASE-LAR-10634-1] c 37 N74-18123

**TOXICOLOGY**

Exposure system for animals Patent  
[NASA-CASE-XAC-05333] c 11 N71-22875

**TRACE CONTAMINANTS**

Microbalance including crystal oscillators for measuring contaminants in a gas system Patent  
[NASA-CASE-NPO-10144] c 14 N71-17701

Method for removing oxygen impurities from cesium Patent  
[NASA-CASE-XNP-04262-2] c 17 N71-26773

Electric discharge for treatment of trace contaminants  
[NASA-CASE-ARC-10975-1] c 33 N79-15245

Nebulization reflux concentrator  
[NASA-CASE-LAR-13254-1CU] c 35 N86-29174

**TRACE ELEMENTS**

Ion microprobe mass spectrometer for analyzing fluid materials Patent  
[NASA-CASE-ERC-10014] c 14 N71-28863

Automated system for identifying traces of organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c 25 N76-18245

Nulling device for detection of trace gases by NDIR absorption  
[NASA-CASE-ARC-10760-1] c 25 N76-22323

Thermoluminescent aerosol analysis  
[NASA-CASE-LAR-12046-1] c 25 N78-15210

Reversal electron attachment ionizer for detection of trace species  
[NASA-CASE-NPO-17596-1-CU] c 35 N89-28795

**TRACKED VEHICLES**

Tank tread assemblies with track-linking mechanism  
[NASA-CASE-NPO-16321-1CU] c 37 N87-17034

**TRACKING (POSITION)**

Plurality of photosensitive cells on a pyramidal base for planetary trackers  
[NASA-CASE-XNP-04180] c 07 N69-39736

Telespectrograph Patent  
[NASA-CASE-XLA-03273] c 14 N71-18699

Method and apparatus for aligning a laser beam projector Patent  
[NASA-CASE-NPO-11087] c 23 N71-29125

Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking  
[NASA-CASE-MFS-23267-1] c 35 N77-20401

System and method for tracking a signal source --- employing feedback control  
[NASA-CASE-HQN-10880-1] c 17 N78-17140

Sun tracking solar energy collector  
[NASA-CASE-NPO-13921-1] c 44 N79-14526

Motion detection, novelty filtering, and target tracking using an interferometric technique with a GaAs phase conjugate mirror  
[NASA-CASE-NPO-17784-1-CU] c 74 N91-13998

Method and apparatus for positioning a robotic end effector  
[NASA-CASE-MSC-21476-1] c 37 N91-21542

Optical joint correlator for real-time image tracking and retinal surgery  
[NASA-CASE-MSC-21509-1] c 74 N91-25840

**TRACKING FILTERS**

Automatic acquisition system for phase-lock loop  
[NASA-CASE-XGS-04994] c 09 N69-21543

Apparatus and method for stabilized phase detection for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c 33 N79-11313

PN lock indicator for dithered PN code tracking loop  
[NASA-CASE-NPO-14435-1] c 33 N81-33405

**TRACKING RADAR**

Monopulse system with an electronic scanner  
[NASA-CASE-XGS-05582] c 07 N69-27460

Phase-locked loop with sideband rejecting properties Patent  
[NASA-CASE-XNP-02723] c 07 N70-41680

Radar antenna system for acquisition and tracking Patent  
[NASA-CASE-XMS-09610] c 07 N71-24625

Acquisition and tracking system for optical radar  
[NASA-CASE-MFS-20125] c 16 N72-13437

Synthetic aperture radar target simulator  
[NASA-CASE-NPO-15024-1] c 32 N84-27951

**TRACKING STATIONS**

Optical monitor panel Patent  
[NASA-CASE-XKS-03509] c 14 N71-23175

Simultaneous acquisition of tracking data from two stations  
[NASA-CASE-NPO-13292-1] c 32 N75-15854

**TRACTION**

Articulated suspension system  
[NASA-CASE-NPO-17354-1-CU] c 37 N90-17153

**TRAFFIC CONTROL**

Traffic survey system --- using optical scanners  
[NASA-CASE-MFS-22631-1] c 66 N76-19888

**TRAILERS**

Low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c 85 N82-33288

**TRAILING EDGES**

Serrated trailing edges for improving lift and drag characteristics of lifting surfaces  
[NASA-CASE-LAR-13870-1-CU] c 05 N92-21587

**TRAILING-EDGE FLAPS**

Double hinged flap Patent  
[NASA-CASE-XLA-01290] c 02 N70-42016

Variable area exhaust nozzle  
[NASA-CASE-LEW-12378-1] c 07 N79-14097

**TRAINING DEVICES**

Visual accommodation trainer-tester  
[NASA-CASE-ARC-11426-1] c 09 N84-12193

Virtual reality flight control display with six-degree-of-freedom controller and spherical orientation overlay  
[NASA-CASE-NPO-18733-1-CU] c 06 N93-30416

**TRAINING SIMULATORS**

Mechanical simulator of low gravity conditions Patent  
[NASA-CASE-MFS-10555] c 11 N71-19494

Subgravity simulator Patent  
[NASA-CASE-XMS-04798] c 11 N71-21474

Kinesthetic control simulator --- for pilot training  
[NASA-CASE-LAR-10276-1] c 09 N75-15662

**TRAJECTORIES**

A generalized compliant motion primitive  
[NASA-CASE-NPO-18134-1-CU] c 37 N91-32510

Bilevel shared control for teleoperators  
[NASA-CASE-NPO-17800-1-CU] c 37 N92-22036

**TRAJECTORY ANALYSIS**

Means for visually indicating flight paths of vehicles between the Earth, Venus, and Mercury Patent  
[NASA-CASE-XNP-00708] c 14 N70-35394

Method of planetary atmospheric investigation using a split-trajectory dual flyby mode Patent  
[NASA-CASE-XAC-08494] c 30 N71-15990

**TRAJECTORY CONTROL**

Trajectory-correction propulsion system Patent  
[NASA-CASE-XNP-01104] c 28 N70-39931

Technique for control of free-flight rocket vehicles Patent  
[NASA-CASE-XLA-00937] c 31 N71-17691

Apparatus for automatically stabilizing the attitude of a nonrigid vehicle  
[NASA-CASE-ARC-10134] c 30 N72-17873

Terminal slider control of nonlinear robotic systems  
[NASA-CASE-NPO-18584-1-CU] c 37 N93-11177

**TRAJECTORY PLANNING**

Digital parallel processor array for optimum path planning  
[NASA-CASE-NPO-18727-1-CU] c 62 N93-28427

**TRANSUDERS**

Pressure variable capacitor  
[NASA-CASE-XNP-09752] c 14 N69-21541

Bootstrap unloader Patent  
[NASA-CASE-XNP-09768] c 09 N71-12516

## TRANSFORMATIONS (MATHEMATICS)

Vibrating structure displacement measuring instrument Patent  
[NASA-CASE-XLA-03135] c 32 N71-16428

Contour surveying system Patent  
[NASA-CASE-XLA-08646] c 14 N71-17586

Rotary bead dropper and selector for testing micrometeorite detectors Patent  
[NASA-CASE-XGS-03304] c 09 N71-22988

Self-calibrating displacement transducer Patent  
[NASA-CASE-XLA-00781] c 09 N71-22999

Extensometer frame  
[NASA-CASE-XLA-10322] c 15 N72-17452

Split range transducer  
[NASA-CASE-XLA-11189] c 10 N72-20222

Pulsed excitation voltage circuit for transducers  
[NASA-CASE-FRC-10036] c 09 N72-22200

Magnifying scratch gage force transducer  
[NASA-CASE-LAR-10496-1] c 14 N72-22437

Intruder detection system  
[NASA-CASE-ARC-10097-2] c 07 N73-25160

Acoustical transducer calibrating system and apparatus  
[NASA-CASE-FRC-10060-1] c 14 N73-27379

Demodulator for carrier transducers  
[NASA-CASE-NUC-10107-1] c 33 N74-17930

LC-oscillator with automatic stabilized amplitude via bias current control --- power supply circuit for transducers  
[NASA-CASE-MFS-21698-1] c 33 N74-26732

Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c 52 N74-27566

Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-3] c 33 N75-19520

Subminiature insertable force transducer --- including a strain gage to measure forces in muscles  
[NASA-CASE-NPO-13423-1] c 33 N75-31329

Self-supporting strain transducer  
[NASA-CASE-LAR-11263-1] c 35 N75-33369

Miniature muscle displacement transducer  
[NASA-CASE-NPO-13519-1] c 33 N76-19338

Method and apparatus for nondestructive testing of pressure vessels  
[NASA-CASE-NPO-12142-1] c 38 N76-28563

Mycardium wall thickness transducer and measuring method  
[NASA-CASE-NPO-13644-1] c 52 N76-29895

Solar cell angular position transducer  
[NASA-CASE-LAR-11999-1] c 44 N80-18552

Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c 52 N80-27072

Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c 52 N81-20703

Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c 39 N81-25400

Hot foil transducer skin friction sensor  
[NASA-CASE-LAR-12321-1] c 35 N82-24470

Thin film strain transducer  
[NASA-CASE-WLP-10055-1] c 35 N84-28015

Strain gage calibration  
[NASA-CASE-LAR-12743-1] c 35 N84-28019

Thin film strain transducer --- suitable for in-flight measurement of scientific balloon strain  
[NASA-CASE-WLP-10055-2] c 35 N85-21598

Gravity enhanced acoustic levitation method and apparatus  
[NASA-CASE-NPO-16147-1-CU] c 71 N85-29693

Adjustable mount for electro-optic transducers in an evacuated cryogenic system  
[NASA-CASE-LAR-13100-1] c 37 N87-23982

Single mode levitation and translation  
[NASA-CASE-NPO-16675-1-CU] c 71 N88-24241

Low power consumption current transducer  
[NASA-CASE-NPO-16888-1-CU] c 33 N89-29681

A method and apparatus for indicating disbands in joint regions  
[NASA-CASE-LAR-14626-1] c 38 N92-17859

Smart accelerometer --- vibration damage detection  
[NASA-CASE-MSC-21951-1] c 35 N92-23545

Pressure transducer and system for cryogenic environments  
[NASA-CASE-LAR-14579-1] c 35 N92-29097

Acoustophoresis method and apparatus  
[NASA-CASE-LAR-13388-1] c 25 N92-33611

Measurand transient signal suppressor  
[NASA-CASE-MSC-22027-1] c 63 N93-17056

Control system and method for prosthetic devices  
[NASA-CASE-MSC-21941-1] c 54 N93-17087

**TRANSFER FUNCTIONS**

Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333

**TRANSFORMATIONS (MATHEMATICS)**

Programmable remapper with single flow architecture  
[NASA-CASE-MSC-21481-1] c 60 N91-13890

## TRANSFORMERS

- Signal multiplexer  
[NASA-CASE-XGS-01110] c 07 N69-24334  
Insertion loss measuring apparatus having transformer means connected across a pair of bolometers Patent  
[NASA-CASE-XNP-01193] c 10 N71-16057  
Saturation current protection apparatus for saturable core transformers Patent  
[NASA-CASE-ERC-10075] c 09 N71-24800  
Unsaturating saturable core transformer Patent  
[NASA-CASE-ERC-10125] c 09 N71-24893  
Electronically resettable fuse Patent  
[NASA-CASE-XGS-11177] c 09 N71-27001  
Voltage regulator Patent  
[NASA-CASE-ERC-10113] c 09 N71-27053  
Radial heat flux transformer  
[NASA-CASE-NPO-10828] c 33 N72-17948  
Saturation current protection apparatus for saturable core transformers  
[NASA-CASE-ERC-10075-2] c 09 N72-22196  
Failsafe multiple transformer circuit configuration  
[NASA-CASE-NPO-11078] c 09 N72-25262  
Banded transformer cores  
[NASA-CASE-NPO-11966-1] c 33 N74-17928  
Solid-state current transformer  
[NASA-CASE-MFS-22560-1] c 33 N77-14335  
Transformer regulated self-stabilizing chopper  
[NASA-CASE-XGS-09186] c 33 N78-17295  
Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c 33 N79-18193  
Circuit for automatic load sharing in parallel converter modules  
[NASA-CASE-NPO-14056-1] c 33 N79-24257  
System for automatically switching transformer coupled lines  
[NASA-CASE-MSC-16697-1] c 33 N79-28415  
Three phase power factor controller  
[NASA-CASE-MFS-25535-1] c 33 N81-12330  
Base drive for paralleled inverter systems  
[NASA-CASE-NPO-14163-1] c 33 N81-14220  
Low current linearization of magnetic amplifier for dc transducer  
[NASA-CASE-NPO-14617-1] c 33 N81-24338  
Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c 33 N81-33404  
Non-contacting power transfer device  
[NASA-CASE-GSC-12595-1] c 33 N82-24422  
High voltage isolation transformer  
[NASA-CASE-GSC-12817-1] c 33 N85-29146
- TRANSIENT HEATING**  
Thermocouple installation  
[NASA-CASE-NPO-13540-1] c 35 N77-14409  
Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-1] c 35 N82-25484  
Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA 1.71-NPO-15494-2] c 35 N85-34373
- TRANSIENT LOADS**  
Deployable solar cell array  
[NASA-CASE-NPO-10883] c 31 N72-22874
- TRANSIENT RESPONSE**  
Measurand transient signal suppressor  
[NASA-CASE-MSC-22027-1] c 63 N93-17056
- TRANSISTOR AMPLIFIERS**  
Apparatus for overcurrent protection of a push-pull amplifier Patent  
[NASA-CASE-MSC-12033-1] c 09 N71-13531
- TRANSISTOR CIRCUITS**  
Low power drain semi-conductor circuit  
[NASA CASE-XGS-04999] c 09 N69-24317  
Ring counter  
[NASA-CASE-XGS-03095] c 09 N69-27463  
Pulse counting circuit which simultaneously indicates the occurrence of the nth pulse Patent  
[NASA-CASE-XMF-00906] c 09 N70-41655  
Linear sawtooth voltage-wave generator employing transistor timing circuit having capacitor-zener diode combination feedback Patent  
[NASA-CASE-XMS-01315] c 09 N70-41675  
Switching circuit employing regeneratively connected complementary transistors Patent  
[NASA-CASE-XNP-02654] c 10 N70-42032  
High voltage transistor circuit Patent  
[NASA-CASE-XNP-06937] c 09 N71-19516  
Complementary regenerative switch Patent  
[NASA-CASE-XGS-02751] c 09 N71-23015  
Transistor drive regulator Patent  
[NASA-CASE-LEW-10233] c 10 N71-27126  
Multiple slope sweep generator Patent  
[NASA-CASE-XMS-03542] c 09 N71-28926  
Broadband video process with very high input impedance  
[NASA-CASE-NPO-10199] c 09 N72-17156

- Ultra-stable oscillator with complementary transistors  
[NASA-CASE-GSC-11513-1] c 33 N74-20862
- Inrush current limiter  
[NASA-CASE-GSC-11789-1] c 33 N77-14333  
Temperature compensated current source  
[NASA-CASE-MSC-11235] c 33 N78-17294  
Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c 33 N81-33404  
Power converter  
[NASA-CASE-FRC-11014-1] c 33 N82-18494
- TRANSISTORS**  
Power supply circuit Patent  
[NASA-CASE-XMS-00913] c 10 N71-23543  
Switching circuit Patent  
[NASA-CASE-XNP-06505] c 10 N71-24799  
Cascaded complementary pair broadband transistor amplifiers Patent  
[NASA-CASE-NPO-10003] c 10 N71-26415  
Fast response low power drain logic circuits  
[NASA-CASE-GSC-10878-1] c 10 N72-22236  
Coaxial inverted geometry transistor having buried emitter  
[NASA-CASE-ARC-10330-1] c 09 N73-32112  
Four phase logic systems --- including integrated microcircuits  
[NASA-CASE-MSC-14240-1] c 33 N75-14957  
Complementary DMOS-VMOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c 33 N79-12321  
Circuit for automatic load sharing in parallel converter modules  
[NASA-CASE-NPO-14056-1] c 33 N79-24257  
Base drive for paralleled inverter systems  
[NASA-CASE-NPO-14163-1] c 33 N81-14220  
Four quadrant control circuit for a brushless three-phase dc motor  
[NASA-CASE-MFS-28080-1] c 33 N87-21233  
GaAs-based optoelectronic neurons  
[NASA-CASE-NPO-18497-1-CU] c 63 N92-24245  
Nonvolatile programmable neural network synaptic array  
[NASA-CASE-NPO-18578-1-CU] c 33 N92-30086  
GaAs-based optoelectronic neurons  
[NASA-CASE-NPO-18497-1-CU] c 63 N93-24599
- TRANSITION FLOW**  
Ablation article and method  
[NASA-CASE-LAR-10439-1] c 33 N73-27796
- TRANSITION TEMPERATURE**  
Process for preparing thermoplastic aromatic polyimides  
[NASA-CASE-LAR-11828-1] c 27 N78-32261  
Method of producing high T(subc) superconducting NBN films  
[NASA-CASE-NPO-16681-1-CU] c 76 N88-24543
- TRANSITIONAL MOTION**  
Centrifuge mounted motion simulator Patent  
[NASA-CASE-XAC-00399] c 11 N70-34815  
Translating horizontal tail Patent  
[NASA-CASE-XLA-08801-1] c 02 N71-11043  
Semi-linear ball bearing Patent  
[NASA-CASE-XLA-02809] c 15 N71-22982  
Positioning mechanism  
[NASA-CASE-NPO-10679] c 15 N72-21462  
Improved docking alignment system  
[NASA-CASE-MSC-21372-1] c 35 N89-12842  
Suspension mechanism and method  
[NASA-CASE-LAR-14142-1] c 37 N90-27116  
Helix translation device --- shim for precision displacements  
[NASA-CASE-GSC-13141-1] c 37 N92-23548  
Connection space reduction mechanism  
[NASA-CASE-GSC-13220-1] c 37 N92-29140
- TRANSLATORS**  
Serial data correlator/code translator  
[NASA-CASE-KSC-11025-1] c 32 N83-13323
- TRANSLUCENCE**  
Light transmitting window assembly  
[NASA-CASE-MSC-18417-1] c 74 N85-29750
- TRANSMISSION CIRCUITS**  
Beam forming network  
[NASA-CASE-NPO-15743-1] c 32 N85-29118
- TRANSMISSION EFFICIENCY**  
Microwave power transmission system wherein level of transmitted power is controlled by reflections from receiver  
[NASA-CASE-MFS-21470-1] c 44 N74-19870  
Linear phase demodulator including a phase locked loop with auxiliary feedback loop  
[NASA-CASE-GSC-12018-1] c 33 N77-14334  
Apparatus and method for characterizing the transmission efficiency of a mass spectrometer  
[NASA-CASE-NPO-16989-1-CU] c 35 N91-14587  
Dual frequency optical carrier technique for transmission of reference frequencies in dispersive media  
[NASA-CASE-NPO-18007-1-CU] c 74 N92-11791

## TRANSMISSION LINES

- Validation device for spacecraft checkout equipment Patent  
[NASA-CASE-XKS-10543] c 07 N71-26292  
Collapsible antenna boom and transmission line Patent  
[NASA-CASE-MFS-20068] c 07 N71-27191  
Phase modulator Patent  
[NASA-CASE-MSC-13201-1] c 07 N71-28429  
Shielded flat cable  
[NASA-CASE-MFS-13687-2] c 09 N72-22198  
Phase control circuits using frequency multiplications for phased array antennas  
[NASA-CASE-ERC-10285] c 10 N73-16206  
Phase protection system for ac power lines  
[NASA-CASE-MSC-17832-1] c 33 N74-14956  
System for stabilizing cable phase delay utilizing a coaxial cable under pressure  
[NASA-CASE-NPO-13138-1] c 33 N74-17927  
Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c 32 N79-23310  
System for automatically switching transformer coupled lines  
[NASA-CASE-MSC-16697-1] c 33 N79-28415
- TRANSMISSION LOSS**  
Low-loss, high-isolation, fiber-optic isolator  
[NASA-CASE-NPO-17207-1-CU] c 74 N88-25304  
Dual frequency optical carrier technique for transmission of reference frequencies in dispersive media  
[NASA-CASE-NPO-18007-1-CU] c 74 N92-11791
- TRANSMISSIONS (MACHINE ELEMENTS)**  
Compensating linkage for main rotor control  
[NASA-CASE-LAR-11797-1] c 05 N81-19087  
Directional gear ratio transmissions  
[NASA-CASE-LAR-12644-1] c 37 N84-28084  
Magnetic drive coupling  
[NASA-CASE-MSC-21171-1] c 37 N88-23973
- TRANSMISSIVITY**  
Process of making medical clip  
[NASA-CASE-LAR-12650-2] c 52 N84-28389
- TRANSMITTANCE**  
Light transmitting window assembly  
[NASA-CASE-MSC-18417-1] c 74 N85-29750
- TRANSMITTER RECEIVERS**  
Integrated thermoelectric generator/space antenna combination  
[NASA-CASE-XER-09521] c 09 N72-12136  
Location identification system  
[NASA-CASE-ERC-10324] c 07 N72-25173  
Automatic vehicle location system  
[NASA-CASE-NPO-11850-1] c 32 N74-12912  
Digital communication system  
[NASA-CASE-MSC-13912-1] c 32 N74-30524  
Electro-optical spin measurement system  
[NASA-CASE-LAR-13629-1] c 09 N91-14356
- TRANSMITTERS**  
Temperature telemetry transmitter Patent  
[NASA-CASE-NPO-10649] c 07 N71-24840  
Two carrier communication system with single transmitter  
[NASA-CASE-NPO-11548] c 07 N73-26118  
Miniature multichannel biotelemetry system  
[NASA-CASE-NPO-13065-1] c 52 N74-26625  
Digital transmitter for data bus communications system  
[NASA-CASE-MSC-14558-1] c 32 N75-21486  
Apparatus for endoscopic examination --- analysis of the propulsion system configuration and transmitter  
[NASA-CASE-NPO-14092-1] c 52 N80-16725  
Single frequency multitransmitter telemetry  
[NASA-CASE-LAR-13006-1] c 17 N87-16863  
Emergency locating transmitter  
[NASA-CASE-GSC-12821-2] c 33 N91-31530  
Doppler shift compensation system for laser transmitters and receivers  
[NASA-CASE-GSC-13194-1] c 36 N93-18287
- TRANSONIC SPEED**  
Leading edge curvature based on convective heating Patent  
[NASA-CASE-XLA-01486] c 01 N71-23497
- TRANSONIC WIND TUNNELS**  
Wind tunnel test section  
[NASA-CASE-MFS-20509] c 11 N72-17183  
Miniature remote dead weight calibrator  
[NASA-CASE-LAR-13564-1] c 35 N87-25558
- TRANSPARENCE**  
Helmet assembly and latch means therefor Patent  
[NASA-CASE-XMS-04935] c 05 N71-11190  
Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c 74 N77-28932  
Method of fabricating a photovoltaic module of a substantially transparent construction  
[NASA-CASE-NPO-14303-1] c 44 N80-18550

- Light transmitting window assembly  
[NASA-CASE-MSC-18417-1] c 74 N85-29750
- Process for preparing essentially colorless polyimide film containing phenoxy-linked diamines  
[NASA-CASE-LAR-13353-1] c 27 N86-29039
- Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-31727
- Procedure to prepare transparent silica gels  
[NASA-CASE-LAR-13476-1-CU] c 76 N87-29360
- Method for investigating the formation of crystals in a transparent material  
[NASA-CASE-MFS-26008-1-CU] c 76 N88-14835
- Single layer multi-color luminescent display  
[NASA-CASE-LAR-13616-1] c 74 N91-31950
- Purification system  
[NASA-CASE-MSC-21584-1] c 25 N92-33029
- TRANSPARATION**  
Rocket chamber and method of making  
[NASA-CASE-LEW-11118-2] c 20 N76-14191
- Control and augmentation of passive porosity through transpiration control  
[NASA-CASE-LAR-14682-1] c 34 N92-30387
- TRANSPONDERS**  
Dynamic Doppler simulator Patent  
[NASA-CASE-XMS-05454-1] c 07 N71-12391
- Method and apparatus for mapping planets  
[NASA-CASE-NPO-11001] c 07 N72-21118
- Code regenerative clean-up loop transponder for a mu-type ranging system  
[NASA-CASE-NPO-11707] c 07 N73-25161
- Automatic vehicle location system  
[NASA-CASE-NPO-11850-1] c 32 N74-12912
- Simultaneous acquisition of tracking data from two stations  
[NASA-CASE-NPO-13292-1] c 32 N75-15854
- Automatic transponder --- measurement of the internal delay time of a transponder  
[NASA-CASE-GSC-12075-1] c 32 N77-31350
- Video processor for air traffic control beacon system  
[NASA-CASE-KSC-11155-1] c 04 N86-19304
- TRANSPORT VEHICLES**  
Bidirectional drive and brake mechanism  
[NASA-CASE-MSC-21540-1] c 37 N91-32514
- TRANSPORTATION**  
Supporting and protecting device Patent  
[NASA-CASE-XMF-00580] c 11 N70-35383
- Shuttle car loading system  
[NASA-CASE-NPO-15949-1] c 85 N85-34722
- TRANSVERSE ACCELERATION**  
Rim inertial measuring system  
[NASA-CASE-LAR-12052-1] c 18 N81-29152
- TRAPPED PARTICLES**  
Method and apparatus for determining time, direction, and composition of impacting space particles  
[NASA-CASE-LAR-13392-1-CU] c 19 N91-14412
- TRAPS**  
Deep trap, laser activated image converting system  
[NASA-CASE-NPO-13131-1] c 36 N75-19652
- TRAVELING SALESMAN PROBLEM**  
Electronic neural network for solving traveling salesman and similar global optimization problems  
[NASA-CASE-NPO-17807-2-CU] c 63 N92-29955
- TRAVELING WAVE AMPLIFIERS**  
Serrordyne frequency converter re-entrant amplifier system Patent  
[NASA-CASE-XGS-01022] c 07 N71-16088
- Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility  
[NASA-CASE-HON-10069] c 33 N75-27251
- Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c 36 N83-35350
- Ladder supported ring bar circuit  
[NASA-CASE-LEW-13570-1] c 33 N84-16452
- TRAVELING WAVE MASERS**  
Folded traveling wave maser structure Patent  
[NASA-CASE-XNP-05219] c 16 N71-15550
- High-gain, broadband traveling wave maser Patent  
[NASA-CASE-NPO-10548] c 16 N71-24831
- Independent gain and bandwidth control of a traveling wave maser  
[NASA-CASE-NPO-13801-1] c 36 N78-18410
- TRAVELING WAVE TUBES**  
Segmented superconducting magnet for a broadband traveling wave maser Patent  
[NASA-CASE-XGS-10518] c 16 N71-28554
- Traveling wave tube circuit  
[NASA-CASE-LEW-12013-1] c 33 N79-10339
- Multistage depressed collector for dual mode operation --- for microwave transmitting tubes  
[NASA-CASE-LEW-13282-1] c 33 N82-24415
- Linearized traveling wave amplifier with hard limiter characteristics  
[NASA-CASE-LEW-13981-2] c 33 N86-21742
- Miniature traveling wave tube and method of making  
[NASA-CASE-LEW-14520-1] c 33 N90-22724
- TRAVELING WAVES**  
Maser for frequencies in the 7-20 GHz range  
[NASA-CASE-NPO-11437] c 16 N72-28521
- TRAYS**  
Protein crystal growth tray assembly  
[NASA-CASE-MFS-28507-1] c 76 N92-34171
- TREADMILLS**  
Tread drum for animals --- having an electrical shock station  
[NASA-CASE-ARC-10917-1] c 51 N78-27733
- Treadmill for space flight  
[NASA-CASE-MSC-21752-1] c 54 N92-17910
- TREADS**  
Tank tread assemblies with track-linking mechanism  
[NASA-CASE-NPO-16321-1CU] c 37 N87-17034
- TRIGGER CIRCUITS**  
Ring counter  
[NASA-CASE-XGS-03095] c 09 N69-27463
- Electric arc driven wind tunnel Patent  
[NASA-CASE-XMF-00411] c 11 N70-36913
- Automatic signal range selector for metering devices Patent  
[NASA-CASE-XMS-06497] c 14 N71-26244
- Multivibrator circuit with means to prevent false triggering from supply voltage fluctuations Patent  
[NASA-CASE-ARC-10137-1] c 09 N71-28468
- SCR lamp driver  
[NASA-CASE-GSC-10221-1] c 09 N72-23171
- Rapidly pulsed, high intensity, incoherent light source  
[NASA-CASE-XLE-2529-3] c 33 N74-20859
- Pulsed thyristor trigger control circuit  
[NASA-CASE-MFS-25616-1] c 33 N84-16455
- TRIGONOMETRY**  
Trigonometric vehicle guidance assembly which aligns the three perpendicular axes of two three-axes systems Patent  
[NASA-CASE-XMF-00684] c 21 N71-21688
- TRIMERS**  
Trifunctional alcohol  
[NASA-CASE-NPO-10714] c 06 N69-31244
- Trimerization of aromatic nitriles  
[NASA-CASE-LEW-12053-1] c 27 N78-15276
- Catalytic trimerization of aromatic nitriles and triaryl-s-triazine ring cross-linked high temperature resistant polymers and copolymers made thereby  
[NASA-CASE-LEW-12053-2] c 27 N79-28307
- TRIODES**  
Triode thermionic energy converter  
[NASA-CASE-XLE-01015] c 03 N69-39898
- Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587
- TRITIUM**  
Method for determining the state of charge of batteries by the use of tracers Patent  
[NASA-CASE-XNP-01464] c 03 N71-10728
- TROPOPAUSE**  
CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c 06 N83-10040
- TROPOSPHERE**  
Atmospheric pressure flow reactor: Gas phase chemical kinetics under tropospheric conditions without wall effects  
[NASA-CASE-MSC-21384-1] c 34 N92-16243
- Atmospheric pressure flow reactor: Gas phase chemical kinetics under tropospheric conditions without wall effects  
[NASA-CASE-MSC-21384-2] c 35 N93-17626
- TRUCKS**  
Fifth wheel  
[NASA-CASE-FRC-10081-1] c 37 N77-14477
- Low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c 85 N82-33288
- TRUSSES**  
Low mass truss structure  
[NASA-CASE-LAR-10546-1] c 11 N72-25287
- Lightweight structural columns --- space erectable trusses  
[NASA-CASE-LAR-12095-1] c 31 N81-25258
- Structural members, method and apparatus  
[NASA-CASE-MSC-16217-1] c 31 N81-27323
- Sequentially deployable maneuverable tetrahedral beam  
[NASA-CASE-LAR-13098-1] c 31 N86-19479
- Shuttle-launch triangular space station  
[NASA-CASE-MSC-20676-1] c 18 N86-24729
- Synchronously deployable truss structure  
[NASA-CASE-LAR-13117-1] c 37 N86-25789
- Deployable M-braced truss structure  
[NASA-CASE-LAR-13081-1] c 37 N86-32737
- Deployable geodesic truss structure  
[NASA-CASE-LAR-13113-1] c 31 N87-25492
- Preloaded space structural coupling joints  
[NASA-CASE-LAR-13489-1] c 18 N87-27713
- Mobile remote manipulator system for a tetrahedral truss  
[NASA-CASE-MSC-20985-1] c 18 N88-26398
- Collet lock joint for space station truss  
[NASA-CASE-MSC-21207-1] c 37 N88-29180
- Clevis joint for deployable space structures  
[NASA-CASE-LAR-13898-1] c 37 N91-15544
- Overcenter collet space station truss fastener  
[NASA-CASE-MSC-21504-1] c 18 N91-21221
- Apparatus for joining trusses  
[NASA-CASE-MFS-28545-1] c 31 N91-25306
- Synchronously deployable double fold beam and planar truss structure  
[NASA-CASE-LAR-13490-1] c 18 N91-27199
- Robot-friendly connector --- space truss structures  
[NASA-CASE-MSC-21864-1] c 37 N92-23544
- Pre-integrated truss space station and method of assembly  
[NASA-CASE-MSC-22015-1] c 18 N93-20042
- Robot-friendly connector --- space truss structures  
[NASA-CASE-MSC-21864-1] c 37 N93-20117
- TUBE GRIDS**  
Method for fabricating solar cells having integrated collector grids  
[NASA-CASE-LEW-12819-2] c 44 N79-18444
- TUBE HEAT EXCHANGERS**  
Electrothermal rockets having improved heat exchangers Patent  
[NASA-CASE-XLE-01783] c 28 N70-34175
- Procedure and apparatus for determination of water in nitrogen tetroxide  
[NASA-CASE-NPO-10234] c 06 N72-17094
- Liquid cooled brassiere and method of diagnosing malignant tumors therewith  
[NASA-CASE-ARC-11007-1] c 52 N77-14736
- Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c 44 N81-17518
- TUBES**  
Method of making tubes Patent  
[NASA-CASE-XGS-04175] c 15 N71-18579
- Tube sealing device Patent  
[NASA-CASE-NPO-10431] c 15 N71-29132
- Fluid separator  
[NASA-CASE-MFS-28658-1] c 34 N93-17039
- TUMBLING MOTION**  
Tumbler system to provide random motion  
[NASA-CASE-XGS-02437] c 15 N69-21472
- TUMORS**  
Liquid cooled brassiere and method of diagnosing malignant tumors therewith  
[NASA-CASE-ARC-11007-1] c 52 N77-14736
- TUNABLE LASERS**  
Spectrophotone stabilized laser with line center offset frequency control  
[NASA-CASE-NPO-15516-1] c 36 N84-22943
- Portable remote laser sensor for methane leak detection  
[NASA-CASE-NPO-15790-1] c 36 N85-21631
- Digital control of diode laser for atmospheric spectroscopy  
[NASA-CASE-NPO-16000-1] c 36 N85-29264
- Method and means for generation of tunable laser sidebands in the far-infrared region  
[NASA-CASE-NPO-16497-1-CU] c 36 N87-25567
- Isotope separation using tuned laser and electron beam  
[NASA-CASE-NPO-16907-1-CU] c 25 N88-24732
- Field induced gap infrared detector  
[NASA-CASE-NPO-17526-1-CU] c 35 N91-14588
- Birefringent filter design  
[NASA-CASE-LAR-13887-1] c 36 N92-16290
- Doppler shift compensation system for laser transmitters and receivers  
[NASA-CASE-GSC-13194-1] c 36 N93-18287
- Tunable CW diode-pumped Tm,Ho:YLF4 laser operating at or near room temperature  
[NASA-CASE-NPO-18611-1-CU] c 36 N93-30415
- TUNGSTEN**  
Bonding thermoelectric elements to nonmagnetic refractory metal electrodes  
[NASA-CASE-XGS-04554] c 15 N69-39786
- Method of producing porous tungsten ionizers for ion rocket engines Patent  
[NASA-CASE-XLE-00455] c 28 N70-38197
- Small plasma probe Patent  
[NASA-CASE-XLE-02578] c 25 N71-20747
- Fabrication of controlled-porosity metals Patent  
[NASA-CASE-XNP-04339] c 17 N71-29137
- Tungsten contacts on silicon substrates  
[NASA-CASE-GSC-10695-1] c 09 N72-25259
- Nuclear thermionic converter --- tungsten-thorium oxide rods  
[NASA-CASE-NPO-13121-1] c 73 N77-18891
- TUNGSTEN ALLOYS**  
Evaporant holder  
[NASA-CASE-XLA-03105] c 15 N69-27483

- Cobalt-base alloy  
[NASA-CASE-LEW-10436-1] c 17 N73-32415  
Directionally solidified eutectic gamma plus beta  
nickel-base superalloys  
[NASA-CASE-LEW-12906-1] c 26 N77-32279
- TUNING**  
Active tuned circuit  
[NASA-CASE-GSC-11340-1] c 10 N72-33230  
Magnetically actuated tuning method for Gunn  
oscillators  
[NASA-CASE-NPO-12106] c 09 N73-15235  
Tuned analog network  
[NASA-CASE-GSC-12650-1] c 33 N84-14421  
Spectrophone stabilized laser with line center offset  
frequency control  
[NASA-CASE-NPO-15516-1] c 36 N84-22943  
Aircraft rotor blade with passive tuned tab  
[NASA-CASE-ARC-11444-1] c 05 N85-29947  
Precision tunable resonant microwave cavity  
[NASA-CASE-LEW-13935-1] c 33 N87-21234  
Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N87-22895  
Tailorable infrared sensing device with strain layer  
superlattice structure  
[NASA-CASE-NPO-16607-1-CU] c 76 N88-14836  
Birefringent filter design  
[NASA-CASE-LAR-13887-1] c 36 N92-16290
- TUNNEL DIODES**  
Low power drain semi-conductor circuit  
[NASA-CASE-XGS-04999] c 09 N69-24317  
High band gap 2-6 and 3-5 tunneling junctions for silicon  
multijunction solar cells  
[NASA-CASE-NPO-16526-1CU] c 44 N87-17399  
Method for producing edge geometry superconducting  
tunnel junctions utilizing an NbN/MgO/NbN thin film  
structure  
[NASA-CASE-NPO-17812-2-CU] c 76 N92-22040  
Edge geometry superconducting tunnel junctions  
utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-3-CU] c 76 N92-22041
- TUNNELING (EXCAVATION)**  
Scanning seismic intrusion detection method and  
apparatus --- monitoring unwanted subterranean entry and  
departure  
[NASA-CASE-ARC-11317-1] c 35 N83-34272
- TUNNELS**  
Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c 37 N76-22540  
Smart tunnel: Docking mechanism  
[NASA-CASE-MSC-21360-1] c 18 N91-14374
- TURBINE BLADES**  
Transpiration cooled turbine blade manufactured from  
wires Patent  
[NASA-CASE-XLE-00020] c 15 N70-33226  
Modification and improvements to cooled blades  
Patent  
[NASA-CASE-XLE-00092] c 15 N70-33264  
High temperature nickel-base alloy Patent  
[NASA-CASE-XLE-00151] c 17 N70-33283  
External liquid-spray cooling of turbine blades Patent  
[NASA-CASE-XLE-00037] c 28 N70-33372  
Liquid spray cooling method Patent  
[NASA-CASE-XLE-00027] c 33 N71-29152  
Welding blades to rotors  
[NASA-CASE-LEW-10533-1] c 15 N73-28515  
Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c 24 N77-19170  
Fully plasma-sprayed compliant backed ceramic turbine  
seal  
[NASA-CASE-LEW-13268-2] c 37 N82-26674  
Method of protecting a surface with a  
silicon-slurry/aluminide coating --- coatings for gas turbine  
engine blades and vanes  
[NASA-CASE-LEW-13343-1] c 27 N82-28441  
Fully plasma-sprayed compliant backed ceramic turbine  
seal  
[NASA-CASE-LEW-13268-1] c 27 N82-29453  
Vertical shaft windmill  
[NASA-CASE-LAR-12923-1] c 37 N84-12493
- TURBINE ENGINES**  
High speed, self-acting shaft seal --- for use in turbine  
engines  
[NASA-CASE-LEW-11274-1] c 37 N75-21631  
Dual cycle aircraft turbine engine  
[NASA-CASE-LAR-11310-1] c 07 N77-28118  
Composite seal for turbomachinery --- backings for  
turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c 37 N79-18318  
Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c 05 N79-24976  
Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c 37 N80-26658  
Multi-heat addition turbine engine  
[NASA-CASE-LEW-15094-1] c 07 N93-22034

**TURBINE PUMPS**

- Pulsed energy power system Patent  
[NASA-CASE-MSC-13112] c 03 N71-11057  
Cryogenic cooling system Patent  
[NASA-CASE-NPO-10467] c 23 N71-26654  
Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c 20 N74-13502  
Supercharged topping rocket propellant feed system  
[NASA-CASE-XLE-02062-1] c 20 N80-14188  
Rotor self-lubricating axial stop  
[NASA-CASE-MFS-28273-1] c 37 N88-23974  
Hybrid bearings for turbopumps and the like  
[NASA-CASE-MFS-28491-1] c 37 N93-28326

**TURBINE WHEELS**

- Locking device for turbine rotor blades Patent  
[NASA-CASE-XNP-00816] c 28 N71-28928  
Apparatus for welding blades to rotors  
[NASA-CASE-LEW-10533-2] c 37 N74-11300  
Blade retainer assembly  
[NASA-CASE-LEW-12608-1] c 07 N77-27116

**TURBINES**

- Rotating shaft seal Patent  
[NASA-CASE-XNP-02862-1] c 15 N71-26294  
Method for driving two-phase turbines with enhanced  
efficiency  
[NASA-CASE-NPO-15037-2] c 37 N85-29282  
Wingtip vortex turbine  
[NASA-CASE-LAR-14116-1] c 05 N91-14345  
Method of reducing drag in aerodynamic systems  
[NASA-CASE-LEW-14791-1] c 02 N92-34243

**TURBOCOMPRESSORS**

- Multi-stage multiple-reentry turbine Patent  
[NASA-CASE-XLE-00170] c 15 N70-36412  
Apparatus and method for reducing thermal stress in  
a turbine rotor  
[NASA-CASE-LEW-12232-1] c 07 N79-10057  
Combustor liner construction  
[NASA-CASE-LEW-14035-1] c 07 N84-24577  
Diesel engine catalytic combustor system --- aircraft  
engines  
[NASA-CASE-LEW-12995-1] c 37 N84-33808

**TURBOFAN ENGINES**

- Supersonic fan blading --- noise reduction in turbofan  
engines  
[NASA-CASE-LEW-11402-1] c 07 N74-28226  
Noise suppressor --- for turbofan engine by incorporating  
annular acoustically porous elements in exhaust and inlet  
ducts  
[NASA-CASE-LAR-11141-1] c 07 N74-32418  
Variable thrust nozzle for quiet turbofan engine and  
method of operating same  
[NASA-CASE-LEW-12317-1] c 07 N78-17055  
Method and apparatus for rapid thrust increases in a  
turbofan engine  
[NASA-CASE-LEW-12971-1] c 07 N80-18039  
Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c 07 N81-19116  
Thrust reverser for a long duct fan engine --- for turbofan  
engines  
[NASA-CASE-LEW-13199-1] c 07 N82-26293  
Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c 07 N83-33884

**TURBOFANS**

- Dual output variable pitch turbofan actuation system  
[NASA-CASE-LEW-12419-1] c 07 N77-14025  
Reverse pitch fan with divided splitter  
[NASA-CASE-LEW-12760-1] c 07 N77-17059

**TURBOGENERATORS**

- Wind and solar powered turbine  
[NASA-CASE-NPO-15496-1] c 44 N84-23018  
Wingtip vortex turbine  
[NASA-CASE-LAR-14116-1] c 05 N91-14345

**TURBOJET ENGINE CONTROL**

- Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c 07 N81-19116

**TURBOJET ENGINES**

- Telescoping-spike supersonic inlet for aircraft engines  
Patent  
[NASA-CASE-XLE-00005] c 28 N70-39899  
Gas turbine combustion apparatus Patent  
[NASA-CASE-XLE-103477-1] c 28 N71-20330  
Reduction of nitric oxide emissions from a combustor  
[NASA-CASE-ARC-10814-2] c 07 N80-26298

**TURBOMACHINE BLADES**

- Platform for a swing root turbomachinery blade  
[NASA-CASE-LEW-12312-1] c 07 N77-32148  
Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c 37 N80-26658

**TURBOMACHINERY**

- Turbo-machine blade vibration damper Patent  
[NASA-CASE-XLE-00155] c 28 N71-29154  
Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-3] c 37 N82-19540  
Fully plasma-sprayed compliant backed ceramic turbine  
seal  
[NASA-CASE-LEW-13268-1] c 27 N82-29453

- Method of fabricating an abrasible gas path seal  
[NASA-CASE-LEW-13269-2] c 37 N84-22957  
Wind and solar powered turbine  
[NASA-CASE-NPO-15496-1] c 44 N84-23018  
Compliant hydrodynamic fluid journal bearing  
[NASA-CASE-LEW-13670-1] c 37 N86-19606  
Damping seal for turbomachinery  
[NASA-CASE-MFS-25842-2] c 37 N86-20788  
Turbomachinery shaft insert  
[NASA-CASE-MFS-28345-2] c 37 N89-28842
- TURBOSHAFTS**  
Optical torqueometer Patent  
[NASA-CASE-XLE-00503] c 14 N70-34818  
High speed, self-acting shaft seal --- for use in turbine  
engines  
[NASA-CASE-LEW-11274-1] c 37 N75-21631
- TURBULENCE**  
Active control of boundary layer transition and  
turbulence  
[NASA-CASE-LAR-13532-1] c 34 N91-14562  
Atmospheric pressure flow reactor: Gas phase chemical  
kinetics under tropospheric conditions without wall  
effects  
[NASA-CASE-MSC-21384-1] c 34 N92-16243
- TURBULENCE EFFECTS**  
Hydrodynamic skin-friction reduction  
[NASA-CASE-LAR-14078-1-CU] c 34 N90-27071
- TURBULENCE METERS**  
Hot foil transducer skin friction sensor  
[NASA-CASE-LAR-12321-1] c 35 N82-24470
- TURBULENT BOUNDARY LAYER**  
Sound shield  
[NASA-CASE-LAR-12883-1] c 71 N83-17235  
Method for laminar boundary layer transition visualization  
in flight  
[NASA-CASE-LAR-13554-1] c 02 N89-12551  
Swept wing attachment line contamination fence  
[NASA-CASE-LAR-13400-1] c 02 N93-22015
- TURBULENT FLOW**  
Exhaust flow deflector --- for ducted gas flow  
[NASA-CASE-LAR-11570-1] c 34 N76-18364  
System for measuring Reynolds in a turbulently flowing  
fluid --- signal processing  
[NASA-CASE-ARC-10755-2] c 34 N76-27517  
System for measuring three fluctuating velocity  
components in a turbulently flowing fluid  
[NASA-CASE-ARC-10974-1] c 34 N77-27345  
Detection of the transitional layer between laminar and  
turbulent flow areas on a wing surface --- using an  
accelerometer to measure pressure levels during wind  
tunnel tests  
[NASA-CASE-LAR-12261-1] c 02 N80-20224  
Amplified wind turbine apparatus  
[NASA-CASE-MFS-23830-1] c 44 N82-24639  
Active thermal isolation for temperature responsive  
sensors  
[NASA-CASE-LAR-14612-1] c 34 N92-29954
- TURNSTILE ANTENNAS**  
Method and means for damping nutation in a satellite  
Patent  
[NASA-CASE-XMF-00442] c 31 N71-10747  
Broadband modified turnstile antenna Patent  
[NASA-CASE-MSC-12209] c 09 N71-24842  
Turnstile slot antenna  
[NASA-CASE-GSC-11428-1] c 32 N74-20864  
Turnstile and flared cone UHF antenna  
[NASA-CASE-LAR-10970-1] c 33 N76-14372
- TURRET**  
Electron beam tube containing a multiple cathode array  
employing indexing means for cathode substitution  
Patent  
[NASA-CASE-NPO-10625] c 09 N71-26182
- TWISTING**  
Means for controlling aerodynamically induced twist  
[NASA-CASE-LAR-12175-1] c 05 N82-28279
- TWO BODY PROBLEM**  
Instrument for measuring potentials on two dimensional  
electric field plots Patent  
[NASA-CASE-XLA-08493] c 10 N71-19421
- TWO DIMENSIONAL BODIES**  
Two-dimensional radiant energy array computers and  
computing devices  
[NASA-CASE-GSC-11839-1] c 60 N77-14751
- TWO PHASE FLOW**  
Two-step rocket engine bipropellant valve Patent  
[NASA-CASE-XMS-04890-1] c 15 N70-22192  
Booster tank system Patent  
[NASA-CASE-MSC-12390] c 27 N71-29155  
Two phase flow system with discrete impinging  
two-phase jets  
[NASA-CASE-NPO-11556] c 12 N72-25292  
Method and turbine for extracting kinetic energy from  
a stream of two-phase fluid  
[NASA-CASE-NPO-14130-1] c 34 N79-20335

- Method for driving two-phase turbines with enhanced efficiency  
[NASA-CASE-NPO-15037-2] c 37 N85-29282
- Pumped two-phase heat transfer loop  
[NASA-CASE-MSC-20841-1] c 34 N87-22950
- Pumped two-phase heat transfer loop  
[NASA-CASE-MSC-20841-2] c 34 N88-23958
- TYPEWRITERS**  
Guide for a typewriter  
[NASA-CASE-MFS-15218-1] c 37 N77-19457

## U

## U BENDS

- Technique of elbow bending small jacketed transfer lines  
Patent  
[NASA-CASE-XNP-10475] c 15 N71-24679
- Method for distillation of liquids  
[NASA-CASE-XNP-08124-2] c 06 N73-13129

## ULCERS

- Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c 52 N81-14613
- Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-1] c 52 N81-29764

## ULLAGE

- Penetrating radiation system for detecting the amount of liquid in a tank Patent  
[NASA-CASE-MSC-12280] c 27 N71-16348

## ULTRAHIGH FREQUENCIES

- Turnstile and flared cone UHF antenna  
[NASA-CASE-LAR-10970-1] c 33 N76-14372
- Dual band combiner for horn antenna  
[NASA-CASE-NPO-14519-1] c 32 N80-23524

## ULTRAHIGH VACUUM

- Method of lubricating rolling element bearings Patent  
[NASA-CASE-XLE-09527] c 15 N71-17688
- Gauge calibration by diffusion  
[NASA-CASE-XGS-07752] c 14 N73-30390
- Ultrahigh vacuum gauge having two collector electrodes  
[NASA-CASE-LAR-02743] c 14 N73-32324
- In situ transfer standard for ultrahigh vacuum gage calibration  
[NASA-CASE-LAR-10862-1] c 35 N74-15092
- Precision manipulator heating and cooling apparatus for use in UHV systems with sample transfer capability  
[NASA-CASE-LAR-13040-1] c 37 N85-29286

## ULTRAPURE METALS

- Apparatus for production of ultrapure amorphous metals utilizing acoustic cooling  
[NASA-CASE-NPO-15658-1] c 26 N86-32551

## ULTRASONIC AGITATION

- Apparatus for recovering matter adhered to a host surface  
[NASA-CASE-NPO-11213] c 15 N73-20514

## ULTRASONIC CLEANING

- Acoustic tooth cleaner  
[NASA-CASE-LAR-12471-1] c 52 N82-29862

## ULTRASONIC FLAW DETECTION

- Length mode piezoelectric ultrasonic transducer for inspection of solid objects  
[NASA-CASE-MSC-19672-1] c 38 N79-14398
- Two-dimensional scanner apparatus --- flaw detector in small flat plates  
[NASA-CASE-MFS-25687-1] c 35 N84-22928
- Ultrasonic angle beam standard reflector --- ultrasonic nondestructive inspection  
[NASA-CASE-LAR-13153-1] c 71 N86-21276
- Ultrasonic method and apparatus for determining crack opening load  
[NASA-CASE-LAR-13889-1] c 39 N88-30160

## ULTRASONIC RADIATION

- Ultrasonic biomedical measuring and recording apparatus --- for recording motion of internal organs such as heart valves  
[NASA-CASE-ARC-10597-1] c 52 N74-20726
- Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-1] c 52 N76-33835
- Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-2] c 52 N79-26771
- Dual differential interferometer  
[NASA-CASE-LAR-12966-1] c 35 N85-30282
- Method for thermal monitoring subcutaneous tissue  
[NASA-CASE-LAR-13028-1] c 52 N85-30618
- Acoustic radiation stress measurement  
[NASA-CASE-LAR-13440-1] c 71 N87-21653
- Method and apparatus for characterizing reflected ultrasonic pulses  
[NASA-CASE-LAR-13966-1] c 71 N91-27914
- Methods of determining loads and fiber orientations in anisotropic non-crystalline materials using energy flux deviation  
[NASA-CASE-LAR-14399-1] c 39 N93-26102

- Constant frequency pulsed phase-locked loop measuring device  
[NASA-CASE-LAR-13823-1] c 35 N93-29084

## ULTRASONIC SCANNERS

- Cutting head for ultrasonic lithotripsy  
[NASA-CASE-GSC-12944-1] c 52 N86-19885

## ULTRASONIC TESTS

- Ultrasonic scanner for radial and flat panels  
[NASA-CASE-MFS-20335-1] c 35 N74-10415
- Ultrasonic scanning system for in-place inspection of brazed tube joints  
[NASA-CASE-MFS-20767-1] c 38 N74-15130
- Method and apparatus for nondestructive testing --- using high frequency arc discharges  
[NASA-CASE-MFS-21233-1] c 38 N74-15395
- CW ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c 39 N78-15512
- Rapid quantification of an internal property --- ultrasonic determination of bladder urine quantity  
[NASA-CASE-LAR-13689-1-NP] c 35 N87-23941
- Ultrasonic method and apparatus for determining crack opening load  
[NASA-CASE-LAR-13889-1] c 39 N88-30160
- Method of recertifying a loaded bearing member using a phase point  
[NASA-CASE-LAR-14741-1] c 39 N92-11384

## ULTRASONIC WAVE TRANSDUCERS

- Apparatus for recovering matter adhered to a host surface  
[NASA-CASE-NPO-11213] c 15 N73-20514
- Ultrasonic bone densitometer  
[NASA-CASE-MFS-20994-1] c 35 N75-12271
- Reference apparatus for medical ultrasonic transducer  
[NASA-CASE-ARC-10753-1] c 54 N75-27760
- Ultrasonic calibration device --- for producing changes in acoustic attenuation and phase velocity  
[NASA-CASE-LAR-11435-1] c 35 N76-15432
- Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c 52 N79-14751
- CDS solid state phase insensitive ultrasonic transducer --- annealing cadmium sulfide crystals  
[NASA-CASE-LAR-12304-1] c 35 N80-20559
- Liquid-immersible electrostatic ultrasonic transducer  
[NASA-CASE-LAR-12465-1] c 33 N82-26572
- Ultrasonic transducer with Gaussian radial pressure distribution  
[NASA-CASE-LAR-12967-1] c 35 N84-22932
- Apparatus for disintegrating kidney stones  
[NASA-CASE-GSC-12652-1] c 52 N84-34913
- Ultrasonic depth gauge for liquids under high pressure  
[NASA-CASE-LAR-13300-1-CU] c 35 N89-14407
- Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-2] c 52 N92-11621

## ULTRASONIC WELDING

- Ultrasonically bonded valve assembly  
[NASA-CASE-NPO-13360-1] c 37 N75-25185

## ULTRASONICS

- Methods and apparatus employing vibratory energy for wrenching Patent  
[NASA-CASE-MFS-20586] c 15 N71-17686
- Pseudo continuous wave instrument --- ultrasonics  
[NASA-CASE-LAR-12260-1] c 35 N79-10390
- Dual differential interferometer  
[NASA-CASE-LAR-12966-1] c 35 N85-30282
- Method for thermal monitoring subcutaneous tissue  
[NASA-CASE-LAR-13028-1] c 52 N85-30618
- Ultrasonic depth gauge for liquids under high pressure  
[NASA-CASE-LAR-13300-1-CU] c 35 N89-14407
- Method of recertifying a loaded bearing member  
[NASA-CASE-LAR-14168-1] c 39 N92-34174
- Rapid detection and quantification of features such as damage or flaws in composite and metallic structures  
[NASA-CASE-LAR-14850-1-CU] c 38 N93-17048

## ULTRAVIOLET DETECTORS

- A quality monitor and monitoring technique employing optically stimulated electron emission  
[NASA-CASE-LAR-15063-1] c 38 N93-30414

## ULTRAVIOLET FILTERS

- Ultraviolet filter  
[NASA-CASE-XNP-02340] c 23 N69-24332
- Ultraviolet resonance lamp Patent  
[NASA-CASE-ARC-10030] c 09 N71-12521
- Alkali metal for ultraviolet band-pass filter  
[NASA-CASE-NPO-18433-1-CU] c 74 N92-34241

## ULTRAVIOLET LASERS

- Stabilization of He2(a 3 Sigma u+ molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c 72 N79-13826

## ULTRAVIOLET RADIATION

- Alkali-metal silicate protective coating  
[NASA-CASE-XGS-04119] c 18 N69-39979
- Ultraviolet resonance lamp Patent  
[NASA-CASE-ARC-10030] c 09 N71-12521

- Leak detector wherein a probe is monitored with ultraviolet radiation Patent  
[NASA-CASE-ERC-10034] c 15 N71-24896
- Phototropic composition of matter  
[NASA-CASE-XGS-03736] c 14 N72-22443
- Transmitting and reflecting diffuser --- for ultraviolet light  
[NASA-CASE-LAR-10385-2] c 70 N74-13436
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c 27 N74-21156
- Light shield and cooling apparatus --- high intensity ultraviolet lamp  
[NASA-CASE-LAR-10089-1] c 34 N74-23066
- Flame detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c 19 N74-29410
- Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback  
[NASA-CASE-NPO-13346-1] c 36 N76-29575
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c 27 N76-32315
- Vitro-violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments  
[NASA-CASE-MSC-16074-1] c 27 N80-26446
- Purification system  
[NASA-CASE-MSC-21584-1] c 25 N92-33029
- A quality monitor and monitoring technique employing optically stimulated electron emission  
[NASA-CASE-LAR-15063-1] c 38 N93-30414

## ULTRAVIOLET REFLECTION

- Alkali metal silicate protective coating Patent  
[NASA-CASE-XGS-04799] c 18 N71-24183

## ULTRAVIOLET LIGHT REFLECTIVE COATING

- Transmitting and reflecting diffuser --- using ultraviolet grade fused silica coatings  
[NASA-CASE-LAR-10385-3] c 74 N78-15879

## ULTRAVIOLET SPECTRA

- Ultraviolet atomic emission detector  
[NASA-CASE-HQN-10756-1] c 14 N72-25428

## ULTRAVIOLET SPECTROMETERS

- Concave grating spectrometer Patent  
[NASA-CASE-XGS-01036] c 14 N70-40003
- Telespectrograph Patent  
[NASA-CASE-XLA-03273] c 14 N71-18699

## UMBILICAL CONNECTORS

- Umbilical separator for rockets Patent  
[NASA-CASE-XNP-00425] c 11 N70-38202
- Umbilical disconnect Patent  
[NASA-CASE-XLA-00711] c 03 N71-12258
- Remote controlled tubular disconnect Patent  
[NASA-CASE-XLA-01396] c 03 N71-12259
- Serpentuator Patent  
[NASA-CASE-XMF-05344] c 31 N71-16345
- Breakaway connector  
[NASA-CASE-NPO-11140] c 15 N72-17455
- Quick disconnect coupling  
[NASA-CASE-NPO-11202] c 15 N72-25450
- Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c 37 N76-22540
- High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c 15 N82-24272

## UMBILICAL TOWERS

- Emergency escape system Patent  
[NASA-CASE-XKS-02342] c 05 N71-11199

## UNDERWATER ENGINEERING

- Ejectable underwater sound source recovery assembly  
[NASA-CASE-LAR-10595-1] c 35 N74-16135
- Underwater seismic source --- for petroleum exploration  
[NASA-CASE-NPO-14255-1] c 46 N79-23555

## UNDERWATER TESTS

- Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332] c 05 N72-20097
- Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332-2] c 05 N73-25125

## UNIFORM FLOW

- Wind tunnel flow generation section  
[NASA-CASE-ARC-10710-1] c 09 N75-12969

## UNIONS (CONNECTORS)

- Beam connector apparatus and assembly  
[NASA-CASE-MFS-25134-1] c 31 N83-31895
- Preloaded space structural coupling joints  
[NASA-CASE-LAR-13489-1] c 18 N87-27713

## UNLOADING

- Bootstrap unloader Patent  
[NASA-CASE-XNP-09768] c 09 N71-12516

## UNMANNED SPACECRAFT

- Material handling device Patent  
[NASA-CASE-XNP-09770-3] c 11 N71-27036

## UNSATURATION (CHEMISTRY)

- Stabilized unsaturated polyesters  
[NASA-CASE-NPO-16103-1] c 27 N85-29043



## UNSTEADY FLOW

### UNSTEADY FLOW

- System and method for cancelling expansion waves in a wave rotor  
[NASA-CASE-LEW-15218-1] c 34 N93-11172

### UP-CONVERTERS

- Method and apparatus for quadriphase-shift-key and linear phase modulation  
[NASA-CASE-NPO-14444-1] c 33 N81-15192

### UPPER ATMOSPHERE

- Telespectrograph Patent  
[NASA-CASE-XLA-03273] c 14 N71-18699  
Apparatus for sampling particulates in gases  
[NASA-CASE-HQN-10037-1] c 14 N73-27376  
Rocket having barium release system to create ion clouds in the upper atmosphere  
[NASA-CASE-LAR-10670-2] c 15 N74-27360  
Microwave limb sounder --- measuring trace gases in the upper atmosphere  
[NASA-CASE-NPO-14544-1] c 46 N82-12685

### UPPER SURFACE BLOWING

- Method and apparatus for detecting laminar flow separation and reattachment  
[NASA-CASE-LAR-13952-2-SB] c 34 N91-31596

### URANIUM 235

- Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c 36 N77-26477

### UREAS

- Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c 27 N77-30236  
Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NPO-14101-1] c 52 N80-14687  
Reverse osmosis membrane of high urea rejection properties --- water purification  
[NASA-CASE-ARC-10980-1] c 27 N80-23452

### URETHANES

- Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c 27 N81-15104

### URINALYSIS

- Automated fluid chemical analyzer Patent  
[NASA-CASE-XNP-09451] c 06 N71-26754  
Method of detecting and counting bacteria in body fluids  
[NASA-CASE-GSC-11092-2] c 04 N73-27052  
Automatic instrument for chemical processing to detect microorganism in biological samples by measuring light reactions  
[NASA-CASE-GSC-11169-2] c 05 N73-32011  
Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c 52 N79-14750

### URINATION

- Open type urine receptacle  
[NASA-CASE-MSC-12324-1] c 05 N72-22093  
Urine collection device  
[NASA-CASE-MSC-16433-1] c 52 N81-24711  
Urine collection apparatus --- feminine hygiene  
[NASA-CASE-MSC-18381-1] c 52 N81-28740  
Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-2] c 52 N92-11621

### URINE

- Rapid quantification of an internal property --- ultrasonic determination of bladder urine quantity  
[NASA-CASE-LAR-13689-1-NP] c 35 N87-23941

### UROLOGY

- Urine collection device  
[NASA-CASE-MSC-16433-1] c 52 N81-24711

### UTERUS

- Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c 52 N82-22875

## V

### V GROOVES

- Vee-notching device --- with adjustable carriage  
[NASA-CASE-MFS-20730-1] c 39 N74-13131  
Complementary DMOS-VMOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c 33 N79-12321  
High voltage v-groove solar cell  
[NASA-CASE-LEW-13401-2] c 44 N83-32177  
Double-V block fingers with cruciform recess  
[NASA-CASE-GSC-13356-1] c 37 N92-24243  
Double-V block fingers with cruciform recess  
[NASA-CASE-GSC-13356-2] c 37 N93-17625

### VACANCIES (CRYSTAL DEFECTS)

- Bimetallic junctions  
[NASA-CASE-LEW-11573-1] c 26 N77-28265

### VACUUM

- Depositing semiconductor films utilizing a thermal gradient  
[NASA-CASE-XKS-04614] c 15 N69-21460

- Superconducting magnet Patent  
[NASA-CASE-XNP-06503] c 23 N71-29049  
Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c 35 N79-14346  
Bakeable McLeod gauge  
[NASA-CASE-XGS-01293-1] c 35 N79-33450  
Spray applicator for spraying coatings and other fluids in space  
[NASA-CASE-MSC-18852-1] c 37 N85-29283  
Non-mechanical optical path switching and its application to dual beam spectroscopy including gas filter correlation radiometry  
[NASA-CASE-LAR-14588-1-CU] c 74 N92-29117  
Sample positioning in microgravity  
[NASA-CASE-NPO-18448-1-CU] c 29 N92-30083  
Sample positioning in microgravity  
[NASA-CASE-NPO-18448-1-CU] c 29 N93-24600

### VACUUM APPARATUS

- Null-type vacuum microbalance Patent  
[NASA-CASE-XAC-00472] c 15 N70-40180  
Evacuation port seal Patent  
[NASA-CASE-XMF-03290] c 15 N71-23256  
Apparatus for testing polymeric materials Patent  
[NASA-CASE-XNP-09699] c 06 N71-24607  
Trap for preventing diffusion pump backstreaming  
[NASA-CASE-GSC-10518-1] c 15 N72-22489  
Inductance device with vacuum insulation  
[NASA-CASE-LEW-10330-1] c 09 N72-27226  
Apparatus for producing metal powders  
[NASA-CASE-XLE-06461-2] c 17 N72-28535  
Vacuum probe surface sampler  
[NASA-CASE-LAR-10623-1] c 14 N73-30395  
Vacuum leak detector  
[NASA-CASE-LAR-11237-1] c 35 N75-19612  
Apparatus for positioning modular components on a vertical or overhead surface  
[NASA-CASE-LAR-11465-1] c 37 N76-21554  
Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c 31 N81-19343  
Head for high speed spinner having a vacuum chuck --- holding silicon dioxide chips for etching  
[NASA-CASE-NPO-15227-1] c 37 N81-33482  
Static continuous electrophoresis device  
[NASA-CASE-MFS-25306-1] c 25 N83-13187  
Method and apparatus for supercooling and solidifying substances  
[NASA-CASE-MFS-25242-1] c 35 N83-29650  
Space ultra-vacuum facility and method of operation  
[NASA-CASE-MFS-28139-1] c 29 N87-18679  
Low temperature storage container for transporting perishables to space station  
[NASA-CASE-MFS-28248-1] c 31 N88-24817  
Vacuum-isolation vessel and method for measurement of thermal noise in microphones  
[NASA-CASE-LAR-14567-1-CU] c 33 N92-33021  
Vacuum powder injector and method of impregnating fiber with powder  
[NASA-CASE-LAR-14179-1] c 31 N93-26101  
Turntable mechanism  
[NASA-CASE-MFS-28522-1] c 37 N93-31313

### VACUUM CHAMBERS

- High-vacuum condenser tank for ion rocket tests Patent  
[NASA-CASE-XLE-00168] c 11 N70-33278  
Split welding chamber Patent  
[NASA-CASE-LEW-11531] c 15 N71-14932  
Space environmental work simulator Patent  
[NASA-CASE-XMF-07488] c 11 N71-18773  
Pressure monitoring with a plurality of ionization gauges controlled at a central location Patent  
[NASA-CASE-XLE-00787] c 14 N71-21090  
Device for measuring light scattering wherein the measuring beam is successively reflected between a pair of parallel reflectors Patent  
[NASA-CASE-XER-11203] c 14 N71-28994  
Cryogenic feedthrough  
[NASA-CASE-LAR-10031] c 15 N72-22484  
Altitude simulation chamber for rocket engine testing  
[NASA-CASE-MFS-20620] c 11 N72-27262  
Evacuation valve  
[NASA-CASE-LAR-10061-1] c 15 N72-31483  
Method and apparatus for determining the contents of contained gas samples  
[NASA-CASE-GSC-10903-1] c 14 N73-12444  
Test stand system for vacuum chambers  
[NASA-CASE-MFS-21362] c 11 N73-20267  
Atomic hydrogen storage --- cryotrapping and magnetic field strength  
[NASA-CASE-LEW-12081-2] c 28 N80-20402  
Containerless high temperature calorimeter apparatus  
[NASA-CASE-MFS-23923-1] c 35 N81-19426  
Hermetic seal for a shaft  
[NASA-CASE-NPO-15115-1] c 37 N82-24493

- Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-15670-1] c 33 N82-33634  
Sphere forming method and apparatus  
[NASA-CASE-NPO-15070-1] c 31 N83-35176  
Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-256704-1] c 33 N84-22884  
Ion generator and ion application system  
[NASA-CASE-MFS-28122-1] c 72 N88-24253  
Water window imaging x ray microscope  
[NASA-CASE-MFS-28485-1] c 35 N92-29135

### VACUUM DEPOSITION

- A method for the deposition of beta-silicon carbide by isoeptitaxy  
[NASA-CASE-ERC-10120] c 26 N69-33482  
Vacuum deposition apparatus Patent  
[NASA-CASE-XMF-01667] c 15 N71-17647  
Evaporant source for vapor deposition Patent  
[NASA-CASE-XMF-06065] c 15 N71-20395  
Vacuum evaporator with electromagnetic ion steering Patent  
[NASA-CASE-NPO-10331] c 09 N71-26701  
Preparation of dielectric coating of variable dielectric constant by plasma polymerization  
[NASA-CASE-ARC-10892-2] c 27 N79-14214  
Refractory coatings and method of producing the same  
[NASA-CASE-LEW-13169-1] c 26 N82-29415  
Diamondlike flakes  
[NASA-CASE-LEW-13837-2] c 24 N85-21267

### VACUUM EFFECTS

- High power RF coaxial switch  
[NASA-CASE-NPO-14229-1] c 33 N80-18285

### VACUUM FURNACES

- Apparatus for inserting and removing specimens from high temperature vacuum furnaces  
[NASA-CASE-LAR-10841-1] c 31 N74-27900

### VACUUM GAGES

- Thermopile vacuum gage tube simulator Patent  
[NASA-CASE-XLA-02758] c 14 N71-18481  
Gauge calibration by diffusion  
[NASA-CASE-XGS-07752] c 14 N73-30390  
Ultrahigh vacuum measuring ionization gauge  
[NASA-CASE-XLA-05087] c 14 N73-30391  
In situ transfer standard for ultrahigh vacuum gage calibration  
[NASA-CASE-LAR-10862-1] c 35 N74-15092

### VACUUM MELTING

- High temperature furnace for melting materials in space  
[NASA-CASE-MFS-20710] c 11 N72-23215

### VACUUM PUMPS

- Pressure control valve --- inflating flexible bladders  
[NASA-CASE-ARC-11251-1] c 37 N81-17433

### VACUUM SPECTROSCOPY

- Optical multiple sample vacuum integrating sphere  
[NASA-CASE-GSC-12849-1] c 74 N86-26190

### VACUUM SYSTEMS

- Shrink-fit gas valve Patent  
[NASA-CASE-XGS-00587] c 15 N70-35087  
Cryogenic connector for vacuum use Patent  
[NASA-CASE-XGS-02441] c 15 N70-41629  
Ionization vacuum gauge with all but the end of the ion collector shielded Patent  
[NASA-CASE-XLA-07424] c 14 N71-18482  
Sorption vacuum trap Patent  
[NASA-CASE-XER-09519] c 14 N71-18483  
Vacuum leak detector  
[NASA-CASE-LAR-11237-1] c 35 N75-19612  
Ampoule sealing apparatus and process --- for housing a semiconductor growth charge under vacuum  
[NASA-CASE-LAR-12847-1] c 33 N83-16633

### VACUUM TUBES

- Integrated structure vacuum tube  
[NASA-CASE-ARC-10445-1] c 31 N76-31365  
Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c 26 N80-14229

### VALUE

- High impact pressure regulator Patent  
[NASA-CASE-NPO-10175] c 14 N71-18625

### VALVES

- Valve actuator Patent  
[NASA-CASE-XHQ-01208] c 15 N70-35409  
Fluid coupling Patent  
[NASA-CASE-XLE-00397] c 15 N70-36492  
High pressure four-way valve Patent  
[NASA-CASE-XNP-00214] c 15 N70-36908  
Reinforcing means for diaphragms Patent  
[NASA-CASE-XNP-01962] c 32 N70-41370  
Multiway vortex valve system Patent  
[NASA-CASE-XMF-04709] c 15 N71-15609  
Multiple orifice throttle valve Patent  
[NASA-CASE-XNP-09698] c 15 N71-18580

High pressure air valve Patent  
[NASA-CASE-MSC-11010] c 15 N71-19485

Valve seat with resilient support member Patent  
[NASA-CASE-XKS-02582] c 15 N71-21234

Positive locking check valve Patent  
[NASA-CASE-XMS-09310] c 15 N71-22706

Dual latching solenoid valve Patent  
[NASA-CASE-XMS-05890] c 09 N71-23191

Valve seat  
[NASA-CASE-NPO-10606] c 15 N72-25451

Evacuation valve  
[NASA-CASE-LAR-10061-1] c 15 N72-31483

Flow control valve --- for high temperature fluids  
[NASA-CASE-NPO-11951-1] c 37 N74-21065

Airlock  
[NASA-CASE-MFS-20922-1] c 18 N74-22136

Reciprocating engines  
[NASA-CASE-MSC-16239-1] c 37 N81-32510

Prosthetic occlusive device for an internal passageway  
[NASA-CASE-MFS-25740-1] c 52 N84-11744

Moisture content and gas sampling device  
[NASA-CASE-MSC-18866-1] c 35 N85-29213

Linear motion valve  
[NASA-CASE-MSC-20148-1] c 37 N85-29284

Reactant pressure differential control for fuel cell gases  
[NASA-CASE-MSC-20127-2] c 37 N85-34403

Apparatus for mixing solutions in low gravity environments  
[NASA-CASE-MFS-26047-1] c 29 N90-21209

Valve for waste collection and storage  
[NASA-CASE-MSC-21025-4] c 54 N91-14723

Method of injecting fluid propellants into a rocket combustion chamber  
[NASA-CASE-LEW-14846-2] c 20 N91-26200

Method and apparatus for waste collection and storage  
[NASA-CASE-MSC-21025-3] c 54 N91-26747

Check valve with poppet damping mechanism  
[NASA-CASE-MSC-21903-1] c 37 N92-30101

Check valve with poppet dashpot/frictional damping mechanism  
[NASA-CASE-MSC-21950-1] c 37 N92-34242

Thruster sealing system and apparatus  
[NASA-CASE-MSC-21899-1] c 37 N93-14702

Valve malfunction detection apparatus  
[NASA-CASE-MFS-29904-1] c 35 N93-29503

**VANES**

Solar vane actuator Patent  
[NASA-CASE-XNP-05535] c 14 N71-23040

Rotary vane attenuator wherein rotor has orthogonally disposed resistive and dielectric cards  
[NASA-CASE-NPO-11418-1] c 14 N73-13420

Amplified wind turbine apparatus  
[NASA-CASE-MFS-23830-1] c 44 N82-24639

Method of protecting a surface with a silicon-slurry/aluminide coating --- coatings for gas turbine engine blades and vanes  
[NASA-CASE-LEW-13343-1] c 27 N82-28441

Electrorepulsive actuator  
[NASA-CASE-NPO-17684-1-CU] c 33 N92-22042

**VAPOR DEPOSITION**

A method for the deposition of beta-silicon carbide by isoeptitaxy  
[NASA-CASE-ERC-10120] c 26 N69-33482

Apparatus for producing high purity silicon carbide crystals Patent  
[NASA-CASE-XLA-02057] c 26 N70-40015

Method of changing the conductivity of vapor deposited gallium arsenide by the introduction of water into the vapor deposition atmosphere Patent  
[NASA-CASE-XNP-01961] c 26 N71-29156

Tungsten contacts on silicon substrates  
[NASA-CASE-GSC-10695-1] c 09 N72-25259

Deposition apparatus  
[NASA-CASE-LAR-10541-1] c 15 N72-32487

Deposition of alloy films --- on irregularly shaped metal object  
[NASA-CASE-LEW-11262-1] c 27 N74-13270

System for depositing thin films  
[NASA-CASE-MFS-20775-1] c 31 N75-12161

Vapor deposition apparatus --- semiconductors and gallium arsenides  
[NASA-CASE-HQN-10462] c 25 N75-29192

Chemical vapor deposition reactor --- providing uniform film thickness  
[NASA-CASE-NPO-13650-1] c 25 N79-28253

Corrosion resistant coating  
[NASA-CASE-NPO-15928-1] c 26 N85-29005

Ceramic honeycomb structures and the method thereof  
[NASA-CASE-ARC-11652-1] c 27 N87-23737

Preparation of dilute magnetic semiconductor films by metalorganic chemical vapor deposition  
[NASA-CASE-NPO-17399-1-CU] c 76 N89-14120

Method of fabricating germanium and gallium arsenide devices  
[NASA-CASE-GSC-13265-1] c 76 N91-14066

Macromolecular crystal growing system  
[NASA-CASE-MFS-26088-1-CU] c 76 N92-25398

Alkali metal for ultraviolet band-pass filter  
[NASA-CASE-NPO-18433-1-CU] c 74 N92-34241

Multiple layer dielectrics, hot film sensors, and methods of producing same  
[NASA-CASE-LAR-14591-1] c 35 N93-19493

SiC fiber-reinforced Celsian glass-ceramic matrix composite  
[NASA-CASE-LEW-15264-1] c 24 N93-31293

Method of producing a ceramic fiber-reinforced glass-ceramic matrix composite  
[NASA-CASE-LEW-15264-2] c 24 N93-31299

**VAPOR PHASES**

Fluid dispensing apparatus and method Patent  
[NASA-CASE-XLE-01182] c 27 N71-15635

Simple method of making photovoltaic junctions Patent  
[NASA-CASE-XNP-01960] c 09 N71-23027

Fluid phase analyzer Patent  
[NASA-CASE-NPO-10691] c 14 N71-26199

Propellant mass distribution metering apparatus Patent  
[NASA-CASE-NPO-10185] c 10 N71-26339

Pumped two-phase heat transfer loop  
[NASA-CASE-MSC-20841-1] c 34 N87-22950

Atmospheric pressure flow reactor: Gas phase chemical kinetics under tropospheric conditions without wall effects  
[NASA-CASE-MSC-21384-1] c 34 N92-16243

**VAPOR PRESSURE**

Venting vapor apparatus Patent  
[NASA-CASE-XLE-00288] c 15 N70-34247

Vapor liquid separator Patent  
[NASA-CASE-XMF-04042] c 15 N71-23023

Method and apparatus for convection control of metallic halide vapor density in a metallic halide laser  
[NASA-CASE-NPO-15021-1] c 36 N83-10417

**VAPOR TRAPS**

Sorption vacuum trap Patent  
[NASA-CASE-XER-09519] c 14 N71-18483

**VAPORIZERS**

Boiler for generating high quality vapor Patent  
[NASA-CASE-XLE-00785] c 33 N71-16104

Particle analyzing method and apparatus  
[NASA-CASE-NPO-15292-1] c 35 N83-27184

Continuous laminar smoke generator  
[NASA-CASE-LAR-13014-1] c 09 N85-21178

**VAPORIZING**

Gas liquefaction and dispensing apparatus Patent  
[NASA-CASE-NPO-10070] c 15 N71-27372

Method for controlling vapor content of a gas  
[NASA-CASE-NPO-10633] c 03 N72-28025

Hypervelocity impact shield  
[NASA-CASE-MSC-21420-1] c 18 N92-15114

Vaporizing particle velocimeter  
[NASA-CASE-LAR-14685-1] c 02 N92-34172

**VAPORS**

Method of evaporation  
[NASA-CASE-NPO-15609-2] c 25 N88-23846

Drop deployment system for crystal growth apparatus  
[NASA-CASE-MFS-26422-1] c 29 N91-17250

**VARACTOR DIODE CIRCUITS**

Phase modulator Patent  
[NASA-CASE-MSC-13201-1] c 07 N71-28429

**VARACTOR DIODES**

Varactor high level mixer  
[NASA-CASE-XGS-02171] c 09 N69-24324

Multiple varactor frequency doubler Patent  
[NASA-CASE-XMF-04958-1] c 10 N71-26414

Millimeter wave pumped parametric amplifier  
[NASA-CASE-GSC-11617-1] c 33 N74-32660

Maser cavity servo-tuning system  
[NASA-CASE-NPO-15890-1-CU] c 33 N85-29143

Planar varactor frequency multiplier devices with blocking barrier  
[NASA-CASE-NPO-18428-1-CU] c 33 N92-23464

**VARIABLEITY**

Variable speed drive  
[NASA-CASE-GSC-12643-1] c 37 N83-26078

Slotted variable camber flap  
[NASA-CASE-LAR-12541-1] c 05 N84-22551

**VARIABLE CYCLE ENGINES**

Dual cycle aircraft turbine engine  
[NASA-CASE-LAR-11310-1] c 07 N77-28118

Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c 37 N78-17384

Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c 07 N78-18067

**VARIABLE GEOMETRY STRUCTURES**

Landing arrangement for aerial vehicles Patent  
[NASA-CASE-XLA-00142] c 02 N70-33286

Variable geometry wind tunnels  
[NASA-CASE-XLA-07430] c 11 N72-22246

Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c 07 N80-32392

**VARIABLE PITCH PROPELLERS**

Dual output variable pitch turbofan actuation system  
[NASA-CASE-LEW-12419-1] c 07 N77-14025

Impact absorbing blade mounts for variable pitch blades  
[NASA-CASE-LEW-12313-1] c 37 N78-10468

**VARIABLE SWEEP WINGS**

Variable sweep wing configuration Patent  
[NASA-CASE-XLA-00230] c 02 N70-33255

Variable sweep wing aircraft Patent  
[NASA-CASE-XLA-00221] c 02 N70-33266

Variable-span aircraft Patent  
[NASA-CASE-XLA-00166] c 02 N70-34178

Variable sweep aircraft wing Patent  
[NASA-CASE-XLA-00350] c 02 N70-38011

Variable sweep aircraft Patent  
[NASA-CASE-XLA-03659] c 02 N71-11041

Dual-fuselage aircraft having yawable wing and horizontal stabilizer  
[NASA-CASE-ARC-10470-1] c 02 N73-26005

**VARIABLE THRUST**

Variable thrust ion engine utilizing thermally decomposable solid fuel Patent  
[NASA-CASE-XMF-00923] c 28 N70-36802

Method for continuous variation of propellant flow and thrust in propulsive devices Patent  
[NASA-CASE-XLE-00177] c 28 N70-40367

Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c 07 N78-17055

**VARIATIONS**

Bidirectional step torque filter with zero backlash characteristic Patent  
[NASA-CASE-XGS-04227] c 15 N71-21744

**VECTOR ANALYSIS**

Two force component measuring device Patent  
[NASA-CASE-XAC-04886-1] c 14 N71-20439

**VECTOR CURRENTS**

Preloadable vector sensitive latch  
[NASA-CASE-MSC-20910-1] c 37 N87-25582

**VECTOR QUANTIZATION**

Pipeline synthetic aperture radar data compression utilizing systolic binary tree-searched architecture for vector quantization  
[NASA-CASE-NPO-17941-1-CU] c 32 N91-13595

**VECTOCARDIOGRAPHY**

Biomedical electrode arrangement Patent  
[NASA-CASE-XFR-10856] c 05 N71-11189

**VECTORS (MATHEMATICS)**

Method and apparatus for second-rank tensor generation  
[NASA-CASE-NPO-17512-1-CU] c 74 N91-26918

**VEGETATION GROWTH**

Rotary plant growth accelerating apparatus --- weightlessness  
[NASA-CASE-ARC-10722-1] c 51 N75-25503

Remote sensing of vegetation and soil using microwave ellipsometry  
[NASA-CASE-GSC-11976-1] c 43 N78-10529

Enhancement of in vitro guayule propagation  
[NASA-CASE-NPO-15213-1] c 51 N83-17045

Slow-release fertilizer  
[NASA-CASE-MSC-21953-1-NP] c 37 N93-17271

Active synthetic soil  
[NASA-CASE-MSC-21954-1-NP] c 51 N93-19054

**VEHICLE WHEELS**

Deformable vehicle wheel Patent  
[NASA-CASE-MFS-20400] c 31 N71-18611

Resilient wheel Patent  
[NASA-CASE-MFS-13929] c 15 N71-27091

Omnidirectional wheel  
[NASA-CASE-MFS-21309-1] c 37 N74-18125

Two speed drive system --- mechanical device for changing speed on rotating vehicle wheel  
[NASA-CASE-MFS-20645-1] c 37 N74-23070

Fifth wheel  
[NASA-CASE-FRC-10081-1] c 37 N77-14477

Tire/wheel concept  
[NASA-CASE-LAR-11695-2] c 37 N81-24443

Suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NPO-14395-1] c 37 N82-21587

**VEHICLES**

Magnetic suspension and pointing system  
[NASA-CASE-LAR-11889-2] c 37 N78-27424

**VEHICULAR TRACKS**

Suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NPO-14395-1] c 37 N82-21587

Tank tread assemblies with track-linking mechanism  
[NASA-CASE-NPO-16321-1CU] c 37 N87-17034

## VELOCITY

Velocity limiting safety system Patent  
[NASA-CASE-XLA-07473] c 15 N71-24895

## VELOCITY COUPLING

Coupled cavity traveling wave tube with velocity tapering  
[NASA-CASE-LEW-12296-1] c 33 N82-26568

## VELOCITY MEASUREMENT

Micrometeoroid velocity measuring device Patent  
[NASA-CASE-XLA-00495] c 14 N70-41332  
Superconductive accelerometer Patent  
[NASA-CASE-XMF-01099] c 14 N71-15969  
Gravimeter Patent  
[NASA-CASE-XMF-05844] c 14 N71-17587  
Laser Doppler system for measuring three dimensional vector velocity Patent  
[NASA-CASE-MFS-20386] c 21 N71-19212  
Particle detection apparatus including a ballistic pendulum Patent  
[NASA-CASE-XMS-04201] c 14 N71-22990  
Angular velocity and acceleration measuring apparatus  
[NASA-CASE-ERC-10292] c 14 N72-25410  
Flow velocity and directional instrument  
[NASA-CASE-LAR-10855-1] c 14 N73-13415  
Doppler shift system --- system for measuring velocities of radiating particles  
[NASA-CASE-HQN-10740-1] c 72 N74-19310  
Tachometer  
[NASA-CASE-MFS-23175-1] c 35 N77-30436  
Velocity measurement system  
[NASA-CASE-MFS-23363-1] c 35 N78-32396  
Fluid velocity measuring device  
[NASA-CASE-LAR-11729-1] c 34 N79-12359  
Air speed and attitude probe  
[NASA-CASE-FRC-11009-1] c 06 N80-18036  
Fluidic angular velocity sensor  
[NASA-CASE-NPO-16479-1CU] c 35 N86-32695  
Spinning disk calibration method and apparatus for laser Doppler velocimeter  
[NASA-CASE-ARC-11510-1] c 35 N86-32697  
Laser velocimeter for near-surface measurements  
[NASA-CASE-ARC-11917-1] c 35 N91-15520  
Vaporizing particle velocimeter  
[NASA-CASE-LAR-14685-1] c 02 N92-34172

## VELOCITY MODULATION

Molecular beam velocity selector Patent  
[NASA-CASE-XLE-01533] c 11 N71-10777  
Apparatus for controlling the velocity of an electromechanical drive for interferometers and the like Patent  
[NASA-CASE-XGS-03532] c 14 N71-17627

## VENTILATION

Protective garment ventilation system  
[NASA-CASE-XMS-04928] c 54 N78-17679  
Low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c 85 N82-33288  
Ballast system for maintaining constant pressure in a glove box  
[NASA-CASE-NPO-17786-1-CU] c 35 N90-17104

## VENTILATORS

Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c 54 N75-27761

## VENTING

Venting vapor apparatus Patent  
[NASA-CASE-XLE-00288] c 15 N70-34247  
Liquid storage tank venting device for zero gravity environment Patent  
[NASA-CASE-XLE-01449] c 15 N70-41646  
Valve seat with resilient support member Patent  
[NASA-CASE-XKS-02582] c 15 N71-21234  
Venting device for pressurized space suit helmet Patent  
[NASA-CASE-XMS-09652-1] c 05 N71-26333  
Solid propellant rocket motor  
[NASA-CASE-XNP-03282] c 28 N72-20758  
Passive venting technique for shallow cavities  
[NASA-CASE-LAR-14031-1] c 05 N90-20079  
System for venting gas from a liquid storage tank  
[NASA-CASE-MSC-21253-1] c 31 N90-20254  
Passive venting technique for shallow cavities  
[NASA-CASE-LAR-13875-1] c 05 N91-27156

## VENTURI TUBES

Liquid seeding atomizer  
[NASA-CASE-ARC-11631-1] c 34 N87-21255

## VENUS (PLANET)

Space simulator Patent  
[NASA-CASE-XNP-00459] c 11 N70-38675

## VERTICAL FLIGHT

Aircraft instrument Patent  
[NASA-CASE-XLA-00487] c 14 N70-40157

## VERTICAL LANDING

Landing gear Patent  
[NASA-CASE-XMF-01174] c 02 N70-41589

## VERTICAL ORIENTATION

Vertical shaft windmill  
[NASA-CASE-LAR-12923-1] c 37 N84-12493

## VERTICAL TAKEOFF AIRCRAFT

Mechanical stability augmentation system Patent  
[NASA-CASE-XLA-06339] c 02 N71-13422  
Attitude controls for VTOL aircraft Patent  
[NASA-CASE-XAC-08972] c 02 N71-20570

## VERY HIGH FREQUENCIES

VHF/UHF parasitic probe antenna Patent  
[NASA-CASE-XKS-09340] c 07 N71-24614

## VERY LARGE SCALE INTEGRATION

Split-cross-bridge resistor for testing for proper fabrication of integrated circuits  
[NASA-CASE-NPO-16021-1] c 33 N85-30187  
Method of examining microcircuit patterns  
[NASA-CASE-NPO-16299-1] c 33 N87-14594  
Systolic VLSI array for implementing the Kalman filter algorithm  
[NASA-CASE-NPO-17108-1-CU] c 33 N89-28713  
VLSI single-chip (255,223) Reed-Solomon encoder with interleaver  
[NASA-CASE-NPO-17280-1-CU] c 17 N90-21061  
VLSI binary updown counter  
[NASA-CASE-NPO-17205-1-CU] c 60 N90-21525  
Network of dedicated processors for finding lowest-cost map path  
[NASA-CASE-NPO-17716-1-CU] c 62 N92-15620  
Nonvolatile programmable neural network synaptic array  
[NASA-CASE-NPO-18578-1-CU] c 33 N92-30086  
VLSI architecture for a Reed-Solomon decoder  
[NASA-CASE-NPO-17897-1-CU] c 33 N92-33011  
Cascaded VLSI neural network architecture for on-line learning  
[NASA-CASE-NPO-18645-1-CU] c 63 N92-34240

## VERY LONG BASE INTERFEROMETRY

System for real-time crustal deformation monitoring  
[NASA-CASE-NPO-14124-1] c 46 N80-14603

## VESTS

Life preserver Patent  
[NASA-CASE-XMS-00864] c 05 N70-36493

## VIBRATION

Passive caging mechanism Patent  
[NASA-CASE-GSC-10306-1] c 15 N71-24694  
Active vibration isolator for flexible bodies Patent  
[NASA-CASE-LAR-10106-1] c 15 N71-27169  
Apparatus for disintegrating kidney stones  
[NASA-CASE-GSC-12652-1] c 52 N84-34913  
Vibrating-chamber levitation systems  
[NASA-CASE-NPO-16142-1-CU] c 35 N86-20752  
Suspension mechanism and method  
[NASA-CASE-LAR-14142-1] c 37 N90-27116  
Dynamic tester for rotor seals and bearings  
[NASA-CASE-MFS-28493-1] c 09 N91-25155  
Accelerometer method and apparatus for integral display and control functions  
[NASA-CASE-MSC-21961-1] c 35 N92-29952

## VIBRATION DAMPING

Viscous pendulum damper Patent  
[NASA-CASE-LAR-10274-1] c 14 N71-17626  
Digital filter for reducing sampling jitter in digital control systems Patent  
[NASA-CASE-NPO-11088] c 08 N71-29034  
Turbo-machine blade vibration damper Patent  
[NASA-CASE-XLE-00155] c 28 N71-29154  
Active notch filter network with variable notch depth, width and frequency  
[NASA-CASE-FRC-11055-1] c 33 N80-29583  
Variable force, eddy-current or magnetic damper  
[NASA-CASE-LEW-13717-1] c 37 N85-30333  
Variable friction secondary seal for face seals  
[NASA-CASE-LEW-14170-1] c 37 N86-25790  
Tensile film clamps and mounting block for the rheovibron and autovibron viscoelastometer  
[NASA-CASE-LAR-13696-1] c 37 N90-20409  
Dynamic tester for rotor seals and bearings  
[NASA-CASE-MFS-28493-1] c 09 N91-25155  
Noncircular rolling joints for vibrational reduction in slewing maneuvers  
[NASA-CASE-LAR-14515-1-CU] c 37 N92-33031  
Linear mass actuator  
[NASA-CASE-LAR-14352-1] c 37 N92-34173  
Method and apparatus for minimizing multiple degree of freedom vibration transmission between two regions of a structure  
[NASA-CASE-LAR-14508-1-CU] c 39 N93-13420

## VIBRATION EFFECTS

Thermal detector of electromagnetic energy by means of a vibrating electrode Patent  
[NASA-CASE-XAC-10768] c 09 N71-18830  
Apparatus for recovering matter adhered to a host surface  
[NASA-CASE-NPO-11213] c 15 N73-20514  
Spherical bearing --- to reduce vibration effects  
[NASA-CASE-MFS-23447-1] c 37 N79-11404

Self-locking double retention redundant full pin release  
[NASA-CASE-NPO-16233-1] c 37 N86-20801

## VIBRATION ISOLATORS

Variable stiffness polymeric damper  
[NASA-CASE-XAC-11225] c 14 N69-27486  
Miniature vibration isolator Patent  
[NASA-CASE-XLA-01019] c 15 N70-40156  
Vibration damping system Patent  
[NASA-CASE-XMS-01620] c 23 N71-15673  
Hermetic sealed vibration damper Patent  
[NASA-CASE-MSC-10959] c 15 N71-26243  
Dynamic vibration absorber Patent  
[NASA-CASE-LAR-10083-1] c 15 N71-27006  
Vibration isolation system using compression springs  
[NASA-CASE-NPO-11012] c 15 N72-11391  
Thrust-isolating mounting --- characteristics of support for loads mounted in spacecraft  
[NASA-CASE-MFS-21680-1] c 18 N74-27397  
Shock absorbing mount for electrical components  
[NASA-CASE-NPO-13253-1] c 37 N75-18573  
Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles  
[NASA-CASE-MSC-12619-2] c 27 N79-12221  
Shock isolator for operating a diode laser on a closed-cycle refrigerator  
[NASA-CASE-GSC-12297-1] c 37 N79-28549  
Decoupler pylon: wing/store flutter suppressor  
[NASA-CASE-LAR-12468-1] c 08 N82-32373  
Vibration isolation and pressure compensation apparatus for sensitive instrumentation  
[NASA-CASE-LAR-12728-1] c 35 N83-32026  
Aircraft rotor blade with passive tuned tab  
[NASA-CASE-ARC-11444-1] c 05 N85-29947  
Variable force, eddy-current or magnetic damper  
[NASA-CASE-LEW-13717-1] c 37 N85-30333  
Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797  
Vacuum-isolation vessel and method for measurement of thermal noise in microphones  
[NASA-CASE-LAR-14567-1-CU] c 33 N92-33021

## VIBRATION MEASUREMENT

Method and apparatus for measuring the damping characteristics of a structure  
[NASA-CASE-ARC-10154-1] c 14 N72-22440  
Method and apparatus for vibration analysis utilizing the Mossbauer effect  
[NASA-CASE-MSC-05882] c 35 N75-27329  
Displacement probes with self-contained exciting medium  
[NASA-CASE-LAR-11690-1] c 35 N80-14371  
Emitted vibration measurement device and method  
[NASA-CASE-MFS-25981-1] c 35 N87-14690  
Vibration analyzer  
[NASA-CASE-MSC-21408-1] c 37 N91-14607  
Smart accelerometer --- vibration damage detection  
[NASA-CASE-MSC-21951-1] c 35 N92-23545  
Acceleration recorder and playback module  
[NASA-CASE-MSC-22008-1] c 35 N93-17077

## VIBRATION METERS

Fiber optic vibration transducer and analyzer Patent  
[NASA-CASE-XMF-02433] c 14 N71-10616  
Ride quality meter  
[NASA-CASE-LAR-12882-1] c 35 N84-12445  
Smart accelerometer --- vibration damage detection  
[NASA-CASE-MSC-21951-1] c 35 N92-23545

## VIBRATION MODE

Function generator for synthesizing complex vibration mode patterns  
[NASA-CASE-LAR-10310-1] c 10 N73-20253

## VIBRATION SIMULATORS

Apparatus for vibrational testing of articles  
[NASA-CASE-GSC-11302-1] c 14 N73-13416

## VIBRATION TESTS

Peak acceleration limiter for vibrational tester Patent  
[NASA-CASE-NPO-10556] c 14 N71-27185  
Fixture for supporting articles during vibration tests  
[NASA-CASE-MFS-20523] c 14 N72-27412  
Apparatus for vibrational testing of articles  
[NASA-CASE-GSC-11302-1] c 14 N73-13416  
Multi axes vibration fixtures  
[NASA-CASE-MFS-20242] c 14 N73-19421  
Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12458-1] c 44 N83-21503

## VIBRATIONAL SPECTRA

Dynamic vibration absorber Patent  
[NASA-CASE-LAR-10083-1] c 15 N71-27006

## VIDEO COMMUNICATION

Means for generating a sync signal in an FM communication system Patent  
[NASA-CASE-XNP-10830] c 07 N71-11281  
Reduced bandwidth video communication system utilizing sampling techniques Patent  
[NASA-CASE-XNP-02791] c 07 N71-23026  
Video communication system and apparatus Patent  
[NASA-CASE-XNP-06611] c 07 N71-26102

# SUBJECT INDEX

Sampling video compression system  
[NASA-CASE-ARC-10984-1] c 32 N77-24328

**VIDEO COMPRESSION**  
Sampling video compression system  
[NASA-CASE-ARC-10984-1] c 32 N77-24328

**VIDEO DATA**  
Digital television camera control system Patent  
[NASA-CASE-XNP-01472] c 14 N70-41807  
Transient video signal recording with expanded playback Patent  
[NASA-CASE-ARC-10003-1] c 09 N71-25866  
Facsimile video remodulation network  
[NASA-CASE-GSC-10185-1] c 07 N72-12081  
Dual digital video switcher  
[NASA-CASE-KSC-10782-1] c 33 N75-30431  
Neighborhood comparison operator  
[NASA-CASE-NPO-16464-1CU] c 60 N86-24224

**VIDEO EQUIPMENT**  
Television signal processing system Patent  
[NASA-CASE-NPO-10140] c 07 N71-24742  
Video sync processor Patent  
[NASA-CASE-KSC-10002] c 10 N71-25865  
Video communication system and apparatus Patent  
[NASA-CASE-XNP-06611] c 07 N71-26102  
Video signal enhancement system with dynamic range compression and modulation index expansion Patent  
[NASA-CASE-NPO-10343] c 07 N71-27341  
Broadband video process with very high input impedance  
[NASA-CASE-NPO-10199] c 09 N72-17156  
Electronic video editor  
[NASA-CASE-KSC-10003] c 10 N73-13235  
Scan converting video tape recorder  
[NASA-CASE-NPO-10166-1] c 07 N73-22076  
Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c 35 N76-16391  
Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c 45 N76-17656  
Reconfigurable work station for a video display unit and keyboard  
[NASA-CASE-MFS-26009-1-SB] c 54 N88-24163  
Programmable pipelined image processor  
[NASA-CASE-NPO-16461-1CU] c 60 N89-26400  
Composite video and graphics display for camera viewing systems in robotics and teleoperation  
[NASA-CASE-NPO-17836-1-CU] c 32 N93-18284  
Method of encouraging attention by correlating video game difficulty with attention level  
[NASA-CASE-LAR-15022-1] c 53 N93-28128

**VIDEO SIGNALS**  
Programmable scan/read circuitry for charge coupled device imaging detectors --- spacecraft attitude control and star trackers  
[NASA-CASE-NPO-15345-1] c 74 N84-23247  
Television camera video level control system  
[NASA-CASE-MSC-18578-1] c 32 N85-21427  
Large TV display system  
[NASA-CASE-NPO-16932-1CU] c 33 N87-15413  
Method and apparatus for telemetry adaptive bandwidth compression  
[NASA-CASE-MSC-20821-1] c 17 N87-25348  
Real-time data compression of broadcast video signals  
[NASA-CASE-LEW-14945-1] c 32 N91-13598  
Real-time data compression of broadcast video signals  
[NASA-CASE-LEW-14945-2] c 32 N92-10128  
Picture data compression coder using subband/transform coding with a Lempel-Ziv-based coder  
[NASA-CASE-LEW-15700-1] c 82 N93-28130

**VIDEO TAPE RECORDERS**  
Transient video signal recording with expanded playback Patent  
[NASA-CASE-ARC-10003-1] c 09 N71-25866  
Scan converting video tape recorder  
[NASA-CASE-NPO-10166-1] c 07 N73-22076  
Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c 35 N76-16391

**VIDEO TAPES**  
Generation of animation sequences of three dimensional models  
[NASA-CASE-MSC-21379-1-SB] c 61 N90-27340

**VIDICONS**  
Method of erasing target material of a vidicon tube or the like Patent  
[NASA-CASE-XNP-06028] c 09 N71-23189  
Material handling device Patent  
[NASA-CASE-XNP-09770-3] c 11 N71-27036

**VIEWING**  
Real-time 3-D X-ray and gamma-ray viewer  
[NASA-CASE-GSC-12640-1] c 74 N84-11920  
Double window viewing chamber assembly  
[NASA-CASE-MFS-28057-1] c 09 N87-14355

Stereoscopic camera and viewing systems with undistorted depth presentation and reduced or eliminated erroneous acceleration and deceleration perceptions, or with perceptions produced or enhanced for special effects  
[NASA-CASE-NPO-18028-1-CU] c 74 N92-16809  
Polarization perception device  
[NASA-CASE-MSC-21915-1] c 74 N92-30027

**VINYL COPOLYMERS**  
Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
[NASA-CASE-ARC-11429-1-CU] c 27 N86-20560  
Vinyl stilbazoles  
[NASA-CASE-ARC-11429-3CU] c 27 N87-16908  
Structural panels  
[NASA-CASE-ARC-11429-2-CU] c 27 N87-22845

**VINYL POLYMERS**  
Method of using photovoltaic cell using poly-N-vinylcarbazole complex Patent  
[NASA-CASE-NPO-10373] c 03 N71-18698  
Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-1] c 27 N78-32256  
Compound oxidized styrylphosphine --- flame resistant vinyl polymers  
[NASA-CASE-MSC-14903-2] c 27 N80-10358  
Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-3] c 27 N80-24438

**VINYLDENE**  
Dicyanoacetylene polymers Patent  
[NASA-CASE-XNP-03250] c 06 N71-23500

**VIRTUAL REALITY**  
Virtual reality flight control display with six-degree-of-freedom controller and spherical orientation overlay  
[NASA-CASE-NPO-18733-1-CU] c 06 N93-30416

**VIRUSES**  
Water system virus detection  
[NASA-CASE-MSC-16098-1] c 51 N79-10693

**VISCOELASTICITY**  
Resilience testing device Patent  
[NASA-CASE-XLA-08254] c 14 N71-26161  
Parallel-plate viscometer with double diaphragm suspension  
[NASA-CASE-NPO-11387] c 14 N73-14429  
Shock absorbing mount for electrical components  
[NASA-CASE-NPO-13253-1] c 37 N75-18573  
Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c 27 N81-15104  
Tensile film clamps and mounting block for the rheovibron and autovibron viscoelastometer  
[NASA-CASE-LAR-13696-1] c 37 N90-20409  
Composite passive damping struts for large precision structures  
[NASA-CASE-NPO-17914-1-CU] c 39 N91-13767  
Composite passive damping struts for large precision structures  
[NASA-CASE-NPO-17914-1-CU] c 39 N93-24596

**VISCOMETERS**  
Parallel plate viscometer Patent  
[NASA-CASE-XNP-09462] c 14 N71-17584  
Parallel-plate viscometer with double diaphragm suspension  
[NASA-CASE-NPO-11387] c 14 N73-14429

**VISCOSITY**  
Low viscosity magnetic fluid obtained by the colloidal suspension of magnetic particles Patent  
[NASA-CASE-XLE-01512] c 12 N70-40124  
Viscosity measuring instrument  
[NASA-CASE-NPO-14501-1] c 35 N80-18357  
Process of end-capping a polyimide system  
[NASA-CASE-LAR-13135-1] c 27 N86-19456  
A tough performance simultaneous semi-interpenetrating polymer network  
[NASA-CASE-LAR-14339-1] c 27 N90-26955

**VISCOUS DAMPING**  
Variable stiffness polymeric damper  
[NASA-CASE-XAC-11225] c 14 N69-27486  
Viscous-pendulum-damper Patent  
[NASA-CASE-XLA-02079] c 12 N71-16894  
Viscous pendulum damper Patent  
[NASA-CASE-LAR-10274-1] c 14 N71-17626  
Multiple plate hydrostatic viscous damper  
[NASA-CASE-LEW-12445-1] c 37 N81-22360

**VISIBILITY**  
Controlled visibility device for an aircraft Patent  
[NASA-CASE-XFR-04147] c 11 N71-10748  
Reusable captive blind fastener  
[NASA-CASE-MSC-18742-1] c 37 N82-26673  
EMU helmet mounted display  
[NASA-CASE-MSC-21460-1] c 54 N91-13879

**VISIBLE SPECTRUM**  
Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c 04 N82-16059

# VOLTAGE AMPLIFIERS

**VISION**  
Retinally stabilized differential resolution television display  
[NASA-CASE-NPO-15432-1] c 32 N85-29117

**VISORS**  
Anti-fog composition --- for prevention of fogging on surfaces such as space helmet visors and windshields  
[NASA-CASE-MSC-13530-2] c 23 N75-14834

**VISUAL ACUITY**  
Multiparameter vision testing apparatus  
[NASA-CASE-MSC-13601-2] c 54 N75-27759

**VISUAL AIDS**  
Visual aid for the hearing impaired  
[NASA-CASE-GSC-13027-1-CU] c 35 N91-27522

**VISUAL CONTROL**  
Visual target for retrofire attitude control  
[NASA-CASE-XMS-12158-1] c 31 N69-27499  
Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c 04 N82-16059

**VISUAL FIELDS**  
Visual examination apparatus  
[NASA-CASE-ARC-10329-1] c 05 N73-26072  
Visual examination apparatus  
[US-PATENT-RE-28,921] c 52 N76-30793  
Binocular device for displaying numerical information in field of view  
[NASA-CASE-LAR-11782-1] c 74 N77-20882  
Visual accommodation trainer-tester  
[NASA-CASE-ARC-11426-1] c 09 N84-12193

**VISUAL OBSERVATION**  
Automatic visual inspection system for microelectronics  
[NASA-CASE-NPO-13282] c 38 N78-17396

**VISUAL PERCEPTION**  
Liquid flow sight assembly Patent  
[NASA-CASE-XLE-02998] c 14 N70-42074  
Aircraft control position indicator  
[NASA-CASE-LAR-12984-1] c 06 N87-22678  
Visual accommodation trainer-tester  
[NASA-CASE-ARC-11426-2] c 52 N89-16256

**VISUAL STIMULI**  
Reaction tester  
[NASA-CASE-MSC-13604-1] c 05 N73-13114

**VITERBI DECODERS**  
Space communication system for compressed data with a concatenated Reed-Solomon-Viterbi coding channel  
[NASA-CASE-NPO-13545-1] c 32 N77-12240

**VOICE COMMUNICATION**  
Position location system and method Patent  
[NASA-CASE-GSC-10087-2] c 21 N71-13958  
Satellite communication system and method Patent  
[NASA-CASE-GSC-10118-1] c 07 N71-24621  
Protective suit having an audio transceiver Patent  
[NASA-CASE-KSC-10164] c 07 N71-33108  
Technique for recovery of voice data from heat damaged magnetic tape  
[NASA-CASE-MSC-14219-1] c 32 N74-27612  
Filtering device --- removing electromagnetic noise from voice communication signals  
[NASA-CASE-MFS-22729-1] c 32 N76-21366  
Real time analysis of voiced sounds  
[NASA-CASE-NPO-13465-1] c 32 N76-31372  
Satellite personal communications system  
[NASA-CASE-NPO-14480-1] c 32 N80-20448

**VOICE DATA PROCESSING**  
Digital communication system  
[NASA-CASE-MSC-13912-1] c 32 N74-30524  
Method and apparatus for operating on compressed PCM voice data  
[NASA-CASE-KSC-11285-1] c 32 N86-27513

**VOIDS**  
Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14162-1] c 27 N90-15259  
Thermal treatment of silicon integrated circuit chips to prevent and heal voids in aluminum metallization  
[NASA-CASE-NPO-17678-1-CU] c 76 N91-28014  
Method and apparatus for evaluating multilayer objects for imperfections  
[NASA-CASE-LAR-14581-1-SB] c 38 N93-12204

**VOLATILITY**  
Apparatus for testing polymeric materials Patent  
[NASA-CASE-XNP-09699] c 06 N71-24607

**VOLT-AMPERE CHARACTERISTICS**  
Voltage-current characteristic simulator Patent  
[NASA-CASE-XMS-01554] c 10 N71-10578  
The dc-to-dc converters employing staggered-phase power switches with two-loop control  
[NASA-CASE-NPO-13512-1] c 33 N77-10428  
Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c 33 N79-18193

**VOLTAGE AMPLIFIERS**  
Electronic amplifier with power supply switching Patent  
[NASA-CASE-XMS-00945] c 09 N71-10798

Bootstrap unloader Patent  
[NASA-CASE-XNP-09768] c 09 N71-12516

Active RC networks  
[NASA-CASE-ARC-10020] c 10 N72-17172

Wide range analog-to-digital converter with a variable gain amplifier  
[NASA-CASE-NPO-11018] c 08 N72-21200

Voltage feed through apparatus having reduced partial discharge  
[NASA-CASE-GSC-12347-1] c 33 N80-18286

Arc lamp power supply using a voltage multiplier  
[NASA-CASE-LAR-13202-1] c 33 N88-23942

Cascaded transformerless DC-DC voltage amplifier with optically isolated switching devices  
[NASA-CASE-NPO-17994-1-CU] c 33 N93-18278

**VOLTAGE CONTROLLED OSCILLATORS**

Pulsed phase locked loop strain monitor --- voltage controlled oscillators  
[NASA-CASE-LAR-12772-1] c 33 N83-16626

Automatic oscillator frequency control system  
[NASA-CASE-GSC-12804-1] c 33 N86-20668

Radio Frequency (RF) strain monitor  
[NASA-CASE-LAR-13705-1] c 39 N88-25011

Dual physiological rate measurement instrument  
[NASA-CASE-MSC-20078-3] c 52 N91-14709

**VOLTAGE CONVERTERS (DC TO DC)**

Regulated dc-to-dc converter for voltage step-up or step-down with input-output isolation  
[NASA-CASE-HQN-10792-1] c 33 N74-11049

The dc-to-dc converters employing staggered-phase power switches with two-loop control  
[NASA-CASE-NPO-13512-1] c 33 N77-10428

Inrush current limiter  
[NASA-CASE-GSC-11789-1] c 33 N77-14333

Phase substitution of spare converter for a failed one of parallel phase staggered converters  
[NASA-CASE-NPO-13812-1] c 33 N77-30365

Regulated high efficiency, lightweight capacitor-diode multiplier dc to dc converter  
[NASA-CASE-LEW-12791-1] c 33 N78-32341

Buck/boost regulator  
[NASA-CASE-GSC-12360-1] c 33 N81-19392

Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c 33 N81-19393

Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c 33 N81-33404

Power converter  
[NASA-CASE-FRC-11014-1] c 33 N82-18494

A dc to dc converter  
[NASA-CASE-MFS-25430-1] c 33 N84-16453

Simplified dc to dc converter  
[NASA-CASE-LEW-13495-1] c 33 N84-33663

Microprocessor control of multiple peak power tracking DC/DC converters for use with solar cell arrays  
[NASA-CASE-GSC-13450-1] c 44 N92-23463

**VOLTAGE GENERATORS**

Pulsed energy power system Patent  
[NASA-CASE-MSC-13112] c 03 N71-11057

Telemeter adaptable for implanting in an animal Patent  
[NASA-CASE-XAC-05706] c 05 N71-12342

Multiple slope sweep generator Patent  
[NASA-CASE-XMS-03542] c 09 N71-28926

Controllable load insensitive power converters  
[NASA-CASE-ERC-10268] c 09 N72-25252

Driver for solar cell I-V characteristic plots  
[NASA-CASE-NPO-14096-1] c 44 N80-18551

Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c 33 N83-31953

**VOLTAGE REGULATORS**

Regulated dc to dc converter  
[NASA-CASE-XGS-03429] c 03 N69-21330

Power control circuit  
[NASA-CASE-XNP-02713] c 10 N69-39888

Amplifier drift tester  
[NASA-CASE-XMS-05562-1] c 09 N69-39986

Bus voltage compensation circuit for controlling direct current motor  
[NASA-CASE-XMS-04215-1] c 09 N69-39987

Regulated power supply Patent  
[NASA-CASE-XMS-01991] c 09 N71-21449

High voltage divider system Patent  
[NASA-CASE-XLE-02008] c 09 N71-21583

Power supply circuit Patent  
[NASA-CASE-XMS-00913] c 10 N71-23543

Voltage to frequency converter Patent  
[NASA-CASE-GSC-10022-1] c 10 N71-25882

Buck boost voltage regulation circuit Patent  
[NASA-CASE-GSC-10735-1] c 10 N71-26085

Automatic signal range selector for metering devices Patent  
[NASA-CASE-XMS-06497] c 14 N71-26244

Voltage regulator with plural parallel power source sections Patent  
[NASA-CASE-GSC-10891-1] c 10 N71-26626

Maximum power point tracker Patent  
[NASA-CASE-GSC-10376-1] c 14 N71-27407

High power microwave power divider Patent  
[NASA-CASE-NPO-11031] c 07 N71-33606

Reference voltage switching unit  
[NASA-CASE-NPO-11253] c 09 N72-17157

Switching regulator  
[NASA-CASE-LEW-11005-1] c 09 N72-21243

Controllable load insensitive power converters  
[NASA-CASE-ERC-10268] c 09 N72-25252

Regulated dc-to-dc converter for voltage step-up or step-down with input-output isolation  
[NASA-CASE-HQN-10792-1] c 33 N74-11049

Overvoltage protection network  
[NASA-CASE-ARC-10197-1] c 33 N74-17929

Low distortion automatic phase control circuit --- voltage controlled phase shifter  
[NASA-CASE-MFS-21671-1] c 33 N74-22885

Voltage monitoring system  
[NASA-CASE-KSC-10736-1] c 33 N75-19521

Transformer regulated self-stabilizing chopper  
[NASA-CASE-XGS-09186] c 33 N78-17295

Voltage regulator for battery power source --- using a bipolar transistor  
[NASA-CASE-FRC-10116-1] c 33 N79-23345

Buck/boost regulator  
[NASA-CASE-GSC-12360-1] c 33 N81-19392

Motor power factor controller with a reduced voltage starter  
[NASA-CASE-MFS-25586-1] c 33 N82-11360

Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c 33 N82-24418

Three phase power factor controller  
[NASA-CASE-MFS-25535-2] c 33 N84-22885

High voltage isolation transformer  
[NASA-CASE-GSC-12817-1] c 33 N85-29146

**VOLTMETERS**

Voltage monitoring system  
[NASA-CASE-KSC-10736-1] c 33 N75-19521

**VOLUME**

Mining volume measurement system  
[NASA-CASE-LAR-13519-1] c 35 N88-23963

Volumetric measurement of tank volume  
[NASA-CASE-MSC-21500-1] c 35 N91-21493

**VOLUMETRIC ANALYSIS**

Volumetric direct nuclear pumped laser  
[NASA-CASE-LAR-12183-1] c 36 N79-18307

**VOMITING**

Venting device for pressurized space suit helmet Patent  
[NASA-CASE-XMS-09652-1] c 05 N71-26333

**VORTEX ALLEVIATION**

Underwing compression vortex attenuation device  
[NASA-CASE-LAR-14744-1] c 02 N93-19053

**VORTEX BREAKDOWN**

Wingtip vortex dissipator for aircraft  
[NASA-CASE-LAR-11645-1] c 02 N77-10001

Underwing compression vortex attenuation device  
[NASA-CASE-LAR-14744-1] c 02 N93-19053

**VORTEX FLAPS**

Underwing compression vortex attenuation device  
[NASA-CASE-LAR-14744-1] c 02 N93-19053

**VORTEX GENERATORS**

Multiway vortex valve system Patent  
[NASA-CASE-XMF-04709] c 15 N71-15609

Vortex generator for controlling the dispersion of effluents in a flowing liquid  
[NASA-CASE-LAR-12045-1] c 34 N77-24423

Vortex generating flow passage design for increased film cooling effectiveness  
[NASA-CASE-LEW-14039-1] c 34 N85-33433

Wingtip vortex propeller  
[NASA-CASE-LAR-13019-1] c 07 N85-35194

**VORTICES**

Vortex-lift roll-control device  
[NASA-CASE-LAR-11868-2] c 08 N79-14108

Vortex motion phase separator for zero gravity liquid transfer  
[NASA-CASE-KSC-11387-1] c 29 N90-20236

Wingtip vortex turbine  
[NASA-CASE-LAR-14116-1] c 05 N91-14345

Underwing compression vortex attenuation device  
[NASA-CASE-LAR-14744-1] c 02 N93-19053

Method of measuring cross-flow vortices by use of an array of hot-film sensors  
[NASA-CASE-LAR-14824-1-SB] c 34 N93-26000

**VORTICITY**

Crossflow vorticity sensor  
[NASA-CASE-LAR-13436-1-CU] c 02 N88-23759

Passive laminar flow control of crossflow vorticity  
[NASA-CASE-LAR-13563-1] c 34 N91-23410

**VULCANIZING**

Method for compression molding of thermosetting plastics utilizing a temperature gradient across the plastic to cure the article  
[NASA-CASE-LAR-10489-1] c 31 N74-18124

**VULNERABILITY**

Pressure rig for repetitive casting  
[NASA-CASE-LAR-14050-1] c 31 N90-21216

**W****WAFERS**

Apparatus and method for separating a semiconductor wafer Patent  
[NASA-CASE-ERC-10138] c 26 N71-14354

Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction  
[NASA-CASE-MFS-23315-1] c 76 N78-24950

System for slicing silicon wafers  
[NASA-CASE-NPO-14406-1] c 37 N80-29703

Scriber for silicon wafers  
[NASA-CASE-NPO-15539-1] c 37 N82-11469

Method of Fabricating Schottky Barrier solar cell  
[NASA-CASE-NPO-13689-4] c 44 N82-28780

Method of making a high voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c 44 N82-29709

High voltage planar multijunction solar cell  
[NASA-CASE-LEW-13400-1] c 44 N82-31764

Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-15670-1] c 33 N82-33634

High voltage V-groove solar cell  
[NASA-CASE-LEW-13401-2] c 44 N83-32177

Method of increasing minority carrier lifetime in silicon web or the like  
[NASA-CASE-NPO-15530-1] c 76 N83-35888

Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-256704-1] c 33 N84-22884

Imaging X-ray spectrometer  
[NASA-CASE-GSC-12682-1] c 35 N84-33765

Epitaxial thinning process  
[NASA-CASE-NPO-15786-1] c 76 N84-35112

Process and apparatus for growing a crystal ribbon  
[NASA-CASE-NPO-15629-1] c 76 N84-35113

Ingot slicing machine and method  
[NASA-CASE-NPO-15483-1] c 37 N85-21650

Lithium counterdoped silicon solar cell  
[NASA-CASE-LEW-14177-1] c 44 N86-32875

Cross-contact chain  
[NASA-CASE-NPO-16784-1] c 33 N87-10231

Floating emitter solar cell  
[NASA-CASE-NPO-16467-1-CU] c 33 N87-23879

Optical shutter switching matrix  
[NASA-CASE-KSC-11392-1] c 74 N90-22383

Method of fabricating germanium and gallium arsenide devices  
[NASA-CASE-GSC-13265-1] c 76 N91-14066

Process for the controlled growth of single-crystal films of silicon carbide polytypes on silicon carbide wafers  
[NASA-CASE-LEW-15222-1] c 76 N91-26966

Process for the homoepitaxial growth of single-crystal silicon carbide films on silicon carbide wafers  
[NASA-CASE-LEW-15223-1] c 76 N91-26967

Quantum well, beam deflecting surface emitting lasers  
[NASA-CASE-NPO-18243-1-CU] c 36 N93-13418

**WAKES**

Space ultra-vacuum facility and method of operation  
[NASA-CASE-MFS-28139-1] c 29 N87-18679

**WALKING**

Drop foot corrective device  
[NASA-CASE-LAR-12259-2] c 54 N86-22112

Compliant walker  
[NASA-CASE-GSC-13348-2] c 52 N93-14708

**WALKING MACHINES**

Space spider crane  
[NASA-CASE-LAR-13411-1-SB] c 18 N88-23828

**WALL FLOW**

Atmospheric pressure flow reactor: Gas phase chemical kinetics under tropospheric conditions without wall effects  
[NASA-CASE-MSC-21384-1] c 34 N92-16243

**WALL TEMPERATURE**

Method of making apparatus for sensing temperature  
[NASA-CASE-XLE-05230-2] c 14 N73-13417

Structural heat pipe --- for spacecraft wall thermal insulation system  
[NASA-CASE-GSC-11619-1] c 34 N75-12222

Thermal control canister  
[NASA-CASE-GSC-12253-1] c 34 N79-31523

Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c 34 N83-27144

**WALLS**

Formed metal ribbon wrap Patent  
[NASA-CASE-XLE-00164] c 15 N70-36411

- Method and apparatus for mapping the distribution of chemical elements in an extended medium  
[NASA-CASE-GSC-12808-1] c 25 N85-21279
- Apparatus and method to keep the walls of a free-space reactor free from deposits of solid materials  
[NASA-CASE-NPO-15851-1] c 37 N85-21652
- Sound attenuation apparatus  
[NASA-CASE-LAR-13968-1] c 71 N91-27913
- Pressure wall patch  
[NASA-CASE-MFS-28724-1] c 18 N93-17061
- Radial spline assembly for antifriction bearings  
[NASA-CASE-MFS-28629-1] c 37 N93-17084
- Radial spline assembly for antifriction bearings  
[NASA-CASE-MFS-28629-1] c 37 N93-26001
- WARNING SYSTEMS**
- Out of tolerance warning alarm system for plurality of monitored circuits Patent  
[NASA-CASE-XMS-10984-1] c 10 N71-19417
- Unsaturating saturable core transformer Patent  
[NASA-CASE-ERC-10125] c 09 N71-24893
- Electrical apparatus for detection of thermal decomposition of insulation Patent  
[NASA-CASE-XMF-03968] c 14 N71-27186
- Combustion products generating and metering device  
[NASA-CASE-GSC-11095-1] c 14 N72-10375
- Stacked array of omnidirectional antennas  
[NASA-CASE-LAR-10545-1] c 09 N72-21244
- Display research collision warning system  
[NASA-CASE-HQN-10703] c 21 N73-13643
- System for indicating direction of intruder aircraft  
[NASA-CASE-ERC-10226-1] c 14 N73-16483
- Silent emergency alarm system for schools and the like  
[NASA-CASE-NPO-11307-1] c 10 N73-30205
- Apparatus for aiding a pilot in avoiding a midair collision between aircraft  
[NASA-CASE-LAR-10717-1] c 21 N73-30641
- Inverter ratio failure detector  
[NASA-CASE-NPO-13160-1] c 35 N74-18090
- Hearing aid malfunction detection system  
[NASA-CASE-MSC-14916-1] c 33 N78-10375
- Automatic communication signal monitoring system  
[NASA-CASE-NPO-13941-1] c 32 N79-10262
- Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c 33 N80-23559
- Scanning seismic intrusion detection method and apparatus --- monitoring unwanted subterranean entry and departure  
[NASA-CASE-ARC-11317-1] c 35 N83-34272
- Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-1-NP] c 52 N90-21519
- Computer access security code system  
[NASA-CASE-NPO-17525-1-CU] c 60 N90-25583
- Visual aid for the hearing impaired  
[NASA-CASE-GSC-13027-1-CU] c 35 N91-27522
- Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-2] c 52 N92-11621
- Valve malfunction detection apparatus  
[NASA-CASE-MFS-29904-1] c 35 N93-29503
- WASHING**
- Method of neutralizing the corrosive surface of amine-cured epoxy resins  
[NASA-CASE-GSC-12686-1] c 27 N83-34039
- Method and apparatus for cleaning rubber deposits from airport runways and roadways  
[NASA-CASE-LAR-14483-1] c 31 N93-22035
- WASTE DISPOSAL**
- Relief container  
[NASA-CASE-XMS-06761] c 05 N69-23192
- An airlock  
[NASA-CASE-MFS-20922] c 31 N72-20840
- Liquid waste feed system  
[NASA-CASE-LAR-10365-1] c 05 N72-27102
- Reduced gravity fecal collector seat and urinal  
[NASA-CASE-MFS-22102-1] c 54 N74-20725
- Airlock  
[NASA-CASE-MFS-20922-1] c 18 N74-22136
- Automatic liquid inventory collecting and dispensing unit  
[NASA-CASE-LAR-11071-1] c 35 N75-19611
- Automatic biowaste sampling  
[NASA-CASE-MSC-14640-1] c 54 N76-14804
- Absorbent product and articles made therefrom  
[NASA-CASE-MSC-18223-2] c 54 N84-11758
- Improved method and apparatus for waste collection and storage  
[NASA-CASE-MSC-21025-1] c 31 N87-25495
- Valve for waste collection and storage  
[NASA-CASE-MSC-21025-4] c 54 N91-14723
- Method for waste collection and storage  
[NASA-CASE-MSC-21025-2] c 54 N91-14724
- Method and apparatus for waste collection and storage  
[NASA-CASE-MSC-21025-3] c 54 N91-26747
- Space station trash removal system  
[NASA-CASE-MSC-21723-1] c 18 N92-30315
- Sharps container  
[NASA-CASE-MSC-21776-1] c 31 N92-33612
- WASTE ENERGY UTILIZATION**
- Automotive absorption air conditioner utilizing solar and motor waste heat  
[NASA-CASE-NPO-15183-1] c 44 N82-26776
- Apparatus for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-1] c 07 N83-36029
- Method for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-2] c 07 N86-20389
- WASTE HEAT**
- Thermal control system --- removing waste heat from industrial process spacecraft  
[NASA-CASE-GSC-12771-1] c 34 N84-14461
- Lunar radiator shade  
[NASA-CASE-MSC-21868-1] c 54 N92-21589
- WASTE UTILIZATION**
- Simultaneous treatment of SO<sub>2</sub> containing stack gases and waste water  
[NASA-CASE-MSC-16258-1] c 45 N79-12584
- WASTE WATER**
- Water system virus detection  
[NASA-CASE-MSC-16098-1] c 51 N79-10693
- Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c 85 N79-17747
- Method for treating wastewater using microorganisms and vascular aquatic plants  
[NASA-CASE-NSTL-10] c 45 N84-12654
- Combined air and water pollution control system  
[NASA-CASE-NST-00007-1] c 45 N91-14662
- WASTES**
- Sharps container  
[NASA-CASE-MSC-21776-1] c 31 N92-33612
- WATER**
- High power-high voltage waterload Patent  
[NASA-CASE-XNP-05381] c 09 N71-20842
- Procedure and apparatus for determination of water in nitrogen tetroxide  
[NASA-CASE-NPO-10234] c 06 N72-17094
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-1] c 37 N76-16446
- Solar hydrogen generator  
[NASA-CASE-LAR-11361-1] c 44 N77-22607
- Remote water monitoring system  
[NASA-CASE-LAR-11973-1] c 35 N78-27384
- Solar photolysis of water  
[NASA-CASE-NPO-14126-1] c 44 N79-11470
- Biofilm monitoring coupon system and method of use  
[NASA-CASE-MSC-21585-1] c 51 N91-31755
- Water window imaging x ray microscope  
[NASA-CASE-MFS-28485-1] c 35 N92-29135
- Purification system  
[NASA-CASE-MSC-21584-1] c 25 N92-33029
- Method and apparatus for cleaning rubber deposits from airport runways and roadways  
[NASA-CASE-LAR-14483-1] c 31 N93-22035
- WATER FLOW**
- Potable water dispenser  
[NASA-CASE-MFS-21115-1] c 54 N74-12779
- Self-contained, single-use hose and tubing cleaning module  
[NASA-CASE-MSC-20857-1] c 37 N87-17035
- WATER INJECTION**
- Reentry communication by material addition Patent  
[NASA-CASE-XLA-01552] c 07 N71-11284
- WATER LANDING**
- Vehicle parachute and equipment jettison system Patent  
[NASA-CASE-XLA-00195] c 02 N70-38009
- Emergency earth orbital escape device  
[NASA-CASE-MSC-13281] c 31 N72-18859
- WATER MANAGEMENT**
- Water management system and an electrolytic cell therefor Patent  
[NASA-CASE-MSC-10960-1] c 03 N71-24718
- Solar-powered pump  
[NASA-CASE-NPO-13567-1] c 44 N76-29701
- WATER POLLUTION**
- Compact solar still Patent  
[NASA-CASE-XMS-04533] c 15 N71-23086
- Bacterial contamination monitor  
[NASA-CASE-GSC-10879-1] c 14 N72-25413
- Method and automated apparatus for detecting coliform organisms  
[NASA-CASE-MSC-16777-1] c 51 N80-27067
- Combined air and water pollution control system  
[NASA-CASE-NST-00007-1] c 45 N91-14662
- WATER QUALITY**
- Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points  
[NASA-CASE-MSC-16841-1] c 34 N79-24285
- Rapid, quantitative determination of bacteria in water --- adenosine triphosphate  
[NASA-CASE-GSC-12158-1] c 51 N83-27569
- Method for detecting coliform organisms  
[NASA-CASE-ARC-11322-1] c 51 N83-28849
- WATER RECLAMATION**
- Recovery of potable water from human wastes in below-G conditions Patent  
[NASA-CASE-XLA-03213] c 05 N71-11207
- Water system virus detection  
[NASA-CASE-MSC-16098-1] c 51 N79-10693
- Water separator  
[NASA-CASE-XMS-01295-1] c 37 N79-21345
- Whole body cleaning agent containing N-acyltaurate  
[NASA-CASE-MSC-21589-1] c 54 N92-29137
- WATER RESOURCES**
- Radar target for remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c 43 N80-18498
- WATER SPLITTING**
- Static feed water electrolysis subsystem development  
[NASA-CASE-MSC-21577-1-SB] c 25 N91-23271
- Water electrolysis  
[NASA-CASE-MSC-21572-1-SB] c 25 N92-28756
- WATER TEMPERATURE**
- Differential temperature transducer Patent  
[NASA-CASE-XAC-00812] c 14 N71-15598
- WATER TREATMENT**
- Water management system and an electrolytic cell therefor Patent  
[NASA-CASE-MSC-10960-1] c 03 N71-24718
- Method of preparing water purification membranes --- polymerization of allyl amine as thin films in plasma discharge  
[NASA-CASE-ARC-10643-1] c 25 N75-12087
- Iodine generator for reclaimed water purification  
[NASA-CASE-MSC-14632-1] c 54 N78-14784
- Water system virus detection  
[NASA-CASE-MSC-16098-1] c 51 N79-10693
- Simultaneous treatment of SO<sub>2</sub> containing stack gases and waste water  
[NASA-CASE-MSC-16258-1] c 45 N79-12584
- Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c 85 N79-17747
- Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c 45 N80-14579
- Reverse osmosis membrane of high urea rejection properties --- water purification  
[NASA-CASE-ARC-10980-1] c 27 N80-23452
- Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c 27 N81-14076
- Sewage sludge additive  
[NASA-CASE-NPO-13877-1] c 45 N82-11634
- Method for treating wastewater using microorganisms and vascular aquatic plants  
[NASA-CASE-NSTL-10] c 45 N84-12654
- Combined air and water pollution control system  
[NASA-CASE-NST-00007-1] c 45 N91-14662
- Purification system  
[NASA-CASE-MSC-21584-1] c 25 N92-33029
- Regenerable biocide delivery unit  
[NASA-CASE-MSC-21763-1-SB] c 51 N93-18351
- Ion exchange polymers and method for making  
[NASA-CASE-LEW-15576-1] c 27 N93-31316
- WATER VAPOR**
- Vapor pressure measuring system and method Patent  
[NASA-CASE-XMS-01618] c 14 N71-20741
- Cell and method for electrolysis of water and anode  
[NASA-CASE-MSC-16394-1] c 28 N81-24280
- Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-2] c 36 N83-29681
- Wet atmospheric generation apparatus  
[NASA-CASE-MFS-28177-1] c 35 N91-21496
- WATER WAVES**
- Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c 35 N79-10391
- Oceanic wave measurement system  
[NASA-CASE-MFS-23862-1] c 48 N80-18667
- WATERPROOFING**
- Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c 37 N74-21063
- Elevated waterproof access floor system and method of making the same  
[NASA-CASE-ARC-11363-1] c 31 N87-16918



## WATERWAVE ENERGY CONVERSION

### WATERWAVE ENERGY CONVERSION

Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c 44 N80-29834

### WAVE AMPLIFICATION

Distributed feedback acoustic surface wave oscillator  
[NASA-CASE-NPO-13673-1] c 71 N77-26919

### WAVE DIFFRACTION

Diffraction grating configuration for X-ray and ultraviolet focusing  
[NASA-CASE-GSC-12357-1] c 74 N80-21140

### WAVE FRONT RECONSTRUCTION

Recording and reconstructing focused image holograms  
Patent  
[NASA-CASE-ERC-10017] c 16 N71-15567

### WAVE FRONTS

Feedback controlled optics with wavefront compensation  
[NASA-CASE-NPO-18194-1-CU] c 74 N91-32924

### WAVE GENERATION

Wind tunnel airstream oscillating apparatus Patent  
[NASA-CASE-XLA-00112] c 11 N70-33287  
Linear sawtooth voltage-wave generator employing transistor timing circuit having capacitor-zener diode combination feedback Patent  
[NASA-CASE-XMS-01315] c 09 N70-41675

Waveform simulator Patent  
[NASA-CASE-NPO-10251] c 10 N71-27365  
Wide band doubler and sine wave quadrature generator  
[NASA-CASE-NPO-11133] c 10 N72-20223

Material suspension within an acoustically excited resonant chamber --- at near weightless conditions  
[NASA-CASE-NPO-13263-1] c 12 N75-24774  
Vibrating-chamber levitation systems  
[NASA-CASE-NPO-16142-1-CU] c 35 N86-20752

### WAVE INTERACTION

Coupled cavity traveling wave tube with velocity tapering  
[NASA-CASE-LEW-12296-1] c 33 N82-26568

### WAVE PROPAGATION

Double reference pulsed phase locked loop  
[NASA-CASE-LAR-13310-1] c 32 N87-14559

### WAVE REFLECTION

Microwave flaw detector Patent  
[NASA-CASE-ARC-10009-1] c 15 N71-17822  
Millimeter wave antenna system Patent Application  
[NASA-CASE-GSC-10949-1] c 07 N71-28965

### WAVE RESISTANCE

Reactanceless synthesized impedance bandpass amplifier  
[NASA-CASE-GSC-12788-1] c 33 N85-29145

### WAVE SCATTERING

Device and method for determining X ray reflection efficiency of optical surfaces  
[NASA-CASE-MFS-20243] c 23 N73-13662  
Method and apparatus for Delta Kappa synthetic aperture radar measurement of ocean current  
[NASA-CASE-NPO-15704-1] c 32 N85-34327  
Tissue simulating gel for medical research  
[NASA-CASE-LAR-14036-1] c 27 N91-13562

### WAVEFORMS

Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00131] c 09 N70-38995  
Single or joint amplitude distribution analyzer Patent  
[NASA-CASE-XNP-01383] c 09 N71-10659  
Peak polarity selector Patent  
[NASA-CASE-FRC-10010] c 10 N71-24862

Family of frequency to amplitude converters  
[NASA-CASE-MSC-12395] c 09 N72-25257  
Apparatus for statistical time-series analysis of electrical signals  
[NASA-CASE-MSC-12428-1] c 10 N73-25240

Low distortion receiver for bi-level baseband PCM waveforms  
[NASA-CASE-MSC-14557-1] c 32 N76-16249

Speech analyzer  
[NASA-CASE-GSC-11898-1] c 32 N77-30309

Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c 33 N79-10337

Measurement of waves in flows across a surface  
[NASA-CASE-NPO-17479-1-CU] c 34 N91-13658

### WAVEGUIDE ANTENNAS

Virtual wall slot circularly polarized planar array antenna  
[NASA-CASE-NPO-10301] c 07 N72-11148

### WAVEGUIDE FILTERS

High power microwave power divider Patent  
[NASA-CASE-NPO-11031] c 07 N71-33606

### WAVEGUIDE WINDOWS

Broadband microwave waveguide window Patent  
[NASA-CASE-XNP-08880] c 09 N71-24808

### WAVEGUIDES

Dual waveguide mode source having control means for adjusting the relative amplitude of two modes Patent  
[NASA-CASE-XNP-03134] c 07 N71-10676

Folded traveling wave maser structure Patent  
[NASA-CASE-XNP-05219] c 16 N71-15550

Quasi-optical microwave component Patent  
[NASA-CASE-ERC-10011] c 07 N71-29065

Waveguide mixer  
[NASA-CASE-ERC-10179] c 07 N72-20141

Active microwave irises and windows  
[NASA-CASE-LAR-10513-1] c 07 N72-25170

Thin film microwave iris  
[NASA-CASE-LAR-10511-1] c 09 N72-29172

Resonant waveguide stark cell --- using microwave spectrometers  
[NASA-CASE-LAR-11352-1] c 33 N75-26245

Diffused waveguiding capillary tube with distributed feedback for a gas laser  
[NASA-CASE-NPO-13544-1] c 36 N76-18428

Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c 36 N80-18372

Support assembly for cryogenically coolable low-noise choke waveguide  
[NASA-CASE-NPO-14253-1] c 32 N80-32605

Coaxial phased array antenna  
[NASA-CASE-MSC-16800-1] c 32 N81-14187

Coupled cavity traveling wave tube with velocity tapering  
[NASA-CASE-LEW-12296-1] c 33 N82-26568

Waveguide cooling system  
[NASA-CASE-NPO-15401-1] c 32 N83-27085

Universal nondestructive mm-wave integrated circuit test fixture  
[NASA-CASE-LEW-14746-1] c 33 N91-14552

Method for non-destructive estimation of waveguide directional coupler dimensions  
[NASA-CASE-NPO-18454-1-CU] c 33 N92-17865

Coaxial turnstile junction  
[NASA-CASE-GSC-13422-1] c 33 N92-23462

Method for non-destructive estimation of waveguide directional coupler dimensions  
[NASA-CASE-NPO-18454-1-CU] c 33 N93-18285

Wavelength-division multiplexed optical integrated circuit with vertical diffraction grating  
[NASA-CASE-NPO-18357-1-CU] c 74 N93-29848

### WAVELENGTH DIVISION MULTIPLEXING

Method and apparatus for wavelength tuning of liquid lasers  
[NASA-CASE-ERC-10187] c 16 N69-31343

Instrument for the quantitative measurement of radiation at multiple wave lengths Patent  
[NASA-CASE-XLE-00011] c 14 N70-41946

Optical systems having spatially invariant outputs  
[NASA-CASE-ERC-10248] c 14 N72-17323

Two color horizon sensor  
[NASA-CASE-ERC-10174] c 14 N72-25409

Monitoring deposition of films  
[NASA-CASE-MFS-20675] c 26 N73-26751

Dual wavelength scanning Doppler velocimeter --- without perturbation of flow fields  
[NASA-CASE-ARC-10637-1] c 35 N75-16783

Diatom infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c 36 N75-31426

Fluorescent radiation converter  
[NASA-CASE-GSC-12528-1] c 74 N81-24900

Acoustic levitation methods and apparatus  
[NASA-CASE-NPO-15562-1] c 71 N82-27086

Extended range X-ray telescope  
[NASA-CASE-MFS-25282-1] c 34 N83-19015

Dual laser optical system and method for studying fluid flow  
[NASA-CASE-MFS-25315-1] c 36 N83-29680

Acoustic suspension system  
[NASA-CASE-NPO-15435-1] c 71 N83-36846

Dual wavelength holographic interferometry system  
[NASA-CASE-MFS-28242-1] c 35 N89-26202

### WEAR

Refractory coatings  
[NASA-CASE-LEW-13169-2] c 26 N82-30371

Spectroscopic wear detector  
[NASA-CASE-LEW-15200-1] c 20 N93-18856

Three-grid accelerator system for an ion propulsion engine  
[NASA-CASE-NPO-18391-1-CU] c 20 N93-28424

WEAR INHIBITORS  
Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-3] c 37 N82-19540

WEAR RESISTANCE  
Pretreatment of lubricated surfaces with sputtered cadmium oxide  
[NASA-CASE-LEW-14474-1] c 27 N91-28423

## SUBJECT INDEX

### WEATHERPROOFING

Weatherproof helix antenna Patent  
[NASA-CASE-XKS-08485] c 07 N71-19493

### WEAVING

Integral fill yarn insertion and beatup method using inflatable membrane  
[NASA-CASE-LAR-14046-1] c 31 N93-18857

Method and apparatus for three dimensional braiding  
[NASA-CASE-LAR-14047-1] c 31 N93-19038

Method and apparatus for weaving a woven angle ply fabric  
[NASA-CASE-LAR-14048-1] c 31 N93-29611

### WEBS (SHEETS)

Method and apparatus for measuring web material wound on a reel  
[NASA-CASE-GSC-11902-1] c 38 N77-17495

Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-1] c 35 N82-25484

Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373

### WEBS (SUPPORTS)

Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-2] c 07 N78-18066

Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-3] c 07 N79-14096

Device for mechanically stabilizing web ribbon buttons during growth initiation  
[NASA-CASE-NPO-17074-2-CU] c 76 N92-21499

### WEDGES

Two dimensional wedge/translating shroud nozzle  
[NASA-CASE-LAR-11919-1] c 07 N78-27121

Method and apparatus for gripping test specimens  
[NASA-CASE-LEW-15345-1] c 37 N93-12327

An apparatus for gripping test specimens  
[NASA-CASE-LEW-15345-2] c 37 N93-28127

### WEIGHT (MASS)

Suspended mass impact damper Patent  
[NASA-CASE-LAR-10193-1] c 15 N71-27146

System for indicating fuel-efficient aircraft altitude  
[NASA-CASE-NPO-15351-2] c 06 N84-34443

### WEIGHT INDICATORS

Device for monitoring a change in mass in varying gravimetric environments  
[NASA-CASE-MFS-21556-1] c 35 N74-26945

Miniature remote dead weight calibrator  
[NASA-CASE-LAR-13564-1] c 35 N87-25558

### WEIGHT MEASUREMENT

Automatic force measuring system Patent  
[NASA-CASE-XLA-02605] c 14 N71-10773

Device for monitoring a change in mass in varying gravimetric environments  
[NASA-CASE-MFS-21556-1] c 35 N74-26945

Portable pallet weighing apparatus  
[NASA-CASE-GSC-12789-1] c 35 N85-20294

### WEIGHTLESSNESS

Apparatus for transferring cryogenic liquids Patent  
[NASA-CASE-XLE-00345] c 15 N70-38020

Liquid-gas separation system Patent  
[NASA-CASE-XMS-01624] c 15 N70-40062

Measuring device Patent  
[NASA-CASE-XMS-01546] c 14 N70-40233

Zero gravity starting means for liquid propellant motors Patent  
[NASA-CASE-XNP-01390] c 28 N70-41275

Liquid-gas separator for zero gravity environment Patent  
[NASA-CASE-XMS-01492] c 05 N70-41297

Recovery of potable water from human wastes in below-G conditions Patent  
[NASA-CASE-XLA-03213] c 05 N71-11207

Zero gravity separator Patent  
[NASA-CASE-XLE-00586] c 15 N71-15968

Reduced gravity simulator Patent  
[NASA-CASE-XLA-01787] c 11 N71-16028

Method and apparatus of simulating zero gravity conditions Patent  
[NASA-CASE-MFS-12750] c 27 N71-16223

Quick disconnect latch and handle combination Patent  
[NASA-CASE-MFS-11132] c 15 N71-17649

Spherical tank gauge Patent  
[NASA-CASE-XMS-06236] c 14 N71-21007

Zero gravity apparatus Patent  
[NASA-CASE-XMF-06515] c 14 N71-23227

Skeletal stressing method and apparatus Patent  
[NASA-CASE-ARC-10100-1] c 05 N71-24738

Material handling device Patent  
[NASA-CASE-XNP-09770-3] c 11 N71-27036

Method of making foamed materials in zero gravity  
[NASA-CASE-XMF-09902] c 15 N72-11387

Remote control manipulator for zero gravity environment  
[NASA-CASE-MFS-14405] c 15 N72-28495

Zero gravity liquid mixer  
[NASA-CASE-LAR-10195-1] c 15 N73-19458

- Zero gravity liquid transfer screen  
[NASA-CASE-KSC-10626] c 14 N73-27378
- Reduced gravity fecal collector seat and urinal  
[NASA-CASE-MFS-22102-1] c 54 N74-20725
- Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c 34 N74-27744
- Rotary plant growth accelerating apparatus --- weightlessness  
[NASA-CASE-ARC-10722-1] c 51 N75-25503
- Fluid control apparatus and method  
[NASA-CASE-LAR-11110-1] c 34 N75-26282
- Method for manufacturing mirrors in zero gravity environment  
[NASA-CASE-MSC-12611-1] c 12 N76-15189
- Fluid mass sensor for a zero gravity environment  
[NASA-CASE-MSC-14653-1] c 35 N77-19385
- Method of crystallization --- in gravity-free environments  
[NASA-CASE-MFS-23001-1] c 76 N77-32919
- Passive propellant system  
[NASA-CASE-MFS-23642-1] c 20 N80-10278
- Method and apparatus for producing concentric hollow spheres --- inertial confinement fusion targets  
[NASA-CASE-NPO-14596-1] c 31 N81-33319
- Sample levitation and melt in microgravity  
[NASA-CASE-NPO-17022-1-CU] c 29 N87-25489
- Vortex motion phase separator for zero gravity liquid transfer  
[NASA-CASE-KSC-11387-1] c 29 N90-20236
- Zero-G phase detector and separator  
[NASA-CASE-LEW-14844-1] c 35 N90-22024
- Valve for waste collection and storage  
[NASA-CASE-MSC-21025-4] c 54 N91-14723
- Method for waste collection and storage  
[NASA-CASE-MSC-21025-2] c 54 N91-14724
- Acoustic positioning and orientation prediction  
[NASA-CASE-NPO-17511-1-CU] c 71 N91-14807
- Volumetric measurement of tank volume  
[NASA-CASE-MSC-21500-1] c 35 N91-21493
- Tank gauging apparatus and method  
[NASA-CASE-MSC-21059-3] c 35 N91-21495
- Method and apparatus for waste collection and storage  
[NASA-CASE-MSC-21025-3] c 54 N91-26747
- Treadmill for space flight  
[NASA-CASE-MSC-21752-1] c 54 N92-17910
- Whole body cleaning agent containing N-acetyltaurate  
[NASA-CASE-MSC-21589-1] c 54 N92-29137
- Cryogenic shutter  
[NASA-CASE-GSC-13189-2] c 37 N92-29151
- Passive zero-gravity leg restraint  
[NASA-CASE-ARC-11882-1-CU] c 54 N93-14713
- WEIGHTLESSNESS SIMULATION**
- Reduced gravity liquid configuration simulator  
[NASA-CASE-XLE-02624] c 12 N69-39988
- Mass measuring system Patent  
[NASA-CASE-XMS-03371] c 05 N70-42000
- Harness assembly Patent  
[NASA-CASE-MFS-14671] c 05 N71-12341
- Whole body measurement systems --- for weightlessness simulation  
[NASA-CASE-MSC-13972-1] c 52 N74-10975
- Weightlessness simulation system and process  
[NASA-CASE-ARC-11646-1] c 14 N87-25344
- Hollow fiber clinostat for simulating microgravity in cell culture  
[NASA-CASE-MFS-28370-1] c 35 N92-31790
- WELD STRENGTH**
- Grain refinement control in TIG arc welding  
[NASA-CASE-MSC-19095-1] c 37 N75-19683
- WELD TESTS**
- Determination of spot weld quality Patent  
[NASA-CASE-XNP-02588] c 15 N71-18613
- Method and apparatus for swept-frequency impedance measurements of welds  
[NASA-CASE-ARC-10176-1] c 15 N72-21464
- WELDED JOINTS**
- Apparatus for welding blades to rotors  
[NASA-CASE-LEW-10533-2] c 37 N74-11300
- Ultrasonic scanning system for in-place inspection of brazed tube joints  
[NASA-CASE-MFS-20767-1] c 38 N74-15130
- Device for measuring the ferrite content in an austenitic stainless-steel weld  
[NASA-CASE-MFS-22907-1] c 26 N76-18257
- Capillary flow weld-bonding  
[NASA-CASE-LAR-11726-1] c 37 N76-27568
- Automated weld torch guidance control system  
[NASA-CASE-MFS-25807-2] c 37 N86-21850
- Apparatus and method for explosive bonding to edge of flyer plate  
[NASA-CASE-LAR-14096-1] c 31 N91-31476
- WELDED STRUCTURES**
- Grain refinement control in TIG arc welding  
[NASA-CASE-MSC-19095-1] c 37 N75-19683
- Flanged major modular assembly jig  
[NASA-CASE-MSC-19372-1] c 39 N76-31562
- Weld-bonded titanium structures  
[NASA-CASE-LAR-11549-1] c 37 N77-11397
- Bimetallic junctions  
[NASA-CASE-LEW-11573-1] c 26 N77-28265
- WELDING**
- Segmented back-up bar Patent  
[NASA-CASE-XMF-00640] c 15 N70-39924
- Flexible back-up bar Patent  
[NASA-CASE-XMF-00722] c 15 N70-40204
- Apparatus for welding sheet material --- butt joints  
[NASA-CASE-XMS-01330] c 37 N75-27376
- Weld-bonded titanium structures  
[NASA-CASE-LAR-11549-1] c 37 N77-11397
- Method and apparatus for holding two separate metal pieces together for welding  
[NASA-CASE-GSC-12318-1] c 37 N80-23655
- Automatic weld torch guidance control system  
[NASA-CASE-MFS-25807] c 37 N83-20154
- Joining lead wires to thin platinum alloy films  
[NASA-CASE-LEW-13934-1] c 35 N83-35338
- Method of repairing hidden leaks in tubes  
[NASA-CASE-MFS-19796-1] c 37 N86-32736
- Alignment and assembly tool for very large diameter cylinders  
[NASA-CASE-MFS-28001-2] c 37 N88-14360
- Optically controlled welding system  
[NASA-CASE-MFS-29291-1] c 37 N89-12868
- WELDING MACHINES**
- Apparatus for welding torch angle and seam tracking control Patent  
[NASA-CASE-XMF-03287] c 15 N71-15607
- Automatic welding speed controller Patent  
[NASA-CASE-XMF-01730] c 15 N71-23050
- Electric welding torch Patent  
[NASA-CASE-XMF-02330] c 15 N71-23798
- Welding skate with computerized control Patent  
[NASA-CASE-XMF-07069] c 15 N71-23815
- Computerized system for translating a torch head  
[NASA-CASE-MFS-23620-1] c 37 N79-10421
- Welding torch with arc light reflector  
[NASA-CASE-MFS-29134-1] c 74 N87-17493
- Welding monitoring system  
[NASA-CASE-MFS-29177-1] c 37 N88-14362
- High temperature solder device for flat cables  
[NASA-CASE-GSC-13344-1] c 26 N92-29094
- Gas arc constriction for plasma arc welding  
[NASA-CASE-MFS-28844-1] c 37 N93-31292
- WET CELLS**
- Method and device for determining battery state of charge Patent  
[NASA-CASE-NPO-10194] c 03 N71-20407
- WET SPINNING**
- Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14489-1] c 37 N91-27562
- WETTING**
- Pretreatment method for anti-wettable materials  
[NASA-CASE-XMS-03537] c 15 N69-21471
- Whole body cleaning agent containing N-acetyltaurate  
[NASA-CASE-MSC-21589-1] c 54 N92-29137
- WHEATSTONE BRIDGES**
- Self-balancing strain gage transducer Patent  
[NASA-CASE-MFS-12827] c 14 N71-17656
- Method for improving the signal-to-noise ratio of the Wheatstone bridge type bolometer Patent  
[NASA-CASE-XLA-02810] c 14 N71-25901
- Temperature control system with a pulse width modulated bridge  
[NASA-CASE-NPO-11304] c 14 N73-26430
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-2] c 35 N85-34373
- Pressure transducer and system for cryogenic environments  
[NASA-CASE-LAR-14579-1] c 35 N92-29097
- WHEELCHAIRS**
- Wheels for wheelchairs and the like  
[NASA-CASE-MFS-28632-1] c 54 N93-17042
- Platform stair lift  
[NASA-CASE-MFS-28772-1] c 54 N93-29845
- WHEELS**
- Non-backdrivable free wheeling coupling  
[NASA-CASE-MSC-20475-1] c 37 N87-17037
- Device for applying constant pressure to a surface  
[NASA-CASE-GSC-13230-1] c 37 N92-28754
- Wheels for wheelchairs and the like  
[NASA-CASE-MFS-28632-1] c 54 N93-17042
- WHISKER COMPOSITES**
- Reinforced metallic composites Patent  
[NASA-CASE-XLE-00228] c 17 N70-38490
- WHISKERS (CRYSTALS)**
- Catalyst for growth of boron carbide single crystal whiskers  
[NASA-CASE-XHQ-03903] c 15 N69-21922
- WICKS**
- Method of forming a wick for a heat pipe  
[NASA-CASE-NPO-13391-1] c 34 N76-27515
- Monogroove heat pipe design: Insulated liquid channel with bridging wick  
[NASA-CASE-MSC-20497-1] c 34 N85-29180
- Polymeric heat pipe wick  
[NASA-CASE-GSC-13019-1] c 34 N88-29133
- Ceramic heat pipe wick  
[NASA-CASE-GSC-13199-1] c 27 N90-23541
- WIDE ANGLE LENSES**
- Wide angle long eye relief eyepiece Patent  
[NASA-CASE-XMS-06056-1] c 23 N71-24857
- Wide field strip-imaging optical system  
[NASA-CASE-NPO-18146-1-CU] c 74 N92-17892
- WIDEBAND COMMUNICATION**
- Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c 32 N77-28346
- Multiple band circularly polarized microstrip antenna  
[NASA-CASE-MSC-18334-1] c 32 N80-32604
- WINCHES**
- Winch having cable position and load indicators Patent  
[NASA-CASE-MSC-12052-1] c 15 N71-24599
- WIND DIRECTION**
- Radiation counting technique for measuring wind velocity and direction  
[NASA-CASE-LAR-12971-1] c 47 N84-28292
- Cable suspended windmill  
[NASA-CASE-LAR-13434-1] c 37 N90-23742
- WIND EFFECTS**
- Viscous pendulum damper Patent  
[NASA-CASE-LAR-10274-1] c 14 N71-17626
- Aircraft lifter  
[NASA-CASE-LAR-12518-1] c 06 N86-27280
- WIND MEASUREMENT**
- Passive optical wind and turbulence detection system Patent  
[NASA-CASE-XMF-14032] c 20 N71-16340
- Maxometers (peak wind speed anemometers)  
[NASA-CASE-MFS-20916] c 14 N73-25460
- Wind sensor  
[NASA-CASE-NPO-13462-1] c 35 N76-24524
- Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c 35 N77-10493
- Wind measurement system  
[NASA-CASE-MFS-23362-1] c 47 N77-10753
- WIND PROFILES**
- Wind velocity probing device and method Patent  
[NASA-CASE-XLA-02081] c 20 N71-16281
- WIND SHEAR**
- CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c 06 N83-10040
- Aircraft lifter  
[NASA-CASE-LAR-12518-1] c 06 N86-27280
- WIND TUNNEL APPARATUS**
- Wind tunnel airstream oscillating apparatus Patent  
[NASA-CASE-XLA-00112] c 11 N70-33287
- Electric arc device for heating gases Patent  
[NASA-CASE-XAC-00319] c 25 N70-41628
- Test unit free-flight suspension system Patent  
[NASA-CASE-XLA-00939] c 11 N71-15926
- Burst diaphragm flow initiator Patent  
[NASA-CASE-MFS-12915] c 11 N71-17600
- Electric arc apparatus Patent  
[NASA-CASE-XAC-01677] c 09 N71-20816
- Model launcher for wind tunnels Patent  
[NASA-CASE-XNP-03578] c 11 N71-23030
- Wind tunnel microphone structure Patent  
[NASA-CASE-XNP-00250] c 11 N71-28779
- Wind tunnel  
[NASA-CASE-LAR-10135-1] c 09 N79-21083
- Metric half-span model support system  
[NASA-CASE-LAR-12441-1] c 09 N82-23254
- Airfoil flutter model suspension system  
[NASA-CASE-LAR-13522-1-SB] c 09 N87-25334
- Probe insertion apparatus with inflatable seal  
[NASA-CASE-LEW-14965-1] c 37 N91-13732
- Electro-optical spin measurement system  
[NASA-CASE-LAR-13629-1] c 09 N91-14356
- Wind tunnel balance  
[NASA-CASE-ARC-11877-1-SB] c 09 N91-14357
- Multiple axis reticle  
[NASA-CASE-ARC-11886-1-SB] c 35 N91-14591
- Pitot-pressure probe for measuring pressure in a hypersonic wind tunnel  
[NASA-CASE-LAR-14232-1] c 09 N92-34213
- Nozzle diffuser for use with an open test section of a wind tunnel  
[NASA-CASE-LAR-14424-1-SB] c 09 N93-25996
- WIND TUNNEL CALIBRATION**
- Rotary target V-block  
[NASA-CASE-LAR-12007-3] c 35 N84-16523

## WIND TUNNEL DRIVES

- Electric arc driven wind tunnel Patent  
[NASA-CASE-XMF-00411] c 11 N70-36913
- WIND TUNNEL MODELS**  
Flow field simulation Patent  
[NASA-CASE-LAR-11138] c 12 N71-20436  
Multilegged support system Patent  
[NASA-CASE-XLA-01326] c 11 N71-21481  
Model launcher for wind tunnels Patent  
[NASA-CASE-XNP-03578] c 11 N71-23030  
Wind tunnel model damper Patent  
[NASA-CASE-XLA-09480] c 11 N71-33612  
Wind tunnel model and method  
[NASA-CASE-LAR-10812-1] c 09 N74-17955  
Method for determining thermo-physical properties of specimens --- photographic recording of changes in thin film phase-change temperature indicating material in wind tunnel  
[NASA-CASE-LAR-11053-1] c 25 N74-18551  
Metric half-span model support system  
[NASA-CASE-LAR-12441-1] c 09 N82-23254  
Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12458-1] c 44 N83-21503  
Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12720-1] c 44 N83-21504  
Model mount system for testing flutter  
[NASA-CASE-LAR-12950-1] c 09 N84-34448  
Airfoil flutter model suspension system  
[NASA-CASE-LAR-13522-1-SB] c 09 N87-25334  
Wind tunnel balance  
[NASA-CASE-ARC-11877-1-SB] c 09 N91-14357  
Multiple axis reticle  
[NASA-CASE-ARC-11886-1-SB] c 35 N91-14591  
Improved ceramic slip casting technique --- application to aircraft model fabrication  
[NASA-CASE-LAR-14471-1] c 27 N93-20041
- WIND TUNNEL NOZZLES**  
Multi-purpose wind tunnel reaction control model block  
[NASA-CASE-MSC-19706-1] c 09 N78-31129  
Wind tunnel supplementary Mach number minimum section insert  
[NASA-CASE-LAR-12532-1] c 09 N82-11088  
Improved method and apparatus for Mach number change in wind tunnel  
[NASA-CASE-LAR-13548-1] c 09 N91-28175
- WIND TUNNEL TESTS**  
Metallic hot wire anemometer --- for high speed wind tunnel tests  
[NASA-CASE-ARC-10911-1] c 35 N77-20400  
Multi-purpose wind tunnel reaction control model block  
[NASA-CASE-MSC-19706-1] c 09 N78-31129  
Metric half-span model support system  
[NASA-CASE-LAR-12441-1] c 09 N82-23254  
Miniature remote dead weight calibrator  
[NASA-CASE-LAR-13564-1] c 35 N87-25558  
Device for quick changeover between wind tunnel force and pressure testing  
[NASA-CASE-LAR-13512-1] c 35 N87-28884  
Dual strain gage balance system for measuring light loads  
[NASA-CASE-LAR-14419-1] c 35 N92-10185  
Thermal remote anemometer system  
[NASA-CASE-LAR-13508-1] c 35 N92-21710  
Method of remotely characterizing thermal properties of a sample  
[NASA-CASE-LAR-13508-3-CU] c 09 N93-11057
- WIND TUNNEL WALLS**  
Sound shield  
[NASA-CASE-LAR-12883-1] c 71 N83-17235
- WIND TUNNELS**  
Thin film gauge --- for measuring convective heat transfer rates along test surfaces in wind tunnels  
[NASA-CASE-NPO-10617-1] c 35 N74-22095  
Wind tunnel flow generation section  
[NASA-CASE-ARC-10710-1] c 09 N75-12969  
Apparatus for reducing aerodynamic noise in a wind tunnel  
[NASA-CASE-MFS-23099-1] c 09 N76-23273  
Static pressure orifice system testing method and apparatus  
[NASA-CASE-LAR-12269-1] c 35 N80-18358  
Wind tunnel balance  
[NASA-CASE-ARC-11877-1-SB] c 09 N91-14357  
Improved method and apparatus for Mach number change in wind tunnel  
[NASA-CASE-LAR-13548-1] c 09 N91-28175  
Nozzle diffuser for use with an open test section of a wind tunnel  
[NASA-CASE-LAR-14424-1-SB] c 09 N93-25996
- WIND TURBINES**  
Amplified wind turbine apparatus  
[NASA-CASE-MFS-23830-1] c 44 N82-24639  
Wind and solar powered turbine  
[NASA-CASE-NPO-15496-1] c 44 N84-23018

## WIND VELOCITY

- Radionuclide counting technique for measuring wind velocity and direction  
[NASA-CASE-LAR-12971-1] c 47 N84-28292
- Aircraft liftmeter  
[NASA-CASE-LAR-12518-1] c 06 N86-27280
- WIND VELOCITY MEASUREMENT**  
Wind velocity probing device and method Patent  
[NASA-CASE-XLA-02081] c 20 N71-16281
- Aircraft liftmeter  
[NASA-CASE-LAR-12518-1] c 06 N86-27280
- WINDING**  
Conically shaped cavity radiometer with a dual purpose cone winding Patent  
[NASA-CASE-XNP-09701] c 14 N71-26475  
Pulse coupling circuit  
[NASA-CASE-LEW-10433-1] c 09 N72-22197  
Counter-balanced, multiple cable construction crane  
[NASA-CASE-LAR-14565-1-CU] c 37 N92-34212
- WINDMILLS (WINDPOWERED MACHINES)**  
Electrical power generating system --- for windpowered generation  
[NASA-CASE-MFS-24368-3] c 33 N81-22280  
Vertical shaft windmill  
[NASA-CASE-LAR-12923-1] c 37 N84-12493  
Coupling an induction motor type generator to ac power lines --- making windmill generators compatible with public power lines  
[NASA-CASE-MFS-25302-2] c 33 N84-33660  
Cable suspended windmill  
[NASA-CASE-LAR-13434-1] c 37 N90-23742
- WINDOWS (APERTURES)**  
Active microwave irises and windows  
[NASA-CASE-LAR-10513-1] c 07 N72-25170  
Observation window for a gas confining chamber  
[NASA-CASE-NPO-10890] c 11 N73-12265  
Light transmitting window assembly  
[NASA-CASE-MSC-18417-1] c 74 N85-29750  
Double window viewing chamber assembly  
[NASA-CASE-MFS-28057-1] c 09 N87-14355
- WINDPOWER UTILIZATION**  
Amplified wind turbine apparatus  
[NASA-CASE-MFS-23830-1] c 44 N82-24639  
Wind and solar powered turbine  
[NASA-CASE-NPO-15496-1] c 44 N84-23018
- WINDPOWERED GENERATORS**  
Wind wheel electric power generator  
[NASA-CASE-MFS-23515-1] c 44 N80-21828  
Electrical power generating system --- for windpowered generation  
[NASA-CASE-MFS-24368-3] c 33 N81-22280
- WINDSHIELDS**  
Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c 27 N76-16230
- WING CAMBER**  
Slotted variable camber flap  
[NASA-CASE-LAR-12541-1] c 05 N84-22551
- WING FLAPS**  
Jet aircraft configuration Patent  
[NASA-CASE-XLA-00087] c 02 N70-33332  
Slotted variable camber flap  
[NASA-CASE-LAR-12541-1] c 05 N84-22551
- WING PANELS**  
Underwing compression vortex attenuation device  
[NASA-CASE-LAR-14744-1] c 02 N93-19053
- WING PROFILES**  
Variable-span aircraft Patent  
[NASA-CASE-XLA-00166] c 02 N70-34178  
Annular wing  
[NASA-CASE-FRC-11007-2] c 05 N82-26277
- WING ROOTS**  
Solar powered aircraft  
[NASA-CASE-LAR-12615-1] c 05 N84-12154
- WING SLOTS**  
Slotted variable camber flap  
[NASA-CASE-LAR-12541-1] c 05 N84-22551
- WING TIP VORTICES**  
Wingtip vortex dissipator for aircraft  
[NASA-CASE-LAR-11645-1] c 02 N77-10001
- WING TIPS**  
Smoke generator  
[NASA-CASE-ARC-10905-1] c 37 N77-13418  
Wingtip vortex propeller  
[NASA-CASE-LAR-13019-1] c 07 N85-35194  
Wingtip vortex turbine  
[NASA-CASE-LAR-14116-1] c 05 N91-14345
- WINGS**  
Ferry system  
[NASA-CASE-LAR-10574-1] c 11 N73-13257  
Surface finishing --- for aircraft wings  
[NASA-CASE-MSC-12631-1] c 24 N77-28225  
Free wing assembly for an aircraft  
[NASA-CASE-FRC-10092-1] c 05 N79-12061

- Detection of the transitional layer between laminar and turbulent flow areas on a wing surface --- using an accelerometer to measure pressure levels during wind tunnel tests  
[NASA-CASE-LAR-12261-1] c 02 N80-20224  
System for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations  
[NASA-CASE-FRC-11024-1] c 02 N80-28300  
Means for controlling aerodynamically induced twist  
[NASA-CASE-LAR-12175-1] c 05 N82-28279  
Decoupler pylon: wing/store flutter suppressor  
[NASA-CASE-LAR-12468-1] c 08 N82-32373  
Piezoelectric deicing device  
[NASA-CASE-LEW-13773-2] c 33 N86-20671  
Remote pivot decoupler pylon: Wing/store flutter suppressor  
[NASA-CASE-LAR-13173-1] c 05 N87-14314
- WIRE**  
Transpiration cooled turbine blade manufactured from wires Patent  
[NASA-CASE-XLE-00020] c 15 N70-33226  
Soldering device Patent  
[NASA-CASE-XLA-08911] c 15 N71-27214  
Forming tool for ribbon or wire  
[NASA-CASE-XLA-05966] c 15 N72-12408  
Method of removing insulated material from insulated wires  
[NASA-CASE-FRC-10038] c 15 N72-20444  
Shielded flat cable  
[NASA-CASE-MFS-13687-2] c 09 N72-22198  
Butt welder for fine gauge tungsten/rhenium thermocouple wire  
[NASA-CASE-LAR-10103-1] c 15 N73-14468  
Method of fabricating a twisted composite superconductor  
[NASA-CASE-LEW-11015] c 26 N73-32571  
Joining lead wires to thin platinum alloy films  
[NASA-CASE-LEW-13934-1] c 35 N83-35338  
Apparatus for disintegrating kidney stones  
[NASA-CASE-GSC-12652-1] c 52 N84-34913  
Method of forming low cost, formable High T(sub c) superconducting wire  
[NASA-CASE-LEW-14676-2] c 76 N90-17454  
Internal wire guide for GTAW welding  
[NASA-CASE-MFS-29489-1] c 31 N90-23586  
Electrode carrying wire for GTAW welding  
[NASA-CASE-MFS-29491-1] c 31 N90-26168  
Low cost, formable, high T(sub c) superconducting wire  
[NASA-CASE-LEW-14676-1] c 33 N91-31529  
Permanent wire splicing by an explosive joining process  
[NASA-CASE-LAR-13825-1] c 31 N92-16162  
Coupling device with improved thermal interface  
[NASA-CASE-GSC-13251-1] c 37 N92-29120  
Flexible heating head for induction heating apparatus and method  
[NASA-CASE-LAR-14418-1] c 32 N92-31257  
Device for removing foreign objects from anatomic organs  
[NASA-CASE-GSC-13306-1] c 52 N92-33032  
Welding wire pressure sensor assembly  
[NASA-CASE-MFS-26216-1] c 37 N93-28951
- WIRE BRIDGE CIRCUITS**  
Cavity radiometer Patent  
[NASA-CASE-XNP-08961] c 14 N71-24809
- WIRE CLOTH**  
Insulating structure Patent  
[NASA-CASE-XMF-00341] c 15 N70-33323  
Method of making screen by casting Patent  
[NASA-CASE-XLE-00953] c 15 N71-15966
- WIRE WINDING**  
Adjustable tension wire guide Patent  
[NASA-CASE-XMS-02383] c 15 N71-15918  
Superconducting alternator Patent  
[NASA-CASE-XLE-02823] c 09 N71-23443  
Electric motive machine including magnetic bearing  
[NASA-CASE-XGS-07805] c 15 N72-33476  
Laser measuring system for incremental assemblies --- measuring wire-wrapped frame assemblies in spark chambers  
[NASA-CASE-GSC-12321-1] c 36 N82-16396  
Improved high power/high frequency inductor  
[NASA-CASE-NPO-17830-1-CU] c 33 N91-14539
- WIRELESS COMMUNICATION**  
Silent emergency alarm system for schools and the like  
[NASA-CASE-NPO-11307-1] c 10 N73-30205  
RF beam center location method and apparatus for power transmission system  
[NASA-CASE-NPO-13821-1] c 44 N78-28594
- WIRING**  
Apparatus for testing wiring harness by vibration generating means  
[NASA-CASE-MSC-15158-1] c 14 N72-17325

## SUBJECT INDEX

- Test apparatus for locating shorts during assembly of electrical buses  
[NASA-CASE-ARC-11116-1] c 33 N82-24420
- Phase sensitive guidance sensor for wire-following vehicles  
[NASA-CASE-NPO-15341-1] c 35 N84-33769
- WOOD**  
Method of radiographic inspection of wooden members  
[NASA-CASE-LAR-13724-1] c 38 N90-23756
- WOODEN STRUCTURES**  
Structural wood panels with improved fire resistance  
[NASA-CASE-ARC-11174-1] c 24 N81-13999
- WORDS (LANGUAGE)**  
Minimal logic block encoder Patent  
[NASA-CASE-NPO-10595] c 10 N71-25917  
Parallel generation of the check bits of a PN sequence Patent  
[NASA-CASE-XNP-04623] c 10 N71-26103  
Digital memory in which the driving of each word location is controlled by a switch core Patent  
[NASA-CASE-XNP-01466] c 10 N71-26434
- WORK HARDENING**  
Method of producing complex aluminum alloy parts of high temper, and products thereof  
[NASA-CASE-MSC-19693-1] c 26 N78-24333
- WORK-REST CYCLE**  
Bright light delivery system  
[NASA-CASE-MFS-28723-1] c 52 N93-17058
- WORKING FLUIDS**  
Heat pipe with dual working fluids  
[NASA-CASE-ARC-10198] c 34 N78-17336  
Thermochemical generation of hydrogen  
[NASA-CASE-NPO-15015-1] c 25 N82-28368  
Heat pipes containing alkali metal working fluid  
[NASA-CASE-LEW-12253-1] c 74 N83-19596  
Ceramic heat pipe wick  
[NASA-CASE-GSC-13199-1] c 27 N90-23541  
Heat tube device  
[NASA-CASE-KSC-11395-1-CU] c 34 N91-21473  
System and method for cancelling expansion waves in a wave rotor  
[NASA-CASE-LEW-15218-1] c 34 N93-11172
- WORKSTATIONS**  
Reconfigurable work station for a video display unit and keyboard  
[NASA-CASE-MFS-26009-1-SB] c 54 N88-24163  
Dynamic resource allocation scheme for distributed heterogeneous computer systems  
[NASA-CASE-NPO-17197-1-CU] c 62 N91-25693  
Passive zero-gravity leg restraint  
[NASA-CASE-ARC-11882-1-CU] c 54 N93-14713
- WOVEN COMPOSITES**  
Method and apparatus for weaving a woven angle ply fabric  
[NASA-CASE-LAR-14048-1] c 31 N93-29611
- WRENCHES**  
Methods and apparatus employing vibratory energy for wrenching Patent  
[NASA-CASE-MFS-20586] c 15 N71-17686  
System for enhancing tool-exchange capabilities of a portable wrench  
[NASA-CASE-MFS-22283-1] c 37 N75-33395  
Zero torque gear head wrench  
[NASA-CASE-NPO-13059-1] c 37 N76-20480  
High-torque open-end wrench  
[NASA-CASE-NPO-13541-1] c 37 N79-14383
- WRIST**  
Wrist joint assembly  
[NASA-CASE-MFS-23311-1] c 54 N78-17676

## X

- X RAY ABSORPTION**  
Medical clip  
[NASA-CASE-LAR-12650-1] c 52 N84-28388
- X RAY ANALYSIS**  
Water window imaging x ray microscope  
[NASA-CASE-MFS-28485-1] c 35 N92-29135
- X RAY APPARATUS**  
Device and method for determining X ray reflection efficiency of optical surfaces  
[NASA-CASE-MFS-20243] c 23 N73-13662  
X-ray position detector  
[NASA-CASE-NPO-12087-1] c 74 N81-19898  
X-ray monochromator  
[NASA-CASE-MFS-28492-1] c 74 N93-14711
- X RAY DIFFRACTION**  
Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction  
[NASA-CASE-MFS-23315-1] c 76 N78-24950
- X RAY FLUORESCENCE**  
X ray sensitive area detection device  
[NASA-CASE-MFS-28232-1] c 74 N91-14835

## X RAY IMAGERY

- Low intensity X-ray and gamma-ray imaging device --- fiber optics  
[NASA-CASE-GSC-12263-1] c 74 N79-20857  
Real-time 3-D X-ray and gamma-ray viewer  
[NASA-CASE-GSC-12640-1] c 74 N84-11920  
Method of fabricating an imaging X-ray spectrometer  
[NASA-CASE-GSC-12956-1] c 35 N87-14671  
X ray sensitive area detection device  
[NASA-CASE-MFS-28232-1] c 74 N91-14835  
Digital data registration and differencing compression system  
[NASA-CASE-SSC-00010-2] c 82 N92-23550
- X RAY INSPECTION**  
Method of determining bond quality of power transistors attached to substrates --- X ray inspection of junction microstructure  
[NASA-CASE-MFS-21931-1] c 37 N75-26372  
Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction  
[NASA-CASE-MFS-23315-1] c 76 N78-24950  
X-ray determination of parts alignment  
[NASA-CASE-MSC-20418-1] c 74 N86-20126
- X RAY IRRADIATION**  
Multiple environment materials test chamber having a multiple port X-ray tube for irradiating a plurality of samples Patent  
[NASA-CASE-XMS-02930] c 11 N71-23042
- X RAY SOURCES**  
Imaging X-ray spectrometer  
[NASA-CASE-GSC-12682-1] c 35 N84-33765
- X RAY SPECTROSCOPY**  
Low intensity X-ray and gamma-ray spectrometer  
[NASA-CASE-GSC-12587-1] c 35 N82-32659  
Imaging X-ray spectrometer  
[NASA-CASE-GSC-12682-1] c 35 N84-33765  
Method of fabricating an imaging X-ray spectrometer  
[NASA-CASE-GSC-12956-1] c 35 N87-14671
- X RAY TELESCOPES**  
X-ray reflection collimator adapted to focus X-radiation directly on a detector Patent  
[NASA-CASE-XHQ-04106] c 14 N70-40240  
Three mirror glancing incidence system for X-ray telescope  
[NASA-CASE-MFS-21372-1] c 74 N74-27866  
Method of and means for testing a glancing-incidence mirror system of an X-ray telescope  
[NASA-CASE-MFS-22409-2] c 74 N78-15880  
Extended range X-ray telescope  
[NASA-CASE-MFS-25282-1] c 34 N83-19015  
Spectral slicing X-ray telescope with variable magnification  
[NASA-CASE-MFS-25942-1] c 74 N86-20124  
Multispectral glancing incidence X-ray telescope  
[NASA-CASE-MFS-28013-1] c 89 N86-22459  
Variable magnification variable dispersion glancing incidence imaging x ray spectroscopic telescope  
[NASA-CASE-MFS-28013-3] c 89 N90-27594  
Variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-2] c 89 N91-14096  
Multispectral variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-4] c 89 N92-33012
- X RAYS**  
Support structure for irradiated elements Patent  
[NASA-CASE-XNP-06031] c 15 N71-15606  
Selective image area control of X-ray film exposure density  
[NASA-CASE-NPO-13808-1] c 35 N78-15461  
Three-dimensional and tomographic imaging device for X-ray and gamma-ray emitting objects  
[NASA-CASE-GSC-12851-1] c 35 N85-30281  
Variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-2] c 89 N91-14096  
Digital data registration and differencing compression system  
[NASA-CASE-SSC-00010-1] c 82 N91-23976  
Water window imaging x ray microscope  
[NASA-CASE-MFS-28485-1] c 35 N92-29135
- X-Y PLOTTERS**  
Contour surveying system Patent  
[NASA-CASE-XLA-08646] c 14 N71-17586  
Particle parameter analyzing system --- x-y plotter circuits and display  
[NASA-CASE-XLE-06094] c 33 N78-17293
- X-15 AIRCRAFT**  
Energy management system for glider type vehicle Patent  
[NASA-CASE-XFR-00756] c 02 N71-13421
- XENON**  
Double photon excitation of high-Rydberg atoms as a long-lived submillimeter detector  
[NASA-CASE-NPO-16372-1] c 72 N86-33127

## ZINC COMPOUNDS

## XENON LAMPS

- Optical pump and driver system for lasers  
[NASA-CASE-ERC-10283] c 16 N72-25485  
Purging means and method for Xenon arc lamps  
[NASA-CASE-NPO-11978] c 31 N78-17238  
Multiple anode arc lamp system  
[NASA-CASE-NPO-10857-1] c 33 N80-14330

## Y

## YAG LASERS

- Dually mode locked Nd:YAG laser  
[NASA-CASE-GSC-11746-1] c 36 N75-19654  
Length controlled stabilized mode-lock Nd:YAG laser  
[NASA-CASE-GSC-11571-1] c 36 N77-25499

## YAGI ANTENNAS

- Planar microstrip YAGI antenna array  
[NASA-CASE-NPO-17873-2-CU] c 32 N93-29507

## YARNS

- Flexible pile thermal barrier insulator  
[NASA-CASE-MSC-19568-1] c 34 N78-25350  
Lightweight electrically-powered flexible thermal laminate --- made of metal and nonconductive yarns  
[NASA-CASE-MSC-12662-1] c 33 N79-12331  
Integral fill yarn insertion and beatup method using inflatable membrane  
[NASA-CASE-LAR-14046-1] c 31 N93-18857

## YAW

- Three-axis controller Patent  
[NASA-CASE-XAC-01404] c 05 N70-41581  
Thrust augmented spin recovery device  
[NASA-CASE-LAR-11970-2] c 08 N81-19130  
Actuated forebody strakes  
[NASA-CASE-LAR-13983-1] c 05 N90-23390  
Helicopter low-speed yaw control  
[NASA-CASE-LAR-14219-1] c 08 N93-25998

## YBCO SUPERCONDUCTORS

- Process for applying a superconductive powder to a wide variety of substrates  
[NASA-CASE-LAR-14729-1-CU] c 33 N93-19051

## YIELD STRENGTH

- High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c 26 N80-32484

## YLF LASERS

- Tm:Ho:YLF laser end-pumped by a semiconductor diode laser array  
[NASA-CASE-NPO-17282-1-CU] c 36 N91-15528

## YO-YO DEVICES

- Stretch de-spin mechanism Patent  
[NASA-CASE-XGS-00619] c 30 N70-40016

## YOKES

- Preloadable vector sensitive latch  
[NASA-CASE-MSC-20910-1] c 37 N87-25582

## YTTERBIUM

- Thermal barrier coating system  
[NASA-CASE-LEW-14057-1] c 24 N85-35233

## YTTRIUM COMPOUNDS

- Composite thermal barrier coating  
[NASA-CASE-LEW-14999-1] c 24 N92-21725

## YTTRIUM OXIDES

- An improved SNS superconducting junction with weak link barrier and method of producing  
[NASA-CASE-NPO-18552-1-CU] c 33 N92-24246

## Z

## ZEOLITES

- Filter system for control of outgas contamination in vacuum Patent  
[NASA-CASE-MFS-14711] c 15 N71-26185  
Regenerative Cu/La zeolite supported desulfurizing sorbents  
[NASA-CASE-NPO-17480-1-CU] c 25 N92-10073

## ZINC

- Potassium silicate zinc coatings  
[NASA-CASE-GSC-10361-1] c 18 N72-23581  
Rechargeable battery which combats shape change of the zinc anode  
[NASA-CASE-HQN-10862-1] c 44 N76-29699

## ZINC COMPOUNDS

- Method of changing the conductivity of vapor deposited gallium arsenide by the introduction of water into the vapor deposition atmosphere Patent  
[NASA-CASE-XNP-01961] c 26 N71-29156  
Synthesis of zinc titanate pigment and coatings containing the same  
[NASA-CASE-MFS-13532] c 18 N72-17532  
Brazing alloy  
[NASA-CASE-XNP-03878] c 26 N75-27127  
Zinc-halide battery with molten electrolyte  
[NASA-CASE-NPO-11961-1] c 44 N76-18643  
Method of preparing zinc orthotitanate pigment  
[NASA-CASE-MFS-23345-1] c 27 N77-30237

## ZINC OXIDES

## SUBJECT INDEX

### ZINC OXIDES

Stabilized zinc oxide coating compositions Patent

[NASA-CASE-XMF-07770-2] c 18 N71-26772

Method of forming transparent films of ZnO

[NASA-CASE-FRC-10019] c 15 N73-12487

### ZIRCONIUM

Zirconium modified nickel-copper alloy

[NASA-CASE-LEW-12245-1] c 26 N77-20201

Nical ternary alloy having improved cyclic oxidation resistance

[NASA-CASE-LEW-13339-1] c 26 N82-31505

Thermal barrier coating system

[NASA-CASE-LEW-14057-1] c 24 N85-35233

Nickel base coating alloy

[NASA-CASE-LEW-13834-1] c 26 N87-14482

### ZIRCONIUM CARBIDES

Zirconium carbide as an electrocatalyst for the chromous-chromic redox couple

[NASA-CASE-LEW-13246-1] c 44 N83-27344

### ZIRCONIUM COMPOUNDS

High temperature refractory member with radiation emissive overcoat

[NASA-CASE-NPO-17122-1-CU] c 27 N91-14489

### ZIRCONIUM OXIDES

Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide

[NASA-CASE-GSC-11577-1] c 37 N75-15992

Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide

[NASA-CASE-GSC-11577-3] c 24 N79-25143

Metallic seal for thermal barrier coating systems

[NASA-CASE-LEW-15020-1] c 27 N91-15412

Composite thermal barrier coating

[NASA-CASE-LEW-14999-1] c 24 N92-21725

Guanidine based vehicle/binders for use with oxides, metals, and ceramics

[NASA-CASE-LEW-15314-1] c 27 N92-23461

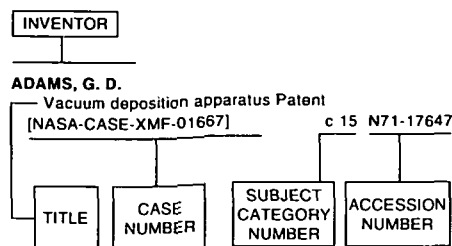
### ZONE MELTING

Method of making single crystal fibers

[NASA-CASE-LEW-14921-1] c 24 N91-13502

NASA PATENT ABSTRACTS BIBLIOGRAPHY  
Section 2

## Typical Inventor Index Listing



Listings in this index are arranged alphabetically by inventor. The title of the document provides the user with a brief description of the subject matter. The case number is the prime access point to patent documents. The subject category number indicates the category in Section 1 (Abstracts) in which the citation is located. The accession number denotes the number by which the citation is identified within the subject category. The titles are arranged under each inventor in ascending accession number order.

## A

## AARON, JAMES

Low-noise nozzle valve  
[NASA-CASE-MFS-28383-1] c 34 N91-14563

## ABBOTT, TERENCE S.

Method and system for monitoring and displaying engine performance parameters  
[NASA-CASE-LAR-14049-1] c 07 N89-23466

## ABEDIN, M. N.

Method and apparatus for evaluating multilayer objects for imperfections  
[NASA-CASE-LAR-14581-1-SB] c 38 N93-12204

## ABEL, I. R.

Optical instruments  
[NASA-CASE-MSC-14096-1] c 74 N74-15095

## ABERNATHY, W. J.

Insert facing tool  
[NASA-CASE-MFS-21485-1] c 37 N74-25968

## ABHYANKAR, K. D.

Interferometer-polarimeter  
[NASA-CASE-NPO-11239] c 14 N73-12446

## ABRAMS, EVE M.

Device for applying constant pressure to a surface  
[NASA-CASE-GSC-12320-1] c 37 N92-28754

## ABSHIRE, J. B.

Polarization compensator for optical communications  
[NASA-CASE-GSC-11782-1] c 74 N76-30053

Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-1] c 36 N81-22344

Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-2] c 36 N83-29681

Optical distance measuring instrument  
[NASA-CASE-GSC-12761-1] c 74 N86-32266

## ACHAR, B. N.

Metal phthalocyanine polymers  
[NASA-CASE-ARC-11405-1] c 27 N84-27884

Phthalocyanine polymers  
[NASA-CASE-ARC-11413-1] c 27 N85-21348

Metal (2,4,4',4'') phthalocyanine tetraamines as curing agents for epoxy resins  
[NASA-CASE-ARC-11424-1] c 27 N85-34281

Metal phthalocyanine intermediates for the preparation of polymers  
[NASA-CASE-ARC-11405-2] c 27 N86-19455

## ACHAR, BAPPALIGE N.

Process for preparing phthalocyanine polymer from imide containing bisphthalonitrile  
[NASA-CASE-ARC-11511-2] c 27 N87-21112

## ACORD, J. D.

Photosensitive device to detect bearing deviation Patent  
[NASA-CASE-XNP-00438] c 21 N70-35089

Space vehicle attitude control Patent  
[NASA-CASE-XNP-00465] c 21 N70-35395

Attitude control for spacecraft Patent  
[NASA-CASE-XNP-02982] c 31 N70-41855

Anti-backlash circuit for hydraulic drive system Patent  
[NASA-CASE-XNP-01020] c 03 N71-12260

Solar vane actuator Patent  
[NASA-CASE-XNP-05535] c 14 N71-23040

## ACRES, WILLIAM R.

Preloadable vector sensitive latch  
[NASA-CASE-MSC-20910-1] c 37 N87-25582

## ACUNA, M. H.

Two axis fluxgate magnetometer Patent  
[NASA-CASE-GSC-10441-1] c 14 N71-27325

Controllable high voltage source having fast settling time  
[NASA-CASE-GSC-11844-1] c 33 N75-19522

## ADACHI, R. R.

Programmable physiological infusion  
[NASA-CASE-ARC-10447-1] c 52 N74-22771

## ADAMOVSKY, GRIGORY

Fiber optic sensing system  
[NASA-CASE-LEW-14795-1] c 74 N91-21871

## ADAMS, C. M., JR.

Pretreatment method for anti-wettable materials  
[NASA-CASE-XMS-03537] c 15 N69-21471

## ADAMS, G. D.

Vacuum deposition apparatus Patent  
[NASA-CASE-XMF-01667] c 15 N71-17647

Evaporant source for vapor deposition Patent  
[NASA-CASE-XMF-06065] c 15 N71-20395

## ADAMS, R. R.

Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12463-1] c 35 N83-21311

## ADAMS, W. A.

High stability amplifier  
[NASA-CASE-GSC-12646-1] c 33 N83-34191

High stability buffered phase comparator  
[NASA-CASE-GSC-12645-1] c 33 N84-16454

## ADAMSON, A. P.

Impact absorbing blade mounts for variable pitch blades  
[NASA-CASE-LEW-12313-1] c 37 N78-10468

Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c 07 N78-17055

Gas turbine engine with convertible accessories  
[NASA-CASE-LEW-12390-1] c 07 N78-17056

Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-2] c 07 N78-18066

Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c 07 N78-25089

Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-3] c 07 N79-14096

## ADAMSON, M. J.

Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c 27 N74-21156

Electrical conductivity cell and method for fabricating the same  
[NASA-CASE-ARC-10810-1] c 33 N76-19339

Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c 27 N76-32315

## AGARWAL, AVAL K.

Method of measuring cross-flow vortices by use of an array of hot-film sensors  
[NASA-CASE-LAR-14824-1-SB] c 34 N93-26000

## AGRAWAL, A. K.

Multicomputer communication system  
[NASA-CASE-NPO-15433-1] c 32 N85-21428

## AHL, E. L., JR.

Latching mechanism for deployable/re-stowable columns useful in satellite construction  
[NASA-CASE-LAR-13169-1] c 37 N86-25791

## AHL, ELVIN L.

Antenna surface contour control system  
[NASA-CASE-LAR-13798-1] c 32 N89-25363

## AHMED, SHAFFIQ

Solidification processing of alloys using an applied electric field  
[NASA-CASE-MFS-26083-1-CU] c 26 N90-26940

## AIRTH, H. B., JR.

Regulated power supply Patent  
[NASA-CASE-XMS-01991] c 09 N71-21449

## AISENBERG, S.

Doppler shift system  
[NASA-CASE-HQN-10740-1] c 72 N74-19310

## AJELLO, J. M.

High resolution threshold photoelectron spectroscopy by electron attachment  
[NASA-CASE-NPO-14078-1] c 72 N80-14877

## AJIOKA, J. S.

High efficiency multifrequency feed  
[NASA-CASE-GSC-11909] c 32 N74-20863

## AKAWIE, R. I.

Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids  
[NASA-CASE-MFS-22411-1] c 37 N74-21058

## AKKERMAN, J. W.

Reciprocating engines  
[NASA-CASE-MSC-16239-1] c 37 N81-32510

Automatic compression adjusting mechanism for internal combustion engines  
[NASA-CASE-MSC-18807-1] c 37 N83-36483

## ALADZHADZHYAN, SAMUEL H.

Generation of intense negative ion beams  
[NASA-CASE-NPO-16061-1-CU] c 72 N87-21660

## ALAHUZOS, GEORGE

Hazardous materials emergency response mobile robot  
[NASA-CASE-NPO-18690-1-CU] c 37 N92-34205

## ALARIO, J. P.

Monogroove heat pipe design: Insulated liquid channel with bridging wick  
[NASA-CASE-MSC-20497-1] c 34 N85-29180

Multi-leg heat pipe evaporator  
[NASA-CASE-MSC-20812-1] c 34 N86-27593

## ALBRECHT, W. P.

Fifth wheel  
[NASA-CASE-FRC-10081-1] c 37 N77-14477

## ALBRIGHT, C. F.

Water management system and an electrolytic cell therefor Patent  
[NASA-CASE-MSC-10960-1] c 03 N71-24718

Process for separation of dissolved hydrogen from water by use of palladium and process for coating palladium with palladium black  
[NASA-CASE-MSC-13335-1] c 06 N72-31140

## ALBUS, J. S.

Light sensitive digital aspect sensor Patent  
[NASA-CASE-XGS-00359] c 14 N70-34158

System and method for tracking a signal source  
[NASA-CASE-HQN-10880-1] c 17 N78-17140

## ALCORN, G. E.

Imaging X-ray spectrometer  
[NASA-CASE-GSC-12682-1] c 35 N84-33765

GaAs Schottky barrier photo-responsive device and method of fabrication  
[NASA-CASE-GSC-12816-1] c 76 N86-20150

Method of fabricating an imaging X-ray spectrometer  
[NASA-CASE-GSC-12956-1] c 35 N87-14671

## ALDERFER, DAVID W.

Off-surface infrared flow visualization  
[NASA-CASE-LAR-14568-1] c 74 N93-22037

## ALDRICH, B. R.

Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332] c 05 N72-20097

Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332-2] c 05 N73-25125

General purpose rocket furnace  
[NASA-CASE-MFS-23460-1] c 12 N79-26075

High gradient directional solidification furnace  
[NASA-CASE-MFS-25963-1] c 35 N86-20750

## ALESNA, R. E.

Flexible joint for pressurizable garment  
[NASA-CASE-MSC-11072] c 54 N74-32546



- ALEXANDER, P., JR.**  
Disconnect unit  
[NASA-CASE-NPO-11330] c 33 N73-26958
- ALFORD, W. J., JR.**  
Variable sweep wing configuration Patent  
[NASA-CASE-XLA-00230] c 02 N70-33255
- ALGER, D. L.**  
Deuterium pass through target  
[NASA-CASE-LEW-11866-1] c 72 N76-15860  
Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c 37 N78-13436  
Closed loop spray cooling apparatus  
[NASA-CASE-LEW-11981-1] c 31 N78-17237  
Closed loop spray cooling apparatus  
[NASA-CASE-LEW-11981-2] c 34 N79-20336
- ALLCOCK, H. R.**  
Process for the preparation of polycarbonylphosphazenes  
[NASA-CASE-ARC-11176-2] c 27 N81-27271  
Carboranylchlorophosphazenes and their polymers  
[NASA-CASE-ARC-11176-1] c 27 N82-18389  
Carboranymethylene-substituted phosphazenes and polymers thereof  
[NASA-CASE-ARC-11370-1] c 27 N84-22750
- ALLEN, EARL R.**  
Active synthetic soil  
[NASA-CASE-MSC-21954-1-NP] c 51 N93-19054
- ALLEN, G. V.**  
Electric welding torch Patent  
[NASA-CASE-XMF-02330] c 15 N71-23798
- ALLEN, H., JR.**  
Apparatus for igniting solid propellants Patent  
[NASA-CASE-XLE-00207] c 28 N70-33375  
Method of igniting solid propellants Patent  
[NASA-CASE-XLE-01988] c 27 N71-15634
- ALLEN, J. G., JR.**  
Lunar landing flight research vehicle Patent  
[NASA-CASE-XFR-00929] c 31 N70-34966
- ALLEN, J. H., SR.**  
Apparatus for machining geometric cones Patent  
[NASA-CASE-XMS-04292] c 15 N71-22722
- ALLEN, J. L.**  
Gravity enhanced acoustic levitation method and apparatus  
[NASA-CASE-NPO-16147-1-CU] c 71 N85-29693  
Noncontact temperature pattern measuring device  
[NASA-CASE-NPO-17024-1-CU] c 35 N88-24943
- ALLEN, JAMES L.**  
Single mode levitation and translation  
[NASA-CASE-NPO-16675-1-CU] c 71 N88-24241  
Acoustic controlled rotation and orientation  
[NASA-CASE-NPO-16995-1-CU] c 71 N90-12289  
Noncontact temperature pattern measuring device  
[NASA-CASE-NPO-17824-1-CU] c 36 N90-17132
- ALLEN, JANICE K.**  
Wet atmospheric generation apparatus  
[NASA-CASE-MFS-28177-1] c 35 N91-21496
- ALLEN, L. D.**  
Method of improving heat transfer characteristics in a nucleate boiling process Patent  
[NASA-CASE-XMS-04268] c 33 N71-16277
- ALLEN, L. H.**  
Method and apparatus for aligning a laser beam projector Patent  
[NASA-CASE-NPO-11087] c 23 N71-29125
- ALLEN, MARGARET A.**  
Emergency egress fixed rocket package  
[NASA-CASE-MSC-21332-1] c 03 N91-15142
- ALLEN, R. W.**  
Ceramic insulation for radiant heating environments and method of preparing the same Patent  
[NASA-CASE-MFS-14253] c 33 N71-24858
- ALLEN, W. K.**  
Time division multiplex system  
[NASA-CASE-XGS-05918] c 07 N69-39974  
Serrodyne frequency converter re-entrant amplifier system Patent  
[NASA-CASE-XGS-01022] c 07 N71-16088  
Traffic control system and method Patent  
[NASA-CASE-GSC-10087-1] c 02 N71-19287  
Satellite interface synchronization system  
[NASA-CASE-GSC-10390-1] c 07 N72-11149  
Doppler compensation by shifting transmitted object frequency within limits  
[NASA-CASE-GSC-10087-4] c 07 N73-20174
- ALLEN, W. W.**  
Analog-to-digital converter analyzing system  
[NASA-CASE-NPO-10560] c 08 N72-22166
- ALLEY, V. L., JR.**  
Amplifying ribbon extensometer  
[NASA-CASE-LAR-11825-1] c 35 N77-22449  
Nozzle extraction process and handmeter for measuring handle  
[NASA-CASE-LAR-12147-1] c 31 N79-11246
- ALLGEIER, R. K., JR.**  
Metal valve pintle with encapsulated elastomeric body Patent  
[NASA-CASE-MSC-12116-1] c 15 N71-17648
- ALLISON, SIDNEY G.**  
Magneto acoustic emission apparatus for testing materials for embrittlement  
[NASA-CASE-LAR-13817-1] c 26 N90-21170  
Method and apparatus for using magneto-acoustic remanence to determine embrittlement  
[NASA-CASE-LAR-13817-5] c 39 N92-28757  
Magnetic remanence method and apparatus to test materials for embrittlement  
[NASA-CASE-LAR-13817-4] c 39 N92-29101  
Magneto acoustic emission method for testing materials for embrittlement  
[NASA-CASE-LAR-13817-2] c 39 N92-29155  
Method of recertifying a loaded bearing member  
[NASA-CASE-LAR-14168-1] c 39 N92-34174
- ALLRED, JOHNNY W.**  
Single acting translation/rotational brake  
[NASA-CASE-LAR-14738-1] c 37 N93-29175
- ALLTON, CHARLES S.**  
Hatch cover  
[NASA-CASE-MSC-21356-1] c 18 N90-19278
- ALPER, M. E.**  
Automated multi-level vehicle parking system  
[NASA-CASE-NPO-13058-1] c 37 N77-22480
- ALSTON, WILLIAM B.**  
Substituted 1,1,1-Triaryl-2,2,2-Trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-1] c 23 N88-26404  
New Condensation polyimides containing 1,1,1-triaryl-2,2,2-trifluoroethane structures  
[NASA-CASE-LEW-14346-1] c 23 N90-19300  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-2] c 25 N90-23497  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-3] c 23 N91-17141  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-4] c 23 N91-25185  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-6] c 23 N92-17882  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-7] c 23 N93-17412
- ALTER, WENDY SUE**  
Directional solidification of superalloys  
[NASA-CASE-MFS-28314-1] c 26 N91-14462
- ALTMAN, R. L.**  
Synthesis of dawsonites  
[NASA-CASE-ARC-11326-1] c 25 N83-33977  
Fire extinguishant materials  
[NASA-CASE-ARC-11252-1] c 25 N83-36118
- ALTSHULER, T. L.**  
Orifice gross leak tester Patent  
[NASA-CASE-ERC-10150] c 14 N71-28992
- AMBRUSO, A.**  
Gas operated actuator  
[NASA-CASE-NPO-11340] c 15 N72-33477
- AMEER, G. A.**  
Telespectrograph Patent  
[NASA-CASE-XLA-03273] c 14 N71-18699
- AMON, M.**  
Ritchey-Chretien Telescope  
[NASA-CASE-GSC-11487-1] c 14 N73-30393
- ANACKER, K.**  
Forming tool for ribbon or wire  
[NASA-CASE-XLA-05966] c 15 N72-12408
- ANAGNOSTOU, E.**  
Method of making encapsulated solar cell modules  
[NASA-CASE-LEW-12185-1] c 44 N78-25528
- ANDERS, JOHN B.**  
Combined riblet and lebu drag reduction system  
[NASA-CASE-LAR-13286-1] c 02 N88-14071
- ANDERSON, ALMA G., JR.**  
Dual mode laser velocimeter  
[NASA-CASE-ARC-11634-1] c 36 N88-14350
- ANDERSON, CHARLES H.**  
Near real-time stereo vision system  
[NASA-CASE-NPO-18593-1-CU] c 74 N93-18276
- ANDERSON, D. L.**  
Static inverters which sum a plurality of waves Patent  
[NASA-CASE-XMF-00663] c 08 N71-18752
- ANDERSON, F. A.**  
Solid propellant rocket motor  
[NASA-CASE-XNP-03282] c 28 N72-20758  
High performance ammonium nitrate propellant  
[NASA-CASE-NPO-14260-1] c 28 N79-28342
- ANDERSON, G. D.**  
Phase detector assembly Patent  
[NASA-CASE-XMF-00701] c 09 N70-40272
- ANDERSON, G. E.**  
Flexible pile thermal barrier insulator  
[NASA-CASE-MSC-19568-1] c 34 N78-25350  
Fluid leak indicator  
[NASA-CASE-MSC-20783-1] c 35 N86-20756
- ANDERSON, J. R.**  
Method for removing oxygen impurities from cesium Patent  
[NASA-CASE-XNP-04262-2] c 17 N71-26773
- ANDERSON, J. W.**  
Edge coating of flat wires  
[NASA-CASE-XMF-05757-1] c 31 N79-21227
- ANDERSON, K. F.**  
Pulsed excitation voltage circuit for transducers  
[NASA-CASE-FRC-10036] c 09 N72-22200
- ANDERSON, L. M.**  
Inelastic tunnel diodes  
[NASA-CASE-LEW-13833-1] c 33 N85-21492  
Solar energy converter using surface plasma waves  
[NASA-CASE-LEW-13827-1] c 44 N85-21768
- ANDERSON, R. A.**  
Sandwich panel construction Patent  
[NASA-CASE-XLA-00349] c 33 N70-37979
- ANDERSON, R. E.**  
Automatic transponder  
[NASA-CASE-GSC-12075-1] c 32 N77-31350
- ANDERSON, R. F.**  
Piezoelectric pump Patent  
[NASA-CASE-XNP-05429] c 26 N71-21824
- ANDERSON, T. O.**  
Binary number sorter Patent  
[NASA-CASE-NPO-10112] c 08 N71-12502  
Ranging system Patent  
[NASA-CASE-NPO-10066] c 09 N71-18598  
Data compression processor Patent  
[NASA-CASE-NPO-10068] c 08 N71-19288  
Data compressor Patent  
[NASA-CASE-XNP-04067] c 08 N71-22707  
Error correcting method and apparatus Patent  
[NASA-CASE-XNP-02748] c 08 N71-22749  
Comparator for the comparison of two binary numbers Patent  
[NASA-CASE-XNP-04819] c 08 N71-23295  
Digital synchronizer Patent  
[NASA-CASE-NPO-10851] c 07 N71-24613  
Decoder system Patent  
[NASA-CASE-NPO-10118] c 07 N71-24741  
Parallel generation of the check bits of a PN sequence Patent  
[NASA-CASE-XNP-04623] c 10 N71-26103  
Rapid sync acquisition system Patent  
[NASA-CASE-NPO-10214] c 10 N71-26577  
Digital filter for reducing sampling jitter in digital control systems Patent  
[NASA-CASE-NPO-11088] c 08 N71-29034  
Encoder/decoder system for a rapidly synchronizable binary code Patent  
[NASA-CASE-NPO-10342] c 10 N71-33407  
Modular encoder  
[NASA-CASE-NPO-10629] c 08 N72-18184  
Transition tracking bit synchronization system  
[NASA-CASE-NPO-10844] c 07 N72-20140  
Digital quasi-exponential function generator  
[NASA-CASE-NPO-11130] c 08 N72-20176  
MOD 2 sequential function generator for multibit binary sequence  
[NASA-CASE-NPO-10636] c 08 N72-25210  
Digital slope threshold data compressor  
[NASA-CASE-NPO-11630] c 08 N72-33172  
Asynchronous, multiplexing, single line transmission and recovery data system  
[NASA-CASE-NPO-13321-1] c 32 N75-26195  
Multi-computer multiple data path hardware exchange system  
[NASA-CASE-NPO-13422-1] c 60 N76-14818  
Computer interface system  
[NASA-CASE-NPO-13428-1] c 60 N77-12721  
High-speed multiplexing of keyboard data inputs  
[NASA-CASE-NPO-14554-1] c 60 N81-27814  
Control means for a solid state crossbar switch  
[NASA-CASE-NPO-15066-1] c 33 N82-29538
- ANDERSON, W. J.**  
Method of improving the reliability of a rolling element system Patent  
[NASA-CASE-XLE-02999] c 15 N71-16052  
High speed rolling element bearing  
[NASA-CASE-LEW-10856-1] c 15 N72-22490  
High speed hybrid bearing comprising a fluid bearing and a rolling bearing convected in series  
[NASA-CASE-LEW-11152-1] c 15 N73-32359  
Thrust bearing  
[NASA-CASE-LEW-11949-1] c 37 N76-29588
- ANDERSON, W. W.**  
Annular momentum control device used for stabilization of space vehicles and the like  
[NASA-CASE-LAR-11051-1] c 15 N76-14158

- Magnetic suspension and pointing system  
[NASA-CASE-LAR-11889-2] c 37 N78-27424
- Magnetic suspension and pointing system  
[NASA-CASE-LAR-11889-1] c 35 N79-26372
- Rim inertial measuring system  
[NASA-CASE-LAR-12052-1] c 18 N81-29152
- ANDERSON, W. W., JR.**  
Compensating radiometer  
[NASA-CASE-XLA-04556] c 14 N69-27484
- Semi-linear ball bearing Patent  
[NASA-CASE-XLA-02809] c 15 N71-22982
- ANDREWS, D. G.**  
Slotted variable camber flap  
[NASA-CASE-LAR-12541-1] c 05 N84-22551
- ANDREWS, E. H., JR.**  
Method of obtaining permanent record of surface flow phenomena Patent  
[NASA-CASE-XLA-01353] c 14 N70-41366
- ANDREWS, R. E.**  
Inverter ratio failure detector  
[NASA-CASE-NPO-13160-1] c 35 N74-18090
- ANDREWS, T. W.**  
Adjustable support  
[NASA-CASE-NPO-10721] c 15 N72-27484
- System and method for moving a probe to follow movements of tissue  
[NASA-CASE-NPO-15197-1] c 52 N83-25346
- ANGELE, W.**  
Electrical connector for flat cables Patent  
[NASA-CASE-XMF-00324] c 09 N70-34596
- Instrument support with precise lateral adjustment Patent  
[NASA-CASE-XMF-00480] c 14 N70-39898
- Support apparatus for dynamic testing Patent  
[NASA-CASE-XMF-01772] c 11 N70-41677
- Method of making a molded connector Patent  
[NASA-CASE-XMF-03498] c 15 N71-15986
- Method of making shielded flat cable Patent  
[NASA-CASE-MFS-13687] c 09 N71-28691
- Shielded flat cable  
[NASA-CASE-MFS-13687-2] c 09 N72-22198
- Electrical connector  
[NASA-CASE-MFS-20757] c 09 N72-28225
- Cryogenic gyroscope housing  
[NASA-CASE-MFS-21136-1] c 35 N74-18323
- ANGULO, E. D.**  
Apparatus for disintegrating kidney stones  
[NASA-CASE-GSC-12652-1] c 52 N84-34913
- ANGULO, EARL D.**  
Device for removing foreign objects from anatomic organs  
[NASA-CASE-GSC-13306-1] c 52 N92-33032
- ANGULO, E. D.**  
Cutting head for ultrasonic lithotripsy  
[NASA-CASE-GSC-12944-1] c 52 N86-19885
- ANICICH, V. G.**  
Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c 72 N80-27163
- ANSELMO, V. J.**  
Medical diagnosis system and method with multispectral imaging  
[NASA-CASE-NPO-14402-1] c 52 N81-27783
- AOYAGI, KIYOSHI**  
High performance forward swept wing aircraft  
[NASA-CASE-ARC-11636-1] c 05 N88-28914
- APPEL, M. A.**  
Propellant tank pressurization system Patent  
[NASA-CASE-XNP-00650] c 27 N71-28929
- APPLEBERRY, W. T.**  
Device for measuring tensile forces  
[NASA-CASE-MFS-21728-1] c 35 N74-27865
- Device for use in loading tension members  
[NASA-CASE-MFS-21488-1] c 14 N75-24794
- Mechanical sequencer  
[NASA-CASE-MSC-19536-1] c 37 N77-22482
- Load regulating latch  
[NASA-CASE-MSC-19535-1] c 37 N77-32499
- Sequencing device utilizing planetary gear set  
[NASA-CASE-MSC-19514-1] c 37 N79-20377
- APPLER, R. L.**  
Method for generating ultra-precise angles Patent  
[NASA-CASE-XGS-04173] c 19 N71-26674
- APPLETON, M. W.**  
Omnidirectional slot antenna for mounting on cylindrical space vehicle  
[NASA-CASE-LAR-10163-1] c 09 N72-25247
- ARCAND, G. M.**  
Method for determining the state of charge of batteries by the use of tracers Patent  
[NASA-CASE-XNP-01464] c 03 N71-10728
- ARCELLA, F. G.**  
Method of forming a wick for a heat pipe  
[NASA-CASE-NPO-13391-1] c 34 N76-27515
- Bimetallic junctions  
[NASA-CASE-LEW-11573-1] c 26 N77-28265
- ARENS, W. E.**  
Charge-coupled device data processor for an airborne imaging radar system  
[NASA-CASE-NPO-13587-1] c 32 N77-32342
- Azimuth correlator for real-time synthetic aperture radar image processing  
[NASA-CASE-NPO-14019-1] c 32 N79-14268
- ARGOUD, M. J.**  
Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c 74 N77-28933
- Protective telescoping shield for solar concentrator  
[NASA-CASE-NPO-16236-1] c 44 N86-27706
- ARIAS, A.**  
Apparatus for positioning and loading a test specimen Patent  
[NASA-CASE-XLE-01300] c 15 N70-41993
- Thermal shock apparatus Patent  
[NASA-CASE-XLE-02024] c 14 N71-22964
- Production of metal powders  
[NASA-CASE-XLE-06461] c 17 N72-22530
- Method for producing dispersion strengthened alloys by converting metal to a halide, comminuting, reducing the metal halide to the metal and sintering  
[NASA-CASE-LEW-10450-1] c 15 N72-25448
- Apparatus for producing metal powders  
[NASA-CASE-XLE-06461-2] c 17 N72-28535
- ARLINE, S. B.**  
Flow diverter valve and flow diversion method  
[NASA-CASE-HQN-00573-1] c 37 N79-33468
- ARMSTRONG, H. T.**  
Coupling for linear shaped charge Patent  
[NASA-CASE-XLA-00189] c 33 N70-36846
- ARNDT, G. D.**  
System for improving signal-to-noise ratio of a communication signal Patent Application  
[NASA-CASE-MSC-12259-1] c 07 N70-12616
- System for improving signal-to-noise ratio of a communication signal  
[NASA-CASE-MSC-12259-2] c 07 N72-33146
- ARONS, I. J.**  
Heat resistant protective hand covering  
[NASA-CASE-MSC-20261-2] c 54 N84-23113
- Heat resistant protective hand covering  
[NASA-CASE-MSC-20261-1] c 54 N84-28484
- ARRANCE, F. C.**  
Method of making membranes  
[NASA-CASE-XNP-04264] c 03 N69-21337
- ASHBROOK, R. L.**  
High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-00726] c 17 N71-15644
- High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-02991] c 17 N71-16025
- High temperature ferromagnetic cobalt-base alloy Patent  
[NASA-CASE-XLE-03629] c 17 N71-23248
- Method of forming superalloys  
[NASA-CASE-LEW-10805-1] c 15 N73-13465
- Method of heat treating a formed powder product material  
[NASA-CASE-LEW-10805-3] c 26 N74-10521
- Method of forming articles of manufacture from superalloy powders  
[NASA-CASE-LEW-10805-2] c 37 N74-13179
- ASHBY, GEORGE C., JR.**  
Pressure measuring probe  
[NASA-CASE-LAR-13853-1] c 35 N89-14423
- Pilot-pressure probe for measuring pressure in a hypersonic wind tunnel  
[NASA-CASE-LAR-14232-1] c 09 N92-34213
- ASHWORTH, B. R.**  
Apparatus for applying simulator g-forces to an arm of an aircraft simulator pilot  
[NASA-CASE-LAR-10550-1] c 09 N74-30597
- Seat cushion to provide realistic acceleration cues to aircraft simulator pilot  
[NASA-CASE-LAR-12149-2] c 09 N79-31228
- Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c 54 N81-27806
- ASKINS, B. S.**  
Method of obtaining intensified image from developed photographic films and plates  
[NASA-CASE-MFS-23461-1] c 35 N79-10389
- ASTHEIMER, R. W.**  
Multi-lobar scan horizon sensor Patent  
[NASA-CASE-XGS-00809] c 21 N70-35427
- ASTON, G.**  
Ion beam accelerator system  
[NASA-CASE-NPO-15547-1] c 72 N84-16959
- Hollow cathode apparatus  
[NASA-CASE-NPO-15560-1] c 33 N85-21491
- ATKISSON, E. A.**  
Apparatus having coaxial capacitor structure for measuring fluid density Patent  
[NASA-CASE-XLE-00143] c 14 N70-36618
- ATTIA, ALAN I.**  
Overcharge and overdischarge protection of ambient temperature secondary lithium cells  
[NASA-CASE-NPO-18343-1-CU] c 33 N93-11456
- Anode for rechargeable ambient temperature lithium cells  
[NASA-CASE-NPO-18580-1-CU] c 33 N93-17278
- AUBLE, C. M.**  
Instrument for the quantitative measurement of radiation at multiple wave lengths Patent  
[NASA-CASE-XLE-00011] c 14 N70-41946
- AUER, S. O.**  
Cosmic dust or other similar outer space particles impact location detector  
[NASA-CASE-GSC-11291-1] c 25 N72-33696
- Micrometeoroid analyzer  
[NASA-CASE-ARC-10443-1] c 14 N73-20477
- Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c 35 N75-27331
- Micrometeoroid velocity and trajectory analyzer  
[NASA-CASE-GSC-11892-1] c 35 N76-15433
- Moving particle composition analyzer  
[NASA-CASE-GSC-11889-1] c 35 N76-16393
- Remote sensing of vegetation and soil using microwave ellipsometry  
[NASA-CASE-GSC-11976-1] c 43 N78-10529
- AUGASON, GORDON C.**  
Method and apparatus for making an optical element having a dielectric film  
[NASA-CASE-ARC-11611-1] c 74 N87-28416
- AUKER, B. H.**  
Refractory porcelain enamel passive control coating for high temperature alloys  
[NASA-CASE-MFS-22324-1] c 27 N75-27160
- AUSTIN, I. G.**  
Water separator  
[NASA-CASE-XMS-01295-1] c 37 N79-21345
- AUSTIN, W. E.**  
Compton scatter attenuation gamma ray spectrometer  
[NASA-CASE-MFS-21441-1] c 14 N73-30392
- AUYEUNG, J.**  
Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629
- AVENI, GLENN**  
Acoustic positioning and orientation prediction  
[NASA-CASE-NPO-17511-1-CU] c 71 N91-14807
- AVERRILL, R. D.**  
Vibration isolation and pressure compensation apparatus for sensitive instrumentation  
[NASA-CASE-LAR-12728-1] c 35 N83-32026
- AVIZIENIS, A. A.**  
Self-testing and repairing computer Patent  
[NASA-CASE-NPO-10567] c 08 N71-24633
- AYLWARD, J. R.**  
Cell and method for electrolysis of water and anode  
[NASA-CASE-MSC-16394-1] c 28 N81-24280
- AYVAZIAN, R. A.**  
Laminar flow enhancement Patent  
[NASA-CASE-NPO-10122] c 12 N71-17631
- Propellant mass distribution metering apparatus Patent  
[NASA-CASE-NPO-10185] c 10 N71-26339

## B

- BAALS, ROBERT A.**  
Calibration apparatus for recess mounted pressure transducers  
[NASA-CASE-LAR-14724-1] c 35 N92-30030
- BABA, P. D.**  
Method for making conductors for ferrite memory arrays  
[NASA-CASE-LAR-10994-1] c 24 N75-13032
- BABB, B. D.**  
Method and apparatus for cryogenic wire stripping Patent  
[NASA-CASE-MFS-10340] c 15 N71-17628
- Self-balancing strain gage transducer Patent  
[NASA-CASE-MFS-12827] c 14 N71-17656
- BABCOCK, STEPHEN G.**  
Welding monitoring system  
[NASA-CASE-MFS-29177-1] c 37 N88-14362
- BABECKI, A. J.**  
Peen plating  
[NASA-CASE-GSC-11163-1] c 15 N73-32360
- BACCHI, R.**  
Valve actuator Patent  
[NASA-CASE-XHQ-01208] c 15 N70-35409
- BACHLE, W. H.**  
Mechanically extendible telescoping boom  
[NASA-CASE-NPO-11118] c 03 N72-25021

**BACHTEL, FREDERICK D.**

Spacecraft component heater control system  
[NASA-CASE-MFS-28327-1] c 18 N89-28556

**BACK, LLOYD**

Acoustic device and method for measuring gas densities  
[NASA-CASE-NPO-18155-1-CU] c 71 N93-13421

**BACKES, PAUL G.**

Telerobot control system  
[NASA-CASE-NPO-18116-1-CU] c 37 N91-32509  
A generalized compliant motion primitive  
[NASA-CASE-NPO-18134-1-CU] c 37 N91-32510  
Extended task space control for robotic manipulators  
[NASA-CASE-NPO-18902-1-CU] c 37 N93-28129  
Dual arm generalized compliant motion with shared control  
[NASA-CASE-NPO-18738-1-CU] c 37 N93-28954

**BACON, J. F.**

Glass compositions with a high modulus of elasticity  
[NASA-CASE-HQN-10274-1] c 27 N82-29451  
High modulus invert analog glass compositions containing beryllia  
[NASA-CASE-HQN-10931-2] c 27 N82-29452  
Non-toxic invert analog glass compositions of high modulus  
[NASA-CASE-HQN-10328-2] c 27 N82-29454  
High modulus rare earth and beryllium containing silicate glass compositions  
[NASA-CASE-HQN-10595-1] c 27 N82-29455

**BADIN, F. E.**

Space simulation and radiative property testing system and method Patent  
[NASA-CASE-MFS-20096] c 14 N71-30026

**BAEHR, E. F.**

Channel-type shell construction for rocket engines and the like Patent  
[NASA-CASE-XLE-00144] c 28 N70-34860  
Rocket thrust chamber Patent  
[NASA-CASE-XLE-00145] c 28 N70-36806  
Method of making a regeneratively cooled combustion chamber Patent  
[NASA-CASE-XLE-00150] c 28 N70-41818  
Method of making a rocket motor casing Patent  
[NASA-CASE-XLE-00409] c 28 N71-15658  
Rocket motor casing Patent  
[NASA-CASE-XLE-05689] c 28 N71-15659  
Ophthalmic liquification pump  
[NASA-CASE-LEW-12051-1] c 52 N75-33640  
Corneal seal device  
[NASA-CASE-LEW-12258-1] c 52 N77-28716  
Tissue macerating instrument  
[NASA-CASE-LEW-12668-1] c 52 N78-14773  
Flow compensating pressure regulator  
[NASA-CASE-LEW-12718-1] c 34 N78-25351  
Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12955-1] c 52 N80-14684

**BAER, D. A.**

Synchronous orbit battery cyclor  
[NASA-CASE-GSC-11211-1] c 03 N72-25020

**BAFFES, PAUL**

System and method for a general purpose architecture for intelligent computer-aided training  
[NASA-CASE-MSC-21381-1] c 63 N91-13944

**BAFFES, PAUL THOMAS**

Method of up-front load balancing for local memory parallel processors  
[NASA-CASE-MSC-21348-1] c 62 N91-14769

**BAGANOFF, D.**

Means for controlling rupture of shock tube diaphragms Patent  
[NASA-CASE-XAC-00731] c 11 N71-15960

**BAGBY, J. J.**

Thermally operated valve Patent  
[NASA-CASE-XLE-00815] c 15 N70-35407

**BAHMAN, H.**

Self-erecting reflector Patent  
[NASA-CASE-XGS-09190] c 31 N71-16102  
Belt for transmitting power from a cogged driving member to a cogged driven member  
[NASA-CASE-GSC-12289-1] c 37 N80-32717  
Unidirectional flexural pivot  
[NASA-CASE-GSC-12622-1] c 37 N84-12492

**BAHM, E. J.**

A dc servosystem including an ac motor Patent  
[NASA-CASE-NPO-10700] c 07 N71-33613

**BAHREN, JACOB**

Fast temporal neural learning using teacher forcing  
[NASA-CASE-NPO-18553-1-CU] c 63 N92-30085

**BAILEY, C. L., JR.**

Solid state controller three axes controller  
[NASA-CASE-MSC-12394-1] c 08 N74-10942

**BAILEY, D. A.**

Adaptive control system for line-commutated inverters  
[NASA-CASE-MFS-25209-1] c 33 N83-35227

**BAILEY, F. J., JR.**

Airplane take-off performance indicator Patent  
[NASA-CASE-XLA-00100] c 14 N70-36807

**BAILEY, G. A.**

Magnetic matrix memory system Patent  
[NASA-CASE-XMF-05835] c 08 N71-12504

**BAILEY, G. C.**

Integrating IR detector imaging systems  
[NASA-CASE-NPO-15805-1] c 74 N84-28590

**BAILEY, J. W.**

Bi-polar phase detector and corrector for split phase PCM data signals Patent  
[NASA-CASE-XGS-01590] c 07 N71-12392  
Radio frequency coaxial high pass filter Patent  
[NASA-CASE-XGS-01418] c 09 N71-23573  
Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c 01 N83-35992

**BAILEY, JAMES W.**

Tool and process for miniature explosive joining of tubes  
[NASA-CASE-LAR-13662-1] c 37 N88-14359  
Ignitability test method and apparatus  
[NASA-CASE-LAR-13996-1-SB] c 25 N90-15161  
Ignitability test method and apparatus  
[NASA-CASE-LAR-14454-1] c 25 N91-32196

**BAILEY, M. C.**

Stacked array of omnidirectional antennas  
[NASA-CASE-LAR-10545-1] c 09 N72-21244

**BAILEY, R. L.**

Apparatus and method for protecting a photographic device Patent  
[NASA-CASE-NPO-10174] c 14 N71-18465  
Solid propellant rocket motor nozzle  
[NASA-CASE-NPO-11458] c 28 N72-23810  
Electromagnetic wave energy converter  
[NASA-CASE-GSC-11394-1] c 09 N73-32109

**BAIR, CLAYTON H.**

Birefringent filter design  
[NASA-CASE-LAR-13887-1] c 36 N92-16290

**BAKER, C. D.**

Coating process  
[NASA-CASE-XNP-06508] c 18 N69-39895  
Electrical spot terminal assembly Patent  
[NASA-CASE-NPO-10034] c 15 N71-17685  
Electrical connector  
[NASA-CASE-NPO-10694] c 09 N72-20200  
Pressure transducer  
[NASA-CASE-NPO-10832] c 14 N72-21405

**BAKER, DONALD A.**

Passive fetal monitoring sensor  
[NASA-CASE-LAR-14088-1-CU] c 35 N92-33016

**BAKER, E. H.**

Centrifuge mounted motion simulator Patent  
[NASA-CASE-XAC-00399] c 11 N70-34815

**BAKER, G. J.**

Air speed and attitude probe  
[NASA-CASE-FRC-11009-1] c 06 N80-18036

**BAKER, J. T.**

Logic-controlled occlusive cuff system  
[NASA-CASE-MSC-14836-1] c 52 N82-11770

**BAKER, KARL W.**

Solar thermal energy receiver  
[NASA-CASE-LEW-14949-1] c 44 N92-29143

**BAKER, M. E.**

Omnidirectional joint Patent  
[NASA-CASE-XMS-09635] c 05 N71-24623

**BAKER, R. L.**

Bidirectional step torque filter with zero backlash characteristic Patent  
[NASA-CASE-XGS-04227] c 15 N71-21744

**BAKER, V. D.**

Vapor pressure measuring system and method Patent  
[NASA-CASE-XMS-01618] c 14 N71-20741

**BAKSTON, B.**

Apparatus for the determination of the existence or non-existence of a bonding between two members Patent  
[NASA-CASE-MFS-13686] c 15 N71-18132

**BALDWIN, L. V.**

Particle beam measurement apparatus using beam kinetic energy to change the heat sensitive resistance of the detection probe Patent  
[NASA-CASE-XLE-00243] c 14 N70-38602

Apparatus for increasing ion engine beam density Patent  
[NASA-CASE-XLE-00519] c 28 N70-41576

**BALES, T. T.**

Controlled glass bead peening Patent  
[NASA-CASE-XLA-07390] c 15 N71-18616  
Metal matrix composite structural panel construction  
[NASA-CASE-LAR-12807-1] c 24 N84-11214  
Curved cap corrugated sheet  
[NASA-CASE-LAR-12884-1] c 18 N84-33450

**BALLANTINE, T. J.**

A method and technique for installing light-weight fragile, high-temperature fiber insulation  
[NASA-CASE-MSC-18934-3] c 24 N82-26387

**BALLARD, R. R.**

Two-axis controller Patent  
[NASA-CASE-XFR-04104] c 03 N70-42073

**BALLENTINE, F. M., JR.**

Foam generator Patent  
[NASA-CASE-XLA-00838] c 03 N70-36778

**BALLOU, E. V.**

Process for the preparation of calcium superoxide  
[NASA-CASE-ARC-11053-1] c 25 N79-10162  
Use of glow discharge in fluidized beds  
[NASA-CASE-LAR-11245-1] c 28 N82-18401

**BAMFORD, R. M.**

Elastic universal joint Patent  
[NASA-CASE-XNP-00416] c 15 N70-36947  
Sealed separable connection Patent  
[NASA-CASE-NPO-10064] c 15 N71-17693

**BANDINI, U.**

Out of tolerance warning alarm system for plurality of monitored circuits Patent  
[NASA-CASE-XMS-10984-1] c 10 N71-19417

**BANDYOPADHYAY, PROMODE R.**

Reflection type skin friction meter  
[NASA-CASE-LAR-14520-1-SB] c 02 N93-18275

**BANK, H.**

Gas diffusion liquid storage bag and method of use for storing blood  
[NASA-CASE-NPO-13930-1] c 52 N79-14749

**BANKS, A.**

Apparatus for producing oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-2] c 27 N86-32569

**BANKS, B. A.**

Ion beam deflector Patent  
[NASA-CASE-LEW-10689-1] c 28 N71-26173  
Ion thruster accelerator system Patent  
[NASA-CASE-LEW-10106-1] c 28 N71-26642  
Process for glass coating an ion accelerator grid Patent  
[NASA-CASE-LEW-10278-1] c 15 N71-28582  
Ion thruster magnetic field control  
[NASA-CASE-LEW-10835-1] c 28 N72-22771  
Electromagnetic flow rate meter  
[NASA-CASE-LEW-10981-1] c 35 N74-21018  
Sputtering holes with ion beamlets  
[NASA-CASE-LEW-11646-1] c 20 N74-31269  
Method of making dished ion thruster grids  
[NASA-CASE-LEW-11694-1] c 20 N75-18310  
Apparatus for forming dished ion thruster grids  
[NASA-CASE-LEW-11694-2] c 37 N76-14461  
Method of constructing dished ion thruster grids to provide hole array spacing compensation  
[NASA-CASE-LEW-11876-1] c 20 N76-21276  
Anode for ion thruster  
[NASA-CASE-LEW-12048-1] c 20 N77-20162  
Texturing polymer surfaces by transfer casting  
[NASA-CASE-LEW-13120-1] c 27 N82-28440  
Surface texturing of fluoropolymers  
[NASA-CASE-LEW-13028-1] c 27 N82-33521  
Mechanical bonding of metal method  
[NASA-CASE-LEW-12941-1] c 26 N83-10170  
Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-1] c 52 N83-21785  
Diamondlike flake composites  
[NASA-CASE-LEW-13837-1] c 24 N84-22695  
Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095  
Deposition of diamondlike carbon films  
[NASA-CASE-LEW-14080-1] c 31 N85-20153  
Diamondlike flakes  
[NASA-CASE-LEW-13837-2] c 24 N85-21267  
Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-1] c 27 N86-19458  
Piezoelectric deicing device  
[NASA-CASE-LEW-13773-2] c 33 N86-20671  
Method and apparatus for producing a thermal atomic oxygen beam  
[NASA-CASE-LEW-15614-1] c 72 N93-19026

**BANKS, BRUCE A.**

Ion beam sputter etching  
[NASA-CASE-LEW-13899-1] c 31 N87-21160  
Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N87-23736  
Heat transfer device and method of making the same  
[NASA-CASE-LEW-14162-1] c 34 N91-13668  
Arc-textured high emittance radiator surfaces  
[NASA-CASE-LEW-14679-1] c 27 N91-25296  
Atomic oxygen protective coating with resistance to undercutting at defect sites  
[NASA-CASE-LEW-15306-1] c 27 N93-20566

- Heat transfer device  
[NASA-CASE-LEW-14162-4] c 24 N93-20568  
Method for retarding oxidation of an organic substrate  
[NASA-CASE-LEW-15306-2] c 27 N93-28425  
Semiconductor cooling apparatus  
[NASA-CASE-LEW-14162-3] c 24 N93-29614
- BANKS, DANIEL W.**  
Control and augmentation of passive porosity through transpiration control  
[NASA-CASE-LAR-14682-1] c 34 N92-30387
- BANKSTON, B. F.**  
Device for measuring the ferrite content in an austenitic stainless-steel weld  
[NASA-CASE-MFS-22907-1] c 26 N76-18257  
Two-dimensional scanner apparatus  
[NASA-CASE-MFS-25687-1] c 35 N84-22928  
Apparatus and method for inspecting a bearing ball  
[NASA-CASE-MFS-25833-1] c 35 N86-32698
- BANKSTON, C. PERRY**  
Metal chloride cathode for a battery  
[NASA-CASE-NPO-17809-1-CU] c 33 N91-27478
- BANKSTON, CLYDE P.**  
Organic cathode for a secondary battery  
[NASA-CASE-NPO-17604-1-CU] c 33 N91-14536  
Copper chloride cathode for a secondary battery  
[NASA-CASE-NPO-17640-1-CU] c 33 N91-14538
- BANSAL, N. P.**  
Sintering silicon nitride  
[NASA-CASE-LEW-15489-1] c 27 N93-17062  
Fiber-reinforced monoclinic celsian matrix composite material  
[NASA-CASE-LEW-15269-1] c 24 N93-20040  
Method of producing a ceramic fiber-reinforced glass-ceramic matrix composite  
[NASA-CASE-LEW-15264-2] c 24 N93-31299
- BANSAL, NAROTTAM**  
Silicon carbide fiber reinforced strontium aluminosilicate glass-ceramic matrix composite  
[NASA-CASE-LEW-15263-1] c 24 N93-11543
- BANSAL, NAROTTAM P.**  
Ceramic fiber reinforced glass-ceramic matrix composite  
[NASA-CASE-LEW-15262-1] c 24 N93-26100  
SiC fiber-reinforced Celsian glass-ceramic matrix composite  
[NASA-CASE-LEW-15264-1] c 24 N93-31293
- BANTA, R. D.**  
Positive contact resistance soldering unit  
[NASA-CASE-KSC-10242] c 15 N72-23497
- BARACK, W. N.**  
Redundant disc  
[NASA-CASE-LEW-12496-1] c 07 N78-33101
- BARAONA, C. R.**  
Screen printed interdigitated back contact solar cell  
[NASA-CASE-LEW-13414-1] c 44 N85-20530
- BARBER, J. B.**  
Laser grating interferometer Patent  
[NASA-CASE-XLA-04295] c 16 N71-24170
- BARBER, PATRICK G.**  
Apparatus and procedure to detect a liquid-solid interface during crystal growth in a bridgman furnace  
[NASA-CASE-LAR-13597-1-CU] c 25 N87-23713  
Procedure to prepare transparent silica gels  
[NASA-CASE-LAR-13476-1-CU] c 76 N87-29360
- BARBERA, A. J.**  
Use of unilluminated solar cells as shunt diodes for a solar array  
[NASA-CASE-GSC-10344-1] c 03 N72-27053
- BARD, STEVEN**  
Two stage sorption type cryogenic refrigerator including heat regeneration system  
[NASA-CASE-NPO-17630-1-CU] c 31 N89-29577  
Flexible thermal apparatus for mounting of thermoelectric cooler  
[NASA-CASE-NPO-17806-1-CU] c 31 N91-27385  
Multicomponent gas sorption Joule-Thomson refrigeration  
[NASA-CASE-NPO-17569-1-CU] c 31 N92-15203  
Ultra-high temperature stability Joule-Thomson cooler with capability to accommodate pressure variations  
[NASA-CASE-NPO-18184-1-CU] c 35 N92-29156  
Three-stage sorption type cryogenic refrigeration systems and methods employing heat regeneration  
[NASA-CASE-NPO-18366-1-CU] c 31 N93-13422
- BARGER, R. L.**  
Continuously operating induction plasma accelerator Patent  
[NASA-CASE-XLA-01354] c 25 N70-36946
- BARHEN, JACOB**  
Neural network training by integration of adjoint systems of equations forward in time  
[NASA-CASE-NPO-18586-1-CU] c 63 N93-17276
- BARISH, B.**  
Pulsed energy power system Patent  
[NASA-CASE-MSC-13112] c 03 N71-11057
- BARKER, P.**  
Vibrophonocardiograph Patent  
[NASA-CASE-XFR-07172] c 05 N71-27234
- BARMATZ, M. B.**  
Acoustic levitation methods and apparatus  
[NASA-CASE-NPO-15562-1] c 71 N82-27086  
Acoustic system for material transport  
[NASA-CASE-NPO-15453-1] c 71 N83-32515  
System for controlled acoustic rotation of objects  
[NASA-CASE-NPO-15522-1] c 71 N83-32516  
Acoustic agglomeration methods and apparatus  
[NASA-CASE-NPO-15466-1] c 71 N85-22104  
High temperature acoustic levitator  
[NASA-CASE-NPO-16022-1] c 71 N85-22105  
Gravity enhanced acoustic levitation method and apparatus  
[NASA-CASE-NPO-16147-1-CU] c 71 N85-29693  
Acoustic particle separation  
[NASA-CASE-NPO-15559-1] c 71 N85-30765  
Vibrating-chamber levitation systems  
[NASA-CASE-NPO-16142-1-CU] c 35 N86-20752
- BARMATZ, MARTIN B.**  
Single mode levitation and translation  
[NASA-CASE-NPO-16675-1-CU] c 71 N88-24241  
Stabilization and oscillation of an acoustically levitated object  
[NASA-CASE-NPO-16896-1-CU] c 71 N89-13236  
Controlled sample orientation and rotation in an acoustic levitator  
[NASA-CASE-NPO-17086-1-CU] c 35 N89-14422  
Acoustic controlled rotation and orientation  
[NASA-CASE-NPO-16995-1-CU] c 71 N90-12289  
Acoustic positioning and orientation prediction  
[NASA-CASE-NPO-17511-1-CU] c 71 N91-14807  
Motion measurement of acoustically levitated object  
[NASA-CASE-NPO-18191-1-CU] c 09 N93-24601
- BARNA, P. STEPHEN**  
Nozzle diffuser for use with an open test section of a wind tunnel  
[NASA-CASE-LAR-14424-1-SB] c 09 N93-25996
- BARNES, J. R.**  
Self-calibrating threshold detector  
[NASA-CASE-MSC-16370-1] c 35 N81-19427
- BARNES, NORMAN P.**  
Method and circuit for shaping laser output pulses  
[NASA-CASE-LAR-14203-1] c 36 N89-28817  
Method and circuit for controlling the evolution time interval of a laser output pulse  
[NASA-CASE-LAR-13772-1] c 36 N92-31788
- BARNES, P. E.**  
Cam-operated pitch-change apparatus  
[NASA-CASE-LEW-13050-1] c 07 N79-14095
- BARNES, SCOTT P.**  
Real-time data compression of broadcast video signals  
[NASA-CASE-LEW-14945-1] c 32 N91-13598  
Real-time data compression of broadcast video signals  
[NASA-CASE-LEW-14945-2] c 32 N92-10128
- BARNES, WAYNE L.**  
Orbital maneuvering end effectors  
[NASA-CASE-MFS-28161-1] c 37 N87-18817
- BARNETT, CLIFFORD J.**  
Payload deployment method and system  
[NASA-CASE-MSC-21330-1] c 16 N88-24660
- BARNETT, J. H., JR.**  
Life raft stabilizer  
[NASA-CASE-MSC-12393-1] c 02 N73-26006
- BARNETT, M. A.**  
Furlable antenna  
[NASA-CASE-NPO-13553-1] c 33 N76-32457
- BARNEY, RICHARD D.**  
Cryogenic shutter  
[NASA-CASE-GSC-13189-2] c 37 N92-29151
- BARNISKIS, W. A.**  
Bus voltage compensation circuit for controlling direct current motor  
[NASA-CASE-XMS-04215-1] c 09 N69-39987
- BARNIS, C. E.**  
High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c 15 N82-24272
- BARNIS, CHRIS E.**  
Multiple axis reticle  
[NASA-CASE-ARC-11886-1-SB] c 35 N91-14591
- BARR, T. A.**  
Thickness measurement system  
[NASA-CASE-MFS-23721-1] c 31 N79-28370
- BARRETT, C. A.**  
Nical ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LEW-13339-1] c 26 N82-31505  
Nickel base coating alloy  
[NASA-CASE-LEW-13834-1] c 26 N87-14482
- BARRETT, CHARLES A.**  
Castable hot corrosion resistant alloy  
[NASA-CASE-LEW-14134-2] c 26 N89-14303
- BARRETT, T. W.**  
Personal propulsion unit Patent  
[NASA-CASE-MFS-20130] c 28 N71-27585
- BARRINGTON, A. B.**  
Sorption vacuum trap Patent  
[NASA-CASE-XER-09519] c 14 N71-18483
- BARRINGTON, A. E.**  
Leak detector wherein a probe is monitored with ultraviolet radiation Patent  
[NASA-CASE-ERC-10034] c 15 N71-24896  
Field ionization electrodes Patent  
[NASA-CASE-ERC-10013] c 09 N71-26678  
Ion microprobe mass spectrometer for analyzing fluid materials Patent  
[NASA-CASE-ERC-10014] c 14 N71-28863  
Device for measuring light scattering wherein the measuring beam is successively reflected between a pair of parallel reflectors Patent  
[NASA-CASE-XER-11203] c 14 N71-28994
- BARTERA, R. E.**  
Indicator providing continuous indication of the presence of a specific pollutant in air  
[NASA-CASE-NPO-13474-1] c 45 N76-21742  
Arc control in compact arc lamps  
[NASA-CASE-NPO-10870-1] c 33 N77-22386  
Multiple anode arc lamp system  
[NASA-CASE-NPO-10857-1] c 33 N80-14330
- BARTHOLOME, D. E.**  
Space suit pressure stabilizer Patent  
[NASA-CASE-XLA-05332] c 05 N71-11194  
Equipotential space suit Patent  
[NASA-CASE-LAR-10007-1] c 05 N71-11195  
Therapeutic hand exerciser  
[NASA-CASE-LAR-11667-1] c 52 N76-19785  
Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c 32 N80-29539
- BARTMAN, RANDALL K.**  
Closed loop fiber optic rotation sensor  
[NASA-CASE-NPO-16558-1-CU] c 74 N87-23259
- BARZA, M. J.**  
Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c 51 N77-22794  
Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c 52 N79-14750
- BASHAM, BRYAN D.**  
Discrete event simulation tool for analysis of qualitative models of continuous processing systems  
[NASA-CASE-MSC-21465-1] c 61 N91-14741
- BASIULIS, A.**  
Method and apparatus for distillation of liquids Patent  
[NASA-CASE-XNP-08124] c 15 N71-27184  
Radial heat flux transformer  
[NASA-CASE-NPO-10828] c 33 N72-17948  
Method for distillation of liquids  
[NASA-CASE-XNP-08124-2] c 06 N73-13129
- BASIULIS, D. I.**  
High performance channel injection sealant invention abstract  
[NASA-CASE-ARC-14408-1] c 27 N82-33523
- BASS, A. M.**  
Ultraviolet resonance lamp Patent  
[NASA-CASE-ARC-10030] c 09 N71-12521  
Ultraviolet atomic emission detector  
[NASA-CASE-HQN-10756-1] c 14 N72-25428
- BASS, R. GERALD**  
Ethynyl terminated imidothioethers and resins therefrom  
[NASA-CASE-LAR-13910-2-CU] c 27 N91-31307
- BASS, ROBERT G.**  
Polyenamines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-1-CU] c 27 N87-22847  
Polyenamines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-2-CU] c 23 N89-12667  
Imide/arylene ether copolymers  
[NASA-CASE-LAR-14159-1-CU] c 27 N92-31792
- BASTIEN, G. J.**  
Fluid flow restrictor Patent  
[NASA-CASE-NPO-10117] c 15 N71-15608
- BATE, E. R., JR.**  
Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c 34 N74-27730
- BATES, H. E.**  
Segmenting lead telluride-silicon germanium thermoelements Patent  
[NASA-CASE-GSC-05718] c 26 N71-16037
- BATHKER, D. A.**  
Dual frequency microwave reflex feed  
[NASA-CASE-NPO-13091-1] c 09 N73-12214  
Antenna feed system for receiving circular polarization and transmitting linear polarization  
[NASA-CASE-NPO-14362-1] c 32 N80-16261

**BATSCH, F. F.**

- Attitude control for spacecraft Patent  
[NASA-CASE-XNP-00294] c 21 N70-36938  
Slit regulated gas journal bearing Patent  
[NASA-CASE-XNP-00476] c 15 N70-38620

**BATTE, W. G.**

- Exclusive-Or digital logic module Patent  
[NASA-CASE-XLA-07732] c 08 N71-18751

**BATTEN, C. E.**

- Visible and infrared polarization ratio spectroradiometer  
[NASA-CASE-LAR-12285-1] c 35 N80-28687

**BATTERSON, S. A.**

- Runway light Patent  
[NASA-CASE-XLA-00119] c 11 N70-33329

**BATTS, C. N.**

- Contour surveying system Patent  
[NASA-CASE-XLA-08646] c 14 N71-17586

**BATTS, COLOSSIE N.**

- Comparator with noise suppression  
[NASA-CASE-LAR-13151-1] c 33 N87-21235

**BAUCOM, R. M.**

- Extensometer frame  
[NASA-CASE-XLA-10322] c 15 N72-17452  
Medical clip  
[NASA-CASE-LAR-12650-1] c 52 N84-28388  
Process of making medical clip  
[NASA-CASE-LAR-12650-2] c 52 N84-28389

**BAUCOM, ROBERT M.**

- Preparing composite materials from matrices of processable aromatic polyimide thermoplastic blends  
[NASA-CASE-LAR-14107-1] c 24 N91-25200  
Process for application of powder particles to filamentary materials  
[NASA-CASE-LAR-14231-1] c 24 N92-10070  
Low pressure process for continuous fiber reinforced polyamic acid resin matrix composite laminates  
[NASA-CASE-LAR-14954-1] c 24 N92-34214

**BAUER, H. B.**

- Air conditioning system and component therefore distributing air flow from opposite directions  
[NASA-CASE-GSC-11445-1] c 31 N74-27902

**BAUER, STEVEN X. S.**

- Passive control of pressure loads using porosity  
[NASA-CASE-LAR-14547-1] c 34 N92-17909  
Natural flow wing  
[NASA-CASE-LAR-14281-1] c 02 N92-28729  
Control and augmentation of passive porosity through transpiration control  
[NASA-CASE-LAR-14682-1] c 34 N92-30387  
**BAUERNSCHUB, J. P., JR.**  
Folding boom assembly Patent  
[NASA-CASE-XGS-00938] c 32 N70-41367  
Nonmagnetic, explosive actuated indexing device\* Patent  
[NASA-CASE-XGS-02422] c 15 N71-21529

**BAUGH, B. T.**

- Precision manipulator heating and cooling apparatus for use in UHV systems with sample transfer capability  
[NASA-CASE-LAR-13040-1] c 37 N85-29286

**BAUGHMAN, J. R.**

- Observation window for a gas confining chamber  
[NASA-CASE-NPO-10890] c 11 N73-12265  
Droplet monitoring probe  
[NASA-CASE-NPO-10985] c 14 N73-20478

**BAUMAN, A. J.**

- Solder flux which leaves corrosion-resistant coating Patent  
[NASA-CASE-XNP-03459-2] c 18 N71-15688  
Soldering with solder flux which leaves corrosion resistant coating Patent  
[NASA-CASE-XNP-03459] c 15 N71-21078  
Fluid impervious barrier including liquid metal alloy and method of making same Patent  
[NASA-CASE-XNP-08881] c 17 N71-28747  
Molten salt pyrolysis of latex  
[NASA-CASE-NPO-14315-1] c 27 N81-17261

**BAUMER, W. E.**

- Counter Patent  
[NASA-CASE-XNP-06234] c 10 N71-27137

**BAXTER, R. D.**

- Heat flux measuring system Patent  
[NASA-CASE-XFR-03802] c 33 N71-23085

**BAYSAL, OKTAY**

- Aerodynamic design optimization using sensitivity analysis and computational fluid dynamics  
[NASA-CASE-LAR-14815-1-CU] c 34 N92-29830

**BEALE, H. A.**

- Hall effect magnetometer  
[NASA-CASE-LEW-11632-2] c 35 N75-13213

**BEALS, DAVID C.**

- Spiral lead platen robotic end effector  
[NASA-CASE-LAR-13855-1] c 37 N91-14615

**BEAM, B. H.**

- Thermoelectric radiometer utilizing polymer film  
[NASA-CASE-ARC-10138-1] c 14 N72-24477

**BEAM, R. A.**

- Optical projector system Patent  
[NASA-CASE-XNP-03853] c 23 N71-21882

**BEAM, R. M.**

- Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c 44 N74-33379

**BEASLEY, R. M.**

- Two-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-1] c 27 N76-22377  
Three-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-2] c 27 N76-23426

**BEASLEY, W. D.**

- Continuously operating induction plasma accelerator Patent  
[NASA-CASE-XLA-01354] c 25 N70-36946

**BEATTY, R. W.**

- Rotary vane attenuator wherein rotor has orthogonally disposed resistive and dielectric cards  
[NASA-CASE-NPO-11418-1] c 14 N73-13420

**BEAUREGARD, W. W.**

- Water separating system Patent  
[NASA-CASE-XMS-13052] c 14 N71-20427

**BECK, A. F.**

- Small plasma probe Patent  
[NASA-CASE-XLE-02578] c 25 N71-20747

**BECK, T. R.**

- Method of inhibiting stress corrosion cracks in titanium alloys Patent  
[NASA-CASE-NPO-10271] c 17 N71-16393

**BECKER, R. A.**

- Photoelectric energy spectrometer Patent  
[NASA-CASE-NPO-04161] c 14 N71-15599

**BECKERLE, L. D.**

- Heat shield oven  
[NASA-CASE-XMS-04318] c 15 N69-27871

**BECKMAN, BRIAN C.**

- Encyclopedia of software components  
[NASA-CASE-NPO-18435-1-CU] c 61 N92-30543  
Virtual reality flight control display with six-degree-of-freedom controller and spherical orientation overlay  
[NASA-CASE-NPO-18733-1-CU] c 06 N93-30416

**BECKMAN, P.**

- Probes having ring and primary sensor at same potential to prevent collection of stray wall currents in ionized gases  
[NASA-CASE-XLE-00690] c 25 N69-39884

**BECKWITH, I. E.**

- Sound shield  
[NASA-CASE-LAR-12883-1] c 71 N83-17235

**BECKWITH, R. M.**

- Mechanical coordinate converter Patent  
[NASA-CASE-XNP-00614] c 14 N70-36907

**BEEHM, J. M.**

- Optical tracking mount Patent  
[NASA-CASE-MFS-14017] c 14 N71-26627

**BECKMAN, S. W.**

- Redundant disc  
[NASA-CASE-LEW-12496-1] c 07 N78-33101

**BEEN, J. F.**

- Method and apparatus for measuring electromagnetic radiation  
[NASA-CASE-LEW-11159-1] c 14 N73-28488

**BEER, R.**

- Cooled echelle grating spectrometer  
[NASA-CASE-NPO-14372-1] c 35 N80-26635

**BEGGS, J. M.**

- Insulation bonding test system  
[NASA-CASE-MFS-25862-1] c 27 N85-20126

**BEGGS, JAMES M.**

- Fire and heat resistant laminating resin based on maleimido and citraconimido substituted 1-(diorganooxyphosphonyl-methyl)-2,4-2,6-diaminobenzenes and  
[NASA-CASE-ARC-11533-2] c 27 N89-16042

**BEHEIM, GLENN**

- Phase-stepping fiber-optic projected fringe system for surface topography measurements  
[NASA-CASE-LEW-14996-1] c 74 N93-11058

**BEHMER, H.**

- High-torque open-end wrench  
[NASA-CASE-NPO-13541-1] c 37 N79-14383

**BEHM, J. W.**

- Solid propellant rocket motor  
[NASA-CASE-NPO-11559] c 28 N73-24784

**BEHUN, VAUGHN D.**

- Linear mass actuator  
[NASA-CASE-LAR-14352-1] c 37 N92-34173

**BEITLER, R. S.**

- Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c 07 N81-19116  
Control means for a gas turbine engine  
[NASA-CASE-LEW-14586-1] c 07 N83-31603

**BEJCZY, A. K.**

- Terminal guidance sensor system  
[NASA-CASE-NPO-14521-1] c 37 N81-27519

**Optical fiber tactile sensor**

- [NASA-CASE-NPO-15375-1] c 74 N84-11921

**BEJCZY, ANTA K.**

- Highly parallel computer architecture for robotic computation  
[NASA-CASE-NPO-17632-1-CU] c 60 N91-32805

**BEJCZY, ANTAL K.**

- Special purpose parallel computer architecture for real-time control and simulation in robotic applications  
[NASA-CASE-NPO-17629-1-CU] c 60 N93-29608

**BELANGER, R. J.**

- Fluid lubricant system Patent  
[NASA-CASE-XNP-03972] c 15 N71-23048

**BELASCO, N.**

- Medical subject monitoring systems  
[NASA-CASE-MSC-14180-1] c 52 N76-14757

**BELCHER, J. G., JR.**

- Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c 37 N82-12441

**BELCHER, JEWELL G.**

- Prosthetic helping hand  
[NASA-CASE-MFS-28430-1] c 54 N92-24044

**BELCHER, JEWELL G., JR.**

- Rotationally actuated prosthetic helping hand  
[NASA-CASE-MFS-28426-1] c 54 N93-14870

**BELCHER, JEWELL G., JR.**

- Rotationally actuated prosthetic helping hand  
[NASA-CASE-MFS-28426-1] c 54 N91-32795

**BELEW, H. W., JR.**

- Altitude simulation chamber for rocket engine testing  
[NASA-CASE-MFS-20620] c 11 N72-27262

**BELEW, R. R.**

- Thermal compensating structural member  
[NASA-CASE-MFS-20433] c 15 N72-28496

**BELEW, R. R.**

- Docking structure for spacecraft  
[NASA-CASE-MFS-20863] c 31 N73-26876

**BELEW, R. R.**

- Emergency descent device  
[NASA-CASE-MFS-23074-1] c 54 N77-21844

**BELEW, R. R.**

- Biocentrifuge system capable of exchanging specimen cages while in operational mode  
[NASA-CASE-MFS-23825-1] c 51 N81-32829

**BELEW, R. R.**

- Electrical rotary joint apparatus for large space structures  
[NASA-CASE-MFS-23981-1] c 07 N83-20944

**BELEW, R. R.**

- Variable length strut with longitudinal compliance and locking capability  
[NASA-CASE-MFS-25907-1] c 37 N85-34401

**BELEW, R. R.**

- Remotely controllable mixing system  
[NASA-CASE-MFS-28153-1] c 31 N86-32589

**BELEW, R. R.**

- Remotely operable peristaltic pump  
[NASA-CASE-MFS-28059-1] c 37 N86-32738

**BELEW, ROBERT**

- Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N87-21332

**BELL, A.**

- Process for preparing higher oxides of the alkali and alkaline earth metals  
[NASA-CASE-ARC-10992-1] c 26 N78-32229

**BELL, BRAD N.**

- Generation of animation sequences of three dimensional models  
[NASA-CASE-MSC-21379-1-SB] c 61 N90-27340

**BELL, C. H.**

- Fiber optic multiplex optical transmission system  
[NASA-CASE-KSC-11047-1] c 74 N78-14889

**BELL, C. H.**

- Fiber optic crossbar switch for automatically patching optical signals  
[NASA-CASE-KSC-11104-1] c 74 N83-29032

**BELL, D., III**

- Heated element fluid flow sensor Patent  
[NASA-CASE-MSC-12084-1] c 12 N71-17569

**BELL, V. L.**

- Polyimide adhesives  
[NASA-CASE-LAR-11397-1] c 27 N75-29263

**BELL, V. L.**

- Polyimide adhesives  
[NASA-CASE-LAR-12181-1] c 27 N78-17205

**BELL, V. L., JR.**

- Process for preparing thermoplastic aromatic polyimides  
[NASA-CASE-LAR-11828-1] c 27 N78-32261

**BELL, V. L., JR.**

- Process for interfacial polymerization of pyromellitic dianhydride and 1,2,4, 5-tetraamino-benzene Patent  
[NASA-CASE-XLA-03104] c 06 N71-11235

**BELL, V. L., JR.**

- Imidazopyrrolone/imide copolymers Patent  
[NASA-CASE-XLA-08802] c 06 N71-11238

**BELL, V. L., JR.**

- Dosimeter for high levels of absorbed radiation Patent  
[NASA-CASE-XLA-03645] c 14 N71-20430

**BELL, VERNON L.**

- Process for crosslinking and extending conjugated diene-containing polymers  
[NASA-CASE-LAR-13452-1] c 27 N87-22848

**BELL, VERNON L.**

- Polyether-polyester graft copolymer  
[NASA-CASE-LAR-13447-1] c 27 N88-18725

**BELL, VERNON L.**

- Process for crosslinking methylene-containing aromatic polymers with ionizing radiation  
[NASA-CASE-LAR-13448-1] c 27 N90-21198

- BELLAVIA, J. JR.**  
Thermal barrier pressure seal  
[NASA-CASE-MSC-18134-1] c 37 N81-15363
- BELLMAN, D. R.**  
Skin friction measuring device for aircraft  
[NASA-CASE-FRC-11029-1] c 06 N81-17057
- BELROSE, CHARLES R.**  
Saddle clamp assembly  
[NASA-CASE-MFS-28701-1] c 37 N93-17057
- BELT, J. L.**  
Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c 32 N79-23310
- BELTZ, MARK W.**  
Polyimides with improved compression moldability  
[NASA-CASE-LAR-14457-1] c 27 N93-25997
- BEMENT, L. J.**  
Linear explosive comparison  
[NASA-CASE-LAR-10800-1] c 33 N72-27959  
Totally confined explosive welding  
[NASA-CASE-LAR-10941-1] c 37 N74-21057  
Method of making an explosively welded scarf joint  
[NASA-CASE-LAR-11211-1] c 37 N75-12326  
Totally confined explosive welding  
[NASA-CASE-LAR-10941-2] c 37 N79-13364  
Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c 01 N83-35992
- BEMENT, LAURENCE J.**  
Tool and process for miniature explosive joining of tubes  
[NASA-CASE-LAR-13662-1] c 37 N88-14359  
Ignitability test method and apparatus  
[NASA-CASE-LAR-13996-1-SB] c 25 N90-15161  
Apparatus and method for explosive bonding to edge of flyer plate  
[NASA-CASE-LAR-14096-1] c 31 N91-31476  
Ignitability test method and apparatus  
[NASA-CASE-LAR-14454-1] c 25 N91-32196  
Permanent wire splicing by an explosive joining process  
[NASA-CASE-LAR-13825-1] c 31 N92-16162  
Performance of blasting caps  
[NASA-CASE-LAR-13832-1] c 28 N93-18274
- BENEDICT, R. D.**  
Transient augmentation circuit for pulse amplifiers  
Patent  
[NASA-CASE-XNP-01068] c 10 N71-28739
- BENEDICTO, J. S. J.**  
Method and apparatus for slicing crystals  
[NASA-CASE-GSC-12291-1] c 76 N80-18951  
Crystal cleaving machine  
[NASA-CASE-GSC-12584-1] c 37 N82-32730
- BENGTON, R. D.**  
Fast opening diaphragm Patent  
[NASA-CASE-XLA-03660] c 15 N71-21060
- BENHAM, J. W.**  
Voltage feed through apparatus having reduced partial discharge  
[NASA-CASE-GSC-12347-1] c 33 N80-18286
- BENNETT, G. W.**  
Control means for a gas turbine engine  
[NASA-CASE-LEW-14586-1] c 07 N83-31603
- BENNIGHT, J. D.**  
Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114] c 15 N71-17650  
Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-3] c 15 N71-24865  
Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-2] c 15 N71-26148
- BENNINGTON, DONALD R.**  
Real-time simulation clock  
[NASA-CASE-LAR-14056-1] c 35 N90-23713
- BENZ, F. J.**  
Device and method for frictionally testing materials for ignitability  
[NASA-CASE-MSC-20622-1] c 25 N86-19413
- BENZ, H. A.**  
Image readout device with electronically variable spatial resolution  
[NASA-CASE-LAR-12633-1] c 33 N82-24416
- BERATAN, DAVID N.**  
Molecules with enhanced electronic polarizabilities based on defect-like states in conjugated polymers  
[NASA-CASE-NPO-17633-1-CU] c 27 N91-27372  
All-optical photochromic spatial light modulators based on photoinduced electron transfer in rigid matrices  
[NASA-CASE-NPO-17612-1-CU] c 74 N92-16808
- BERDAHL, C. M.**  
Selective image area control of X-ray film exposure density  
[NASA-CASE-NPO-13808-1] c 35 N78-15461  
Thermal energy transformer  
[NASA-CASE-NPO-14058-1] c 44 N79-18443
- Fluidic angular velocity sensor  
[NASA-CASE-NPO-16479-1-CU] c 35 N86-32695
- BEREMAND, D. G.**  
Direct heating surface combustor  
[NASA-CASE-LEW-11877-1] c 34 N78-27357  
Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c 37 N80-31790
- BEREMAND, G. B.**  
Method of making fiber composites  
[NASA-CASE-LEW-10424-2-2] c 18 N72-25539
- BERG, O. E.**  
Dust particle injector for hypervelocity accelerators  
Patent  
[NASA-CASE-XGS-06628] c 24 N71-16213  
Cosmic dust sensor  
[NASA-CASE-GSC-10503-1] c 14 N72-20381
- BERGE, L. H.**  
Method and apparatus for shaping and enhancing acoustical levitation forces  
[NASA-CASE-MFS-25050-1] c 71 N81-15767  
Gas levitator having fixed levitation node for containerless processing  
[NASA-CASE-MFS-25509-1] c 35 N83-24828
- BERGLUND, R. A.**  
Erectable modular space station Patent  
[NASA-CASE-XLA-00678] c 31 N70-34296
- BERGSTROM, S. L.**  
Production of butanol by fermentation in the presence of cocultures of clostridium  
[NASA-CASE-NPO-16203-1] c 23 N85-35227
- BERKA, R. B.**  
Shuttle-launch triangular space station  
[NASA-CASE-MSC-20676-1] c 18 N86-24729
- BERKMAN, S.**  
Means for growing ribbon crystals without subjecting the crystals to thermal shock-induced strains  
[NASA-CASE-NPO-14298-1] c 76 N80-32244  
Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c 33 N81-19389
- BERKOPEC, F. D.**  
Process for preparing liquid metal electrical contact device  
[NASA-CASE-LEW-11978-1] c 33 N77-26385
- BERMAN, P. A.**  
Solar cell grid patterns  
[NASA-CASE-NPO-13087-2] c 44 N76-31666
- BERNARDIN, R. M.**  
Measuring device Patent  
[NASA-CASE-XMS-01546] c 14 N70-40233
- BERNATOWICZ, D. T.**  
Method of making silicon solar cell array  
[NASA-CASE-LEW-11069-1] c 44 N74-14784
- BERNIUS, MARK T.**  
Reversal electron attachment ionizer for detection of trace species  
[NASA-CASE-NPO-17596-1-CU] c 35 N89-28795
- BERNSEN, B.**  
Electrical apparatus for detection of thermal decomposition of insulation Patent  
[NASA-CASE-XMF-03968] c 14 N71-27186
- BERNSTEIN, A. J.**  
Automatic communication signal monitoring system  
[NASA-CASE-NPO-13941-1] c 32 N79-10262
- BERRIER, B. L.**  
Thrust augmented spin recovery device  
[NASA-CASE-LAR-11970-2] c 08 N81-19130
- BERRY, ANTHONY**  
Sample holder support for microscopes  
[NASA-CASE-MFS-28420-1] c 37 N91-21545
- BERRY, E. H.**  
Positive dc to positive dc converter Patent  
[NASA-CASE-XMF-14301] c 09 N71-23188  
Positive dc to negative dc converter Patent  
[NASA-CASE-XMF-08217] c 03 N71-23239
- BERRY, MAGGIE L.**  
Method of radiographic inspection of wooden members  
[NASA-CASE-LAR-13724-1] c 38 N90-23756
- BERRY, R. F., JR.**  
Ultrasonic angle beam standard reflector  
[NASA-CASE-LAR-13153-1] c 71 N86-21276
- BERRY, ROBERT F., JR.**  
Apparatus and procedure to detect a liquid-solid interface during crystal growth in a bridgman furnace  
[NASA-CASE-LAR-13597-1-CU] c 25 N87-23713  
Method of radiographic inspection of wooden members  
[NASA-CASE-LAR-13724-1] c 38 N90-23756
- BERSON, L. A.**  
Portable 90 degree proof loading device  
[NASA-CASE-MSC-20250-1] c 35 N86-19581
- BESSETTE, R. J.**  
Space suit  
[NASA-CASE-MSC-12609-1] c 05 N73-32012
- BESWICK, A. G.**  
Lunar penetrometer Patent  
[NASA-CASE-XLA-00934] c 14 N71-22765
- BEUYUKIAN, C. S.**  
Tube dimpling tool Patent  
[NASA-CASE-XMS-06876] c 15 N71-21536  
Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c 26 N80-28492
- BEYLIK, C. M.**  
Pressure seal Patent  
[NASA-CASE-NPO-10796] c 15 N71-27068
- BHAGAT, P. K.**  
Apparatus for determining changes in limb volume  
[NASA-CASE-MSC-18759-1] c 52 N83-27578
- BHANDARI, PRADEEP**  
Thermal power transfer system using applied potential difference to sustain operating pressure difference  
[NASA-CASE-NPO-18034-1-CU] c 44 N92-16457
- BHASIN, KUL B.**  
Monolithic mm-wave phase shifter using optically activated superconducting switches  
[NASA-CASE-LEW-14878-1] c 74 N92-28571
- BHAT, B. N.**  
Method of growing composites of the type exhibiting the Soret effect  
[NASA-CASE-MFS-22926-1] c 24 N77-27187
- BHAT, BALAKRISHNA T.**  
Acoustic transducer apparatus with reduced thermal conduction  
[NASA-CASE-NPO-17620-1-CU] c 71 N91-14808
- BHATT, RAMAKRISHNA T.**  
Method of preparing fiber reinforced ceramic material  
[NASA-CASE-LEW-14392-1] c 27 N87-28656  
Fiber reinforced ceramic material  
[NASA-CASE-LEW-14392-2] c 27 N89-29538
- BHIWANDKER, N. C.**  
Method for making conductors for ferrite memory arrays  
[NASA-CASE-LAR-10994-1] c 24 N75-13032
- BIBBO, C.**  
Flexible seal for valves Patent  
[NASA-CASE-XLE-00101] c 15 N70-33376
- BICKLER, D. B.**  
Electrodes for solid state devices  
[NASA-CASE-NPO-15161-1] c 33 N84-16456  
Increased voltage photovoltaic cell  
[NASA-CASE-NPO-16155-1] c 44 N85-30475
- BICKLER, DONALD B.**  
Articulated suspension system  
[NASA-CASE-NPO-17354-1-CU] c 37 N90-17153
- BICKLER, T. C.**  
Synthetic aperture radar target simulator  
[NASA-CASE-NPO-15024-1] c 32 N84-27951
- BICKNELL, T. J.**  
Servomechanism for Doppler shift compensation in optical correlator for synthetic aperture radar  
[NASA-CASE-NPO-14998-1] c 32 N83-18975
- BIDDLE, ALAN P.**  
Ion generator and ion application system  
[NASA-CASE-MFS-28122-1] c 72 N88-24253
- BIEHL, A. J.**  
Hypervelocity gun  
[NASA-CASE-XLE-03186-1] c 09 N79-21084
- BIENIEK, T.**  
Metal containing polymers from cyclic tetrameric phenylphosphonitriamides Patent  
[NASA-CASE-HQN-10364] c 06 N71-27363
- BIER, M.**  
Electrophoretic fractional elution apparatus employing a rotational seal fraction collector  
[NASA-CASE-MFS-23284-1] c 37 N80-14397
- BIKLE, P. F.**  
System for use in conducting wake investigation for a wing in flight  
[NASA-CASE-FRC-11024-1] c 02 N80-28300
- BILBRO, J. W.**  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c 35 N77-10493
- BILDERBACK, R. R.**  
Amplitude modulated laser transmitter Patent  
[NASA-CASE-XMS-04269] c 16 N71-22895
- BILES, J. E., JR.**  
High impact pressure regulator Patent  
[NASA-CASE-NPO-10175] c 14 N71-18625
- BILL, R. C.**  
Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-1] c 37 N79-18318  
Gas path seal  
[NASA-CASE-NPO-12131-3] c 37 N80-18400  
Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c 37 N80-26658  
Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-3] c 37 N82-19540  
Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-2] c 37 N82-26674



- Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c 27 N82-29453
- Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c 18 N83-20996
- Thermal barrier coating system having improved adhesion  
[NASA-CASE-LEW-1335901] c 27 N83-31855
- Method of fabricating an abrasible gas path seal  
[NASA-CASE-LEW-13269-2] c 37 N84-22957
- BILLICA, LINDA W.**  
Fingered bola body, bola with same, and methods of use  
[NASA-CASE-MSC-21967-1] c 37 N92-30026
- BILLINGHAM, J.**  
Temperature controller for a fluid cooled garment  
[NASA-CASE-ARC-10599-1] c 05 N73-26071
- BILLINGS, C. R.**  
Emergency escape system Patent  
[NASA-CASE-XKS-07814] c 15 N71-27067
- BILLINGSLEY, F. C.**  
Electro-optical scanning apparatus Patent Application  
[NASA-CASE-NPO-11106] c 14 N70-34697
- Image data rate converter having a drum with a fixed head and a rotatable head  
[NASA-CASE-NPO-11659-1] c 35 N74-11283
- BILLMAN, K. W.**  
Method and apparatus for wavelength tuning of liquid lasers  
[NASA-CASE-ERC-10187] c 16 N69-31343
- Infrared tunable laser  
[NASA-CASE-ARC-10463-1] c 09 N73-32111
- Alignment apparatus using a laser having a gravitationally sensitive cavity reflector  
[NASA-CASE-ARC-10444-1] c 16 N73-33397
- Measurement of plasma temperature and density using radiation absorption  
[NASA-CASE-ARC-10598-1] c 75 N74-30156
- BILOW, N.**  
Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids  
[NASA-CASE-MFS-22411-1] c 37 N74-21058
- BINKLEY, W. G.**  
Voltage regulator with plural parallel power source sections Patent  
[NASA-CASE-GSC-10891-1] c 10 N71-26626
- BINGHAM, G. J.**  
Shapes for rotating airfoils  
[NASA-CASE-LAR-12396-1] c 02 N84-28732
- BIRCHENOUGH, A. G.**  
Switching regulator  
[NASA-CASE-LEW-11005-1] c 09 N72-21243
- Electronic analog divider  
[NASA-CASE-LEW-11881-1] c 33 N77-17354
- Sustained arc ignition system  
[NASA-CASE-LEW-12444-1] c 33 N77-28385
- BIRD, J. D.**  
Jet shoes  
[NASA-CASE-XLA-08491] c 05 N69-21380
- BIRD, R. G.**  
Portable 90 degree proof loading device  
[NASA-CASE-MSC-20250-1] c 35 N86-19581
- BISHOP, O. L.**  
Broadband choke for antenna structure  
[NASA-CASE-XMS-05303] c 07 N69-27462
- BISHOP, R. E.**  
Optical alignment system Patent  
[NASA-CASE-XNP-02029] c 14 N70-41955
- BISHOP, WILLIAM L.**  
Whiskerless Schottky diode  
[NASA-CASE-GSC-13063-2-CU] c 33 N92-16197
- BLACK, D. H.**  
Horizontally mounted solar collector  
[NASA-CASE-MFS-23349-1] c 44 N79-23481
- BLACK, I' A.**  
Apparatus for measuring thermal conductivity Patent  
[NASA-CASE-XGS-01052] c 14 N71-15992
- BLACK, J. M.**  
Full wave modulator-demodulator amplifier apparatus  
[NASA-CASE-FRC-10072-1] c 33 N74-14939
- Window comparator  
[NASA-CASE-FRC-10090-1] c 33 N78-18308
- Voltage regulator for battery power source  
[NASA-CASE-FRC-10116-1] c 33 N79-23345
- Active notch filter network with variable notch depth, width and frequency  
[NASA-CASE-FRC-11055-1] c 33 N80-29583
- Power converter  
[NASA-CASE-FRC-11014-1] c 33 N82-18494
- BLACK, S. H.**  
Automatic gain control system  
[NASA-CASE-XMS-05307] c 09 N69-24330
- BLACK, W. W.**  
Triaxial antenna Patent  
[NASA-CASE-XGS-02290] c 07 N71-28809

- BLACKABY, J. R.**  
Temperature controller for a fluid cooled garment  
[NASA-CASE-ARC-10599-1] c 05 N73-26071
- BLACKBURN, L. B.**  
Tensile testing apparatus  
[NASA-CASE-LAR-13243-1] c 35 N85-34375
- BLACKBURN, LINDA B.**  
Aluminum alloy  
[NASA-CASE-LAR-13924-1-CU] c 26 N89-28621
- BLACKSTOCK, T. A.**  
Ferry system  
[NASA-CASE-LAR-10574-1] c 11 N73-13257
- BLAIR, G. R.**  
Inorganic thermal control pigment Patent  
[NASA-CASE-XNP-02139] c 18 N71-24184
- BLAISE, H. T.**  
Air cushion lift pad Patent  
[NASA-CASE-MFS-14685] c 31 N71-15689
- Methods and apparatus employing vibratory energy for wrenching Patent  
[NASA-CASE-MFS-20586] c 15 N71-17686
- Remote manipulator system  
[NASA-CASE-MFS-22022-1] c 37 N76-15460
- BLAKELY, ROBERT L.**  
High effectiveness contour matching contact heat exchanger  
[NASA-CASE-MSC-20840-1] c 34 N88-29132
- BLAKESLEE, RICHARD J.**  
Method and apparatus for determining return stroke polarity of distant lightning  
[NASA-CASE-MFS-26102-1-CU] c 47 N91-15661
- Method and apparatus for determining return stroke polarity of distant lightning  
[NASA-CASE-MFS-26102-2-CU] c 47 N93-10108
- BLALOCK, TRAVIS**  
Rapid quantification of an internal property  
[NASA-CASE-LAR-13689-1-NP] c 35 N87-23941
- BLALOCK, TRAVIS M.**  
Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-1-NP] c 52 N90-21519
- Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-2] c 52 N92-11621
- BLANCHARD, W. S., JR.**  
Space capsule Patent  
[NASA-CASE-XLA-00149] c 31 N70-37938
- Space capsule Patent  
[NASA-CASE-XLA-01332] c 31 N71-15664
- Lateral displacement system for separated rocket stages Patent  
[NASA-CASE-XLA-04804] c 31 N71-23008
- High lift aircraft  
[NASA-CASE-LAR-11252-1] c 05 N75-25914
- BLANCHE, J. F.**  
Electrical feed-through connection for printed circuit boards and printed cable  
[NASA-CASE-XMF-01483] c 14 N69-27431
- BLAND, C.**  
Bacteriostatic conformal coating and methods of application Patent  
[NASA-CASE-GSC-10007] c 18 N71-16046
- BLAND, W. M., JR.**  
Survival couch Patent  
[NASA-CASE-XLA-00118] c 05 N70-33285
- BLANKENSHIP, C. P.**  
Protective device for machine and metalworking tools Patent  
[NASA-CASE-XLE-01092] c 15 N71-22797
- Tantalum modified ferritic iron base alloys  
[NASA-CASE-LEW-12095-1] c 26 N78-18182
- BLAZE, C. J.**  
Formed metal ribbon wrap Patent  
[NASA-CASE-XLE-00164] c 15 N70-36411
- BLESS, J. J.**  
Shunt regulation electric power system  
[NASA-CASE-GSC-10135] c 33 N78-17296
- BLOCH, J. T.**  
Method and apparatus for fabricating improved solar cell modules  
[NASA-CASE-NPO-14416-1] c 44 N81-14389
- BLOOMFIELD, H. S.**  
In-situ laser retorting of oil shale  
[NASA-CASE-LEW-12217-1] c 43 N78-14452
- BLOSSER, E. R.**  
Method for determining presence of OH in magnesium oxide  
[NASA-CASE-NPO-10774] c 06 N72-17095
- BLOSSER, MAX L.**  
Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-1] c 34 N92-28752
- Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-2] c 34 N92-30024

- BLOUNT, D. H.**  
Propulsion apparatus and method using boil-off gas from a cryogenic liquid  
[NASA-CASE-MFS-25946-1] c 20 N86-26368
- BLOUNT, DALE H.**  
Rotor self-lubricating axial stop  
[NASA-CASE-MSC-28273-1] c 37 N88-23974
- Cryogenic anti-friction bearing with inner race  
[NASA-CASE-MFS-28384-1] c 37 N90-27112
- BLUCK, RAYMOND M.**  
Seamless metal-clad fiber-reinforced organic matrix composite structures and process for their manufacture  
[NASA-CASE-LAR-13562-1] c 24 N90-25196
- Process for the manufacture of seamless metal-clad fiber-reinforced organic matrix composite structures  
[NASA-CASE-LAR-13562-2] c 24 N91-25199
- BLUE, J. W.**  
Production of high purity I-123  
[NASA-CASE-LEW-10518-1] c 24 N72-33681
- Method of producing I-123  
[NASA-CASE-LEW-11390-2] c 25 N76-27383
- Production of I-123  
[NASA-CASE-LEW-11390-3] c 25 N76-29379
- Targets for producing high purity I-123  
[NASA-CASE-LEW-10518-3] c 25 N78-27226
- BLUM, P.**  
Rock sampling  
[NASA-CASE-XNP-10007-1] c 46 N74-23068
- Rock sampling  
[NASA-CASE-XNP-09755] c 46 N74-23069
- BLUME, H. C.**  
Parametric amplifiers with idler circuit feedback  
[NASA-CASE-LAR-10253-1] c 09 N72-25258
- BLUME, HANS-JUERGEN C.**  
Measurement apparatus and procedure for the determination of surface emissivities  
[NASA-CASE-LAR-13455-1] c 32 N87-21206
- BLUMRICH, J. F.**  
Pivotal shock absorbing pad assembly Patent  
[NASA-CASE-XMF-03856] c 31 N70-34159
- Landing pad assembly for aerospace vehicles Patent  
[NASA-CASE-XMF-02853] c 31 N70-36654
- Double-acting shock absorber Patent  
[NASA-CASE-XMF-01045] c 15 N70-40354
- Tank construction for space vehicles Patent  
[NASA-CASE-XMF-01899] c 31 N70-41948
- Docking structure for spacecraft Patent  
[NASA-CASE-XMF-05941] c 31 N71-23912
- Omnidirectional wheel  
[NASA-CASE-MFS-21309-1] c 37 N74-18125
- BLUTINGER, B.**  
Signal generator  
[NASA-CASE-XNP-05612] c 09 N69-21468
- BLYMILLER, E. R.**  
Microcircuit negative cutter  
[NASA-CASE-XLA-09843] c 15 N72-27485
- BOATRIGHT, W. B.**  
Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10578-1] c 12 N73-25262
- BOCKWOLDT, W. H.**  
Narrow bandwidth video Patent  
[NASA-CASE-XMS-06740-1] c 07 N71-26579
- BOEDY, D. D.**  
Power supply circuit Patent  
[NASA-CASE-XMS-00913] c 10 N71-23543
- BOEHM, J.**  
Gravity device Patent  
[NASA-CASE-XMF-00424] c 11 N70-38196
- BOEHME, R. J.**  
Electrical rotary joint apparatus for large space structures  
[NASA-CASE-MFS-23981-1] c 07 N83-20944
- BOER, K. W.**  
High field CdS detector for infrared radiation  
[NASA-CASE-LAR-11027-1] c 35 N74-18088
- BOEX, M. W.**  
Filter regeneration systems  
[NASA-CASE-MSC-14273-1] c 34 N75-33342
- BOGART, EDWARD H.**  
Method of encouraging attention by correlating video game difficulty with attention level  
[NASA-CASE-LAR-15022-1] c 53 N93-28128
- BOGNER, R. S.**  
Storage battery comprising negative plates of a wedge shaped configuration  
[NASA-CASE-NPO-11806-1] c 44 N74-19693
- BOGUSZ, F. J.**  
Pressure transducer calibrator Patent  
[NASA-CASE-XNP-01660] c 14 N71-23036
- BOIES, R. D.**  
Instrument for measuring potentials on two dimensional electric field plots Patent  
[NASA-CASE-XLA-08493] c 10 N71-19421

- BOISSEVAIN, A. G.**  
Optical machine tool alignment indicator Patent  
[NASA-CASE-XAC-09489-1] c 15 N71-26673
- BOLOTIN, GARY S.**  
Distributed computing system with dual independent communications paths between computers and employing split tokens  
[NASA-CASE-NPO-17185-1-CU] c 62 N91-14772
- BOLT, C. A., JR.**  
Broadband choke for antenna structure  
[NASA-CASE-XMS-05303] c 07 N69-27462
- BOLTON, P. N.**  
Fire extinguishing apparatus having a slidable mass for a penetrator nozzle  
[NASA-CASE-KSC-11064-1] c 31 N81-14137
- BONAZZA, WALTER J.**  
Coaxial cable connector  
[NASA-CASE-NPO-16764-1-CU] c 33 N88-14270
- BOND, H. H., JR.**  
Digital interface for bi-directional communication between a computer and a peripheral device  
[NASA-CASE-MSC-20258-1] c 60 N84-28492
- BOND, ROBERT W.**  
Solidification processing of alloys using an applied electric field  
[NASA-CASE-MFS-26083-1-CU] c 26 N90-26940
- BOND, W. W.**  
Connector internal force gauge Patent  
[NASA-CASE-XNP-03918] c 14 N71-23087
- BONEBRIGHT, MARK E.**  
Ground plane interference elimination by passive element  
[NASA-CASE-NPO-16632-1-CU] c 32 N87-15390
- BONISCH, F. H.**  
Locking redundant link  
[NASA-CASE-LAR-11900-1] c 37 N79-14382
- BONN, J. L.**  
Wire grid forming apparatus Patent  
[NASA-CASE-XLE-00023] c 15 N70-33330
- BONO, P.**  
Recoverable single stage spacecraft booster Patent  
[NASA-CASE-XMF-01973] c 31 N70-41588
- BOODLEY, L. E.**  
Connector strips-positive, negative and T tabs  
[NASA-CASE-XGS-01395] c 03 N69-21539
- BOOM, R. W.**  
Stable superconducting magnet  
[NASA-CASE-XMF-05373-1] c 33 N79-21264
- BOOTH, F. W.**  
Condenser - Separator  
[NASA-CASE-XLA-08645] c 15 N69-21465  
Separator Patent  
[NASA-CASE-XLA-00415] c 15 N71-16079  
Thermal pump-compressor for space use Patent  
[NASA-CASE-XLA-00377] c 33 N71-17610  
Soldering device Patent  
[NASA-CASE-XLA-08911] c 15 N71-27214  
Air removal device  
[NASA-CASE-XLA-08914] c 15 N73-12492  
Zero gravity liquid mixer  
[NASA-CASE-LAR-10195-1] c 15 N73-19458  
Centrifugal lyophobic separator  
[NASA-CASE-LAR-10194-1] c 34 N74-30608  
Air removal device  
[NASA-CASE-XLA-08914-2] c 25 N82-21269
- BOOTH, R. A.**  
Solid state switch  
[NASA-CASE-XNP-09228] c 09 N69-27500
- BORELLI, M. T.**  
Adaptive tracking notch filter system Patent  
[NASA-CASE-XMF-01892] c 10 N71-22986
- BOROSON, H. R.**  
Wide range linear fluxgate magnetometer Patent  
[NASA-CASE-XGS-01587] c 14 N71-15962
- BORSIG, E.**  
Stabilized unsaturated polyesters  
[NASA-CASE-NPO-16103-1] c 27 N85-29043
- BOSCO, G. B., JR.**  
Rotating shaft seal Patent  
[NASA-CASE-XNP-02862-1] c 15 N71-26294
- BOSHERS, W. A.**  
Battery testing device  
[NASA-CASE-MFS-20761-1] c 44 N74-27519  
Rapid activation and checkout device for batteries  
[NASA-CASE-MFS-22749-1] c 44 N76-14601  
Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c 44 N76-27664
- BOSTON, HAROLD G.**  
Diphenylmethane-containing dianhydride and polyimides prepared therefrom  
[NASA-CASE-LAR-14487-1] c 27 N93-29085
- BOSTON, R. E.**  
X-Y alphanumeric character generator for oscilloscopes  
[NASA-CASE-GSC-11582-1] c 33 N75-19517
- BOTTOMS, D. J.**  
Turnstile and flared cone UHF antenna  
[NASA-CASE-LAR-10970-1] c 33 N76-14372
- BOULDIN, D. L.**  
Multilevel metallization method for fabricating a metal oxide semiconductor device  
[NASA-CASE-MFS-23541-1] c 76 N79-14906
- BOURKE, D. G.**  
Data compression system with a minimum time delay unit Patent  
[NASA-CASE-XNP-08832] c 08 N71-12506
- BOUSMAN, W. G.**  
Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c 05 N77-17029
- BOWER, K. F.**  
Buffered analog converter  
[NASA-CASE-KSC-10397] c 08 N72-25206
- BOWLES, KENNETH J.**  
Light weight polymer matrix composite material  
[NASA-CASE-LEW-14734-1] c 24 N89-23623
- BOXWELL, D. A.**  
Acoustically swept rotor  
[NASA-CASE-ARC-11106-1] c 05 N80-14107
- BOYCE, REX A.**  
Bearing servicing tool  
[NASA-CASE-MSC-21881-1] c 37 N93-14871
- BOYLE, J. C.**  
Balance torque-meter Patent  
[NASA-CASE-XGS-01013] c 14 N71-23725
- BOYLE, J. V., JR.**  
Adjustable attitude guide device Patent  
[NASA-CASE-XLA-07911] c 15 N71-15571  
Canister closing device Patent  
[NASA-CASE-XLA-01446] c 15 N71-21528
- BOZAJIAN, J. M.**  
Thermal switch Patent  
[NASA-CASE-XNP-00463] c 33 N70-36847
- BOZEMAN, RICHARD J., JR.**  
Vibration analyzer  
[NASA-CASE-MSC-21408-1] c 37 N91-14607  
Smart accelerometer  
[NASA-CASE-MSC-21951-1] c 35 N92-23545  
Accelerometer method and apparatus for integral display and control functions  
[NASA-CASE-MSC-21961-1] c 35 N92-29952  
System for memorizing maximum values  
[NASA-CASE-MSC-21922-1] c 35 N93-14841  
Measurand transient signal suppressor  
[NASA-CASE-MSC-22027-1] c 63 N93-17056  
Acceleration recorder and playback module  
[NASA-CASE-MSC-22008-1] c 35 N93-17077  
Control system and method for prosthetic devices  
[NASA-CASE-MSC-21941-1] c 54 N93-17087  
Magnetically operated check valve  
[NASA-CASE-MSC-22046-1] c 37 N93-28501
- BRABBS, THEODORE A.**  
Multi-heat addition turbine engine  
[NASA-CASE-LEW-15094-1] c 07 N93-22034
- BRADFIELD, S. P., III**  
Unbalanced quadrupole demodulator  
[NASA-CASE-MSC-14840-1] c 32 N77-24331
- BRADLEY, JAMES G.**  
Dual cathode system for electron beam instruments  
[NASA-CASE-NPO-16878-1-CU] c 35 N90-20351
- BRADLEY, JIMMY D.**  
Power saw  
[NASA-CASE-MSC-21469-1] c 37 N91-31655
- BRADLEY, R. H.**  
Emergency earth orbital escape device  
[NASA-CASE-MSC-13281] c 31 N72-18859  
A method of delivering a vehicle to earth orbit and returning the reusable portion thereof to earth  
[NASA-CASE-MSC-12391] c 30 N73-12884
- BRADY, J. C.**  
Surface roughness detector Patent  
[NASA-CASE-XLA-00203] c 14 N70-34161
- BRAGG, BOBBY J.**  
Thermal switch disc for short circuit protection of batteries  
[NASA-CASE-MSC-21428-1] c 33 N91-14537
- BRAINARD, W. A.**  
Improved refractory coatings  
[NASA-CASE-LEW-23169-2] c 26 N81-16209  
Refractory coatings and method of producing the same  
[NASA-CASE-LEW-13169-1] c 26 N82-29415  
Refractory coatings  
[NASA-CASE-LEW-13169-2] c 26 N82-30371
- BRANDENBURGER, G. H.**  
Method for thermal monitoring subcutaneous tissue  
[NASA-CASE-LAR-13028-1] c 52 N85-30618
- BRANDHORST, H. W., JR.**  
Rapidly pulsed, high intensity, incoherent light source  
[NASA-CASE-XLE-2529-3] c 33 N74-20859  
High power laser apparatus and system  
[NASA-CASE-XLE-2529-2] c 36 N75-27364
- Solar cell assembly  
[NASA-CASE-LEW-11549-1] c 44 N77-19571  
Application of semiconductor diffusants to solar cells by screen printing  
[NASA-CASE-LEW-12775-1] c 44 N79-11468  
Back wall solar cell  
[NASA-CASE-LEW-12236-2] c 44 N79-14528  
Lithium counterdoped silicon solar cell  
[NASA-CASE-LEW-14177-1] c 44 N86-32875
- BRANDHORST, HENRY W., JR.**  
Thin solar cell and lightweight array  
[NASA-CASE-LEW-14959-1] c 44 N91-27614
- BRANDON, CRAIG A.**  
Method of forming dynamic membrane on stainless steel support  
[NASA-CASE-MSC-18172-3] c 31 N88-29052
- BRANSTETTER, J. R.**  
Black-body furnace Patent  
[NASA-CASE-XLE-01399] c 33 N71-15625
- BRANTLEY, J. W.**  
Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c 24 N77-19170
- BRANTLEY, L. W., JR.**  
Solar energy absorber  
[NASA-CASE-MFS-22743-1] c 44 N76-22657  
Solar energy trap  
[NASA-CASE-MFS-22744-1] c 44 N76-24696  
Thermal energy storage system  
[NASA-CASE-MFS-23167-1] c 44 N76-31667  
Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking  
[NASA-CASE-MFS-23267-1] c 35 N77-20401
- BRASCHWITZ, J. M.**  
External liquid-spray cooling of turbine blades Patent  
[NASA-CASE-XLE-00037] c 28 N70-33372
- BRAUN, W.**  
Ultraviolet atomic emission detector  
[NASA-CASE-HQN-10756-1] c 14 N72-25428
- BRAWNER, C. C.**  
Specific wavelength colorimeter  
[NASA-CASE-MSC-14081-1] c 35 N74-27860
- BRAWNER, E. L.**  
Color perception tester  
[NASA-CASE-KSC-10278] c 05 N72-16015
- BREALT, R. P.**  
System for the measurement of ultra-low stray light levels  
[NASA-CASE-MFS-23513-1] c 74 N79-11865
- BREAZEALE, M. A.**  
Liquid-immersible electrostatic ultrasonic transducer  
[NASA-CASE-LAR-12465-1] c 33 N82-26572
- BRECKENRIDGE, R.**  
Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-2] c 33 N83-24763
- BRECKENRIDGE, R. A.**  
Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c 25 N75-26043  
Magnetometer with a miniature transducer and automatic scanning  
[NASA-CASE-LAR-11617-2] c 35 N78-32397  
Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c 35 N82-31659
- BRECKENRIDGE, WILLIAM C.**  
Feedback controlled optics with wavefront compensation  
[NASA-CASE-NPO-18194-1-CU] c 74 N91-32924
- BRECKINRIDGE, J. B.**  
Interferometer  
[NASA-CASE-NPO-14502-1] c 74 N81-17888  
Interferometer  
[NASA-CASE-NPO-14448-1] c 74 N81-29963  
Optical system  
[NASA-CASE-NPO-15801-1] c 74 N85-23396
- BREED, L. L.**  
Fluorinated esters of polycarboxylic acids  
[NASA-CASE-MFS-21040-1] c 06 N73-30098
- BREED, L. W.**  
Preparation of ordered poly /arylenesiloxane/ polymers  
[NASA-CASE-XMF-10753] c 06 N71-11237
- BREEZE, R. K.**  
Method and system for respiration analysis Patent  
[NASA-CASE-XFF-08403] c 05 N71-11202
- BREGMAN, B. J.**  
Derivation of a tangent function using an integrated circuit four-quadrant multiplier  
[NASA-CASE-MSC-13907-1] c 10 N73-26230
- BREINER, CHARLES A.**  
A two-stage earth-to-orbit transport with translating oblique wings for booster recovery  
[NASA-CASE-LAR-14156-1] c 16 N90-16781  
Reusable cryogenic liquid rocket propellant tank  
[NASA-CASE-LAR-14172-1] c 20 N93-31295

## BREITWIESER, R.

High current electrical lead  
[NASA-CASE-LEW-10950-1] c 33 N74-27683

## BREJCHA, A. G., JR.

Coaxial cable connector Patent  
[NASA-CASE-XNP-04732] c 09 N71-20851

## BRESHEARS, R. R.

Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c 37 N79-11405

## BREUER, D. R.

Temperature compensated current source  
[NASA-CASE-MSC-11235] c 33 N78-17294

## BREY, H.

Frequency division multiplex technique  
[NASA-CASE-KSC-10521] c 07 N73-20176

FM/CW radar system  
[NASA-CASE-MFS-22234-1] c 32 N79-10264

## BRICKER, R. W.

Mass measuring system Patent  
[NASA-CASE-XMS-03371] c 05 N70-42000

## BRIGHT, C. W.

Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c 52 N79-26772

## BRINDLEY, PAMELA K.

Furnace for tensile/fatigue testing  
[NASA-CASE-LEW-14848-1] c 14 N91-27175

## BRINDLEY, W. J.

Ceramic coatings on smooth surfaces  
[NASA-CASE-LEW-15164-1] c 27 N91-25298

Oxidation resistant overlay coatings for low expansion  
substrates  
[NASA-CASE-LEW-15154-1] c 27 N93-19332

Oxidation resistant overlay coatings for low expansion  
substrates  
[NASA-CASE-LEW-15154-2] c 27 N93-31300

## BRINDLEY, WILLIAM J.

Oxidation resistant coating for titanium alloys and  
titanium alloy matrix composites  
[NASA-CASE-LEW-15155-1] c 27 N92-29090

## BRINICH, P. F.

Electrothermal rockets having improved heat  
exchangers Patent  
[NASA-CASE-XLE-01783] c 28 N70-34175

## BRINKS, B. J.

Plating nickel on aluminum castings Patent  
[NASA-CASE-XNP-04148] c 17 N71-24830

## BRISKEN, A. F.

Automatic transponder  
[NASA-CASE-GSC-12075-1] c 32 N77-31350

## BRISSENDEN, R. F.

Cable arrangement for rigid tethering Patent  
[NASA-CASE-XLA-02332] c 32 N71-17609

## BRITCLIFFE, MICHAEL J.

Cryogenic regenerator including saran-carbon heat  
conduction matrix  
[NASA-CASE-NPO-17291-1-CU] c 34 N88-23946

## BRITT, T. O.

Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c 33 N79-11315

## BRITZ, W. J.

Rapid activation and checkout device for batteries  
[NASA-CASE-MFS-22749-1] c 44 N76-14601

Lead-oxygen dc power supply system having a closed  
loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c 44 N76-27664

## BROCK, F. J.

Gauge calibration by diffusion  
[NASA-CASE-XGS-07752] c 14 N73-30390

Ultrahigh vacuum measuring ionization gauge  
[NASA-CASE-XLA-05087] c 14 N73-30391

## BROCKMAN, M. H.

Charge storage diode modulators and demodulators  
[NASA-CASE-NPO-10189-1] c 33 N77-21314

Radio frequency arraying method for receivers  
[NASA-CASE-NPO-14328-1] c 32 N80-18253

Faraday rotation measurement method and apparatus  
[NASA-CASE-NPO-14839-1] c 35 N82-15381

## BRODER, J. D.

Method of making electrical contact on silicon solar cell  
and resultant product Patent  
[NASA-CASE-XLE-04787] c 03 N71-20492

Method of making silicon solar cell array  
[NASA-CASE-LEW-11069-1] c 44 N74-14784

Covered silicon solar cells and method of manufacture  
[NASA-CASE-LEW-11065-2] c 44 N76-14600

Silicon nitride coated, plastic covered solar cell  
[NASA-CASE-LEW-11496-1] c 44 N77-14580

## BRODERICK, J. C.

Solid state television camera system Patent  
[NASA-CASE-XMF-06092] c 07 N71-24612

## BRODERICK, R. F.

Signal ratio system utilizing voltage controlled oscillators  
Patent  
[NASA-CASE-XMF-04367] c 09 N71-23545

Radar antenna system for acquisition and tracking  
Patent  
[NASA-CASE-XMS-09610] c 07 N71-24625

## BRODIE, S. B.

Variable ratio mixed-mode bilateral master-slave control  
system for shuttle remote manipulator system  
[NASA-CASE-MSC-14245-1] c 18 N75-27041

## BROOK, S. S.

Numerical computer peripheral interactive device with  
manual controls  
[NASA-CASE-NPO-11497] c 08 N73-25206

## BROMAN, C. L.

Dual output variable pitch turbofan actuation system  
[NASA-CASE-LEW-12419-1] c 07 N77-14025

## BROOK, MARK

Method and apparatus for determining return stroke  
polarity of distant lightning  
[NASA-CASE-MFS-26102-1-CU] c 47 N91-15661

Method and apparatus for determining return stroke  
polarity of distant lightning  
[NASA-CASE-MFS-26102-2-CU] c 47 N93-10108

## BROOKS, A. D.

Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c 35 N76-22509

## BROOKS, D. E.

Method for separating biological cells  
[NASA-CASE-MFS-23883-1] c 51 N80-16715

## BROOKS, G. W.

Impact simulator Patent  
[NASA-CASE-XLA-00493] c 11 N70-34786

Flexible ring slosh damping baffle Patent  
[NASA-CASE-LAR-10317-1] c 32 N71-16103

Lunar penetrometer Patent  
[NASA-CASE-XLA-00934] c 14 N71-22765

## BROOKS, J. D.

Continuously operating induction plasma accelerator  
Patent  
[NASA-CASE-XLA-01354] c 25 N70-36946

## BROOKS, R. A.

Capacitive tank gaging apparatus being independent of  
liquid distribution  
[NASA-CASE-MFS-21629] c 14 N72-22442

## BROOKS, R. L.

Fluid sample collection and distribution system  
[NASA-CASE-MSC-16841-1] c 34 N79-24285

Method for detecting coliform organisms  
[NASA-CASE-ARC-11322-1] c 51 N83-28849

## BROOM, MARY B.

Apparatus for mixing solutions in low gravity  
environments  
[NASA-CASE-MFS-26047-1] c 29 N90-21209

## BROPHY, JOHN R.

Three-grid accelerator system for an ion propulsion  
engine  
[NASA-CASE-NPO-18391-1-CU] c 20 N93-28424

## BROSH, A.

Flow separation detector  
[NASA-CASE-ARC-11046-1] c 35 N78-14364

## BROUSSARD, P. H.

Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c 43 N79-25443

## BROUSSARD, R.

Optical tracking mount Patent  
[NASA-CASE-MFS-14017] c 14 N71-26627

## BROWN, C. E.

G conditioning suit Patent  
[NASA-CASE-XLA-02898] c 05 N71-20268

## BROWN, CHRISTOPHER WILLIAM

Toggle release  
[NASA-CASE-MSC-21354-1] c 37 N88-24969

Two fault tolerant toggle-hook release  
[NASA-CASE-MSC-21671-1] c 37 N91-32498

## BROWN, D.

Radial module space station Patent  
[NASA-CASE-XMS-01906] c 31 N70-41373

## BROWN, D. W.

Phase-locked loop with sideband rejecting properties  
Patent  
[NASA-CASE-XNP-02723] c 07 N70-41680

## BROWN, DAVID R.

Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-1-SB] c 25 N90-23517

Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-2-SB] c 25 N91-21270

## BROWN, E. L.

Sprayable low density ablator and application process  
[NASA-CASE-MFS-23506-1] c 24 N78-24290

## BROWN, G. A.

Integrated circuit including field effect transistor and  
cermet resistor  
[NASA-CASE-GSC-10835-1] c 09 N72-33205

## BROWN, G. V.

Method of fabricating a twisted composite  
superconductor  
[NASA-CASE-LEW-11015] c 26 N73-32571

## Magnetocaloric pump

[NASA-CASE-LEW-11672-1] c 37 N74-27904

## Magnetic heat pumping

[NASA-CASE-LEW-12508-1] c 34 N78-17335

## Magnetic heat pumping

[NASA-CASE-LEW-12508-3] c 34 N83-29625

## BROWN, H. H.

Reaction tester  
[NASA-CASE-MSC-13604-1] c 05 N73-13114

## BROWN, J. LYNN

Altitude compensating ablative stiffening band for rocket  
motor nozzles  
[NASA-CASE-MFS-28728-1] c 20 N93-28950

## BROWN, J. W.

Reduced gravity fecal collector seat and urinal  
[NASA-CASE-MFS-22102-1] c 54 N74-20725

## BROWN, JAMES L.

Laser Doppler velocimeter multiplexer interface for  
simultaneous measured events  
[NASA-CASE-ARC-11536-1] c 33 N89-14384

Three-dimensional laser velocimeter simultaneity  
detector  
[NASA-CASE-ARC-11876-1] c 36 N90-25340

## BROWN, K. H.

Phase modulator Patent  
[NASA-CASE-MSC-13201-1] c 07 N71-28429

## BROWN, KENNETH G.

Isotope exchange in oxide-containing catalyst  
[NASA-CASE-LAR-13542-2-SB] c 25 N90-20154

Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-1-SB] c 25 N90-23517

Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-2-SB] c 25 N91-21270

## BROWN, N. D.

Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c 37 N76-22540

## BROWN, P. A.

Indomethacin-acetaminophen combination for gastric  
ulceration control  
[NASA-CASE-ARC-11118-2] c 52 N81-14613

Indomethacin-acetaminophen combination for gastric  
ulceration control  
[NASA-CASE-ARC-11118-1] c 52 N81-29764

## BROWN, R. F.

Monogroove heat pipe design: Insulated liquid channel  
with bridging wick  
[NASA-CASE-MSC-20497-1] c 34 N85-29180

## BROWN, R. H.

Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c 07 N78-18067

## BROWN, R. L.

Gimballed, partially submerged rocket nozzle Patent  
[NASA-CASE-XMF-01544] c 28 N70-34162

## BROWN, R. M.

Multiple pass reimaging optical system  
[NASA-CASE-ARC-10194-1] c 23 N73-20741

## BROWN, RICHARD F.

Monogroove cold plate  
[NASA-CASE-MSC-20946-1] c 34 N87-28867

## BROWN, W. E., III

Method and means for providing an absolute power  
measurement capability Patent  
[NASA-CASE-ERC-11020] c 14 N71-26774

## Clear air turbulence detector

[NASA-CASE-ERC-10081] c 14 N72-28437

Method and apparatus for measuring solar activity and  
atmospheric radiation effects  
[NASA-CASE-ERC-10276] c 14 N73-26432

## BROWNING, R. E.

Flexible seal for valves Patent  
[NASA-CASE-XLE-00101] c 15 N70-33376

## BROYLES, H. F.

Parallel plate viscometer Patent  
[NASA-CASE-XNP-09462] c 14 N71-17584

Method of making hollow elastomeric bodies  
[NASA-CASE-NPO-13535-1] c 37 N76-31524

## BROYLES, H. H.

Parallel plate viscometer Patent  
[NASA-CASE-XNP-09462] c 14 N71-17584

## BRUCE, M. M., JR.

Computerized system for translating a torch head  
[NASA-CASE-MFS-23620-1] c 37 N79-10421

## BRUCE, R. A.

Specialized halogen generator for purification of water  
Patent  
[NASA-CASE-XLA-08913] c 14 N71-28933

Air removal device  
[NASA-CASE-XLA-08914] c 15 N73-12492

Zero gravity liquid mixer  
[NASA-CASE-LAR-10195-1] c 15 N73-19458

Centrifugal hydrophobic separator  
[NASA-CASE-LAR-10194-1] c 34 N74-30608

## Air removal device

[NASA-CASE-XLA-08914-2] c 25 N82-21269

- BRUNSON, J. W.**  
Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c 33 N81-26359
- BRUNSTEIN, S. A.**  
Dual frequency microwave reflex feed  
[NASA-CASE-NPO-13091-1] c 09 N73-12214
- BRYAN, C. J.**  
Autoignition test cell Patent  
[NASA-CASE-KSC-10198] c 11 N71-28629  
System for sterilizing objects  
[NASA-CASE-KSC-11085-1] c 54 N81-24724
- BRYAN, CHARLES F., JR.**  
Lightning discharge protection rod  
[NASA-CASE-LAR-13470-1] c 03 N88-14083  
Space spider crane  
[NASA-CASE-LAR-13411-1-SB] c 18 N88-23828  
Reusable cryogenic liquid rocket propellant tank  
[NASA-CASE-LAR-14172-1] c 20 N93-31295
- BRYAN, M. B.**  
Wind tunnel model damper Patent  
[NASA-CASE-XLA-09480] c 11 N71-33612
- BRYAN, THOMAS C.**  
Standard remote manipulator system docking target  
augmentation for automated docking  
[NASA-CASE-MFS-28419-1] c 18 N91-27200
- BRYANT, E. L.**  
Fatigue testing device Patent  
[NASA-CASE-XLA-02131] c 32 N70-42003  
Noncontacting method for measuring angular  
deflection  
[NASA-CASE-LAR-12178-1] c 74 N80-21138
- BRYANT, PHILLIP G.**  
Mold bolt and means for achieving close tolerances  
between bolts and bolt holes  
[NASA-CASE-MFS-28720-1] c 37 N93-30567
- BRYANT, ROBERT G.**  
Phenylethynyl endcapping reagents and reactive  
diluent  
[NASA-CASE-LAR-14796-1] c 25 N93-31459
- BRYANT, TIMOTHY D.**  
Vapor fragrancier  
[NASA-CASE-LAR-13680-1] c 35 N87-25561  
Passive fetal monitoring sensor  
[NASA-CASE-LAR-14088-1-CU] c 35 N92-33016
- BRYANT, W. H.**  
Digital controller for a Baum folding machine  
[NASA-CASE-LAR-10688-1] c 37 N74-21056
- BRYSON, R. P.**  
Soil penetrometer  
[NASA-CASE-XNP-05530] c 14 N73-32321
- BUBE, K. R.**  
Solar cell with improved N-region contact and method  
of forming the same  
[NASA-CASE-NPO-14205-1] c 44 N79-31752
- BUCHANAN, R. I.**  
Hypersonic test facility Patent  
[NASA-CASE-XLA-00378] c 11 N71-15925  
Hypersonic test facility Patent  
[NASA-CASE-XLA-05378] c 11 N71-21475
- BUCHELE, D. R.**  
Optical torqueometer Patent  
[NASA-CASE-XLE-00503] c 14 N70-34818
- BUCHHOLD, T. A.**  
Superconductive accelerometer Patent  
[NASA-CASE-XMF-01099] c 14 N71-15969
- BUCHMILLER, L. D.**  
Folded traveling wave maser structure Patent  
[NASA-CASE-XNP-05219] c 16 N71-15550
- BUCK, GREGORY M.**  
Quantitative surface temperature measurement using  
two-color thermographic phosphors and video  
equipment  
[NASA-CASE-LAR-13740-1] c 35 N90-22770  
Improved ceramic slip casting technique  
[NASA-CASE-LAR-14471-1] c 27 N93-20041
- BUCKLEY, D. H.**  
Gas lubricant compositions Patent  
[NASA-CASE-XLE-00353] c 18 N70-39897  
Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-01765] c 18 N71-10772  
Alloys for bearings Patent  
[NASA-CASE-XLE-05033] c 15 N71-23810  
Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-10337] c 15 N71-24046
- BUCKLEY, J. D.**  
One-step dual purpose joining technique  
[NASA-CASE-LAR-12595-1] c 33 N82-26571  
Hot melt adhesive attachment pad  
[NASA-CASE-LAR-12894-1] c 27 N85-20125  
Induction heating gun  
[NASA-CASE-LAR-13181-1] c 31 N85-29083
- BUCKLEY, JOHN D.**  
Method of attaching strain gauges to various materials  
[NASA-CASE-LAR-13797-1] c 35 N88-30108
- Method of preforming and assembling superconducting  
circuit elements  
[NASA-CASE-LAR-14395-1-CU] c 33 N91-28490
- Flexible heating head for induction heating apparatus  
and method  
[NASA-CASE-LAR-14679-2] c 32 N92-31150
- BUEHLER, KURT D.**  
Quick-disconnect inflatable seal assembly  
[NASA-CASE-KSC-11368-1] c 37 N89-13786
- BUEHLER, M. G.**  
Split-cross-bridge resistor for testing for proper  
fabrication of integrated circuits  
[NASA-CASE-NPO-16021-1] c 33 N85-30187
- BUEHLER, MARTIN G.**  
Integrated circuit reliability testing  
[NASA-CASE-NPO-17393-1-CU] c 33 N89-29679  
Asymmetric soft-error resistant memory  
[NASA-CASE-NPO-17394-1-CU] c 60 N91-31810
- BUGG, CHARLES E.**  
Hanging drop crystal growth apparatus  
[NASA-CASE-MFS-26061-1] c 76 N91-16815  
Macromolecular crystal growing system  
[NASA-CASE-MFS-26088-1-CU] c 76 N92-25398
- BUGGA, RATNAKUMAR V.**  
Organic cathode for a secondary battery  
[NASA-CASE-NPO-17604-1-CU] c 33 N91-14536  
Copper chloride cathode for a secondary battery  
[NASA-CASE-NPO-17640-1-CU] c 33 N91-14538  
Metal chloride cathode for a battery  
[NASA-CASE-NPO-17809-1-CU] c 33 N91-27478
- BUHLER, G. V.**  
Meter for use in detecting tension in straps having  
predetermined elastic characteristics  
[NASA-CASE-MFS-22189-1] c 35 N75-19615
- BULLINGER, H. B.**  
Photoetching of metal-oxide layers  
[NASA-CASE-ERC-10108] c 06 N72-21094
- BUNCE, R. C.**  
Closed loop ranging system Patent  
[NASA-CASE-XNP-01501] c 21 N70-41930  
Automatic carrier acquisition system  
[NASA-CASE-NPO-11628-1] c 07 N73-30113
- BUNIN, B. L.**  
Optimized bolted joint  
[NASA-CASE-LAR-13250-1] c 37 N86-27630
- BUNKER, E. R., JR.**  
Automated equipotential plotter  
[NASA-CASE-NPO-11134] c 09 N72-21246
- BUNKER, J. W.**  
Slide release mechanism  
[NASA-CASE-MSC-20080-1] c 37 N85-30334
- BUONCRISTIANI, A. MARTIN**  
Method and apparatus for determining optical absorption  
and emission characteristics of a crystal or non-crystalline  
fiber  
[NASA-CASE-LAR-13963-1] c 76 N90-24150
- BURCH, C. F.**  
Grinding arrangement for ball nose milling cutters  
[NASA-CASE-LAR-10450-1] c 37 N74-27905
- BURCH, J. L.**  
Two speed drive system  
[NASA-CASE-MFS-20645-1] c 37 N74-23070  
Automatically operable self-leveling load table  
[NASA-CASE-MFS-22039-1] c 09 N75-12968  
Actuator device for artificial leg  
[NASA-CASE-MFS-23225-1] c 52 N77-14735  
Combined docking and grasping device  
[NASA-CASE-MFS-23088-1] c 37 N77-23483  
Apparatus for assembling space structure  
[NASA-CASE-MFS-23579-1] c 18 N79-11108  
Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c 43 N79-25443
- BURCHAM, F. W.**  
Multiple pure tone elimination strut assembly  
[NASA-CASE-FRC-11062-1] c 71 N82-16800
- BURCHAM, T. W.**  
Controlled release device Patent  
[NASA-CASE-XKS-03338] c 15 N71-24043
- BURCHER, E. E.**  
Laser communication system for controlling several  
functions at a location remote to the laser  
[NASA-CASE-LAR-10311-1] c 16 N73-16536  
Transmitting and reflecting diffuser  
[NASA-CASE-LAR-10385-2] c 70 N74-13436  
Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c 35 N75-15014  
Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c 35 N75-19613  
Transmitting and reflecting diffuser  
[NASA-CASE-LAR-10385-3] c 74 N78-15879  
Device for measuring the contour of a surface  
[NASA-CASE-LAR-11869-1] c 74 N78-27904
- BURDIN, C.**  
Phase-locked servo system  
[NASA-CASE-MFS-22073-1] c 33 N75-13139
- BURGESS, A. S.**  
Method of fabricating an imaging X-ray spectrometer  
[NASA-CASE-GSC-12956-1] c 35 N87-14671
- BURGETT, F. A.**  
Measuring device Patent  
[NASA-CASE-XMS-01546] c 14 N70-40233  
Process for conditioning tanned sharkskin and articles  
made therefrom Patent  
[NASA-CASE-XMS-09691-1] c 18 N71-15545
- BURK, S. M., JR.**  
Deployable flexible ventral fins for use as an emergency  
spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c 08 N74-30421
- BURKE, J. R.**  
Optical spin compensator  
[NASA-CASE-XGS-02401] c 14 N69-27485
- BURKE, JAMES D.**  
Atmospheric autorotating imaging device  
[NASA-CASE-NPO-17390-1-CU] c 35 N90-22769
- BURKHART, J. A.**  
Magneto-plasma-dynamic arc thruster  
[NASA-CASE-LEW-11180-1] c 25 N73-25760
- BURKLEY, R. A.**  
Panelized high performance multilayer insulation  
Patent  
[NASA-CASE-MFS-14023] c 33 N71-25351
- BURKS, H. D.**  
Polyphenylene ethers with imide linking groups  
[NASA-CASE-LAR-12980-1] c 27 N84-22749  
Process of end-capping a polyimide system  
[NASA-CASE-LAR-13135-1] c 27 N86-19456
- BURKS, HAROLD D.**  
Copolymer with a combination of flexibilizing groups  
[NASA-CASE-LAR-13821-1] c 27 N90-16950  
Polyimide processing additives  
[NASA-CASE-LAR-13669-1] c 27 N92-29157
- BURKS, R. E., JR.**  
Infusible silazane polymer and process for producing  
same  
[NASA-CASE-XMF-02526-1] c 27 N79-21190
- BURLEY, RICHARD K.**  
Valve lock  
[NASA-CASE-MFS-29764-1] c 37 N93-19049  
Valve malfunction detection apparatus  
[NASA-CASE-MFS-29904-1] c 35 N93-29503
- BURNETT, J. E.**  
Tissue macerating instrument  
[NASA-CASE-LEW-12668-1] c 52 N78-14773
- BURNHAM, D. C.**  
Method and apparatus for wavelength tuning of liquid  
lasers  
[NASA-CASE-ERC-10187] c 16 N69-31343
- BURNS, E. A.**  
Ablative resin Patent  
[NASA-CASE-XLE-05913] c 33 N71-14032  
Reinforced structural plastics  
[NASA-CASE-LEW-10199-1] c 27 N74-23125
- BURNS, F. P.**  
Biomedical radiation detecting probe Patent  
[NASA-CASE-XMS-01177] c 05 N71-19440
- BURNS, M. R., JR.**  
Automatic weld torch guidance control system  
[NASA-CASE-MFS-25807] c 37 N83-20154  
Automated weld torch guidance control system  
[NASA-CASE-MFS-25807-2] c 37 N86-21850
- BURNS, R. H.**  
High pulse rate high resolution optical radar system  
[NASA-CASE-NPO-11426] c 07 N73-26119
- BURNS, R. K.**  
Protected isotope heat source  
[NASA-CASE-LEW-11227-1] c 73 N75-30876
- BURROUS, C. N.**  
Temperature compensated light source using a light  
emitting diode  
[NASA-CASE-ARC-10467-1] c 09 N73-14214
- BURROWS, D. L.**  
Insulating structure Patent  
[NASA-CASE-XMF-00341] c 15 N70-33323
- BURTON, D. R.**  
Garments for controlling the temperature of the body  
Patent  
[NASA-CASE-XMS-10269] c 05 N71-24147
- BURTON, W. A.**  
Endless tape cartridge Patent  
[NASA-CASE-XGS-00769] c 14 N70-41647  
Annular slit colloid thruster Patent  
[NASA-CASE-GSC-10709-1] c 28 N71-25213
- BUSEMANN, A.**  
Plasma accelerator Patent  
[NASA-CASE-XLA-00675] c 25 N70-33267
- BUSH, H. G.**  
Vacuum pressure molding technique  
[NASA-CASE-LAR-10073-1] c 37 N76-24575  
Lightweight structural columns  
[NASA-CASE-LAR-12095-1] c 31 N81-25258

- Mechanical end joint system for structural column elements  
[NASA-CASE-LAR-12482-1] c 37 N82-32732
- Self-locking mechanical center joint  
[NASA-CASE-LAR-12864-1] c 37 N85-30336
- Synchronously deployable truss structure  
[NASA-CASE-LAR-13117-1] c 37 N86-25789
- BUSH, HAROLD G.**
- Mobile remote manipulator vehicle system  
[NASA-CASE-LAR-13393-1] c 54 N87-29118
- Seamless metal-clad fiber-reinforced organic matrix composite structures and process for their manufacture  
[NASA-CASE-LAR-13562-1] c 24 N90-25196
- Mechanical end joint system for connecting structural column elements  
[NASA-CASE-LAR-14465-1] c 37 N91-14614
- Process for the manufacture of seamless metal-clad fiber-reinforced organic matrix composite structures  
[NASA-CASE-LAR-13562-2] c 24 N91-25199
- BUSHNELL, D. M.**
- Powder fed sheared dispersal particle generator  
[NASA-CASE-LAR-12785-1] c 37 N84-16561
- BUSHNELL, DENNIS M.**
- Hydrodynamic skin-friction reduction  
[NASA-CASE-LAR-14078-1-CU] c 34 N90-27071
- Polymer/riblet combination for hydrodynamic skin friction reduction  
[NASA-CASE-LAR-14271-1-CU] c 27 N91-13558
- Serrated trailing edges for improving lift and drag characteristics of lifting surfaces  
[NASA-CASE-LAR-13870-1-CU] c 05 N92-21587
- BUSHONG, WILTON E.**
- Induction-type metal detector with increased scanning area capability  
[NASA-CASE-KSC-11386-1] c 35 N90-22023
- BUSSEY, WALTER S.**
- Multi-adjustable headband  
[NASA-CASE-KSC-11322-1] c 54 N89-29953
- BUTLER, D. H.**
- Miniature vibration isolator Patent  
[NASA-CASE-XLA-01019] c 15 N70-40156
- Radio frequency filter device  
[NASA-CASE-XLA-02609] c 09 N72-25256
- BUTLER, J. M.**
- Tackifier for addition polyimides containing monoethylphthalate  
[NASA-CASE-LAR-12642-1] c 27 N81-29229
- BUTLER, L. V.**
- Protective telescoping shield for solar concentrator  
[NASA-CASE-NPO-16236-1] c 44 N86-27706
- BUTMAN, S.**
- Signal phase estimator  
[NASA-CASE-NPO-11203] c 10 N72-20224
- Multichannel telemetry system  
[NASA-CASE-NPO-11572] c 07 N73-16121
- Receiver with an improved phase lock loop in a multichannel telemetry system with suppressed carrier  
[NASA-CASE-NPO-11593-1] c 07 N73-28012
- BUTMAN, S. A.**
- Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c 32 N77-20289
- BUTNER, C. L.**
- Optical multiple sample vacuum integrating sphere  
[NASA-CASE-GSC-12849-1] c 74 N86-26190
- BUZZARD, R. J.**
- Radial heat flux transformer  
[NASA-CASE-NPO-10828] c 33 N72-17948
- BUZZARD, ROBERT J.**
- Fatigue testing apparatus  
[NASA-CASE-LEW-14124-1] c 35 N90-23712
- BYER, ROBERT L.**
- Cladding for transverse-pumped solid-state laser  
[NASA-CASE-NPO-17355-1-CU] c 36 N91-17360
- BYERS, D. C.**
- Electrostatic thruster with improved insulators Patent  
[NASA-CASE-XLE-01902] c 28 N71-10574
- Sputtering holes with ion beamlets  
[NASA-CASE-LEW-11646-1] c 20 N74-31269
- BYNUM, B. G.**
- Response analyzers for sensors Patent  
[NASA-CASE-MFS-11204] c 14 N71-29134
- Ergometer  
[NASA-CASE-MFS-21109-1] c 05 N73-27941
- BYRD, A. W.**
- Heat pipe thermionic diode power system Patent  
[NASA-CASE-XMF-05843] c 03 N71-11055
- Power system with heat pipe liquid coolant lines Patent  
[NASA-CASE-MFS-14114-2] c 09 N71-24807
- Isothermal cover with thermal reservoirs Patent  
[NASA-CASE-MFS-20355] c 33 N71-25353
- Power system with heat pipe liquid coolant lines Patent  
[NASA-CASE-MFS-14114] c 33 N71-27862

- Thermoelectric power system  
[NASA-CASE-MFS-22002-1] c 44 N76-16612
- BYRD, J. D.**
- Elastomeric silazane polymers and process for preparing the same Patent  
[NASA-CASE-XMF-04133] c 06 N71-20717
- BYRD, N. R.**
- Thermally conductive polymers  
[NASA-CASE-GSC-11304-1] c 06 N72-21105
- BYRNE, F.**
- BCD to decimal decoder Patent  
[NASA-CASE-XKS-06167] c 08 N71-24890
- Video sync processor Patent  
[NASA-CASE-KSC-10002] c 10 N71-25865
- Automatic frequency control loop including synchronous switching circuits  
[NASA-CASE-KSC-10393] c 09 N72-21247
- Digital servo controller  
[NASA-CASE-KSC-10769-1] c 33 N74-29556
- Common data buffer system  
[NASA-CASE-KSC-11048-1] c 62 N81-24779
- Video processor for air traffic control beacon system  
[NASA-CASE-KSC-11155-1] c 04 N86-19304
- Method and apparatus for operating on compressed PCM voice data  
[NASA-CASE-KSC-11285-1] c 32 N86-27513
- BYVIK, C. E.**
- Photoelectrochemical cells including chalcogenophosphate photoelectrodes  
[NASA-CASE-LAR-12958-1] c 44 N84-23019
- Method for determining the point of zero zeta potential of semiconductor  
[NASA-CASE-LAR-12893-1] c 76 N85-30923
- BYVIK, CHARLES E.**
- Method and apparatus for determining optical absorption and emission characteristics of a crystal or non-crystalline fiber  
[NASA-CASE-LAR-13963-1] c 76 N90-24150

## C

- CABLE, C. W.**
- Solar cell assembly test method  
[NASA-CASE-NPO-10401] c 03 N72-20033
- CABLE, W. L.**
- Rotary solenoid shutter drive assembly and rotary inertia damper and stop plate assembly  
[NASA-CASE-GSC-11560-1] c 33 N74-20861
- CACOSSA, R. A.**
- Method of detecting impending saturation of magnetic cores  
[NASA-CASE-ERC-10089] c 23 N72-17747
- CAGLIOSTRO, D. E.**
- Method of carbonizing polyacrylonitrile fibers  
[NASA-CASE-ARC-11261-1] c 24 N83-25789
- CAGLIOSTRO, DOMENICK E.**
- Ceramic honeycomb structures and the method thereof  
[NASA-CASE-ARC-11652-1] c 27 N87-23737
- CAHILL, K. J.**
- Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c 33 N80-20487
- Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c 44 N81-29524
- CAHILL, N. E.**
- Positive locking check valve Patent  
[NASA-CASE-XMS-09310] c 15 N71-22706
- CAIRO, F. J.**
- Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c 44 N79-24431
- CALANDRO, J. N.**
- Resilient wheel Patent  
[NASA-CASE-MFS-13929] c 15 N71-27091
- CALCO, FRANK S.**
- Precision tunable resonant microwave cavity  
[NASA-CASE-LEW-13935-1] c 33 N87-21234
- Quick action clamp  
[NASA-CASE-LEW-14887-1] c 37 N91-27561
- Three point lead screw positioning apparatus  
[NASA-CASE-LEW-15216-1] c 37 N92-17678
- CALFO, F. D.**
- Micronized coal burner facility  
[NASA-CASE-LEW-13426-1] c 25 N84-16276
- CALLAHAN, D. E.**
- Solid state television camera system Patent  
[NASA-CASE-XMF-06092] c 07 N71-24612
- CALOMINO, ANTHONY M.**
- Fully articulated four-point-bend loading fixture  
[NASA-CASE-LEW-14776-1] c 37 N91-21540
- CALVERT, H. F.**
- Modification and improvements to cooled blades Patent  
[NASA-CASE-XLE-00092] c 15 N70-33264

- CALVERT, J. A.**
- Redundant motor drive system  
[NASA-CASE-MFS-23777-1] c 37 N80-32716
- CALVERT, JOHN A.**
- Self indexing latch system  
[NASA-CASE-MFS-25956-1] c 37 N87-21333
- CAMACHO, S. L.**
- Protective circuit of the spark gap type  
[NASA-CASE-XAC-08981] c 09 N69-39897
- CAMARDA, C. J.**
- Heat pipe cooled probe  
[NASA-CASE-LAR-12588-1] c 34 N85-21568
- CAMARDA, CHARLES J.**
- Reusable high-temperature heat pipes and heat pipe panels  
[NASA-CASE-LAR-13761-1] c 34 N90-20323
- Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-1] c 34 N92-28752
- Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-2] c 34 N92-30024
- CAMBRA, J. M.**
- Overvoltage protection network  
[NASA-CASE-ARC-10197-1] c 33 N74-17929
- CAMBRIDGE, VIVIAN**
- Predictive sensor method and apparatus  
[NASA-CASE-SSC-00006-1] c 35 N91-13691
- CAMBRIDGE, VIVIAN J.**
- Digital data registration and differencing compression system  
[NASA-CASE-SSC-00010-1] c 82 N91-23976
- Digital data registration and differencing compression system  
[NASA-CASE-SSC-00010-2] c 82 N92-23550
- CAMERON, J. R.**
- Method and system for in vivo measurement of bone tissue using a two level energy source  
[NASA-CASE-MSC-14276-1] c 52 N77-14737
- CAMP, D. W.**
- Anemometer with braking mechanism Patent  
[NASA-CASE-XMF-05224] c 14 N71-23726
- Maximeters (peak wind speed anemometers)  
[NASA-CASE-MFS-20916] c 14 N73-25460
- CAMP, E. L.**
- Automatic signal range selector for metering devices Patent  
[NASA-CASE-XMS-06497] c 14 N71-26244
- CAMPBELL, B. A.**
- Epoxy-aziridine polymer product Patent  
[NASA-CASE-NPO-10701] c 06 N71-28620
- CAMPBELL, C. C., JR.**
- Discrete local altitude sensing device Patent  
[NASA-CASE-XMS-03792] c 14 N70-41812
- CAMPBELL, C. W.**
- Collimated beam manifold with the number of output beams variable at a given output angle  
[NASA-CASE-MFS-25312-1] c 74 N83-17305
- CAMPBELL, D. H.**
- Method of making a rocket nozzle  
[NASA-CASE-XMF-06884-1] c 20 N79-21123
- CAMPBELL, D. R.**
- Time division radio relay synchronizing system using different sync code words for in sync and out of sync conditions Patent  
[NASA-CASE-GSC-10373-1] c 07 N71-19773
- CAMPBELL, F. D.**
- Radiant source tracker independent of nonconstant irradiance  
[NASA-CASE-NPO-11686] c 14 N73-25462
- CAMPBELL, G. E.**
- Self-recording portable soil penetrometer  
[NASA-CASE-MFS-20774] c 14 N73-19420
- CAMPBELL, G. W.**
- Method and system for respiration analysis Patent  
[NASA-CASE-XFR-08403] c 05 N71-11202
- CAMPBELL, J. G.**
- Multislot film cooled pyrolytic graphite rocket nozzle Patent  
[NASA-CASE-XNP-04389] c 28 N71-20942
- Tube sealing device Patent  
[NASA-CASE-NPO-10431] c 15 N71-29132
- CAMPBELL, R. A.**
- Redundant hydraulic control system for actuators  
[NASA-CASE-MFS-20944] c 15 N73-13466
- Contour measurement system  
[NASA-CASE-MFS-23726-1] c 43 N79-26439
- Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c 43 N80-14423
- CAMPBELL, R. B., JR.**
- Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c 35 N77-10493
- CAMPBELL, SCOTT R.**
- Thermal compensating mount  
[NASA-CASE-LAR-14207-1] c 35 N91-14590

- CAMPBELL, T. G.**  
Omnidirectional slot antenna for mounting on cylindrical space vehicle  
[NASA-CASE-LAR-10163-1] c 09 N72-25247  
Aircraft rotor blade with passive tuned tab  
[NASA-CASE-ARC-11444-1] c 05 N85-29947
- CAMPEN, C. F., JR.**  
Automated system for identifying traces of organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c 25 N76-18245
- CANCRO, C. A.**  
Low power drain semi-conductor circuit  
[NASA-CASE-XGS-04999] c 09 N69-24317  
Wide range data compression system Patent  
[NASA-CASE-XGS-02612] c 08 N71-19435  
Passive synchronized spike generator with high input impedance and low output impedance and capacitor power supply Patent  
[NASA-CASE-XGS-03632] c 09 N71-23311  
Fast response low power drain logic circuits  
[NASA-CASE-GSC-10878-1] c 10 N72-22236
- CANICATTI, C. L.**  
Voltage monitoring system  
[NASA-CASE-KSC-10736-1] c 33 N75-19521
- CANNING, T. N.**  
Shock-layer radiation measurement  
[NASA-CASE-XAC-02970] c 14 N69-39896  
Hypervelocity gun Patent  
[NASA-CASE-XAC-05902] c 11 N71-18578  
Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c 35 N74-15093  
Bimetallic fluid displacement apparatus  
[NASA-CASE-ARC-10441-1] c 35 N74-15126  
High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c 15 N82-24272
- CANTOR, C.**  
Attitude control system Patent  
[NASA-CASE-XGS-04393] c 21 N71-14159  
Amplifier clamping circuit for horizon scanner Patent  
[NASA-CASE-XGS-01784] c 10 N71-20782  
Roll alignment detector  
[NASA-CASE-GSC-10514-1] c 14 N72-20379
- CANTRELL, J. H., JR.**  
Liquid-immersible electrostatic ultrasonic transducer  
[NASA-CASE-LAR-12465-1] c 33 N82-26572
- CANTRELL, JOHN H.**  
Magneto acoustic emission apparatus for testing materials for embrittlement  
[NASA-CASE-LAR-13817-1] c 26 N90-21170  
Method and apparatus for using magneto-acoustic remanence to determine embrittlement  
[NASA-CASE-LAR-13817-5] c 39 N92-28757  
Magnetic remanence method and apparatus to test materials for embrittlement  
[NASA-CASE-LAR-13817-4] c 39 N92-29101  
Magneto acoustic emission method for testing materials for embrittlement  
[NASA-CASE-LAR-13817-2] c 39 N92-29155  
Constant frequency pulsed phase-locked loop measuring device  
[NASA-CASE-LAR-13823-1] c 35 N93-29084
- CANTRELL, JOHN H., JR.**  
Acoustic radiation stress measurement  
[NASA-CASE-LAR-13440-1] c 71 N87-21653  
Method and apparatus for characterizing reflected ultrasonic pulses  
[NASA-CASE-LAR-13966-1] c 71 N91-27914
- CANVEL, H.**  
Video communication system and apparatus Patent  
[NASA-CASE-XNP-06611] c 07 N71-26102
- CAPLETTE, R. K.**  
Current steering commutator  
[NASA-CASE-NPO-10743] c 08 N72-21199
- CAPPS, J. E.**  
Two-step rocket engine bipropellant valve Patent  
[NASA-CASE-XMS-04890-1] c 15 N70-22192
- CAPUTO, MICHAEL P.**  
Portable dynamic fundus instrument  
[NASA-CASE-MSC-21675-1] c 52 N92-28755
- CARDEN, JAMES R.**  
Rotationally actuated prosthetic helping hand  
[NASA-CASE-MFS-28426-1] c 54 N91-32795  
Prosthetic helping hand  
[NASA-CASE-MFS-28430-1] c 54 N92-24044  
Bar-holding prosthetic limb  
[NASA-CASE-MFS-28481-1] c 54 N93-14870
- CAREN, R. P.**  
Dual solid cryogenics for spacecraft refrigeration Patent  
[NASA-CASE-GSC-10188-1] c 23 N71-24725
- CARL, C.**  
Apparatus for deriving synchronizing pulses from pulses in a single channel PCM communications system  
[NASA-CASE-NPO-11302-1] c 07 N73-13149  
Method and apparatus for a single channel digital communications system  
[NASA-CASE-NPO-11302-2] c 32 N74-10132
- Digital second-order phase-locked loop  
[NASA-CASE-NPO-11905-1] c 33 N74-12887
- CARL, G. R.**  
Air conditioned suit  
[NASA-CASE-LAR-10076-1] c 05 N73-20137
- CARLE, C. E.**  
Reel safety brake  
[NASA-CASE-GSC-11960-1] c 37 N77-14479
- CARLE, G. C.**  
Modulated voltage metastable ionization detector  
[NASA-CASE-ARC-11503-1] c 35 N85-34374
- CARLISLE, T. E.**  
Method and apparatus for controllably heating fluid Patent  
[NASA-CASE-XMF-04237] c 33 N71-16278
- CARLSON, A. W.**  
Pulse-width modulation multiplier Patent  
[NASA-CASE-XER-09213] c 07 N71-12390
- CARLSON, H. W.**  
Supersonic aircraft Patent  
[NASA-CASE-XLA-04451] c 02 N71-12243
- CARLSON, R. L.**  
Flow diverter valve and flow diversion method  
[NASA-CASE-HQN-00573-1] c 37 N79-33468
- CARLSON, W. C. A.**  
Electric arc device for heating gases Patent  
[NASA-CASE-XAC-00319] c 25 N70-41628
- CARMIN, D. L., JR.**  
Anti-fog composition  
[NASA-CASE-MSC-13530-2] c 23 N75-14834
- CARMODY, R. J.**  
Honeycomb panel and method of making same Patent  
[NASA-CASE-XMF-01402] c 18 N71-21651
- CARO, E. R.**  
High power RF coaxial switch  
[NASA-CASE-NPO-14229-1] c 33 N80-18285  
Method and apparatus for contour mapping using synthetic aperture radar  
[NASA-CASE-NPO-15939-1] c 43 N86-19711
- CARO, EDWARD R.**  
Coaxial cable connector  
[NASA-CASE-NPO-16764-1-CU] c 33 N88-14270
- CARON, P. R.**  
Logarithmic function generator utilizing an exponentially varying signal in an inverse manner  
[NASA-CASE-ERC-10267] c 09 N72-23173  
Phase control circuits using frequency multiplications for phased array antennas  
[NASA-CASE-ERC-10285] c 10 N73-16206
- CARPINI, T. D.**  
Flow velocity and directional instrument  
[NASA-CASE-LAR-10855-1] c 14 N73-13415
- CARR, W. F.**  
Split nut separation system Patent  
[NASA-CASE-XNP-06914] c 15 N71-21489
- CARRAWAY, DEBRA L.**  
Crossflow vorticity sensor  
[NASA-CASE-LAR-13436-1-CU] c 02 N88-23759  
Active thermal isolation for temperature responsive sensors  
[NASA-CASE-LAR-14612-1] c 34 N92-29954
- CARRAWAY, J. B.**  
Miniature multichannel biotelemetry system  
[NASA-CASE-NPO-13065-1] c 52 N74-26625
- CARRENO, VICTOR A.**  
Single frequency multitransmitter telemetry  
[NASA-CASE-LAR-13006-1] c 17 N87-16863
- CARROLL, W. F.**  
Stabilized zinc oxide coating compositions Patent  
[NASA-CASE-XMF-07770-2] c 18 N71-26772
- CARSLEY, R. B.**  
CAM controlled retractable door latch  
[NASA-CASE-MSC-20304-1] c 37 N82-31690
- CARSON, J. W.**  
Quasi-optical microwave component Patent  
[NASA-CASE-ERC-10011] c 07 N71-29065
- CARSON, L. M.**  
PN lock indicator for dithered PN code tracking loop  
[NASA-CASE-NPO-14435-1] c 33 N81-33405  
Discriminator aided phase lock acquisition for suppressed carrier signals  
[NASA-CASE-NPO-14311-1] c 33 N82-29539
- CARSON, P. R.**  
Array phasing device Patent  
[NASA-CASE-ERC-10046] c 10 N71-18722
- CARSON, W. N., JR.**  
Didymium hydrate additive to nickel hydroxide electrodes Patent  
[NASA-CASE-XGS-03505] c 03 N71-10608
- CARTER, A. F.**  
Plasma accelerator Patent  
[NASA-CASE-XLA-00675] c 25 N70-33267  
Method and apparatus for producing a plasma Patent  
[NASA-CASE-XLA-00147] c 25 N70-34661
- CARTER, DANIEL C.**  
Human serum albumin, crystals and method of preparation  
[NASA-CASE-MFS-28234-1] c 52 N90-20616  
Apparatus for mixing solutions in low gravity environments  
[NASA-CASE-MFS-26047-1] c 29 N90-21209  
Hanging drop crystal growth apparatus and method  
[NASA-CASE-MFS-28206-1-SB] c 76 N90-23242  
X ray sensitive area detection device  
[NASA-CASE-MFS-28232-1] c 74 N91-14835  
Hanging drop crystal growth apparatus  
[NASA-CASE-MFS-26061-1] c 76 N91-16815  
Radiation sensitive area detection device and method  
[NASA-CASE-MFS-28563-1] c 35 N91-25388  
Macromolecular crystal growing system  
[NASA-CASE-MFS-26088-1-CU] c 76 N92-25398  
Protein crystal growth tray assembly  
[NASA-CASE-MFS-28507-1] c 76 N92-34171  
Amino acid sequences for the binding regions in serum albumin proteins  
[NASA-CASE-MFS-28402-1] c 51 N93-28952
- CARTER, EDWARD L.**  
Magnetic drive coupling  
[NASA-CASE-MSC-21171-1] c 37 N88-23973
- CARTER, J. M.**  
Sprayable low density ablator and application process  
[NASA-CASE-MFS-23506-1] c 24 N78-24290
- CARTER, W. K.**  
Emergency earth orbital escape device  
[NASA-CASE-MSC-13281] c 31 N72-18859
- CARUSO, A. J.**  
Sorption vacuum trap Patent  
[NASA-CASE-XER-09519] c 14 N71-18483
- CARUSO, V. P.**  
Method of peening and portable peening gun  
[NASA-CASE-MFS-23047-1] c 37 N76-18454
- CARVER, V. C.**  
Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c 25 N82-26396
- CASANOVA, EDGAR J.**  
Gamma ray collimator  
[NASA-CASE-SSC-00013-1] c 38 N91-32515
- CASE, M. C.**  
Space suit  
[NASA-CASE-MSC-12609-1] c 05 N73-32012
- CASEY, L. O.**  
Electrical load protection device Patent  
[NASA-CASE-MSC-12135-1] c 09 N71-12526
- CASH, W. H., JR.**  
Pulse transducer with artifact signal attenuator  
[NASA-CASE-FRC-11012-1] c 52 N80-23969
- CASHION, K. D.**  
Solar optical telescope dome control system Patent  
[NASA-CASE-MSC-10966] c 14 N71-19568
- CASON, R. L.**  
Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c 33 N79-18193
- CASSIDY, PATRICK E.**  
Low dielectric fluorinated poly(phenylene ether ketone) film and coating  
[NASA-CASE-LAR-13992-1-CU] c 23 N91-27220
- CASTLE, K. D.**  
Shielded conductor cable system  
[NASA-CASE-MSC-12745-1] c 33 N81-27397
- CASTLE, KENT D.**  
Extra-corporeal blood access, sensing, and radiation methods and apparatuses  
[NASA-CASE-MSC-21775-1] c 52 N92-11627
- CASTLEMAN, K. R.**  
Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c 52 N79-12694
- CASTLES, STEPHEN H.**  
Surface tension confined liquid cryogen cooler  
[NASA-CASE-GSC-13112-1] c 31 N89-29578  
Sub-Kelvin resistance thermometer  
[NASA-CASE-GSC-13406-1] c 35 N92-33614
- CASTRO, EDGAR O.**  
Pre-integrated truss space station and method of assembly  
[NASA-CASE-MSC-22015-1] c 18 N93-20042
- CATLAW, T. G.**  
High contrast cathode ray tube  
[NASA-CASE-ERC-10468] c 09 N72-20206
- CAUDILL, L. O.**  
Long range laser traversing system  
[NASA-CASE-GSC-11262-1] c 36 N74-21091
- CAVALIER, AL**  
Rapid quantification of an internal property  
[NASA-CASE-LAR-13689-1-NP] c 35 N87-23941
- CAVALIER, ALBERT R.**  
Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-1-NP] c 52 N90-21519



- Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-2] c 52 N92-11621
- CECCON, H. L.**  
Optical pump and driver system for lasers  
[NASA-CASE-ERC-10283] c 16 N72-25485
- CELLIER, A.**  
Digital numerically controlled oscillator  
[NASA-CASE-MS-C-16747-1] c 33 N81-17349
- CEPOLLINA, F. J.**  
Strain gauge measuring techniques Patent  
[NASA-CASE-XGS-04478] c 14 N71-24233
- CERIMELE, CHRISTOPHER J.**  
Assured crew return vehicle  
[NASA-CASE-MS-C-21536-1] c 18 N92-21999
- CERINI, D. J.**  
Hydrogen-rich gas generator  
[NASA-CASE-NPO-13560-1] c 44 N77-10636  
Start up system for hydrogen generator used with an internal combustion engine  
[NASA-CASE-NPO-13849-1] c 28 N80-10374
- CERRO, JEFFREY A.**  
Combined load test apparatus for flat panels  
[NASA-CASE-LAR-14698-1] c 39 N92-30028
- CERYENKA, P. O.**  
External bulb variable volume maser  
[NASA-CASE-GSC-12334-1] c 36 N79-14362
- CHAI, A. T.**  
Method of making a high voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c 44 N82-29709  
High voltage planar multijunction solar cell  
[NASA-CASE-LEW-13400-1] c 44 N82-31764  
Solar cell having improved back surface reflector  
[NASA-CASE-LEW-13620-1] c 44 N83-13579  
High voltage v-groove solar cell  
[NASA-CASE-LEW-13401-2] c 44 N83-32177  
Screen printed interdigitated back contact solar cell  
[NASA-CASE-LEW-13414-1] c 44 N85-20530
- CHALSON, HOWARD E.**  
Multi-adjustable headband  
[NASA-CASE-KSC-11322-1] c 54 N89-29953
- CHAMBERLAIN, F. R.**  
Optical binocular scanning apparatus  
[NASA-CASE-NPO-11002] c 14 N72-22441  
System for forming a quadrified image comprising angularly related fields of view of a three dimensional object  
[NASA-CASE-NPO-14219-1] c 74 N81-17886
- CHAMBERS, A. B.**  
Temperature controller for a fluid cooled garment  
[NASA-CASE-ARC-10599-1] c 05 N73-26071  
Walking boot assembly  
[NASA-CASE-ARC-11101-1] c 54 N78-17675
- CHAMIS, C. C.**  
Hybrid composite laminate structures  
[NASA-CASE-LEW-12118-1] c 24 N77-27188
- CHAN, CHUNG K.**  
Self-actuating heat switches for redundant refrigeration systems  
[NASA-CASE-NPO-17085-1-CU] c 31 N89-12785  
Joule Thomson refrigerator  
[NASA-CASE-NPO-17143-1-CU] c 31 N89-14351
- CHAN, P. C. F.**  
Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NPO-15767-1] c 23 N84-16255
- CHANDLER, J. A.**  
Discrete local altitude sensing device Patent  
[NASA-CASE-XMS-03792] c 14 N70-41812  
Line cutter Patent  
[NASA-CASE-XMS-04072] c 15 N70-42017  
Spacecraft radiator cover Patent  
[NASA-CASE-MS-C-12049] c 31 N71-16080  
Winch having cable position and load indicators Patent  
[NASA-CASE-MS-C-12052-1] c 15 N71-24599  
Apparatus for releasably connecting first and second objects in predetermined space relationship  
[NASA-CASE-MS-C-18969-1] c 18 N84-22605  
Linear motion valve  
[NASA-CASE-MS-C-20148-1] c 37 N85-29284
- CHANDLER, JOSEPH A.**  
Multi-path peristaltic pump  
[NASA-CASE-MS-C-20907-1] c 37 N87-18818  
Bio-reactor chamber  
[NASA-CASE-MS-C-20929-1] c 51 N91-14703
- CHANDLER, W. A.**  
Cryogenic storage system Patent  
[NASA-CASE-XMS-04390] c 31 N70-41871
- CHANEY, R. E.**  
Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c 26 N80-14229
- CHANG-DIAZ, FRANKLIN R.**  
Infusion extractor  
[NASA-CASE-MS-C-20761-1] c 37 N87-15465
- CHANG, C. C.**  
Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MFS-23845-1] c 33 N81-17348
- CHANG, CHI-YUNG**  
Pipeline synthetic aperture radar data compression utilizing systolic binary tree-searched architecture for vector quantization  
[NASA-CASE-NPO-17941-1-CU] c 32 N91-13595
- CHANG, FRANKLIN R.**  
Hybrid plume plasma rocket  
[NASA-CASE-MS-C-20476-2] c 20 N89-25279
- CHANG, JAW J.**  
Systolic VLSI array for implementing the Kalman filter algorithm  
[NASA-CASE-NPO-17108-1-CU] c 33 N89-28713
- CHAO, J. I.**  
Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c 52 N81-25661
- CHAO, TIEN-HSIN**  
Real-time optical multiple object recognition and tracking system and method  
[NASA-CASE-NPO-17139-1-CU] c 74 N88-25301  
Real-time image difference detection using a polarization rotation spatial light modulator  
[NASA-CASE-NPO-17144-1-CU] c 74 N88-25305  
Optoelectronic associative memory  
[NASA-CASE-NPO-18278-1-CU] c 74 N91-32925  
Auto and hetero-associative memory using a 2-D optical logic gate  
[NASA-CASE-NPO-17997-1-CU] c 60 N92-33057  
Improved real-time imaging spectrometer  
[NASA-CASE-NPO-18410-1-CU] c 74 N93-29086
- CHAPMAN, C. P.**  
Switching circuit Patent  
[NASA-CASE-XNP-06505] c 10 N71-24799  
Peak acceleration limiter for vibrational tester Patent  
[NASA-CASE-NPO-10556] c 14 N71-27185  
Apparatus for recovering matter adhered to a host surface  
[NASA-CASE-NPO-11213] c 15 N73-20514  
Automated attendance accounting system  
[NASA-CASE-NPO-11456] c 08 N73-26176  
Servo-controlled intravital microscope system  
[NASA-CASE-NPO-13214-1] c 35 N75-25123
- CHAPMAN, JOHN J.**  
Pressure transducer and system for cryogenic environments  
[NASA-CASE-LAR-14579-1] c 35 N92-29097
- CHAPMAN, R. M.**  
Inflation system for balloon type satellites Patent  
[NASA-CASE-XGS-03351] c 31 N71-16081
- CHAPPELLE, E. W.**  
Use of the enzyme hexokinase for the reduction of inherent light levels  
[NASA-CASE-XGS-05533] c 04 N69-27487  
Light detection instrument Patent  
[NASA-CASE-XGS-05534] c 23 N71-16355  
Lyophilized reaction mixtures Patent  
[NASA-CASE-XGS-05532] c 06 N71-17705  
Flavin coenzyme assay  
[NASA-CASE-GSC-10565-1] c 06 N72-25149  
Method of detecting and counting bacteria in body fluids  
[NASA-CASE-GSC-11092-2] c 04 N73-27052  
Protein sterilization method of firefly luciferase using reduced pressure and molecular sieves  
[NASA-CASE-GSC-10225-1] c 06 N73-27086  
Automatic instrument for chemical processing to detect microorganism in biological samples by measuring light reactions  
[NASA-CASE-GSC-11169-2] c 05 N73-32011  
Method of detecting and counting bacteria  
[NASA-CASE-GSC-11917-2] c 51 N76-29891  
Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c 51 N77-22794  
Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c 52 N79-14750  
Rapid, quantitative determination of bacteria in water  
[NASA-CASE-GSC-12158-1] c 51 N83-27569
- CHARLES, J. F.**  
Floating nut retention system  
[NASA-CASE-MS-C-16938-1] c 37 N80-23653
- CHARLESTON, A.**  
Chromium electrodes for REDOX cells  
[NASA-CASE-LEW-13653-1] c 44 N84-28205
- CHARLTON, K. W.**  
Pneumatic system for controlling and actuating pneumatic cyclic devices  
[NASA-CASE-XMS-04843] c 03 N69-21469
- CHARNOSKY, A. J.**  
Tool attachment for spreading loose elements away from work Patent  
[NASA-CASE-XMF-02107] c 15 N71-10809
- CHASE, E. W.**  
Helmet latching and attaching ring  
[NASA-CASE-XMS-04670] c 54 N78-17678
- CHASE, W. D.**  
Vehicle simulator binocular multiplanar visual display system  
[NASA-CASE-ARC-10808-1] c 09 N76-24280  
Full color hybrid display for aircraft simulators  
[NASA-CASE-ARC-10903-1] c 09 N78-18083  
Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c 04 N82-16059  
Environmental fog/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c 09 N82-24212
- CHATURVEDI, SUSHIL K.**  
Two-stage gas measurement system  
[NASA-CASE-LAR-14791-1] c 35 N93-31297
- CHAU, SAVIO N.**  
Self-checking on-line testable static RAM  
[NASA-CASE-NPO-17939-1-CU] c 60 N93-22032
- CHEATHAM, D. C.**  
Spacecraft docking and alignment system  
[NASA-CASE-MS-C-12559-1] c 18 N76-14186
- CHEN, B. C. J.**  
Waveguide cooling system  
[NASA-CASE-NPO-15401-1] c 32 N83-27085
- CHEN, C. J.**  
Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c 36 N77-26477
- CHEN, CHIEN-CHUNG**  
Electro-optic resonant phase modulator  
[NASA-CASE-NPO-18702-1-CU] c 74 N92-23551
- CHEN, D. Y.**  
Hybrid power semiconductor  
[NASA-CASE-LEW-13922-1] c 33 N86-20672
- CHEN, T. S.**  
Process for preparing perfluorotriazine elastomers and precursors thereof  
[NASA-CASE-ARC-11402-1] c 27 N84-22744  
Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
[NASA-CASE-ARC-11429-1-CU] c 27 N86-20560  
Perfluoro (Imidoylamidine) diamidines  
[NASA-CASE-ARC-11402-3] c 23 N86-21582  
High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1SB] c 24 N86-21590
- CHEN, TIMOTHY S.**  
Process for curing bismaleimide resins  
[NASA-CASE-ARC-11429-4CU] c 27 N87-15304  
Vinyl stilbazoles  
[NASA-CASE-ARC-11429-3CU] c 27 N87-16908  
Structural panels  
[NASA-CASE-ARC-11429-2CU] c 27 N87-22845  
Preparation of B-trichloroborazine  
[NASA-CASE-ARC-11643-1-SB] c 23 N87-23698  
Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-1-SB] c 27 N88-29040  
Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-2-SB] c 27 N90-21177  
Boron-carbon-silicon polymers and ceramic and a process for the production thereof  
[NASA-CASE-ARC-11891-2-SB] c 27 N92-34160
- CHEN, TONY T. D.**  
Two-stage gas measurement system  
[NASA-CASE-LAR-14791-1] c 35 N93-31297
- CHEN, W.**  
Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c 52 N74-27566
- CHEN, W. S.**  
Wind tunnel microphone structure Patent  
[NASA-CASE-XNP-00250] c 11 N71-28779
- CHENG, C. H.**  
Process for preparing perfluorotriazine elastomers and precursors thereof  
[NASA-CASE-ARC-11402-1] c 27 N84-22744  
Perfluoro (Imidoylamidine) diamidines  
[NASA-CASE-ARC-11402-3] c 23 N86-21582
- CHENG, D. Y.**  
Reversed cowl flap inlet thrust augmentor  
[NASA-CASE-ARC-10754-1] c 07 N75-24736  
System for measuring Reynolds in a turbulently flowing fluid  
[NASA-CASE-ARC-10755-2] c 34 N76-27517  
System for measuring three fluctuating velocity components in a turbulently flowing fluid  
[NASA-CASE-ARC-10974-1] c 34 N77-27345  
Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c 07 N83-33884
- CHENG, LI-JEN**  
Floating emitter solar cell  
[NASA-CASE-NPO-16467-1-CU] c 33 N87-23879

- Tailorable infrared sensing device with strain layer superlattice structure  
[NASA-CASE-NPO-16607-1-CU] c 76 N88-14836
- Dynamic range compression/expansion of light beams by photorefractive crystals  
[NASA-CASE-NPO-17140-1-CU] c 74 N89-14077
- Tailorable infrared sensing device with strain layer superlattice structure  
[NASA-CASE-NPO-16617-2-CU] c 35 N90-17118
- Motion detection, novelty filtering, and target tracking using an interferometric technique with a GaAs phase conjugate mirror  
[NASA-CASE-NPO-17784-1-CU] c 74 N91-13998
- Real-time edge-enhanced optical correlator  
[NASA-CASE-NPO-18379-1-CU] c 74 N92-33022
- Improved real-time imaging spectrometer  
[NASA-CASE-NPO-18410-1-CU] c 74 N93-29086
- CHERDAK, A. S.**  
Maximum power point tracker Patent  
[NASA-CASE-GSC-10376-1] c 14 N71-27407
- CHERN, ENGIN J.**  
Method and apparatus for determination of material residual stress  
[NASA-CASE-GSC-13451-1] c 39 N92-23549
- Method for advanced material characterization by laser induced eddy current imaging  
[NASA-CASE-GSC-13386-1] c 38 N92-29154
- Method and apparatus for determination of material residual stress  
[NASA-CASE-GSC-13451-1] c 39 N93-20118
- Method and apparatus for deflection measurements using eddy current effects  
[NASA-CASE-GSC-13506-1] c 35 N93-26103
- CHERN, S. S.**  
Chemical vapor deposition reactor  
[NASA-CASE-NPO-13650-1] c 25 N79-28253
- Induced junction solar cell and method of fabrication  
[NASA-CASE-NPO-13786-1] c 44 N80-29835
- CHERNOFF, R.**  
Frequency translating phase conjugation circuit for active retrodirective antenna array  
[NASA-CASE-NPO-14536-1] c 32 N81-14185
- CHERNOFF, R. C.**  
Phase conjugation method and apparatus for an active retrodirective antenna array  
[NASA-CASE-NPO-13641-1] c 32 N79-24210
- CHESTNUTT, D.**  
Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c 07 N74-31270
- CHEW, MENG-SANG**  
Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N91-28184
- Noncircular rolling joints for vibrational reduction in slewing maneuvers  
[NASA-CASE-LAR-14515-1-CU] c 37 N92-33031
- Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N93-24598
- CHI, K.**  
High pulse rate high resolution optical radar system  
[NASA-CASE-NPO-11426] c 07 N73-26119
- CHIAO, R. Y.**  
Optical frequency waveguide Patent  
[NASA-CASE-HQN-10541-1] c 07 N71-26291
- Optical frequency waveguide and transmission system  
[NASA-CASE-HQN-10541-3] c 23 N72-23695
- CHIH, SAH**  
Floating emitter solar cell  
[NASA-CASE-NPO-16467-1-CU] c 33 N87-23879
- CHILDRESS, J. D.**  
Process for the preparation of brushite crystals  
[NASA-CASE-ERC-10338] c 04 N72-33072
- CHILDS, J. H.**  
High-vacuum condenser tank for ion rocket tests Patent  
[NASA-CASE-XLE-00168] c 11 N70-33278
- Electric propulsion engine test chamber Patent  
[NASA-CASE-XLE-00252] c 11 N70-34844
- CHILENSKI, J. J.**  
Ignition system for monopropellant combustion devices Patent  
[NASA-CASE-XNP-00249] c 28 N70-38249
- CHILTON, R. G.**  
Space capsule Patent  
[NASA-CASE-XLA-00149] c 31 N70-37938
- Space capsule Patent  
[NASA-CASE-XLA-01332] c 31 N71-15664
- CHIOA, R. Y.**  
Laser machining apparatus Patent  
[NASA-CASE-HQN-10541-2] c 15 N71-27135
- Optical frequency waveguide and transmission system Patent  
[NASA-CASE-HQN-10541-4] c 16 N71-27183
- CHISEL, D. M.**  
Fluidic proportional thruster system  
[NASA-CASE-ARC-10106-1] c 28 N72-22769
- CHISHOLM, WILLIAM L.**  
Ion generator and ion application system  
[NASA-CASE-MFS-28122-1] c 72 N88-24253
- CHONG, C. F.**  
Flipflop interrogator and bi-polar current driver Patent  
[NASA-CASE-XGS-03058] c 10 N71-19547
- CHOW, E. Y.**  
Elastic universal joint Patent  
[NASA-CASE-XNP-00416] c 15 N70-36947
- CHOW, EDWARD**  
Fault tolerant hypercube computer system architecture  
[NASA-CASE-NPO-16859-1-CU] c 60 N90-21527
- CHOWNING, D.**  
Emergency earth orbital escape device  
[NASA-CASE-MSC-13281] c 31 N72-18859
- CHREITZBERG, A. M.**  
Electric battery and method for operating same Patent  
[NASA-CASE-XGS-01674] c 03 N71-29129
- CHRISTENSEN, W. W.**  
Chelate-modified polymers for atmospheric gas chromatography  
[NASA-CASE-ARC-11154-1] c 25 N80-23383
- CHRISTIANSON, ROLLIN C.**  
Variable orifice flow regulator  
[NASA-CASE-MSC-21549-1] c 34 N91-27504
- High-temperature, high-pressure oxygen metering valve  
[NASA-CASE-MSC-21823-1] c 37 N93-14843
- CHRISTMAN, L. M.**  
Resuscitation apparatus Patent  
[NASA-CASE-XMS-01115] c 05 N70-39922
- CHRISTOPHER, P. A.**  
Method of fabricating an object with a thin wall having a precisely shaped slit  
[NASA-CASE-LAR-10409-1] c 31 N74-21059
- CHRISTY, C. L., JR.**  
Infusible silazane polymer and process for producing same  
[NASA-CASE-XMF-02526-1] c 27 N79-21190
- CHU, H. P.**  
Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N86-32550
- CHU, T. L.**  
Fabrication of polycrystalline solar cells on low-cost substrates  
[NASA-CASE-GSC-12022-1] c 44 N76-28635
- Process for utilizing low-cost graphite substrates for polycrystalline solar cells  
[NASA-CASE-GSC-12022-2] c 44 N78-24609
- CHUANG, CHUN-HUA**  
Addition polyimides with enhanced processability  
[NASA-CASE-LEW-15043-1] c 27 N91-32230
- CHUBB, D. L.**  
Thermionic photovoltaic energy converter  
[NASA-CASE-LEW-14077-1] c 44 N85-34441
- CHUBB, DONALD L.**  
Gas particle radiator  
[NASA-CASE-LEW-14297-1] c 35 N89-12048
- Liquid sheet radiator apparatus  
[NASA-CASE-LEW-14295-1] c 31 N91-15424
- Selective emitters  
[NASA-CASE-LEW-14731-1] c 44 N92-22037
- CHUMLEY, J. F.**  
Zero gravity apparatus Patent  
[NASA-CASE-XMF-06515] c 14 N71-23227
- CHURCHWARD, REX A.**  
Toughened uni-piece fibrous insulation  
[NASA-CASE-ARC-11888-1] c 24 N92-16026
- CHUTJIAN, A.**  
High resolution threshold photoelectron spectroscopy by electron attachment  
[NASA-CASE-NPO-14078-1] c 72 N80-14877
- CHUTJIAN, A. N.**  
Double photon excitation of high-Rydberg atoms as a long-lived submillimeter detector  
[NASA-CASE-NPO-16372-1] c 72 N86-33127
- CHUTJIAN, ARA**  
Generation of intense negative ion beams  
[NASA-CASE-NPO-16061-1-CU] c 72 N87-21660
- Variable energy, high flux, ground-state atomic oxygen source  
[NASA-CASE-NPO-16640-1-CU] c 72 N87-21661
- Reversal electron attachment ionizer for detection of trace species  
[NASA-CASE-NPO-17596-1-CU] c 35 N89-28795
- Trochoidal analysis of scattered electrons in a merged electron-ion beam geometry  
[NASA-CASE-NPO-16789-1-CU] c 72 N89-29169
- Surface modification using low energy ground state ion beams  
[NASA-CASE-NPO-17498-1-CU] c 72 N91-14813
- CIEPLUCH, C. C.**  
Apparatus for igniting solid propellants Patent  
[NASA-CASE-XLE-00207] c 28 N70-33375
- Method of igniting solid propellants Patent  
[NASA-CASE-XLE-01988] c 27 N71-15634
- CINTRON, NITZA M.**  
Intranasal scopolamine preparation and method  
[NASA-CASE-MSC-21858-1] c 52 N92-11628
- CISSELL, R. E.**  
Threadless fastener apparatus Patent  
[NASA-CASE-XFR-05302] c 15 N71-23254
- CISZEK, T. F.**  
Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c 76 N79-23798
- Method of growing a ribbon crystal particularly suited for facilitating automated control of ribbon width  
[NASA-CASE-NPO-14295-1] c 76 N80-32245
- CLAING, R. G.**  
Joining lead wires to thin platinum alloy films  
[NASA-CASE-LEW-13934-1] c 35 N83-35338
- CLANCY, JOHN P.**  
Linear force device  
[NASA-CASE-MSC-20549-2] c 35 N88-24927
- CLAPP, W. M.**  
Increasing efficiency of switching type regulator circuits Patent  
[NASA-CASE-XMS-09352] c 09 N71-23316
- CLARK, C. E.**  
Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c 54 N81-27806
- CLARK, F. L.**  
Hypersonic test facility Patent  
[NASA-CASE-XLA-00378] c 11 N71-15925
- Hypersonic test facility Patent  
[NASA-CASE-XLA-05378] c 11 N71-21475
- CLARK, H. K.**  
Thermal pump-compressor for space use Patent  
[NASA-CASE-XLA-00377] c 33 N71-17610
- CLARK, I. O.**  
Ampoule sealing apparatus and process  
[NASA-CASE-LAR-12847-1] c 33 N83-16633
- CLARK, J. R.**  
Automated fluid chemical analyzer Patent  
[NASA-CASE-NXP-09451] c 06 N71-26754
- CLARK, K. H.**  
Apparatus for assembling space structure  
[NASA-CASE-MFS-23579-1] c 18 N79-11108
- Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c 54 N81-26718
- Electrical self-aligning connector  
[NASA-CASE-MFS-25211-2] c 33 N84-14423
- Clamp-mount device  
[NASA-CASE-MFS-25510-1] c 37 N84-16560
- Hemispherical latching apparatus  
[NASA-CASE-MFS-25837-1] c 18 N85-29991
- Apparatus for adapting an end effector device remotely controlled manipulator arm  
[NASA-CASE-MFS-25949-1] c 37 N86-19603
- CLARK, R. K.**  
Fixture for environmental exposure of structural materials under compression load  
[NASA-CASE-LAR-12602-1] c 39 N83-32081
- CLARK, R. L.**  
Deposition apparatus  
[NASA-CASE-LAR-10541-1] c 15 N72-32487
- CLARK, R. T.**  
Horn feed having overlapping apertures Patent  
[NASA-CASE-GSC-10452] c 07 N71-12396
- CLARK, RONALD K.**  
Oxygen diffusion barrier coating  
[NASA-CASE-LAR-13474-1-SB] c 26 N87-25455
- Multi-layer light-weight protective coating and method for application  
[NASA-CASE-LAR-14448-1] c 27 N93-11912
- CLARKE, D. R.**  
Thermal compression bonding of interconnectors  
[NASA-CASE-GSC-10303] c 15 N72-22487
- CLARKE, ROBERT**  
EMU helmet mounted display  
[NASA-CASE-MSC-21460-1] c 54 N91-13879
- CLATTERBUCK, C. H.**  
Spacecraft battery seals  
[NASA-CASE-XGS-03864] c 15 N69-24320
- Process for making RF shielded cable connector assemblies and the products formed thereby  
[NASA-CASE-GSC-11215-1] c 09 N73-28083
- High voltage isolation transformer  
[NASA-CASE-GSC-12817-1] c 33 N85-29146
- CLAUS, R. O.**  
Ultrasonic transducer with Gaussian radial pressure distribution  
[NASA-CASE-LAR-12967-1] c 35 N84-22932
- Dual differential interferometer  
[NASA-CASE-LAR-12966-1] c 35 N85-30282
- CLAUS, RICHARD O.**  
An interferometer having fused optical fibers, and apparatus and method using the interferometer  
[NASA-CASE-LAR-14640-1-CU] c 74 N93-17052

## CLAUSS, R. C.

- Transmission line thermal short Patent  
[NASA-CASE-XNP-09775] c 09 N71-20445
- Circulator having quarter wavelength resonant post and parametric amplifier circuits utilizing the same Patent  
[NASA-CASE-XNP-02140] c 09 N71-23097
- High-gain, broadband traveling wave maser Patent  
[NASA-CASE-NPO-10548] c 16 N71-24831
- Maser for frequencies in the 7-20 GHz range  
[NASA-CASE-NPO-11437] c 16 N72-28521
- Refrigerated coaxial coupling  
[NASA-CASE-NPO-13504-1] c 33 N75-30430
- Reflected-wave maser  
[NASA-CASE-NPO-13490-1] c 36 N76-31512
- Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c 36 N80-18372
- Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c 36 N83-35350
- CLAWSON, G. T.**  
Method and apparatus for checking fire detectors  
[NASA-CASE-GSC-11600-1] c 35 N74-21019
- CLAY, D. R.**  
Ion mass spectrometer  
[NASA-CASE-NPO-15423-1] c 35 N84-28016
- CLAY, F. P., JR.**  
Ionization vacuum gauge with all but the end of the ion collector shielded Patent  
[NASA-CASE-XLA-07424] c 14 N71-18482
- CLELAND, E. L.**  
Gas diffusion liquid storage bag and method of use for storing blood  
[NASA-CASE-NPO-13930-1] c 52 N79-14749
- CLEMENS, G. W., JR.**  
Deep space monitor communication satellite system Patent  
[NASA-CASE-XAC-06029-1] c 31 N71-24813
- CLEMENS, P. W.**  
Device for configuring multiple leads  
[NASA-CASE-MFS-22133-1] c 33 N74-26977
- CLEMENT, W. G.**  
Friction measuring apparatus Patent  
[NASA-CASE-XNP-08680] c 14 N71-22995
- CLEMENTS, P. A.**  
System for stabilizing cable phase delay utilizing a coaxial cable under pressure  
[NASA-CASE-NPO-13138-1] c 33 N74-17927
- CLEMMONS, D. L., JR.**  
Thermal control of space vehicles Patent  
[NASA-CASE-XLA-01291] c 33 N70-36617
- CLEMMONS, J. I., JR.**  
Instrument for determining coincidence and elapse time between independent sources of random sequential events  
[NASA-CASE-LAR-12531-1] c 35 N83-29651
- CLEMMONS, JAMES I., JR.**  
Frequency domain laser velocimeter signal processor  
[NASA-CASE-LAR-13552-1-CU] c 33 N89-14385
- CLEMONS, J. M.**  
Method of bonding plasticized elastomer to metal and articles produced thereby  
[NASA-CASE-MFS-25181-1] c 27 N82-24340
- Process for producing tris (n-methylamino) methylsilane  
[NASA-CASE-MFS-25721-1] c 25 N85-21280
- CLEMONS, JOHNNY M.**  
Method for machining holes in composite materials  
[NASA-CASE-MFS-28044-1] c 31 N87-25491
- CLEVELAND, G. J.**  
Medical subject monitoring systems  
[NASA-CASE-MSC-14180-1] c 52 N76-14757
- CLEVENSON, S. A.**  
Ride quality meter  
[NASA-CASE-LAR-12882-1] c 35 N84-12445
- CLICKNER, R. E., JR.**  
Umbilical disconnect Patent  
[NASA-CASE-XLA-00711] c 03 N71-12258
- CLIFF, R. A.**  
Data processor having multiple sections activated at different times by selective power coupling to the sections Patent  
[NASA-CASE-XGS-04767] c 08 N71-12494
- Ripple add and ripple subtract binary counters Patent  
[NASA-CASE-XGS-04766] c 08 N71-18602
- Apparatus for computing square roots Patent  
[NASA-CASE-XGS-04768] c 08 N71-19437
- Digitally controlled frequency synthesizer Patent  
[NASA-CASE-XGS-02317] c 09 N71-23525
- SCR lamp driver  
[NASA-CASE-GSC-10221-1] c 09 N72-23171
- Digital phase-locked loop  
[NASA-CASE-GSC-11623-1] c 33 N75-25040
- CLIFF, W. C.**  
Wind measurement system  
[NASA-CASE-MFS-23362-1] c 47 N77-10753

## CLINE, R. W.

- Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c 74 N74-21304
- CLONTZ, LESLIE A.**  
Altitude compensating ablative stiffening band for rocket motor nozzles  
[NASA-CASE-MFS-28728-1] c 20 N93-28950
- CLOTFELTER, W. N.**  
Apparatus for the determination of the existence or non-existence of a bonding between two members Patent  
[NASA-CASE-MFS-13686] c 15 N71-18132
- Device for measuring the ferrite content in an austenitic stainless-steel weld  
[NASA-CASE-MFS-22907-1] c 26 N76-18257
- Method for measuring biaxial stress in a body subjected to stress inducing loads  
[NASA-CASE-MFS-23299-1] c 39 N77-28511
- CLOUGH, L. G.**  
Driving lamps by induction  
[NASA-CASE-MFS-21214-1] c 09 N73-30181
- CLOYD, R. A.**  
Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-15429-1] c 18 N84-22609
- Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-25429-1] c 18 N86-20469
- CLOYD, RICHARD A.**  
Self indexing latch system  
[NASA-CASE-MFS-25956-1] c 37 N87-21333
- COBB, WILLIAM E.**  
Thermally isolated deployable shield for spacecraft  
[NASA-CASE-MFS-28524-1] c 18 N91-25167
- COBIN, J. C.**  
Latching mechanism Patent  
[NASA-CASE-MSC-15474-1] c 15 N71-26162
- COCCA, F. J.**  
Method and apparatus for detecting surface ions on silicon diodes and transistors  
[NASA-CASE-ERC-10325] c 15 N72-25457
- CODY, JOSEPH C.**  
System for connecting fluid couplings  
[NASA-CASE-MFS-26042-1-SB] c 37 N91-14613
- COE, C. F.**  
Electronic scanning pressure measuring system and transducer package  
[NASA-CASE-ARC-11361-1] c 35 N84-22934
- COE, H. H.**  
High speed rolling element bearing  
[NASA-CASE-LEW-10856-1] c 15 N72-22490
- COE, P. L., JR.**  
Supersonic transport  
[NASA-CASE-LAR-11932-1] c 05 N78-32086
- COFER, W. R., III**  
Nebulization reflux concentrator  
[NASA-CASE-LAR-13254-1CU] c 35 N86-29174
- COFFINBERY, G. A.**  
Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c 07 N77-23106
- Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c 37 N78-10467
- Fuel delivery system including heat exchanger means  
[NASA-CASE-LEW-12793-1] c 37 N79-11403
- Apparatus for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-1] c 07 N83-36029
- Method for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-2] c 07 N86-20389
- COHEN, D.**  
Fluid sample collector Patent  
[NASA-CASE-XMS-06767-1] c 14 N71-20435
- COHEN, E. A.**  
Audio frequency marker system  
[NASA-CASE-NPO-11147] c 14 N72-27408
- COHEN, M. F.**  
Digital modulator and demodulator Patent  
[NASA-CASE-ERC-10041] c 08 N71-29138
- COHEN, M. M.**  
Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612
- Laboratory glassware rack for seismic safety  
[NASA-CASE-ARC-11422-1] c 35 N86-20751
- COHEN, MARC M.**  
Elevated waterproof access floor system and method of making the same  
[NASA-CASE-ARC-11363-1] c 31 N87-16918
- Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-2] c 18 N89-25266

- Suitport extra-vehicular access facility  
[NASA-CASE-ARC-11635-1] c 18 N90-16860
- COHEN, N. S.**  
Nitramine propellants  
[NASA-CASE-NPO-14103-1] c 28 N78-31255
- COHEN, R. A.**  
A method for selective gold diffusion of monolithic silicon devices and/or circuits Patent application  
[NASA-CASE-ERC-10072] c 09 N70-11148
- Method and apparatus for stable silicon dioxide layers on silicon grown in silicon nitride ambient  
[NASA-CASE-ERC-10073-1] c 24 N74-19769
- COHN, E. M.**  
Rechargeable battery which combats shape change of the zinc anode  
[NASA-CASE-HQN-10862-1] c 44 N76-29699
- COHN, R. B.**  
Acoustical transducer calibrating system and apparatus  
[NASA-CASE-FRC-10060-1] c 14 N73-27379
- Adapter for mounting a microphone flush with the external surface of the skin of a pressurized aircraft  
[NASA-CASE-FRC-11072-1] c 05 N83-27975
- COHN, S. B.**  
Dual band combiner for horn antenna  
[NASA-CASE-NPO-14519-1] c 32 N80-23524
- COKER, L. R.**  
Quick disconnect latch and handle combination Patent  
[NASA-CASE-MFS-11132] c 15 N71-17649
- COLBAUGH, RICHARD D.**  
Obstacle avoidance for redundant robots using configuration control  
[NASA-CASE-NPO-17852-1-CU] c 63 N92-33019
- COLBURN, M. E.**  
Automatic instrument for chemical processing to detect microorganism in biological samples by measuring light reactions  
[NASA-CASE-GSC-11169-2] c 05 N73-32011
- COLE, H. A., JR.**  
Method and apparatus for measuring the damping characteristics of a structure  
[NASA-CASE-ARC-10154-1] c 14 N72-22440
- COLE, M. A.**  
System and method for moving a probe to follow movements of tissue  
[NASA-CASE-NPO-15197-1] c 52 N83-25346
- COLE, P. T.**  
Low friction magnetic recording tape Patent  
[NASA-CASE-XGS-00373] c 23 N71-15978
- System for recording and reproducing pulse code modulated data Patent  
[NASA-CASE-XGS-01021] c 08 N71-21042
- Friction measuring apparatus Patent  
[NASA-CASE-XNP-08680] c 14 N71-22995
- Helical recorder arrangement for multiple channel recording on both sides of the tape  
[NASA-CASE-GSC-10614-1] c 09 N72-11224
- COLE, STEVEN W.**  
Method and apparatus for frequency spectrum analysis  
[NASA-CASE-NPO-17759-1-CU] c 32 N92-29124
- COLEMAN, A. D.**  
Insulation bonding test system  
[NASA-CASE-MFS-25862-1] c 27 N85-20126
- COLES, W. D.**  
Twisted multifilament superconductor  
[NASA-CASE-LEW-11726-1] c 26 N73-26752
- Method of fabricating a twisted composite superconductor  
[NASA-CASE-LEW-11015] c 26 N73-32571
- COLLIER, L.**  
Garments for controlling the temperature of the body Patent  
[NASA-CASE-XMS-10269] c 05 N71-24147
- COLLIN, E. E.**  
Apparatus and method for skin packaging articles  
[NASA-CASE-MFS-20855] c 15 N73-27405
- COLLINS, D. D.**  
Simultaneous treatment of SO<sub>2</sub> containing stack gases and waste water  
[NASA-CASE-MSC-16258-1] c 45 N79-12584
- COLLINS, D. F., JR.**  
Fluid power transmitting gas bearing Patent  
[NASA-CASE-ERC-10097] c 15 N71-28465
- COLLINS, E. R.**  
Automated multi-level vehicle parking system  
[NASA-CASE-NPO-13058-1] c 37 N77-22480
- Geological assessment probe  
[NASA-CASE-NPO-14558-1] c 46 N80-24906
- System for slicing silicon wafers  
[NASA-CASE-NPO-14406-1] c 37 N80-29703
- COLLINS, E. R., JR.**  
Impact energy absorbing system utilizing fracturable material  
[NASA-CASE-NPO-10671] c 15 N72-20443

- Shuttle car loading system  
[NASA-CASE-NPO-15949-1] c 85 N85-34722
- Active hold-down for heat treating  
[NASA-CASE-NPO-16892-1-CU] c 37 N87-14704
- COLLINS, EARL R., JR.**  
Tank tread assemblies with track-linking mechanism  
[NASA-CASE-NPO-16321-1-CU] c 37 N87-17034
- Passively activated prehensile digit for a robotic end effector  
[NASA-CASE-NPO-16766-1-CU] c 37 N89-13785
- High density tape casting system  
[NASA-CASE-NPO-16901-1-CU] c 31 N90-19425
- Convergent strand array liquid pumping system  
[NASA-CASE-NPO-17301-1-CU] c 31 N90-23587
- Computer access security code system  
[NASA-CASE-NPO-17525-1-CU] c 60 N90-25583
- Energy efficient continuous flow ash lockhopper  
[NASA-CASE-NPO-16985-1-CU] c 31 N91-15423
- Electrorepulsive actuator  
[NASA-CASE-NPO-17684-1-CU] c 33 N92-22042
- COLLINS, V. G.**  
Recovery of potable water from human wastes in below-G conditions Patent  
[NASA-CASE-XLA-03213] c 05 N71-11207
- Nebulization reflux concentrator  
[NASA-CASE-LAR-13254-1-CU] c 35 N86-29174
- COLLINS, W. A.**  
Flight control system  
[NASA-CASE-MSC-13397-1] c 21 N72-25595
- COLOMBO, GERALD V.**  
Regenerable biocide delivery unit  
[NASA-CASE-MSC-21763-1-SB] c 51 N93-18351
- COLONY, J. A.**  
Phototropic composition of matter  
[NASA-CASE-XGS-03736] c 14 N72-22443
- COLOZZA, ANTHONY J.**  
Self-deploying photovoltaic power system  
[NASA-CASE-LEW-15308-1] c 44 N92-24057
- COMPANION, JOHN**  
Rapid quantification of an internal property  
[NASA-CASE-LAR-13689-1-NP] c 35 N87-23941
- COMPANION, JOHN A.**  
Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-1-NP] c 52 N90-21519
- Tissue simulating gel for medical research  
[NASA-CASE-LAR-14036-1] c 27 N91-13562
- Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-2] c 52 N92-11621
- COMPTON, L. E.**  
Supercritical solvent coal extraction  
[NASA-CASE-NPO-15210-1] c 25 N84-22709
- Oil shale extraction using super-critical extraction  
[NASA-CASE-NPO-15656-1] c 43 N84-23012
- CONANT, J. E.**  
Television simulation for aircraft and space flight Patent  
[NASA-CASE-XFR-03107] c 09 N71-19449
- CONE, C. D., JR.**  
Minimum induced drag airfoil body Patent  
[NASA-CASE-XLA-00755] c 01 N71-13410
- Minimum induced drag airfoil body Patent  
[NASA-CASE-XLA-05828] c 01 N71-13411
- Absolute focus lock for microscopes  
[NASA-CASE-LAR-10184] c 14 N72-22445
- Process for control of cell division  
[NASA-CASE-LAR-10773-3] c 51 N77-25769
- CONGER, C. C.**  
Inductance device with vacuum insulation  
[NASA-CASE-LEW-10330-1] c 09 N72-27226
- CONIGLIO, G. V.**  
Petzval type objective including field shaping lens Patent  
[NASA-CASE-GSC-10700] c 23 N71-30027
- CONLEY, JOSEPH M.**  
Dual cathode system for electron beam instruments  
[NASA-CASE-NPO-16878-1-CU] c 35 N90-20351
- CONN, J. H.**  
Moment of inertia test fixture Patent  
[NASA-CASE-XGS-01023] c 14 N71-22992
- CONNELL, E. W.**  
Flexible joint for pressurizable garment  
[NASA-CASE-MSC-11072] c 54 N74-32546
- CONNELL, JOHN W.**  
Polyenamides from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-1-CU] c 27 N87-22847
- Polyphenylquinoxalines via aromatic nucleophilic displacement  
[NASA-CASE-LAR-13988-1] c 23 N89-11814
- Polyenamides from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-2-CU] c 23 N89-12667
- Acetylene terminated aspartimides and resins therefrom  
[NASA-CASE-LAR-14188-1] c 27 N90-23545
- N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14188-2] c 23 N91-14419
- Ethynyl terminated imidothioethers and resins therefrom  
[NASA-CASE-LAR-13910-2-CU] c 27 N91-31307
- Poly 1, 2, 4-triazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14440-1] c 23 N92-10066
- Polyimidazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14145-1] c 27 N92-28751
- Poly(1,3,4-oxadiazoles) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14427-1] c 23 N92-29141
- Polybenzimidazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14643-1] c 27 N92-29953
- Poly(1,2,4-triazole) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14440-1] c 23 N93-18283
- Polybenzoxazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14606-1-CU] c 23 N93-23077
- CONNELLY, D. L.**  
Light transmitting window assembly  
[NASA-CASE-MSC-18417-1] c 74 N85-29750
- CONNOLLY, D. J.**  
Traveling wave tube circuit  
[NASA-CASE-LEW-12013-1] c 33 N79-10339
- Coupled cavity traveling wave tube with velocity tapering  
[NASA-CASE-LEW-12296-1] c 33 N82-26568
- CONNOLLY, J. P.**  
Automatic real-time pair-feeding system for animals  
[NASA-CASE-ARC-10302-1] c 51 N74-15778
- CONNORS, J. F.**  
Annular rocket motor and nozzle configuration Patent  
[NASA-CASE-XLE-00078] c 28 N70-33284
- Annular supersonic decelerator or drogue Patent  
[NASA-CASE-XLE-00222] c 02 N70-37939
- Penshape exhaust nozzle for supersonic engine Patent  
[NASA-CASE-XLE-00057] c 28 N70-38711
- Telescoping-spike supersonic inlet for aircraft engines Patent  
[NASA-CASE-XLE-00005] c 28 N70-39899
- Thrust and direction control apparatus Patent  
[NASA-CASE-XLE-03583] c 31 N71-17629
- CONRAD, E. W.**  
Thrust vector control apparatus Patent  
[NASA-CASE-XLE-00208] c 28 N70-34294
- Non-reusable kinetic energy absorber Patent  
[NASA-CASE-XLE-00810] c 15 N70-34861
- CONRAD, W. M.**  
Frequency modulation demodulator threshold extension device Patent  
[NASA-CASE-MSC-12165-1] c 07 N71-33696
- CONSTANINIDES, N. J.**  
Servomechanism for Doppler shift compensation in optical correlator for synthetic aperture radar  
[NASA-CASE-NPO-14998-1] c 32 N83-18975
- CONSTANTINIDES, N. J.**  
Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c 32 N82-23376
- CONWAY, E. J.**  
Method for detecting pollutants  
[NASA-CASE-LAR-11405-1] c 45 N76-31714
- COOGAN, J. M.**  
Method of planetary atmospheric investigation using a split-trajectory dual flyby mode Patent  
[NASA-CASE-XAC-08494] c 30 N71-15990
- COOK, C. E.**  
Inflatable device for installing strain gage bridges  
[NASA-CASE-FRC-11068-1] c 35 N84-12443
- COOK, JOSEPH S.**  
Gas storage and recovery system  
[NASA-CASE-MSC-22091-1] c 31 N93-28136
- COOK, T. A.**  
Metering gun for dispensing precisely measured charges of fluid  
[NASA-CASE-MFS-21163-1] c 54 N74-17853
- COOK, W. M., JR.**  
Detector panels-micrometeoroid impact Patent  
[NASA-CASE-XLA-05906] c 31 N71-16221
- COOLEY, THOMAS W.**  
Miniature modular microwave end-to-end receiver  
[NASA-CASE-NPO-18713-1-CU] c 32 N93-29087
- COOLEY, VICTOR M.**  
Suspension mechanism and method  
[NASA-CASE-LAR-14142-1] c 37 N90-27116
- COOLIDGE, J. E.**  
Data transfer system Patent  
[NASA-CASE-NPO-12107] c 08 N71-27255
- COON, G. W.**  
Vibrating element electrometer with output signal magnified over input signal by a function of the mechanical Q of the vibrating element Patent  
[NASA-CASE-XAC-02807] c 09 N71-23021
- Thermally cycled magnetometer Patent  
[NASA-CASE-XAC-03740] c 14 N71-26135
- Trielectrode capacitive pressure transducer  
[NASA-CASE-ARC-10711-2] c 33 N76-21390
- COOPER, C. R.**  
Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332] c 05 N72-20097
- Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332-2] c 05 N73-25125
- COOPER, D. W.**  
Generator for a space power system Patent  
[NASA-CASE-XLE-04250] c 09 N71-20446
- Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c 37 N78-13436
- COOPER, L. P.**  
Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c 07 N81-29129
- COOPER, TOMMY G.**  
Dual physiological rate measurement instrument  
[NASA-CASE-MSC-20078-3] c 52 N91-14709
- COOPER, W. E.**  
Collapsible Apollo couch  
[NASA-CASE-MSC-13140] c 05 N72-11085
- COPELAND, BENJAMIN M., JR.**  
Multiple layer dielectrics, hot film sensors, and methods of producing same  
[NASA-CASE-LAR-14591-1] c 35 N93-19493
- COPELAND, CARL E.**  
Flexible heating head for induction heating apparatus and method  
[NASA-CASE-LAR-14679-2] c 32 N92-31150
- Heating head for induction heating apparatus  
[NASA-CASE-LAR-14429-1] c 33 N93-29173
- COPELAND, J. T., JR.**  
High speed photo-optical time recording  
[NASA-CASE-KSC-10294] c 14 N72-18411
- CORBIN, P. L.**  
Automatic fatigue test temperature programmer Patent  
[NASA-CASE-XLA-02059] c 33 N71-24276
- CORCORAN, W. H.**  
Coal desulfurization by aqueous chlorination  
[NASA-CASE-NPO-14902-1] c 25 N82-29371
- Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NPO-15767-1] c 23 N84-16255
- CORLEY, R. C.**  
Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c 07 N80-18039
- CORNETT, J. E.**  
Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c 07 N80-18039
- Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c 07 N81-19116
- CORNILLE, H. J., JR.**  
Stretch de-spin mechanism Patent  
[NASA-CASE-XGS-00619] c 30 N70-40016
- CORNISH, S. D.**  
Flame detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c 19 N74-29410
- CORREALE, J. V.**  
Absorbent product to absorb fluids  
[NASA-CASE-MSC-18223-1] c 24 N82-29362
- Absorbent product and articles made therefrom  
[NASA-CASE-MSC-18223-2] c 54 N84-11758
- CORRIGAN, ROBERT D.**  
Removable hand hold  
[NASA-CASE-LEW-15196-1] c 37 N92-29092
- CORSMEIER, R. J.**  
Air modulation apparatus  
[NASA-CASE-LEW-13524-1] c 07 N84-33410
- CORSON, B. W., JR.**  
Nozzle Patent  
[NASA-CASE-XLA-00154] c 28 N70-33374
- Cascade plug nozzle  
[NASA-CASE-LAR-11674-1] c 07 N76-18117
- CORWIN, R. R.**  
Apparatus for determining thermophysical properties of test specimens  
[NASA-CASE-LAR-11883-1] c 09 N77-27131
- COSTAKOS, N. C.**  
Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c 37 N76-22540
- COSTEN, R. C.**  
Vortex generator for controlling the dispersion of effluents in a flowing liquid  
[NASA-CASE-LAR-12045-1] c 34 N77-24423

**COSTEN, ROBERT C.**

Schlieren system for visualizing the flow within a pipe of circular cross-section  
[NASA-CASE-LAR-13944-1] c 35 N92-11336

**COSTES, N. C.**

Self-recording portable soil penetrometer  
[NASA-CASE-MFS-20774] c 14 N73-19420

**COSTOGUE, E. N.**

Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c 44 N79-24431

**COSTON, R. M.**

Dual solid cryogenics for spacecraft refrigeration Patent  
[NASA-CASE-GSC-10188-1] c 23 N71-24725

**COTE, C. E.**

Display for binary characters Patent  
[NASA-CASE-XGS-04987] c 08 N71-20571

**COUCH, L. M.**

Wind tunnel supplementary Mach number minimum section insert  
[NASA-CASE-LAR-12532-1] c 09 N82-11088

Heat pipe cooled probe  
[NASA-CASE-LAR-12588-1] c 34 N85-21568

**COUCH, R. H.**

Apparatus for aiding a pilot in avoiding a midair collision between aircraft  
[NASA-CASE-LAR-10717-1] c 21 N73-30641

Phase modulating with odd and even finite power series of a modulating signal  
[NASA-CASE-LAR-11607-1] c 32 N77-14292

Hot melt adhesive attachment pad  
[NASA-CASE-LAR-12894-1] c 27 N85-20125

**COULBERT, C. D.**

Multilayer film cooled pyrolytic graphite rocket nozzle Patent  
[NASA-CASE-XNP-04389] c 28 N71-20942

**COULSON, C. E.**

Active clearance control system for a turbomachine  
[NASA-CASE-LEW-12938-1] c 07 N82-32366

**COULSON, KINSEL L.**

Polarization perception device  
[NASA-CASE-MSC-21915-1] c 74 N92-30027

**COULTRIP, R. H.**

Hot melt adhesive attachment pad  
[NASA-CASE-LAR-12894-1] c 27 N85-20125

**COULTRIP, ROBERT H.**

Flexible heating head for induction heating apparatus and method  
[NASA-CASE-LAR-14679-2] c 32 N92-31150

Flexible heating head for induction heating apparatus and method  
[NASA-CASE-LAR-14418-1] c 32 N92-31257

Heating head for induction heating apparatus  
[NASA-CASE-LAR-14429-1] c 33 N93-29173

**COUR-PALAIS, BURTON G.**

Hypervelocity impact shield  
[NASA-CASE-MSC-21420-1] c 18 N92-15114

**COUVILLON, L. A., JR.**

Signal-to-noise ratio estimating by taking ratio of mean and standard deviation of integrated signal samples Patent  
[NASA-CASE-XNP-05254] c 07 N71-20791

Method and apparatus for frequency-division multiplex communications by digital phase shift of carrier  
[NASA-CASE-NPO-11338] c 08 N72-25208

Apparatus for deriving synchronizing pulses from pulses in a single channel PCM communications system  
[NASA-CASE-NPO-11302-1] c 07 N73-13149

Pseudonoise (PN) synchronization of data system with derivation of clock frequency from received signal for clocking receiver PN generator  
[NASA-CASE-XNP-03623] c 09 N73-28084

Method and apparatus for a single channel digital communications system  
[NASA-CASE-NPO-11302-2] c 32 N74-10132

**COWAN, J. J.**

Holography utilizing surface plasmon resonances  
[NASA-CASE-MFS-22040-1] c 35 N74-26946

**COWDIN, K. T.**

Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c 06 N83-33882

**COWELL, T. E.**

Aerodynamic spike nozzle Patent  
[NASA-CASE-XGS-01143] c 31 N71-15647

**COX, GEORGE B., JR.**

Liquid fuel injection elements for rocket engines  
[NASA-CASE-MFS-28547-1] c 20 N93-29847

**COX, J. A.**

Analog-to-digital converter  
[NASA-CASE-MSC-13110-1] c 08 N72-22163

**COYNER, J. V.**

Foldable beam  
[NASA-CASE-LAR-12077-1] c 31 N81-25259

**CRABILL, N. L.**

Control system for rocket vehicles Patent  
[NASA-CASE-XLA-01163] c 21 N71-15582

**CRAIG, G. D.**

Wind dynamic range video camera  
[NASA-CASE-MFS-25750-1] c 32 N86-20647

Optical stereo video signal processor  
[NASA-CASE-MFS-25752-1] c 74 N86-21348

**CRAIG, H. M.**

Combustor liner construction  
[NASA-CASE-LEW-14035-1] c 07 N84-24577

**CRAIG, R. A.**

Reduction of nitric oxide emissions from a combustor  
[NASA-CASE-ARC-10814-2] c 07 N80-26298

**CRAIGHEAD, N. D., II**

Joint for deployable structures  
[NASA-CASE-NPO-16038-1] c 37 N86-19605

**CRAMER, P. W., JR.**

Beam forming network  
[NASA-CASE-NPO-15743-1] c 32 N85-29118

**CRANE, J. ALLEN**

Compliant walker  
[NASA-CASE-GSC-13348-2] c 52 N93-14708

**CRAWFORD, D. W.**

Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means  
[NASA-CASE-NPO-13910-1] c 52 N79-27836

System and method for moving a probe to follow movements of tissue  
[NASA-CASE-NPO-15197-1] c 52 N83-25346

**CRAWFORD, DANIEL J.**

Real-time simulation clock  
[NASA-CASE-LAR-14056-1] c 35 N90-23713

**CRAWFORD, R.**

Solar energy powered heliostole  
[NASA-CASE-GSC-10945-1] c 21 N72-31637

**CRAWFORD, R. F.**

Foldable beam  
[NASA-CASE-LAR-12077-1] c 31 N81-25259

Sequentially deployable maneuverable tetrahedral beam  
[NASA-CASE-LAR-13098-1] c 31 N86-19479

**CRAWFORD, W. E.**

Drive circuit for minimizing power consumption in inductive load Patent  
[NASA-CASE-NPO-10716] c 09 N71-24892

**CREASY, W. K.**

Shock absorber Patent  
[NASA-CASE-XMS-03722] c 15 N71-21530

**CREE, D.**

Amplifier drift tester  
[NASA-CASE-XMS-05562-1] c 09 N69-39986

**CREE, R. F.**

Catalyst for growth of boron carbide single crystal whiskers  
[NASA-CASE-XHQ-03903] c 15 N69-21922

**CREEDON, J. F.**

Weld-bonded titanium structures  
[NASA-CASE-LAR-11549-1] c 37 N77-11397

**CREEL, T. R., JR.**

Apparatus for determining thermophysical properties of test specimens  
[NASA-CASE-LAR-11883-1] c 09 N77-27131

**CREEL, THEODORE R.**

Boundary layer relaminarization device  
[NASA-CASE-LAR-14470-1] c 02 N93-11876

**CREPEAU, P. C.**

Flexible, repairable, portable material for electrical connectors Patent  
[NASA-CASE-XGS-05180] c 18 N71-25881

**CRESS, S. B.**

Coaxial inverted geometry transistor having buried emitter  
[NASA-CASE-ARC-10330-1] c 09 N73-32112

**CRESSEY, J. R.**

Display for binary characters Patent  
[NASA-CASE-XGS-04987] c 08 N71-20571

**CREW, JOHN H., JR.**

Bearing-bypass material system test  
[NASA-CASE-LAR-13458-1] c 35 N88-23967

**CREWS, J. H., JR.**

Strain coupled servo control system Patent  
[NASA-CASE-XLA-08530] c 32 N71-25360

**CREWS, JEANNE LEE**

Hypervelocity impact shield  
[NASA-CASE-MSC-21420-1] c 18 N92-15114

**CREWS, JOHN H., JR.**

Delamination test apparatus and method  
[NASA-CASE-LAR-13985-1] c 24 N91-14430

**CRIBB, H. E.**

Parasitic probe antenna Patent  
[NASA-CASE-XKS-09348] c 09 N71-13521

Weatherproof helix antenna Patent  
[NASA-CASE-XKS-08485] c 07 N71-19493

VHF/UHF parasitic probe antenna Patent  
[NASA-CASE-XKS-09340] c 07 N71-24614

Validation device for spacecraft checkout equipment Patent  
[NASA-CASE-XKS-10543] c 07 N71-26292

Protective suit having an audio transceiver Patent  
[NASA-CASE-KSC-10164] c 07 N71-33108

Collapsible high gain antenna  
[NASA-CASE-KSC-10392] c 07 N73-26117

**CROFT, R. M.**

Personal propulsion unit Patent  
[NASA-CASE-MFS-20130] c 28 N71-27585

**CROFTS, D. E.**

Heat flux sensor assembly  
[NASA-CASE-XMS-05909-1] c 14 N69-27459

**CROONQUIST, A. P.**

Acoustic rotation control  
[NASA-CASE-NPO-15689-1] c 71 N84-23233

**CROSS, JOHN H.**

Three-dimensional cell to tissue assembly process  
[NASA-CASE-MSC-21559-1] c 51 N92-34231

**CROSS, JON**

Method for anisotropic etching in the manufacture of semiconductor devices  
[NASA-CASE-MSC-21631-1] c 75 N91-32947

**CROSSLEY, EDWARD A., JR.**

Adjustable mount for electro-optic transducers in an evacuated cryogenic system  
[NASA-CASE-LAR-13100-1] c 37 N87-23982

**CROUCH, C. E.**

Linear mass actuator  
[NASA-CASE-LAR-14352-1] c 37 N92-34173

**CROSWELL, W. F.**

Omnidirectional microwave spacecraft antenna Patent  
[NASA-CASE-XLA-03114] c 09 N71-22888

Stacked array of omnidirectional antennas  
[NASA-CASE-LAR-10545-1] c 09 N72-21244

**CROUCH, C. E.**

Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c 43 N79-31706

**CROUCH, H. W.**

Shrink-fit gas valve Patent  
[NASA-CASE-XGS-00587] c 15 N70-35087

**CROUCH, R. K.**

Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c 25 N75-26043

Reusable thermal cycling clamp  
[NASA-CASE-LAR-12868-1] c 37 N85-21651

**CROUCH, ROGER K.**

Apparatus and procedure to detect a liquid-solid interface during crystal growth in a bridgman furnace  
[NASA-CASE-LAR-13597-1-CU] c 25 N87-23713

**CROW, R. B.**

Wide band doubler and sine wave quadrature generator  
[NASA-CASE-NPO-11133] c 10 N72-20223

Filter for third order phase locked loops  
[NASA-CASE-NPO-11941-1] c 10 N73-27171

Frequency discriminator and phase detector circuit  
[NASA-CASE-NPO-11515-1] c 33 N77-13315

**CROWELL, CYNTHIA A.**

Helicopter low-speed yaw control  
[NASA-CASE-LAR-14219-1] c 08 N93-25998

**CROWELL, R. T.**

System and method for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-2] c 02 N81-26073

Method for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-1] c 09 N82-29330

**CRUM, G. W.**

Foot pedal operated fluid type exercising device  
[NASA-CASE-MSC-11561-1] c 05 N73-32014

**CRUMPLER, J. F.**

Vacuum pressure molding technique  
[NASA-CASE-LAR-10073-1] c 37 N76-24575

**CRUMPLER, W. B.**

All-directional fastener Patent  
[NASA-CASE-XLA-01807] c 15 N71-10799

Multilegged support system Patent  
[NASA-CASE-XLA-01326] c 11 N71-21481

**CRUTCHER, J. E.**

Isolation coupling arrangement for a torque measuring system  
[NASA-CASE-XLA-04897] c 15 N72-22482

**CUBBISON, R. W.**

Thrust and direction control apparatus Patent  
[NASA-CASE-XLE-03583] c 31 N71-17629

**CUBLEY, H. D.**

Antenna array phase quadrature tracking system Patent  
[NASA-CASE-MSC-12205-1] c 07 N71-27056

**CUDDIHY, E. F.**

Method of making hollow elastomeric bodies  
[NASA-CASE-NPO-13535-1] c 37 N76-31524

**CUDDIHY, EDWARD F.**

Predictive aging of polymers  
[NASA-CASE-NPO-17524-1-CU] c 27 N90-10261

- Thermal treatment of silicon integrated circuit chips to prevent and heal voids in aluminum metallization  
[NASA-CASE-NPO-17678-1-CU] c 76 N91-28014
- CULLER, V. H.**  
Myocardium wall thickness transducer and measuring method  
[NASA-CASE-NPO-13644-1] c 52 N76-29895  
Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NPO-13643-1] c 52 N76-29896  
Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c 52 N80-27072  
Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c 52 N81-20703
- CULLINGFORD, HATICE S.**  
Method and apparatus for bio-regenerative life support system  
[NASA-CASE-MSC-21629-1] c 54 N91-31803  
Apparatus and method for cellulose processing using microwave pretreatment  
[NASA-CASE-MSC-21936-1-SB] c 25 N93-22036
- CULOTTA, R. F.**  
Static pressure orifice system testing method and apparatus  
[NASA-CASE-LAR-12269-1] c 35 N80-18358
- CULP, D. H.**  
Process for preparing liquid metal electrical contact device  
[NASA-CASE-LEW-11978-1] c 33 N77-26385
- CUNNINGHAM, ALLEN R.**  
Method and apparatus for measuring frequency and phase difference  
[NASA-CASE-MSC-20865-1] c 32 N87-18692
- CUNNINGHAM, H. R.**  
Potable water dispenser  
[NASA-CASE-MFS-21115-1] c 54 N74-12779
- CUNNINGHAM, J. W.**  
Automatic thermal switch  
[NASA-CASE-GSC-12415-1] c 33 N82-24419  
Automatic thermal switch  
[NASA-CASE-GSC-12553-1] c 34 N83-28356
- CUNNINGHAM, R. E.**  
Hydrostatic bearing support  
[NASA-CASE-LEW-11158-1] c 37 N77-28486  
Variable force, eddy-current or magnetic damper  
[NASA-CASE-LEW-13717-1] c 37 N85-30333
- CUNNINGHAM, WILLIAM C.**  
Remotely controlled spray gun  
[NASA-CASE-MFS-28110-1] c 37 N87-24689
- CUOMO, FRANK W.**  
High temperature fiber optic microphone having a pressure-sensing reflective membrane under tensile stress  
[NASA-CASE-LAR-14402-1-CU] c 74 N92-33017  
Fiber optic microphone having a pressure sensing reflective membrane and a voltage source for calibration purpose  
[NASA-CASE-LAR-14402-2-CU] c 71 N93-24602
- CURLANDER, JOHN C.**  
Pipeline synthetic aperture radar data compression utilizing systolic binary tree-searched architecture for vector quantization  
[NASA-CASE-NPO-17941-1-CU] c 32 N91-13595
- CURREN, A. N.**  
Ion sputter textured graphite  
[NASA-CASE-LEW-12919-1] c 24 N83-10117  
Ion sputter textured graphite electrode plates  
[NASA-CASE-LEW-12919-2] c 70 N84-28565  
Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587
- CURRIE, J. R.**  
Bi-carrier demodulator with modulation Patent  
[NASA-CASE-XMF-01160] c 07 N71-11298  
Transistor servo system including a unique differential amplifier circuit Patent  
[NASA-CASE-XMF-05195] c 10 N71-24861  
Pulse width inverter Patent  
[NASA-CASE-MFS-10068] c 10 N71-25139  
Ratometer  
[NASA-CASE-MFS-20418] c 14 N73-24473  
Induction motor control system with voltage controlled oscillator circuit  
[NASA-CASE-MFS-21465-1] c 10 N73-32145  
Contour measurement system  
[NASA-CASE-MFS-23726-1] c 43 N79-26439  
Multi-channel temperature measurement amplification system  
[NASA-CASE-MFS-23775-1] c 44 N82-16474  
Solar energy control system  
[NASA-CASE-MFS-25287-1] c 44 N82-18686  
Photoelectric detection system  
[NASA-CASE-MFS-23776-1] c 33 N82-28545  
Angular measurement system  
[NASA-CASE-MFS-25825-1] c 31 N86-29055

- CURRIE, JAMES R.**  
Cylindrical surface profile and diameter measuring tool and method  
[NASA-CASE-MFS-28287-1] c 35 N88-23959
- CURRIE, R. E., JR.**  
Relay binary circuit Patent  
[NASA-CASE-XMF-00421] c 09 N70-34502
- CURRY, J. E.**  
Method of producing alternating ether siloxane copolymers Patent  
[NASA-CASE-XMF-02584] c 06 N71-20905
- CURRY, K. C.**  
Torsional disconnect unit  
[NASA-CASE-NPO-10704] c 15 N72-20445
- CURRY, KENNETH C.**  
Electrorepulsive actuator  
[NASA-CASE-NPO-17684-1-CU] c 33 N92-22042
- CURRY, R. E.**  
Display research collision warning system  
[NASA-CASE-HQN-10703] c 21 N73-13643
- CURTIS, D. L.**  
Life support system  
[NASA-CASE-MSC-12411-1] c 05 N72-20096
- CUTTS, JAMES A.**  
Programmable hyperspectral image mapper with on-array processing  
[NASA-CASE-NPO-17794-1-CU] c 74 N92-30104
- CYGNAROWICZ, T. A.**  
System for and method of freezing biological tissue  
[NASA-CASE-GSC-12173-1] c 51 N79-10694
- CZARCINSKI, E. A.**  
Programable telemetry system Patent  
[NASA-CASE-GSC-10131-1] c 07 N71-24624

## D

- DABNEY, R. W.**  
Power control for ac motor  
[NASA-CASE-MFS-25861-1] c 33 N85-22877
- DABNEY, RICHARD W.**  
Standard remote manipulator system docking target augmentation for automated docking  
[NASA-CASE-MFS-28419-1] c 18 N91-27200  
Closed-loop autonomous docking system  
[NASA-CASE-MFS-28421-1] c 18 N92-28750
- DAEGES, J. J.**  
Motor run-up system  
[NASA-CASE-NPO-13374-1] c 33 N75-19524
- DAH, W. K.**  
Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c 36 N75-15028  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c 35 N77-10493  
Wind measurement system  
[NASA-CASE-MFS-23362-1] c 47 N77-10753
- DALEDA, J. J.**  
Multi-purpose wind tunnel reaction control model block  
[NASA-CASE-MSC-19706-1] c 09 N78-31129
- DAILEY, C. C.**  
Microwave power receiving antenna Patent  
[NASA-CASE-MFS-20333] c 09 N71-13486  
Method of and means for testing a glancing-incidence mirror system of an X-ray telescope  
[NASA-CASE-MFS-22409-2] c 74 N78-15880
- DALE, W. J.**  
Method of fabricating an article with cavities  
[NASA-CASE-LAR-10318-1] c 31 N74-18089  
Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c 24 N75-30260
- DALELIO, G. F.**  
Synthesis of polymeric schiff bases by schiff-base exchange reactions Patent  
[NASA-CASE-XMF-08651] c 06 N71-11236  
Direct synthesis of polymeric schiff bases from two amines and two aldehydes Patent  
[NASA-CASE-XMF-08655] c 06 N71-11239  
Azine polymers and process for preparing the same Patent  
[NASA-CASE-XMF-08656] c 06 N71-11242  
Synthesis of polymeric schiff bases by reaction of acetals and amine compounds Patent  
[NASA-CASE-XMF-08652] c 06 N71-11243  
Aromatic diamine-aromatic dialdehyde high molecular weight schiff base polymers prepared in a monofunctional schiff base Patent  
[NASA-CASE-XMF-03074] c 06 N71-24740
- DALY, W. M.**  
Fault tolerant clock apparatus utilizing a controlled minority of clock elements  
[NASA-CASE-MSC-12531-1] c 35 N75-30504
- DAME, J. M.**  
High-torque open-end wrench  
[NASA-CASE-NPO-13541-1] c 37 N79-14383
- DAMERON, C. E.**  
Instrument for measuring potentials on two dimensional electric field plots Patent  
[NASA-CASE-XLA-08493] c 10 N71-19421
- DAMMIG, A. H., JR.**  
Capacitive tank gaging apparatus being independent of liquid distribution  
[NASA-CASE-MFS-21629] c 14 N72-22442
- DANCHENKO, V.**  
Radiation hardening of MOS devices by boron  
[NASA-CASE-GSC-11425-1] c 76 N74-20329  
Radiation hardening of MOS devices by boron  
[NASA-CASE-GSC-11425-2] c 76 N75-25730
- DANE, D. H.**  
Harness assembly Patent  
[NASA-CASE-MFS-14671] c 05 N71-12341  
Air cushion lift pad Patent  
[NASA-CASE-MFS-14685] c 31 N71-15689  
Ratchet mechanism Patent  
[NASA-CASE-MFS-12805] c 15 N71-17805  
Mechanical simulator of low gravity conditions Patent  
[NASA-CASE-MFS-10555] c 11 N71-19494  
Mechanically actuated triggered hand  
[NASA-CASE-MFS-20413] c 15 N72-21463  
Sprag solenoid brake  
[NASA-CASE-MFS-21846-1] c 37 N74-26976  
Orthotic arm joint  
[NASA-CASE-MFS-21611-1] c 54 N75-12616  
Remote manipulator system  
[NASA-CASE-MFS-22022-1] c 37 N76-15460
- DANELIS, J. V.**  
Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-1] c 52 N81-29764
- DANGLE, E. E.**  
Rocket engine Patent  
[NASA-CASE-XLE-00342] c 28 N70-37980
- DANIEL, JAMES A.**  
High-temperature, high-pressure oxygen metering valve  
[NASA-CASE-MSC-21823-1] c 37 N93-14843
- DANIEL, RONALD L.**  
Method of fabricating a rocket engine combustion chamber  
[NASA-CASE-MFS-28569-1] c 27 N93-30565
- DANIELS, A.**  
Stirling cycle cryogenic cooler  
[US-PATENT-4,389,849] c 44 N83-28574
- DANIELS, H. J.**  
Adaptive tracking notch filter system Patent  
[NASA-CASE-XMF-01892] c 10 N71-22986
- DANIELS, JULIA G.**  
Method for machining holes in composite materials  
[NASA-CASE-MFS-28044-1] c 31 N87-25491
- DANSKIN, J. H.**  
Fuel injection pump for internal combustion engines Patent  
[NASA-CASE-MSC-12139-1] c 28 N71-14058
- DARCEY, R. J.**  
Satellite communication system and method Patent  
[NASA-CASE-GSC-10118-1] c 07 N71-24621
- DARGO, DAVID R.**  
Integrated photo-responsive metal oxide semiconductor circuit  
[NASA-CASE-GSC-12782-1] c 33 N88-14271
- DARR, J., JR.**  
Threadless fastener apparatus Patent  
[NASA-CASE-XFR-05302] c 15 N71-23254
- DARROW, W. E., JR.**  
Collapsible nozzle extension for rocket engines Patent  
[NASA-CASE-MFS-11497] c 28 N71-16224
- DARYABEIGI, KAMRAN**  
Off-surface infrared flow visualization  
[NASA-CASE-LAR-14568-1] c 74 N93-22037
- DASGUPTA, K.**  
Dual purpose optical instrument capable of simultaneously acting as spectrometer and diffractometer  
[NASA-CASE-XNP-05231] c 14 N73-28491
- DASTOOR, M. N.**  
Enhancement of in vitro guayule propagation  
[NASA-CASE-NPO-15213-1] c 51 N83-17045
- DAUD, T.**  
Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NPO-14670-1] c 44 N81-19558  
Low defect, high purity crystalline layers grown by selective deposition  
[NASA-CASE-NPO-15813-1] c 76 N85-30922
- DAUD, TAHER**  
Method for growing low defect, high purity crystalline layers utilizing lateral overgrowth of a patterned mask  
[NASA-CASE-NPO-15813-2] c 76 N87-15882  
High band gap 2-6 and 3-5 tunneling junctions for silicon multijunction solar cells  
[NASA-CASE-NPO-16526-1CU] c 44 N87-17399



- Cascaded VLSI neural network architecture for on-line learning  
[NASA-CASE-NPO-18645-1-CU] c 63 N92-34240
- DAVARIAN, FARAMAZ**  
Antimultipath communication by injecting tone into null in signal spectrum  
[NASA-CASE-NPO-16414-1-CU] c 32 N87-25511
- DAVENPORT, ARTHUR K.**  
High effectiveness contour matching contact heat exchanger  
[NASA-CASE-MSC-20840-1] c 34 N88-29132
- DAVID-MALIG, M. A.**  
Method and tool for machining a transverse slot about a bore  
[NASA-CASE-LAR-11855-1] c 37 N81-14319
- DAVID, R. M.**  
Insulated electrocardiographic electrodes  
[NASA-CASE-MSC-14339-1] c 05 N75-24716
- DAVIDS, L. H.**  
Guidance and maneuver analyzer Patent  
[NASA-CASE-XNP-09572] c 14 N71-15621
- DAVIDSON, A. C.**  
Spacecraft attitude sensor  
[NASA-CASE-GSC-10890-1] c 21 N73-30640
- DAVIDSON, G. A.**  
Compact spectroradiometer  
[NASA-CASE-HQN-10683] c 14 N71-34389
- DAVIDSON, J. K.**  
Ripple indicator  
[NASA-CASE-KSC-10162] c 09 N72-11225
- DAVIDSON, J. R.**  
Error correction method and apparatus for electronic timepieces  
[NASA-CASE-LAR-12654-1] c 33 N83-36357
- DAVIDSON, J. S. W.**  
Centrifuge mounted motion simulator Patent  
[NASA-CASE-XAC-00399] c 11 N70-34815
- DAVIES, W. D. T.**  
Correlation type phase detector  
[NASA-CASE-GSC-11744-1] c 33 N75-26243
- DAVIS, A. J.**  
Fiber optic vibration transducer and analyzer Patent  
[NASA-CASE-XMF-02433] c 14 N71-10616
- DAVIS, B. K.**  
Spectral method for monitoring atmospheric contamination of inert-gas welding shields Patent  
[NASA-CASE-XMF-02039] c 15 N71-15871
- Stud-bonding gun  
[NASA-CASE-MFS-20299] c 15 N72-11392
- Solar energy power system  
[NASA-CASE-MFS-21628-1] c 44 N75-32581
- Solar energy power system  
[NASA-CASE-MFS-21628-2] c 44 N76-23675
- DAVIS, C. CALVIN**  
Linear mass actuator  
[NASA-CASE-LAR-14352-1] c 37 N92-34173
- DAVIS, D. C.**  
Fatigue failure load indicator  
[NASA-CASE-LAR-12027-1] c 39 N79-22537
- DAVIS, D. P.**  
Quick disconnect coupling  
[NASA-CASE-NPO-11202] c 15 N72-25450
- DAVIS, DENNIS D.**  
Atmospheric pressure flow reactor: Gas phase chemical kinetics under tropospheric conditions without wall effects  
[NASA-CASE-MSC-21384-1] c 34 N92-16243
- Atmospheric pressure flow reactor: Gas phase chemical kinetics under tropospheric conditions without wall effects  
[NASA-CASE-MSC-21384-2] c 35 N93-17626
- DAVIS, E. J.**  
Cable stabilizer for open shaft cable operated elevators  
[NASA-CASE-KSC-10513] c 15 N72-25453
- DAVIS, E. S.**  
Anti-glare improvement for optical imaging systems Patent  
[NASA-CASE-NPO-10337] c 14 N71-15604
- Radiant energy intensity measurement system Patent  
[NASA-CASE-XNP-06510] c 14 N71-23797
- Reference voltage switching unit  
[NASA-CASE-NPO-11253] c 09 N72-17157
- DAVIS, J. G., JR.**  
Tube fabricating process  
[NASA-CASE-LAR-10203-1] c 15 N72-16330
- DAVIS, J. P.**  
Multiducted electromagnetic pump Patent  
[NASA-CASE-NPO-10755] c 15 N71-27084
- Shell side liquid metal boiler  
[NASA-CASE-NPO-10831] c 33 N72-20915
- Uninsulated in-core thermionic diode  
[NASA-CASE-NPO-10542] c 09 N72-27228
- DAVIS, J. W.**  
Burst diaphragm flow initiator Patent  
[NASA-CASE-MFS-12915] c 11 N71-17600
- Wind tunnel test section  
[NASA-CASE-MFS-20509] c 11 N72-17183
- Altitude simulation chamber for rocket engine testing  
[NASA-CASE-MFS-20620] c 11 N72-27262
- DAVIS, L. P.**  
Isolation coupling arrangement for a torque measuring system  
[NASA-CASE-XLA-04897] c 15 N72-22482
- DAVIS, N. S.**  
Decomposition unit Patent  
[NASA-CASE-XMS-00583] c 28 N70-38504
- DAVIS, PATRICIA**  
Process for making a noble metal on tin oxide catalyst  
[NASA-CASE-LAR-13741-1-SB] c 25 N90-20180
- Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-1-SB] c 25 N90-23517
- DAVIS, PATRICIA P.**  
Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-2-SB] c 25 N91-21270
- DAVIS, R. C.**  
Curved cap corrugated sheet  
[NASA-CASE-LAR-12884-1] c 18 N84-33450
- Daze fasteners  
[NASA-CASE-LAR-13009-1] c 37 N85-29285
- DAVIS, RANDALL C.**  
Daze fasteners  
[NASA-CASE-LAR-13009-2] c 37 N87-22976
- Cryogenic insulation system  
[NASA-CASE-LAR-13506-1] c 27 N89-12741
- Truss-core corrugation for compressive loads  
[NASA-CASE-LAR-13438-1] c 31 N89-12786
- DAVIS, W. T.**  
Strain coupled servo control system Patent  
[NASA-CASE-XLA-08530] c 32 N71-25360
- Fatigue failure load indicator  
[NASA-CASE-LAR-12027-1] c 39 N79-22537
- Missile rolling tail brake torque system  
[NASA-CASE-LAR-12751-1] c 15 N84-16231
- A system for controlling the oxygen content of a gas produced by combustion  
[NASA-CASE-LAR-13257-1] c 25 N84-32447
- DAVIS, WILLIAM T.**  
Device for quickly sensing the amount of O<sub>2</sub> in a combustion product gas  
[NASA-CASE-LAR-13816-1] c 35 N90-22025
- DAVISON, E. H.**  
Meteoroid sensing apparatus having a coincidence network connected to a pair of capacitors Patent  
[NASA-CASE-XLE-01246] c 14 N71-10797
- DAVISON, H. W.**  
Gaseous control system for nuclear reactors  
[NASA-CASE-XLE-04599] c 22 N72-20597
- DAWN, F. S.**  
Burn rate testing apparatus  
[NASA-CASE-XMS-09690] c 33 N72-25913
- Lightweight electrically-powered flexible thermal laminate  
[NASA-CASE-MSC-12662-1] c 33 N79-12331
- Absorbent product to absorb fluids  
[NASA-CASE-MSC-18223-1] c 24 N82-29362
- Absorbent product and articles made therefrom  
[NASA-CASE-MSC-18223-2] c 54 N84-11758
- DAWN, FREDERIC**  
Glove attachment  
[NASA-CASE-MSC-21632-1] c 54 N92-34210
- DAWN, FREDERIC S.**  
Hazards protection for space suits and spacecraft  
[NASA-CASE-MSC-21366-1] c 54 N90-25498
- Helmet of a laminate construction of polycarbonate and polysulfone polymeric material  
[NASA-CASE-MSC-21503-1] c 27 N92-10091
- Protective helmet assembly  
[NASA-CASE-MSC-21842-1] c 54 N93-17088
- DAWSON, REGINALD**  
Closed-loop motor control using high-speed fiber optics  
[NASA-CASE-MSC-21806-1] c 74 N92-17863
- DAY, J. L.**  
Electrode for biological recording  
[NASA-CASE-XMS-02872] c 05 N69-21925
- Pressed disc type sensing electrodes with ion-screening means Patent  
[NASA-CASE-XMS-04212-1] c 05 N71-12346
- Method of making a perspiration resistant biopotential electrode  
[NASA-CASE-MSC-90153-2] c 05 N72-25120
- DAY, R. M.**  
Portable pallet weighing apparatus  
[NASA-CASE-GSC-12789-1] c 35 N85-20294
- DAYAN, V. H.**  
Hydrogen leak detection device Patent  
[NASA-CASE-MFS-11537] c 14 N71-20442
- DEA, J. Y.**  
Constant-output atomizer  
[NASA-CASE-MFS-25631-1] c 34 N84-12406
- DEADMORE, D. L.**  
Method of protecting a surface with a silicon-slurry/aluminide coating  
[NASA-CASE-LEW-13343-1] c 27 N82-28441
- Silicon-slurry/aluminide coating  
[NASA-CASE-LEW-13343] c 26 N83-31795
- DEAN, WILLIAM G.**  
Low temperature storage container for transporting perishables to space station  
[NASA-CASE-MFS-28248-1] c 31 N88-24817
- DEATON, E. T., JR.**  
Contour measurement system  
[NASA-CASE-MFS-23726-1] c 43 N79-26439
- DEBNAM, W. J. J.**  
Magnetometer with a miniature transducer and automatic scanning  
[NASA-CASE-LAR-11617-2] c 35 N78-32397
- DEBNAM, W. J., JR.**  
Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c 25 N75-26043
- Ampoule sealing apparatus and process  
[NASA-CASE-LAR-12847-1] c 33 N83-16633
- Reusable thermal cycling clamp  
[NASA-CASE-LAR-12868-1] c 37 N85-21651
- DEBNAM, WILLIAM J., JR.**  
Apparatus and procedure to detect a liquid-solid interface during crystal growth in a bridgman furnace  
[NASA-CASE-LAR-13597-1-CU] c 25 N87-23713
- DEBOO, G. J.**  
Gyrator type circuit Patent  
[NASA-CASE-XAC-10608-1] c 09 N71-12517
- Feedback integrator with grounded capacitor Patent  
[NASA-CASE-XAC-10607] c 10 N71-23669
- Precision rectifier with FET switching means Patent  
[NASA-CASE-ARC-10101-1] c 09 N71-33109
- Phase shift circuit apparatus  
[NASA-CASE-ARC-10269-1] c 10 N72-16172
- Temperature compensated light source using a light emitting diode  
[NASA-CASE-ARC-10467-1] c 09 N73-14214
- Self-tuning bandpass filter  
[NASA-CASE-ARC-10264-1] c 09 N73-20231
- Test apparatus for locating shorts during assembly of electrical buses  
[NASA-CASE-ARC-11116-1] c 33 N82-24420
- DECARLO, F. S.**  
Failure detection and control means for improved drift performance of a gimbaled platform system  
[NASA-CASE-MFS-23551-1] c 04 N76-26175
- DECKER, A. J.**  
High powered arc electrodes  
[NASA-CASE-LEW-11162-1] c 33 N74-12913
- DEDOLPH, R. D.**  
Rotary plant growth accelerating apparatus  
[NASA-CASE-ARC-10722-1] c 51 N75-25503
- DEERKOSKI, L. F.**  
Signal-to-noise ratio determination circuit  
[NASA-CASE-GSC-11239-1] c 10 N73-25241
- Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c 33 N76-27472
- Pseudo noise code and data transmission method and apparatus  
[NASA-CASE-GSC-12017-1] c 32 N77-30308
- DEFIGUIREDO, RUI J. P.**  
Method and apparatus for sensor fusion  
[NASA-CASE-MSC-21334-1] c 32 N91-25317
- DEFURIA, R. R.**  
Fluid power transmitting gas bearing Patent  
[NASA-CASE-ERC-10097] c 15 N71-28465
- DEGEER, M. D.**  
Traversing probe Patent  
[NASA-CASE-XFR-02007] c 12 N71-24692
- DEGRASSE, R. W.**  
Folded traveling wave maser structure Patent  
[NASA-CASE-XNP-05219] c 16 N71-15550
- DEININGER, WILLIAM D.**  
High temperature refractory member with radiation emissive overcoat  
[NASA-CASE-NPO-17122-1-CU] c 27 N91-14489
- DEIS, B. C.**  
Traveling sealer for contoured table Patent  
[NASA-CASE-XLA-01494] c 15 N71-24164
- Drop foot corrective device  
[NASA-CASE-LAR-12259-2] c 54 N86-22112
- DEL CASALE, L. A.**  
Signal generator  
[NASA-CASE-XNP-05612] c 09 N69-21468
- DEL CURTO, B.**  
System for monitoring the presence of neutrals in a stream of ions Patent  
[NASA-CASE-XNP-02592] c 24 N71-20518
- DEL DUCA, A.**  
Electronic divider and multiplier using photocells Patent  
[NASA-CASE-XFR-05637] c 09 N71-19480

**DELA FUENTE, HORACIO M.**

Energy dissipator  
[NASA-CASE-MSC-21555-1] c 37 N93-23075

**DELANO, C. B.**

Polymeric foams from cross-linkable  
poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c 27 N78-31232

**DELA PLAIN, R. W.**

Rotary leveling base platform  
[NASA-CASE-ARC-10981-1] c 37 N78-27425  
Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c 52 N81-29763

**DELA TEUR, L. A.**

Emergency earth orbital escape device  
[NASA-CASE-MSC-13281-1] c 31 N72-18859

**DEL GREGO, D. J.**

Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c 36 N75-15028

**DELLACORTE, CHRISTOPHER**

Method of making carbide/fluoride/silver composites  
[NASA-CASE-LEW-14902-1] c 24 N91-27244

**DELUCA, J. J.**

Segmented superconducting magnet for a broadband  
traveling wave maser Patent  
[NASA-CASE-XGS-10518-1] c 16 N71-28554

Bonding of sapphire to sapphire by eutectic mixture of  
aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-1] c 37 N75-15992

Bonding of sapphire to sapphire by eutectic mixture of  
aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-3] c 24 N79-25143

**DELUCAS, LAWRENCE J.**

Macromolecular crystal growing system  
[NASA-CASE-MFS-26088-1-CU] c 76 N92-25398

**DELVIGS, P.**

Preparation of polyimides from mixtures of monomeric  
diamines and esters of polycarboxylic acids  
[NASA-CASE-LEW-11325-1] c 06 N73-27980

Curing agent for polyepoxides and epoxy resins and  
composites cured therewith  
[NASA-CASE-LEW-13226-1] c 27 N81-17260

Composition and method for making polyimide  
resin-reinforced fabric  
[NASA-CASE-LEW-12933-1] c 27 N81-19296

Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-2] c 27 N83-29392

**DELVIGS, PETER**

Vinyl capped addition polyimides  
[NASA-CASE-LEW-15027-1] c 27 N91-13566

Vinyl capped addition polyimides  
[NASA-CASE-LEW-15027-2] c 27 N92-24053

**DEMING, J. W.**

Determination of antimicrobial susceptibilities on  
infected urines without isolation  
[NASA-CASE-GSC-12046-1] c 52 N79-14750

Rapid, quantitative determination of bacteria in water  
[NASA-CASE-GSC-12158-1] c 51 N83-27569

**DEMOGENES, C.**

Low cycle fatigue testing machine  
[NASA-CASE-LAR-10270-1] c 32 N72-25877

**DEMOREST, K. E.**

Self-lubricating gears and other mechanical parts  
Patent  
[NASA-CASE-MFS-14971] c 15 N71-24984

**DEMPSEY, T. K.**

Ride quality meter  
[NASA-CASE-LAR-12882-1] c 35 N84-12445

**DENACI, D. E.**

Clamping assembly for inertial components Patent  
[NASA-CASE-XMS-02184] c 15 N71-20813

**DENEFF, D. E.**

Television camera video level control system  
[NASA-CASE-MSC-18578-1] c 32 N85-21427

**DENNIS, DALE V.**

Aircraft control position indicator  
[NASA-CASE-LAR-12984-1] c 06 N87-22678

**DENSMORE, ARTHUR C.**

A satellite-tracking millimeter-wave reflector antenna  
system for mobile satellite-tracking  
[NASA-CASE-NPO-18772-1-CU] c 32 N93-28955

**DEO, N.**

Dual purpose momentum wheels for spacecraft with  
magnetic recording  
[NASA-CASE-NPO-11481] c 21 N73-13644

**DEQUAY, LAURENCE**

Hybrid butterfly valve  
[NASA-CASE-SSC-00004-1] c 37 N91-14609

**DERESPINIS, SILVIO F.**

Sun shield  
[NASA-CASE-MSC-20162-1] c 37 N87-17036

**DERING, V. G.**

Vortex breech high pressure gas generator  
[NASA-CASE-LAR-10549-1] c 31 N73-13898

**DERR, L. J.**

Direct radiation cooling of the collector of linear beam  
tubes  
[NASA-CASE-XNP-09227] c 15 N69-24319

Temperature-compensating means for cavity resonator  
of amplifier Patent  
[NASA-CASE-XNP-00449] c 14 N70-35220

Electron beam tube containing a multiple cathode array  
employing indexing means for cathode substitution  
Patent  
[NASA-CASE-NPO-10625] c 09 N71-26182

Thermostatic actuator  
[NASA-CASE-NPO-10637] c 15 N72-12409

Thermal motor  
[NASA-CASE-NPO-11283] c 09 N72-25260

Electrostatically controlled heat shutter  
[NASA-CASE-NPO-11942-1] c 33 N73-32818

**DESCAMP, V. A.**

Filter regeneration systems  
[NASA-CASE-MSC-14273-1] c 34 N75-33342

**DESTESSE, J. G.**

Thermionic tantalum emitter doped with oxygen Patent  
Application  
[NASA-CASE-NPO-11138] c 03 N70-34646

**DETTING, J. R.**

Retractable environmental seal  
[NASA-CASE-MFS-23646-1] c 37 N79-22474

**DEWEILER, H. K.**

High isolation RF signal selection switches  
[NASA-CASE-NPO-13081-1] c 33 N74-22814

**DEUTSCH, LESLIE J.**

VLSI single-chip (255,223) Reed-Solomon encoder with  
interleaver  
[NASA-CASE-NPO-17280-1-CU] c 17 N90-21061

**DEVINE, D. L.**

Test apparatus for locating shorts during assembly of  
electrical buses  
[NASA-CASE-ARC-11116-1] c 33 N82-24420

**DEVINE, E. J.**

Optical tracker having overlapping reticles on parallel  
axes Patent  
[NASA-CASE-XGS-05715] c 23 N71-16100

**DEWHIRST, D. L.**

Deformable vehicle wheel Patent  
[NASA-CASE-MFS-20400] c 31 N71-18611

**DEWITT, R. L.**

Fluid coupling Patent  
[NASA-CASE-XLE-00397] c 15 N70-36492

**DEYOUNG, ANEMARIE**

Projection lens scanning laser velocimeter system  
[NASA-CASE-ARC-11547-1] c 36 N87-17026

**DEYOUNG, R. J.**

Volumetric direct nuclear pumped laser  
[NASA-CASE-LAR-12183-1] c 36 N79-18307

Large volume multiple-path nuclear pumped laser  
[NASA-CASE-LAR-12592-1] c 36 N82-13415

Long gain length solar pumped box laser  
[NASA-CASE-LAR-13256-1] c 36 N86-29204

**DEYOUNG, RUSSELL J.**

Method for remotely powering a device such as a lunar  
rover  
[NASA-CASE-LAR-14789-1] c 37 N92-30388

**DEZERN, JAMES F.**

Polyimides containing amide and perfluoroisopropyl  
connecting groups  
[NASA-CASE-LAR-14608-1] c 27 N92-17676

**DI LOSA, V. J.**

Diversity receiving system with diversity phase lock  
Patent  
[NASA-CASE-XGS-01222] c 10 N71-20841

**DIAMOND, D. D.**

Stator rotor tools  
[NASA-CASE-MSC-16000-1] c 37 N78-24544

**DIAMOND, R. M.**

Central spar and module joint Patent  
[NASA-CASE-XNP-02341] c 15 N71-21531

**DIBATTISTA, J. D.**

Determining particle density using known material  
Hugoniot curves  
[NASA-CASE-LAR-11059-1] c 76 N75-12810

Meteoroid impact position locator aid for manned space  
station  
[NASA-CASE-LAR-10629-1] c 35 N75-33367

**DICARLO, J. A.**

Fiber-reinforced monoclinic celsian matrix composite  
material  
[NASA-CASE-LEW-15269-1] c 24 N93-20040

**DICK, G. JOHN**

Low noise cryogenic dielectric resonator oscillator  
[NASA-CASE-NPO-17157-1-CU] c 33 N88-26596

**DICKENS, L. E.**

Millimeter wave pumped parametric amplifier  
[NASA-CASE-GSC-11617-1] c 33 N74-32660

**DICKERSON, G. E.**

Composite lamination method  
[NASA-CASE-LAR-12019-1] c 24 N78-17150

**DICKERSON, GEORGE E.**

Method of inseting predesigned disbond areas into  
composite laminates  
[NASA-CASE-LAR-13225-1] c 24 N90-25197

Process for bonding elastomers to metals  
[NASA-CASE-LAR-13645-1] c 27 N93-25995

**DICKEY, DUANE P.**

Induction-type metal detector with increased scanning  
area capability  
[NASA-CASE-KSC-11386-1] c 35 N90-22023

**DICKINSON, R. M.**

Thin conformal antenna array for microwave power  
conversions  
[NASA-CASE-NPO-13886-1] c 32 N78-24391

RF beam center location method and apparatus for  
power transmission system  
[NASA-CASE-NPO-13821-1] c 44 N78-28594

Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c 33 N80-18287

**DIETRICH, F. J.**

Amplitude steered array  
[NASA-CASE-GSC-11446-1] c 33 N74-20860

**DILL, W. P.**

Method and automated apparatus for detecting coliform  
organisms  
[NASA-CASE-MSC-16777-1] c 51 N80-27067

**DILLARD, P. A.**

Method of fabricating a photovoltaic module of a  
substantially transparent construction  
[NASA-CASE-NPO-14303-1] c 44 N80-18550

**DILLON, R. F., JR.**

Shock absorbing mount for electrical components  
[NASA-CASE-NPO-13253-1] c 37 N75-18573

**DIMEFF, J.**

Cryogenic apparatus for measuring the intensity of  
magnetic fields  
[NASA-CASE-XAC-02407] c 14 N69-27423

Apparatus for coupling a plurality of ungrounded circuits  
to a grounded circuit Patent  
[NASA-CASE-XAC-00086] c 09 N70-33182

Two-plane balance Patent  
[NASA-CASE-XAC-00073] c 14 N70-34813

Differential pressure cell Patent  
[NASA-CASE-XAC-00042] c 14 N70-34816

High speed low level electrical stepping switch Patent  
[NASA-CASE-XAC-00060] c 09 N70-39915

Dynamic sensor Patent  
[NASA-CASE-XAC-02877] c 14 N70-41681

Electrostatic charged particle analyzer having deflection  
members shaped according to the periodic voltage applied  
thereto Patent  
[NASA-CASE-XAC-05506-1] c 24 N71-16095

Inertial reference apparatus Patent  
[NASA-CASE-XAC-03107] c 23 N71-16098

Thermal detector of electromagnetic energy by means  
of a vibrating electrode Patent  
[NASA-CASE-XAC-10768] c 09 N71-18830

Vibrating element electrometer with output signal  
magnified over input signal by a function of the mechanical  
Q of the vibrating element Patent  
[NASA-CASE-XAC-02807] c 09 N71-23021

Wide range dynamic pressure sensor  
[NASA-CASE-ARC-10263-1] c 14 N72-22438

Nondispersive gas analyzing method and apparatus  
wherein radiation is serially passed through a reference  
and unknown gas  
[NASA-CASE-ARC-10308-1] c 06 N72-31141

Chromato-fluorographic drug detector  
[NASA-CASE-ARC-10633-1] c 25 N74-26947

Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-3] c 33 N75-19520

Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-2] c 33 N75-25041

NDIR gas analyzer based on absorption modulation  
ratios for known and unknown samples  
[NASA-CASE-ARC-10802-1] c 35 N75-30502

Modulated hydrogen ion flame detector  
[NASA-CASE-ARC-10322-1] c 35 N76-18403

Method and apparatus for compensating reflection  
losses in a path length modulated absorption-absorption  
trace gas detector  
[NASA-CASE-ARC-10631-1] c 74 N76-20958

Nulling device for detection of trace gases by NDIR  
absorption  
[NASA-CASE-ARC-10760-1] c 25 N76-22323

Integrated structure vacuum tube  
[NASA-CASE-ARC-10445-1] c 31 N76-31365

Optically selective, acoustically resonant gas detecting  
transducer  
[NASA-CASE-ARC-10639-1] c 35 N78-13400

**DIMPAULT-DARCY, ERIC C.**

Thermal switch disc for short circuit protection of  
batteries  
[NASA-CASE-MSC-21428-1] c 33 N91-14537

## DINER, DANIEL B.

- Television monitor field shifter and an opto-electronic method for obtaining a stereo image of optimal depth resolution and reduced depth distortion on a single screen  
[NASA-CASE-NPO-17249-1-CU] c 32 N89-28676
- Composite video and graphics display for multiple camera viewing system in robotics and teleoperation  
[NASA-CASE-NPO-17836-1-CU] c 32 N92-10126
- Stereoscopic camera and viewing systems with undistorted depth presentation and reduced or eliminated erroneous acceleration and deceleration perceptions, or with perceptions produced or enhanced for special effects  
[NASA-CASE-NPO-18028-1-CU] c 74 N92-16809
- Operator-tailored adjustable control station with movable monitors and cameras for viewing systems in robotics and teleoperations  
[NASA-CASE-NPO-17837-1-CU] c 74 N93-17273
- Composite video and graphics display for camera viewing systems in robotics and teleoperation  
[NASA-CASE-NPO-17836-1-CU] c 32 N93-18284
- DIRUSSO, E.**  
Variable friction secondary seal for face seals  
[NASA-CASE-LEW-14170-1] c 37 N86-25790
- DISTEFANO, SALVADOR**  
Organic cathode for a secondary battery  
[NASA-CASE-NPO-17604-1-CU] c 33 N91-14536
- Copper chloride cathode for a secondary battery  
[NASA-CASE-NPO-17640-1-CU] c 33 N91-14538
- Metal chloride cathode for a battery  
[NASA-CASE-NPO-17809-1-CU] c 33 N91-27478
- Silicon containing electroconductive polymers and structures made therefrom  
[NASA-CASE-NPO-17826-1-CU] c 27 N92-16121
- Secondary Li battery incorporating 12-Crown-4 ether  
[NASA-CASE-NPO-17922-1-CU] c 33 N92-28753
- DIVASALAR, DARIUSH**  
Trellis coded modulation for transmission over fading mobile satellite channel  
[NASA-CASE-NPO-16904-2-CU] c 32 N91-14523
- DIVSALAR, DARIUSH**  
Doppler-corrected differential detection system  
[NASA-CASE-NPO-16987-1-CU] c 32 N91-25316
- Multiple symbol differential detection  
[NASA-CASE-NPO-17896-1-CU] c 32 N91-27439
- DIX, M. G.**  
Demodulation system Patent  
[NASA-CASE-XAC-04030] c 10 N71-19472
- DIXON, ALAN B. C.**  
Altitude compensating ablative stiffening band for rocket motor nozzles  
[NASA-CASE-MFS-28728-1] c 20 N93-28950
- DIXON, D. S.**  
Device and method for frictionally testing materials for ignitability  
[NASA-CASE-MSC-20622-1] c 25 N86-19413
- DIXON, G. V.**  
Active vibration isolator for flexible bodies Patent  
[NASA-CASE-LAR-10106-1] c 15 N71-27169
- DOBIES, E. F.**  
Cyclically operable optical shutter  
[NASA-CASE-NPO-10758] c 14 N73-14427
- DOD, L. R.**  
Plural beam antenna  
[NASA-CASE-GSC-11013-1] c 09 N73-19234
- DOGGETT, R. V., JR.**  
Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12458-1] c 44 N83-21503
- Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12720-1] c 44 N83-21504
- DOLAND, G. D.**  
Method and apparatus for decoding compatible convolutional codes  
[NASA-CASE-MSC-14070-1] c 32 N74-32598
- Phased array antenna control  
[NASA-CASE-MSC-14939-1] c 32 N79-11264
- Random digital encryption secure communication system  
[NASA-CASE-MSC-16462-1] c 32 N82-31583
- DOLCE, JAMES L.**  
Automatic system for installation and replacement of Space Station components  
[NASA-CASE-LEW-14906-1] c 37 N93-12203
- Service equipment for use in hostile environments  
[NASA-CASE-LEW-14906-2] c 37 N93-31314
- DOLGIN, BENJAMIN P.**  
Composite passive damping struts for large precision structures  
[NASA-CASE-NPO-17914-1-CU] c 39 N91-13767
- Composite passive damping struts for large precision structures  
[NASA-CASE-NPO-17914-1-CU] c 39 N93-24596

## DOLLAND, C. R.

- Combinational logic for generating gate drive signals for phase control rectifiers  
[NASA-CASE-MFS-25208-1] c 33 N83-10345
- Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c 33 N83-31953
- Adaptive control system for line-commutated inverters  
[NASA-CASE-MFS-25209-1] c 33 N83-35227
- DOLLYHIGH, S. M.**  
Metric half-span model support system  
[NASA-CASE-LAR-12441-1] c 09 N82-23254
- DOMACK, CHRISTOPHER S.**  
Geometries for roughness shapes in laminar flow  
[NASA-CASE-LAR-13255-1] c 02 N87-16793
- DOMAS, P. A.**  
Redundant disc  
[NASA-CASE-LEW-12496-1] c 07 N78-33101
- DOMBROWSKI, H. G.**  
Adjustable tension wire guide Patent  
[NASA-CASE-XMS-02383] c 15 N71-15918
- DOMINEK, ALLEN K.**  
Almond test body  
[NASA-CASE-LAR-13747-1-CU] c 32 N89-28672
- DONALDSON, R. W., JR.**  
Gas chromatograph injection system  
[NASA-CASE-ARC-10344-2] c 35 N75-26334
- DONALDSON, RALPH W.**  
Dual mode laser velocimeter  
[NASA-CASE-ARC-11634-1] c 36 N88-14350
- DONNELLY, P. C.**  
Prevention of pressure build-up in electrochemical cells Patent  
[NASA-CASE-XGS-01419] c 03 N70-41864
- DONNINI, J. M.**  
Hydrogen fire blink detector  
[NASA-CASE-MFS-15063] c 14 N72-25412
- DONOHUE, J. H.**  
Passive dual spin misalignment compensators  
[NASA-CASE-GSC-11479-1] c 35 N74-28097
- Active nutation controller  
[NASA-CASE-GSC-12273-1] c 35 N80-21719
- DONOVAN, B. P.**  
Artificial gravity spin deployment system Patent  
[NASA-CASE-XNP-02595] c 31 N71-21881
- DONOVAN, G.**  
Drying apparatus for photographic sheet material  
[NASA-CASE-GSC-11074-1] c 14 N73-28489
- DONOVAN, R. P.**  
Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c 35 N76-22509
- DOONG, H.**  
Analog to digital converter Patent  
[NASA-CASE-XLA-00670] c 08 N71-12501
- Controllable high voltage source having fast settling time  
[NASA-CASE-GSC-11844-1] c 33 N75-19522
- DORNE, A.**  
Nose cone mounted heat resistant antenna Patent  
[NASA-CASE-XMS-04312] c 07 N71-22984
- DOROGY, WILLIAM E., JR.**  
Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14162-1] c 27 N90-15259
- Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14489-1] c 37 N91-27562
- DOTSON, W. P., JR.**  
Digital to analog conversion apparatus  
[NASA-CASE-MSC-12458-1] c 08 N73-32081
- DOTTS, R. L.**  
Thermal insulation protection means  
[NASA-CASE-MSC-12737-1] c 24 N79-25142
- Attachment system for silica tiles  
[NASA-CASE-MSC-18741-1] c 27 N82-29456
- High temperature silicon carbide impregnated insulating fabrics  
[NASA-CASE-MSC-18832-1] c 27 N83-18908
- DOUGHERTY, H. B.**  
Rotary solenoid shutter drive assembly and rotary inertia damper and stop plate assembly  
[NASA-CASE-GSC-11560-1] c 33 N74-20861
- DOUGHTY, R. A.**  
Automatic signal range selector for metering devices Patent  
[NASA-CASE-XMS-06497] c 14 N71-26244
- DOUGLAS, J.**  
Process of casting heavy slips Patent  
[NASA-CASE-XLE-00106] c 15 N71-16076
- DOUGLAS, J. L.**  
Maximum power point tracker Patent  
[NASA-CASE-GSC-10376-1] c 14 N71-27407
- DOW, M. B.**  
Vacuum pressure molding technique  
[NASA-CASE-LAR-10073-1] c 37 N76-24575
- DOW, N. F.**  
Two component bearing Patent  
[NASA-CASE-XLA-00013] c 15 N71-29136

## DOWLER, W. L.

- Solid propellant rocket motor nozzle  
[NASA-CASE-NPO-11458] c 28 N72-23810
- Solid propellant rocket motor  
[NASA-CASE-NPO-11559] c 28 N73-24784
- Seismic vibration source  
[NASA-CASE-NPO-14112-1] c 46 N79-22679
- DOWNING, R. G.**  
Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c 44 N79-24431
- DOWNS, W. R.**  
Transpirationally cooled heat ablation system Patent  
[NASA-CASE-XMS-02677] c 31 N70-42075
- Method for obtaining oxygen from lunar or similar soil  
[NASA-CASE-MSC-12408-1] c 46 N74-13011
- DOYCHAK, J.**  
Plasma sprayed ceramic thermal barrier coating for NiAl-based intermetallic alloys  
[NASA-CASE-LEW-15535-1] c 26 N93-31294
- DOYCHAK, JOSEPH**  
Consecutive plate acoustic suppressor apparatus and methods  
[NASA-CASE-LEW-15430-1] c 71 N93-17051
- DOYLE, J. C.**  
Measuring device Patent  
[NASA-CASE-XMS-01546] c 14 N70-40233
- DRAPEAU, D. F.**  
Slow opening valve  
[NASA-CASE-MSC-20112-1] c 37 N85-20338
- DRAPER, SUSAN L.**  
Annealing group III-V compound doped silicon-germanium alloy for improved thermo-electric conversion efficiency  
[NASA-CASE-NPO-17259-1-CU] c 76 N90-19884
- DREIBACH, F. W.**  
Film advance indicator  
[NASA-CASE-LAR-12474-1] c 35 N82-26628
- DRENNAN, ARTHUR**  
Glove attachment  
[NASA-CASE-MSC-21632-1] c 54 N92-34210
- DRESHFIELD, R. L.**  
Cobalt-base alloy  
[NASA-CASE-LEW-10436-1] c 17 N73-32415
- DRESSER, H. S.**  
Multi-purpose wind tunnel reaction control model block  
[NASA-CASE-MSC-19706-1] c 09 N78-31129
- DREXHAGE, M. G.**  
Injection head for delivering liquid fuel and oxidizers  
[NASA-CASE-NPO-10046] c 28 N72-17843
- DREYFUS, M. G.**  
Wedge immersed thermistor bolometers  
[NASA-CASE-XGS-01245-1] c 35 N79-33449
- DRISCOLL, K. L.**  
Means for accommodating large overstrain in lead wires  
[NASA-CASE-LAR-10168-1] c 33 N74-22865
- DROST, E. J.**  
Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c 43 N79-25443
- DRUMMOND, A. S.**  
Flexible back-up bar Patent  
[NASA-CASE-XMF-00722] c 15 N70-40204
- DU PONT, P. S.**  
Solar panel fabrication Patent  
[NASA-CASE-XNP-03413] c 03 N71-26726
- DUBEY, M.**  
Central spar and module joint Patent  
[NASA-CASE-XNP-02341] c 15 N71-21531
- DUBIS, DAVID**  
Energy efficient continuous flow ash lockhopper  
[NASA-CASE-NPO-16985-1-CU] c 31 N91-15423
- DUBOIS, PASCALE C.**  
Data volume reduction for imaging radar polarimetry  
[NASA-CASE-NPO-17184-1-CU] c 32 N88-26541
- Method for providing a polarization filter for processing synthetic aperture radar image data  
[NASA-CASE-NPO-17904-1-CU] c 32 N91-13594
- DUBOIS, R. D.**  
Guide for a typewriter  
[NASA-CASE-MFS-15218-1] c 37 N77-19457
- DUBUSKER, W.**  
Apparatus for welding sheet material  
[NASA-CASE-XMS-01330] c 37 N75-27376
- DUCKETT, J.**  
Variable anodic thermal control coating  
[NASA-CASE-LAR-12719-1] c 44 N83-34449
- DUDDLEY, MICHAEL R.**  
High performance forward swept wing aircraft  
[NASA-CASE-ARC-11636-1] c 05 N88-28914
- DUESBERG, J. D.**  
Method of repairing hidden leaks in tubes  
[NASA-CASE-MFS-19796-1] c 37 N86-32736
- DUFFY, J. O.**  
Minimal logic block encoder Patent  
[NASA-CASE-NPO-10595] c 10 N71-25917

**DUFRESNE, EUGENE R.**  
Method of evaporation  
[NASA-CASE-NPO-15609-2] c 25 N88-23846

**DUGAN, REGINA E.**  
System for venting gas from a liquid storage tank  
[NASA-CASE-MSC-21253-1] c 31 N90-20254

**DUNAETZ, R. A.**  
Flexible, repairable, pottable material for electrical connectors Patent  
[NASA-CASE-XGS-05180] c 18 N71-25881

**DUNAVANT, J. C.**  
Hot air balloon deceleration and recovery system Patent  
[NASA-CASE-XLA-06824-2] c 02 N71-11037

**DUNN, DONALD E.**  
Alkali metal for ultraviolet band-pass filter  
[NASA-CASE-NPO-18433-1-CU] c 74 N92-34241

**DUNN, J. G.**  
Satellite interface synchronization system  
[NASA-CASE-GSC-10390-1] c 07 N72-11149

**DUNN, J. H.**  
Foldable conduit Patent  
[NASA-CASE-XLE-00620] c 32 N70-41579

**DUNN, S. A.**  
Sonic levitation apparatus  
[NASA-CASE-MFS-25828-1] c 71 N84-28568

**DUNN, S. T.**  
Ellipsoidal mirror reflectometer including means for averaging the radiation reflected from the sample Patent  
[NASA-CASE-XGS-05291] c 23 N71-16341

**DUNN, T. J.**  
Pre-stressed thermal protection systems  
[NASA-CASE-MSC-20254-1] c 16 N84-22601

**DUNN, THOMAS J.**  
Metallic threaded composite fastener  
[NASA-CASE-MSC-21580-1] c 37 N92-21726

**DUNN, W. F.**  
Water separator  
[NASA-CASE-XMS-01295-1] c 37 N79-21345

**DUNN, W. R.**  
Coaxial inverted geometry transistor having buried emitter  
[NASA-CASE-ARC-10330-1] c 09 N73-32112

**DUNNAVANT, W. R.**  
Process for preparation of dianilinosilanes Patent  
[NASA-CASE-XMF-06409] c 06 N71-23230  
Process for preparation of high-molecular-weight polyaryloxysilanes Patent  
[NASA-CASE-XMF-08674] c 06 N71-28807

**DUNNING, J. W., JR.**  
Slug flow magnetohydrodynamic generator  
[NASA-CASE-XLE-02083] c 03 N69-39983

**DUONG, TUAN A.**  
Electronic neural network for solving traveling salesman and similar global optimization problems  
[NASA-CASE-NPO-17807-2-CU] c 63 N92-29955  
Cascaded VLSI neural network architecture for on-line learning  
[NASA-CASE-NPO-18645-1-CU] c 63 N92-34240

**DUPRAW, W. A.**  
Analytical test apparatus and method for determining oxide content of alkali metal Patent  
[NASA-CASE-XLE-01997] c 06 N71-23527

**DURAN, E. N.**  
Subminiature insertable force transducer  
[NASA-CASE-NPO-13423-1] c 33 N75-31329  
Miniature muscle displacement transducer  
[NASA-CASE-NPO-13519-1] c 33 N76-19338

**DURNEY, G. P.**  
Space suit  
[NASA-CASE-MSC-12609-1] c 05 N73-32012

**DUSTIN, M. O.**  
Pneumatic oscillator Patent  
[NASA-CASE-LEW-10345-1] c 10 N71-25899  
Shock position sensor for supersonic inlets  
[NASA-CASE-LEW-11915-1] c 35 N76-14431

**DUSTIN, MILES O.**  
Solar thermal energy receiver  
[NASA-CASE-LEW-14949-1] c 44 N92-29143

**DWINELL, W. S.**  
System for automatically switching transformer coupled lines  
[NASA-CASE-MSC-16697-1] c 33 N79-28415

**DYER, GERALD E.**  
Welding monitoring system  
[NASA-CASE-MFS-29177-1] c 37 N88-14362  
Trailer shield assembly for a welding torch  
[NASA-CASE-MFS-29260-1] c 37 N90-19602  
Internal wire guide for GTAW welding  
[NASA-CASE-MFS-29489-1] c 31 N90-23586  
Electrode carrying wire for GTAW welding  
[NASA-CASE-MFS-29491-1] c 31 N90-26168

**DZENITIS, JOHN M.**  
Fingered bola body, bola with same, and methods of use  
[NASA-CASE-MSC-21967-1] c 37 N92-30026

## E

**EASLEY, W. C.**  
Resonant waveguide stark cell  
[NASA-CASE-LAR-11352-1] c 33 N75-26245

**EASTERLING, M. E.**  
Baseband signal combiner for large aperture antenna array  
[NASA-CASE-NPO-14641-1] c 32 N81-29308

**EASTERLING, M. F.**  
Radar ranging receiver Patent  
[NASA-CASE-XNP-00748] c 07 N70-36911  
Phase-locked loop with sideband rejecting properties Patent  
[NASA-CASE-XNP-02723] c 07 N70-41680  
Time synchronization system utilizing moon reflected coded signals Patent  
[NASA-CASE-NPO-10143] c 10 N71-26326  
Two carrier communication system with single transmitter  
[NASA-CASE-NPO-11548] c 07 N73-26118  
Radio frequency arraying method for receivers  
[NASA-CASE-NPO-14328-1] c 32 N80-18253

**EASTON, R. A.**  
Data multiplexer using tree switching configuration  
[NASA-CASE-NPO-11333] c 08 N72-22162  
Flexible computer accessed telemetry  
[NASA-CASE-NPO-11358] c 07 N72-25172

**EATON, L. R.**  
Heat transfer device  
[NASA-CASE-MFS-22938-1] c 34 N76-18374

**EBERHARDT, SILVIO P.**  
Analog hardware for learning neural networks  
[NASA-CASE-NPO-17664-1-CU] c 62 N91-32852  
Network of dedicated processors for finding lowest-cost map path  
[NASA-CASE-NPO-17716-1-CU] c 62 N92-15620  
Neural-network dedicated processor for solving competitive assignment problems  
[NASA-CASE-NPO-17781-1-CU] c 60 N92-17884  
Analog hardware for delta-backpropagation neural networks  
[NASA-CASE-NPO-17564-1-CU] c 32 N92-22033  
Electronic neural network for solving traveling salesman and similar global optimization problems  
[NASA-CASE-NPO-17807-2-CU] c 63 N92-29955  
Neural-network dedicated processor for solving competitive assignment problems  
[NASA-CASE-NPO-17781-1-CU] c 60 N93-20116

**EBERSOLE, T. J.**  
Inverter ratio failure detector  
[NASA-CASE-NPO-13160-1] c 35 N74-18090

**EBIHARA, B. T.**  
Thermal radiation shielding Patent  
[NASA-CASE-XLE-03432] c 33 N71-24145  
Multistage spent particle collector and a method for making same  
[NASA-CASE-LEW-13914-1] c 37 N85-33489

**EBIHARA, BEN T.**  
Apparatus for mounting a field emission cathode  
[NASA-CASE-LEW-14108-1] c 33 N87-28832

**EBY, R. J.**  
Thermal control system for a spacecraft modular housing  
[NASA-CASE-GSC-11018-1] c 31 N73-30829

**ECK, JOHN D.**  
Protective helmet assembly  
[NASA-CASE-MSC-21842-1] c 54 N93-17088

**ECKER, ANDREAS**  
Dual wavelength holographic interferometry system  
[NASA-CASE-MFS-28242-1] c 35 N89-26202

**ECKERT, E. R. G.**  
Transpiration cooled turbine blade manufactured from wires Patent  
[NASA-CASE-XLE-00020] c 15 N70-33226

**ECKLES, P. N.**  
High-speed infrared furnace  
[NASA-CASE-XLE-10466] c 17 N69-25147

**ECKLUND, WAYNE**  
Climbing robot  
[NASA-CASE-GSC-13442-1] c 37 N92-23547

**ECONOMU, M. A.**  
Wire stripper  
[NASA-CASE-FRC-10111-1] c 37 N79-10419  
Air speed and attitude probe  
[NASA-CASE-FRC-11009-1] c 06 N80-18036

**ECORD, G. M.**  
Densification of porous refractory substrates  
[NASA-CASE-MSC-18737-1] c 24 N83-13171

Method of repairing surface damage to porous refractory substrates  
[NASA-CASE-MSC-18736-1] c 24 N83-13172

**EDDINS, T. O.**  
Space craft soft landing system Patent  
[NASA-CASE-XMF-02108] c 31 N70-36845  
Missile launch release system Patent  
[NASA-CASE-XMF-03198] c 30 N70-40353

**EDEEN, GREGG A.**  
Pre-integrated truss space station and method of assembly  
[NASA-CASE-MSC-22015-1] c 18 N93-20042

**EDELSTEIN, FRED**  
Pumped two-phase heat transfer loop  
[NASA-CASE-MSC-20841-1] c 34 N87-22950  
Monogroove cold plate  
[NASA-CASE-MSC-20946-1] c 34 N87-28867  
Pumped two-phase heat transfer loop  
[NASA-CASE-MSC-20841-2] c 34 N88-23958

**EDENBOROUGH, KEVIN L.**  
Smart tunnel: Docking mechanism  
[NASA-CASE-MSC-21360-1] c 18 N91-14374

**EDLESON, S. K.**  
Latch/ejector unit Patent  
[NASA-CASE-XLA-03538] c 15 N71-24897

**EDMAN, C. W.**  
Electrical switching device Patent  
[NASA-CASE-NPO-10037] c 09 N71-19610

**EDWARDS, G. G.**  
Flight craft Patent  
[NASA-CASE-XAC-02058] c 02 N71-16087

**EDWARDS, J. W.**  
Apparatus for damping operator induced oscillations of a controlled system  
[NASA-CASE-FRC-11041-1] c 33 N82-18493

**EDWARDS, T. R.**  
Filtering device  
[NASA-CASE-MFS-22729-1] c 32 N76-21366  
Method of and apparatus for generating an interstitial point in a data stream having an even number of data points  
[NASA-CASE-MFS-25319-1] c 60 N85-33701

**EFTEKHARI, ABE**  
Slow positron beam generator for lifetime studies  
[NASA-CASE-LAR-14250-1-SB] c 72 N91-27936  
Shear sensitive monomer-polymer laminate structure and method of using same  
[NASA-CASE-LAR-14654-1-CU] c 39 N93-29613

**EGALON, CLAUDIO O.**  
Optical fiber fluorosensor  
[NASA-CASE-LAR-14525-1-CU] c 74 N93-22008  
Transversely polarized source cladding for an optical fiber  
[NASA-CASE-LAR-14652-1-SB] c 74 N93-22039

**EGALON, CLAUDIO OLIVEIRA**  
Optical fiber sensor having an active core  
[NASA-CASE-LAR-14607-1-SB] c 74 N92-30029  
Optical fiber strain sensor with improved linearity  
[NASA-CASE-LAR-14857-1-SB] c 74 N93-19374  
Discrete optical fiber strain sensor  
[NASA-CASE-LAR-14810-1-SB] c 35 N93-19492

**EGGER, R. L.**  
Strain gage Patent Application  
[NASA-CASE-FRC-10053] c 14 N70-35587

**EGGERS, A. J., JR.**  
Flight craft Patent  
[NASA-CASE-XAC-02058] c 02 N71-16087

**EGLI, ANNMARIE O.**  
Semi-2-interpenetrating networks of high temperature systems  
[NASA-CASE-LAR-13450-1] c 27 N87-28657

**EGLI, P. H.**  
Method of forming transparent films of ZnO  
[NASA-CASE-FRC-10019] c 15 N73-12487

**EHL, J. H.**  
Cryogenic insulation strength and bond tester  
[NASA-CASE-MFS-25910-1] c 39 N86-20841

**EHL, JAMES H.**  
Alignment and assembly tool for very large diameter cylinders  
[NASA-CASE-MFS-28001-2] c 37 N88-14360

**EHRENFELD, D. A.**  
Excitation and detection circuitry for a flux responsive magnetic head  
[NASA-CASE-XNP-04183] c 09 N69-24329  
Incremental tape recorder and data rate converter Patent  
[NASA-CASE-XNP-02778] c 08 N71-22710

**EICHENBRENNER, F. F.**  
Hydraulic grip Patent  
[NASA-CASE-XLA-05100] c 15 N71-17696  
Light shield and infrared reflector for fatigue testing Patent  
[NASA-CASE-XLA-01782] c 14 N71-26136  
Anti-buckling fatigue test assembly  
[NASA-CASE-LAR-10426-1] c 09 N74-19528

## EICHENTHAL, J.

Wide angle long eye relief eyepiece Patent  
[NASA-CASE-XMS-06056-1] c 23 N71-24857

## EISENBERGER, I.

Data compressor Patent  
[NASA-CASE-XNP-04067] c 08 N71-22707

## EKLUND, WAYNE D.

Compliant joint  
[NASA-CASE-GSC-13153-1] c 37 N91-17387

User friendly joystick  
[NASA-CASE-GSC-13187-1] c 33 N92-29153

Page turning system  
[NASA-CASE-GSC-13415-1] c 37 N92-33616

Compliant walker  
[NASA-CASE-GSC-13348-2] c 52 N93-14708

## EL-AASSER, M. S.

Process for preparation of large-particle-size monodisperse latexes  
[NASA-CASE-MFS-25000-1] c 25 N81-19242

## ELACHI, C.

Acoustically controlled distributed feedback laser  
[NASA-CASE-NPO-13175-1] c 36 N75-31427

Diffused waveguiding capillary tube with distributed feedback for a gas laser  
[NASA-CASE-NPO-13544-1] c 36 N76-18428

Fiber distributed feedback laser  
[NASA-CASE-NPO-13531-1] c 36 N76-24553

Distributed feedback acoustic surface wave oscillator  
[NASA-CASE-NPO-13673-1] c 71 N77-26919

## ELBER, W.

Partial interlaminar separation system for composites  
[NASA-CASE-LAR-12065-1] c 24 N81-14000

Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c 24 N81-33235

Means for controlling aerodynamically induced twist  
[NASA-CASE-LAR-12175-1] c 05 N82-28279

## ELDER, N. D.

Internal flare angle gauge Patent  
[NASA-CASE-XMF-04415] c 14 N71-24693

## ELESIAKY, MOHAMAD E.

Aerodynamic design optimization using sensitivity analysis and computational fluid dynamics  
[NASA-CASE-LAR-14815-1-CU] c 34 N92-29830

## ELIA, A. D.

Monopulse system with an electronic scanner  
[NASA-CASE-XGS-05582] c 07 N69-27460

## ELIASON, J. T.

Photovoltaic cell array  
[NASA-CASE-MFS-22458-1] c 44 N77-10635

## ELKINS, B. R.

Double window viewing chamber assembly  
[NASA-CASE-MFS-28057-1] c 09 N87-14355

## ELKINS, W.

Flexible joint for pressurizable garment  
[NASA-CASE-MSC-11072] c 54 N74-32546

Liquid cooled brassiere and method of diagnosing malignant tumors therewith  
[NASA-CASE-ARC-11007-1] c 52 N77-14736

## ELLEMAN, D. D.

Continuous magnetic flux pump  
[NASA-CASE-XNP-01187] c 15 N73-28516

Superconductive magnetic-field-trapping device  
[NASA-CASE-XNP-01185] c 26 N73-28710

Magnetic-flux pump  
[NASA-CASE-XNP-01188] c 15 N73-32361

Material suspension within an acoustically excited resonant chamber  
[NASA-CASE-NPO-13263-1] c 12 N75-24774

Heat operated cryogenic electrical generator  
[NASA-CASE-NPO-13303-1] c 20 N75-24837

Magnetometer using superconducting rotating body  
[NASA-CASE-NPO-13388-1] c 35 N76-16390

Acoustic energy shaping  
[NASA-CASE-NPO-13802-1] c 71 N78-10837

Method and apparatus for producing concentric hollow spheres  
[NASA-CASE-NPO-14596-1] c 31 N81-33319

Method and apparatus for producing gas-filled hollow spheres  
[NASA-CASE-NPO-14596-3] c 31 N83-31896

Acoustic system for material transport  
[NASA-CASE-NPO-15453-1] c 71 N83-32515

Acoustic bubble removal method  
[NASA-CASE-NPO-15334-1] c 71 N83-35781

Acoustic rotation control  
[NASA-CASE-NPO-15689-1] c 71 N84-23233

Closed loop electrostatic levitation system  
[NASA-CASE-NPO-15553-1] c 33 N85-29142

Noncontact temperature pattern measuring device  
[NASA-CASE-NPO-17024-1-CU] c 35 N88-24943

## ELLEMAN, DANIEL D.

Noncontact temperature pattern measuring device  
[NASA-CASE-NPO-17824-1-CU] c 36 N90-17132

## ELLERN, W. B.

Method of evaluating moisture barrier properties of encapsulating materials Patent  
[NASA-CASE-NPO-10051] c 18 N71-24934

## ELLINGSWORTH, J. R.

Tensile testing apparatus  
[NASA-CASE-LAR-13243-1] c 35 N85-34375

## ELLIOTT, C. THOMAS

Field induced gap infrared detector  
[NASA-CASE-NPO-17526-1-CU] c 35 N91-14588

## ELLIOTT, D. G.

Magnetohydrodynamic induction machine  
[NASA-CASE-XNP-07481] c 25 N69-21929

Two-fluid magnetohydrodynamic system and method for thermal-electric power conversion Patent  
[NASA-CASE-XNP-00644] c 03 N70-36803

Two phase flow system with discrete impinging two-phase jets  
[NASA-CASE-NPO-11556] c 12 N72-25292

Method and turbine for extracting kinetic energy from a stream of two-phase fluid  
[NASA-CASE-NPO-14130-1] c 34 N79-20335

Method for driving two-phase turbines with enhanced efficiency  
[NASA-CASE-NPO-15037-2] c 37 N85-29282

## ELLIOTT, JAMES R., JR.

Shaft mount for data coupler system  
[NASA-CASE-LAR-13805-1] c 37 N92-30097

## ELLIOTT, R. L.

Preparation of ordered poly /arylenesiloxane/ polymers  
[NASA-CASE-XMF-10753] c 06 N71-11237

Fluorinated esters of polycarboxylic acids  
[NASA-CASE-MFS-21040-1] c 06 N73-30098

## ELLIS, D. R.

Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c 05 N75-12930

## ELLIS, H., JR.

Coaxial phased array antenna  
[NASA-CASE-MSC-16800-1] c 32 N81-14187

Cavity-backed, micro-strip dipole antenna array  
[NASA-CASE-MSC-18606-1] c 32 N82-11336

Spiral slotted phased antenna array  
[NASA-CASE-MSC-18532-1] c 32 N82-27558

## ELLIS, S. G.

Simple method of making photovoltaic junctions Patent  
[NASA-CASE-XNP-01960] c 09 N71-23027

Method of electrolytically binding a layer of semiconductors together Patent  
[NASA-CASE-XNP-01959] c 26 N71-23043

Method of changing the conductivity of vapor deposited gallium arsenide by the introduction of water into the vapor deposition atmosphere Patent  
[NASA-CASE-XNP-01961] c 26 N71-29156

## ELSNER, N. B.

Stabilized lanthanum sulphur compounds  
[NASA-CASE-NPO-18135-1] c 25 N83-24572

## EMDE, W. D.

Etching of aluminum for bonding Patent  
[NASA-CASE-MSC-02303] c 17 N71-23828

## EMERY, J. C.

Laser grating interferometer Patent  
[NASA-CASE-XLA-04295] c 16 N71-24170

## ENGEL, A.

Digital video display system using cathode ray tube  
[NASA-CASE-NPO-11342] c 09 N72-25248

Symmetrical odd-modulus frequency divider  
[NASA-CASE-NPO-13426-1] c 33 N75-31330

Digital data reformatter/deserializer  
[NASA-CASE-NPO-13676-1] c 60 N79-20751

## ENGLAND, C.

Hydrogen-bromine secondary battery  
[NASA-CASE-NPO-13237-1] c 44 N76-18641

Zinc-halide battery with molten electrolyte  
[NASA-CASE-NPO-11961-1] c 44 N76-18643

## ENGLAR, K. G.

Artificial gravity spin deployment system Patent  
[NASA-CASE-NPO-02595] c 31 N71-21881

## ENIE, R. B.

Method of repairing discontinuity in fiberglass structures  
[NASA-CASE-LAR-10416-1] c 24 N74-30001

## ENRIQUEZ, E. A.

System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c 32 N79-20296

## ENSTROM, R. E.

Water cooled contactor for anode in carbon arc mechanism  
[NASA-CASE-XMS-03700] c 15 N69-24266

## EPPERLY, WALTER L.

Range and range rate system  
[NASA-CASE-MSC-20867-1] c 36 N88-24958

## EPPS, C. H., JR.

Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-1] c 54 N76-22914

Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c 52 N81-25661

## EPSTEIN, J.

Segmenting lead telluride-silicon germanium thermoelements Patent  
[NASA-CASE-XGS-05718] c 26 N71-16037

Tungsten contacts on silicon substrates  
[NASA-CASE-GSC-10695-1] c 09 N72-25259

## EPSTEIN, P.

Drying apparatus for photographic sheet material  
[NASA-CASE-GSC-11074-1] c 14 N73-28489

## ERB, R. B.

Heat shield Patent  
[NASA-CASE-XMS-00486] c 33 N70-33344

## ERICKSON, W. D.

Hypersonic test facility Patent  
[NASA-CASE-XLA-00378] c 11 N71-15925

Hypersonic test facility Patent  
[NASA-CASE-XLA-05378] c 11 N71-21475

Ablation article and method  
[NASA-CASE-LAR-10439-1] c 33 N73-27796

## ERNEST, J. B.

Crude oil desulfurization  
[NASA-CASE-NPO-14542-1] c 25 N82-23282

## ERPENBACH, H.

Means and methods of depositing thin films on substrates Patent  
[NASA-CASE-XNP-00595] c 15 N70-34967

Process for reducing secondary electron emission Patent  
[NASA-CASE-XNP-09469] c 24 N71-25555

Method of producing a storage bulb for an atomic hydrogen maser  
[NASA-CASE-NPO-13050-1] c 36 N75-15029

## ERRETT, D. D.

Canopus detector including automotive gain control of photomultiplier tube Patent  
[NASA-CASE-XNP-03914] c 21 N71-10771

## ESCHER, W. J. D.

Attitude and propellant flow control system and method Patent  
[NASA-CASE-XMF-00185] c 21 N70-34539

Composite powerplant and shroud therefor Patent  
[NASA-CASE-XLA-01043] c 28 N71-10780

Injector assembly for liquid fueled rocket engines Patent  
[NASA-CASE-XMF-00968] c 28 N71-15660

## ESGAR, J. B.

Thin-walled pressure vessel Patent  
[NASA-CASE-XLE-04677] c 15 N71-10577

Ophthalmic liquifaction pump  
[NASA-CASE-LEW-12051-1] c 52 N75-33640

## ESKEW, M. H., JR.

Random function tracer Patent  
[NASA-CASE-XLA-01401] c 15 N71-21179

## ESPROLES, CARLOS

Burst-by-burst laser frequency monitor  
[NASA-CASE-NPO-18596-1-CU] c 36 N93-28132

## ESPY, P. N.

Coaxial high density, hypervelocity plasma generator and accelerator with ionizable metal disc  
[NASA-CASE-MFS-20589] c 25 N72-32688

## ESTES, E. G.

Rocket nozzle test method Patent  
[NASA-CASE-NPO-10311] c 31 N71-15643

## ESTES, M. F.

Apparatus for making diamonds  
[NASA-CASE-MFS-20698] c 15 N72-20446

Process for making diamonds  
[NASA-CASE-MFS-20698-2] c 15 N73-19457

## ESTEY, R. S.

Method and apparatus for precision control of radiometer  
[NASA-CASE-NPO-15398-1] c 35 N84-22931

## ESTRELLA, C. A.

Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides  
[NASA-CASE-ARC-11107-1] c 25 N80-16116

Adjustable high emittance gap filler  
[NASA-CASE-ARC-11310-1] c 27 N82-24339

## ETHRIDGE, E. C.

Sonic levitation apparatus  
[NASA-CASE-MFS-25828-1] c 71 N84-28568

Containerless high purity pulling process and apparatus for glass fiber  
[NASA-CASE-MFS-25905-2] c 31 N86-21718

## ETHRIDGE, EDWIN C.

Quasi-containerless glass formation method and apparatus  
[NASA-CASE-MFS-28090-1] c 27 N87-21111

## ETSION, I.

Canilever mounted resilient pad gas bearing  
[NASA-CASE-LEW-12569-1] c 37 N79-10418

- Self-stabilizing radial face seal  
[NASA-CASE-LEW-12991-1] c 37 N81-24442  
Modified face seal for positive film stiffness  
[NASA-CASE-LEW-12989-1] c 37 N82-12442
- ETZEL, J. G.**  
Laser measuring system for incremental assemblies  
[NASA-CASE-GSC-12321-1] c 36 N82-16396
- EUBANKS, A. G.**  
Device for measuring electron-beam intensities and for subjecting materials to electron irradiation in an electron microscope  
[NASA-CASE-XGS-01725] c 14 N69-39982  
Foamed in place ceramic refractory insulating material Patent  
[NASA-CASE-XGS-02435] c 18 N71-22998
- EULITZ, W. R.**  
Slosh suppressing device and method Patent  
[NASA-CASE-XMF-00658] c 12 N70-38997
- EVANS, D. D.**  
Ignition means for monopropellant Patent  
[NASA-CASE-XNP-00876] c 28 N70-41311
- EVANS, D. G.**  
Multistage multiple-reentry turbine Patent  
[NASA-CASE-XLE-00170] c 15 N70-36412  
Multistage multiple-reentry turbine Patent  
[NASA-CASE-XLE-00085] c 28 N70-39895
- EVANS, E. H.**  
Strain sensor for high temperatures Patent  
[NASA-CASE-XNP-09205] c 14 N71-17657
- EVANS, F. D.**  
Autoignition test cell Patent  
[NASA-CASE-KSC-10198] c 11 N71-28629
- EVANS, G. A.**  
Fiber distributed feedback laser  
[NASA-CASE-NPO-13531-1] c 36 N76-24553
- EVANS, H. E.**  
Energy storage apparatus  
[NASA-CASE-GSC-12030-1] c 44 N78-24608
- EVANS, J.**  
Millimeter wave antenna system Patent Application  
[NASA-CASE-GSC-10949-1] c 07 N71-28965  
Solenoid valve including guide for armature and valve member  
[NASA-CASE-GSC-10607-1] c 15 N72-20442  
Nutation damper  
[NASA-CASE-GSC-11205-1] c 15 N73-25513  
Magnetically actuated compressor  
[NASA-CASE-GSC-12799-1] c 31 N85-21404
- EVANS, J. C., JR.**  
Rapidly pulsed, high intensity, incoherent light source  
[NASA-CASE-XLE-2529-3] c 33 N74-20859  
High power laser apparatus and system  
[NASA-CASE-XLE-2529-2] c 36 N75-27364  
Solar cell collector  
[NASA-CASE-LEW-12552-1] c 44 N78-25527  
Method for producing solar energy panels by automation  
[NASA-CASE-LEW-12541-1] c 44 N78-25529  
Solar cells having integral collector grids  
[NASA-CASE-LEW-12819-1] c 44 N79-11467  
Application of semiconductor diffusants to solar cells by screen printing  
[NASA-CASE-LEW-12775-1] c 44 N79-11468  
Solar cell collector and method for producing same  
[NASA-CASE-LEW-12552-2] c 44 N79-11472  
Method for fabricating solar cells having integrated collector grids  
[NASA-CASE-LEW-12819-2] c 44 N79-18444  
Solar cell system having alternating current output  
[NASA-CASE-LEW-12806-2] c 44 N81-12542  
Method of making a high voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c 44 N82-29709  
High voltage planar multijunction solar cell  
[NASA-CASE-LEW-13400-1] c 44 N82-31764  
Heat transparent high intensity high efficiency solar cell  
[NASA-CASE-LEW-12892-1] c 44 N83-14692  
High voltage v-groove solar cell  
[NASA-CASE-LEW-13401-2] c 44 N83-32177
- EVANS, J. M., JR.**  
System and method for tracking a signal source  
[NASA-CASE-HQN-10880-1] c 17 N78-17140
- EVANS, K. C.**  
Synchronized voltage contrast display analysis system  
[NASA-CASE-NPO-14567-1] c 33 N83-18996
- EVANS, L. G.**  
Method and apparatus for mapping the distribution of chemical elements in an extended medium  
[NASA-CASE-GSC-12808-1] c 25 N85-21279
- EVANS, P. K.**  
Device for tensioning test specimens within an hermetically sealed chamber  
[NASA-CASE-MFS-23281-1] c 35 N77-22450
- EVENSEN, D. A.**  
Buoyant anti-slosh system Patent  
[NASA-CASE-XLA-04605] c 32 N71-16106
- EVENSEN, ERIK E.**  
Quick-connect fasteners for assembling devices in space  
[NASA-CASE-MSC-21648-1] c 37 N92-24051
- EYES, JOHN W.**  
Porous plug for reducing orifice induced pressure error in airfoils  
[NASA-CASE-LAR-13569-1] c 35 N89-12841  
Water cooled static pressure probe  
[NASA-CASE-LAR-14340-1-CU] c 35 N92-21586
- EVVARD, J. C.**  
Ophthalmic method and apparatus  
[NASA-CASE-LEW-11669-1] c 05 N73-27062
- EWEN, H. I.**  
Method and means for providing an absolute power measurement capability Patent  
[NASA-CASE-ERC-11020] c 14 N71-26774  
Clear air turbulence detector  
[NASA-CASE-ERC-10081] c 14 N72-28437
- EWERT, MICHAEL K.**  
Lunar radiator shade  
[NASA-CASE-MSC-21868-1] c 54 N92-21589
- EXTON, R. J.**  
Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c 45 N76-17656  
TV fatigue crack monitoring system  
[NASA-CASE-LAR-11490-1] c 39 N78-16387  
Vibration-free Raman Doppler velocimeter  
[NASA-CASE-LAR-13268-1] c 35 N87-14669
- EZEKIEL, F. D.**  
Fluid power transmitting gas bearing Patent  
[NASA-CASE-ERC-10097] c 15 N71-28465
- F**
- FACEMIRE, BARBARA R.**  
Liquid encapsulated float zone process and apparatus  
[NASA-CASE-MFS-28144-1] c 76 N88-24545
- FAETH, P. A.**  
Automatic recording McLeod gauge Patent  
[NASA-CASE-XLE-03280] c 14 N71-23093
- FAGET, M. A.**  
Survival couch Patent  
[NASA-CASE-XLA-00118] c 05 N70-33285  
Aerial capsule emergency separation device Patent  
[NASA-CASE-XLA-00115] c 03 N70-33343  
Space capsule Patent  
[NASA-CASE-XLA-00149] c 31 N70-37938  
Space capsule Patent  
[NASA-CASE-XLA-01332] c 31 N71-15664  
Space shuttle vehicle and system  
[NASA-CASE-MSC-12433] c 31 N73-14854  
Space vehicle system  
[NASA-CASE-MSC-12561-1] c 18 N76-17185
- FAGG, MARY F.**  
Reconfigurable work station for a video display unit and keyboard  
[NASA-CASE-MFS-26009-1-SB] c 54 N88-24163
- FAGOT, R. J.**  
Gas low pressure low flow rate metering system Patent  
[NASA-CASE-FRC-10022] c 12 N71-26546  
Respiration monitor  
[NASA-CASE-FRC-10012] c 14 N72-17329
- FAKAN, J. C.**  
Superconducting alternator  
[NASA-CASE-XLE-02824] c 03 N69-39890  
Superconducting alternator Patent  
[NASA-CASE-XLE-02823] c 09 N71-23443
- FALBEL, G.**  
Multi-lobar scan horizon sensor Patent  
[NASA-CASE-XGS-00809] c 21 N70-35427
- FALES, C. L., JR.**  
Magnetometer with a miniature transducer and automatic scanning  
[NASA-CASE-LAR-11617-2] c 35 N78-32397
- FALES, CARL E.**  
Multiresponse imager and imaging process for improved resolution  
[NASA-CASE-LAR-14779-1] c 74 N92-29951
- FALK, W. C.**  
Miniature vibration isolator Patent  
[NASA-CASE-XLA-01019] c 15 N70-40156  
Canister closing device Patent  
[NASA-CASE-XLA-01446] c 15 N71-21528
- FAN, TSO Y.**  
Cladding for transverse-pumped solid-state laser  
[NASA-CASE-NPO-17355-1-CU] c 36 N91-17360
- FANG, P.**  
Recovery of radiation damaged solar cells through thermal annealing  
[NASA-CASE-XGS-04047-2] c 03 N72-11062
- FANG, WAI-CHI**  
Pipeline synthetic aperture radar data compression utilizing systolic binary tree-searched architecture for vector quantization  
[NASA-CASE-NPO-17941-1-CU] c 32 N91-13595
- FANNIN, B. B.**  
System for the measurement of ultra-low stray light levels  
[NASA-CASE-MFS-23513-1] c 74 N79-11865
- FANTASIA, PETER M.**  
Alignment positioning mechanism  
[NASA-CASE-MSC-21502-1] c 37 N91-21543
- FANTL, ANDREW J.**  
Circumferential pressure probe  
[NASA-CASE-LAR-13775-1] c 35 N90-23706
- FARHOOMAND, JAM**  
Method and means for generation of tunable laser sidebands in the far-infrared region  
[NASA-CASE-NPO-16497-1-CU] c 36 N87-25567
- FARLEY, GARY L.**  
Rapid detection and quantification of features such as damage or flaws in composite and metallic structures  
[NASA-CASE-LAR-14850-1-CU] c 38 N93-17048  
Integral fill yarn insertion and beatup method using inflatable membrane  
[NASA-CASE-LAR-14046-1] c 31 N93-18857  
Method and apparatus for three dimensional braiding  
[NASA-CASE-LAR-14047-1] c 31 N93-19038  
Method and apparatus for weaving a woven angle ply fabric  
[NASA-CASE-LAR-14048-1] c 31 N93-29611
- FARMER, M. G.**  
Model mount system for testing flutter  
[NASA-CASE-LAR-12950-1] c 09 N84-34448
- FARMER, MOSES G.**  
Cable suspended windmill  
[NASA-CASE-LAR-13434-1] c 37 N90-23742
- FARNSWORTH, D. L.**  
Phototransistor imaging system  
[NASA-CASE-MFS-20809] c 23 N73-13660  
Solid-state current transformer  
[NASA-CASE-MFS-22560-1] c 33 N77-14335
- FARNSWORTH, F. D.**  
Space simulation and radiative property testing system and method Patent  
[NASA-CASE-MFS-20096] c 14 N71-30026
- FARRELL, R.**  
Lead attachment to high temperature devices  
[NASA-CASE-ERC-10224] c 09 N72-25261  
Wide temperature range electronic device with lead attachment  
[NASA-CASE-ERC-10224-2] c 09 N73-27150
- FARRIS, C. D.**  
Storage battery comprising negative plates of a wedge shaped configuration  
[NASA-CASE-NPO-11806-1] c 44 N74-19693
- FARTHING, W. H.**  
Device for determining relative angular position between a spacecraft and a radiation emitting celestial body  
[NASA-CASE-GSC-11444-1] c 14 N73-28490
- FASSBENDER, A. G.**  
Electrical conductivity cell and method for fabricating the same  
[NASA-CASE-ARC-10810-1] c 33 N76-19339
- FATHAUER, ROBERT W.**  
Method of forming three-dimensional semiconductor structures  
[NASA-CASE-NPO-17835-1-CU] c 76 N90-27518  
Fabrication of nanometer single crystal metallic CoSi<sub>2</sub> structures on Si  
[NASA-CASE-NPO-17736-2-CU] c 24 N92-18561  
Method of forming silicon structures with selectable optical characteristics  
[NASA-CASE-NPO-18625-1-CU] c 76 N92-30102
- FAULKNER, R. D.**  
Bonding graphite with fused silver chloride  
[NASA-CASE-XGS-00963] c 15 N69-39735
- FAY, R. J.**  
Metal shearing energy absorber  
[NASA-CASE-HQN-10638-1] c 15 N73-30460
- FEAKES, F.**  
Gauge calibration by diffusion  
[NASA-CASE-XGS-07752] c 14 N73-30390
- FEALEY, R. D.**  
Bacteria detection instrument and method  
[NASA-CASE-GSC-11533-1] c 14 N73-13435
- FEARNEHOUGH, H. T.**  
Parallel-plate viscometer with double diaphragm suspension  
[NASA-CASE-NPO-11387] c 14 N73-14429
- FEATHERSTON, A. B.**  
Method of fluxless brazing and diffusion bonding of aluminum containing components  
[NASA-CASE-MSC-14435-1] c 37 N76-18455



- FEDOR, J. V.**  
Stretch de-spin mechanism Patent  
[NASA-CASE-XGS-00619] c 30 N70-40016
- FEDOR, OTTO H.**  
Personnel emergency carrier vehicle  
[NASA-CASE-KSC-11282-1] c 85 N87-21755
- FEDORS, R. F.**  
Parallel-plate viscometer with double diaphragm suspension  
[NASA-CASE-NPO-11387] c 14 N73-14429  
Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c 39 N81-25400
- FEHRENKAMP, L. G.**  
Surface finishing  
[NASA-CASE-MSC-12631-1] c 24 N77-28225  
Surface finishing  
[NASA-CASE-MSC-12631-3] c 27 N81-14077
- FEILER, C. E.**  
Control of transverse instability in rocket combustors  
Patent  
[NASA-CASE-XLE-04603] c 33 N71-21507
- FEINBERG, P. M.**  
Digital telemetry system Patent  
[NASA-CASE-XGS-01812] c 07 N71-23001  
Programmable telemetry system Patent  
[NASA-CASE-GSC-10131-1] c 07 N71-24624
- FEINSTEIN, L.**  
Microwave flaw detector Patent  
[NASA-CASE-ARC-10009-1] c 15 N71-17822  
Method and apparatus for swept-frequency impedance measurements of welds  
[NASA-CASE-ARC-10176-1] c 15 N72-21464
- FEINSTEIN, S. P.**  
Viscosity measuring instrument  
[NASA-CASE-NPO-14501-1] c 35 N80-18357
- FELDSTEIN, C.**  
Subminiature insertable force transducer  
[NASA-CASE-NPO-13423-1] c 33 N75-31329  
Miniature muscle displacement transducer  
[NASA-CASE-NPO-13519-1] c 33 N76-19338  
Myocardium wall thickness transducer and measuring method  
[NASA-CASE-NPO-13644-1] c 52 N76-29895  
Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NPO-13643-1] c 52 N76-29896  
Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means  
[NASA-CASE-NPO-13910-1] c 52 N79-27836  
Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c 52 N80-27072  
Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c 52 N81-20703  
System and method for moving a probe to follow movements of tissue  
[NASA-CASE-NPO-15197-1] c 52 N83-25346
- FELL, D. M.**  
Flexible pile thermal barrier insulator  
[NASA-CASE-MSC-19568-1] c 34 N78-25350
- FELTNER, W. R.**  
Multilevel metallization method for fabricating a metal oxide semiconductor device  
[NASA-CASE-MFS-23541-1] c 76 N79-14906  
Method of construction of a multi-cell solar array  
[NASA-CASE-MFS-23540-1] c 44 N79-26475
- FENG, S. Y.**  
Regulated dc-to-dc converter for voltage step-up or step-down with input-output isolation  
[NASA-CASE-HQN-10792-1] c 33 N74-11049
- FENTRESS, C. E.**  
Expanding center probe and drogue Patent  
[NASA-CASE-XMS-03613] c 31 N71-16346
- FENWICK, J. R.**  
Accumulator  
[NASA-CASE-MFS-19287-1] c 34 N77-30399
- FERGUSON, R. E.**  
Two-step rocket engine bipropellant valve Patent  
[NASA-CASE-XMS-04890-1] c 15 N70-22192
- FERRARA, L. J.**  
Collapsible Apollo couch  
[NASA-CASE-MSC-13140] c 05 N72-11085
- FESMIRE, JAMES E.**  
Quick-disconnect inflatable seal assembly  
[NASA-CASE-KSC-11368-1] c 37 N89-13786
- FESSLER, T. E.**  
Thin window, drifted silicon, charged particle detector  
[NASA-CASE-XLE-10529] c 14 N69-23191  
Method of forming thin window drifted silicon charged particle detector Patent  
[NASA-CASE-XLE-00808] c 24 N71-10560
- FEWELL, L. L.**  
Process for the preparation of polycarbonylphosphazenes  
[NASA-CASE-ARC-11176-2] c 27 N81-27271
- Carboranylphosphazenes and their polymers  
[NASA-CASE-ARC-11176-1] c 27 N82-18389
- FIELDS, S. A.**  
Device and method for determining X ray reflection efficiency of optical surfaces  
[NASA-CASE-MFS-20243] c 23 N73-13662
- FIET, O. O.**  
Electrohydrodynamic control valve Patent  
[NASA-CASE-NPO-10416] c 12 N71-27332
- FIGGINS, D. A.**  
Adaptive system and method for signal generation Patent  
[NASA-CASE-GSC-11367] c 10 N71-26374
- FIJANY, AMIR**  
Highly parallel computer architecture for robotic computation  
[NASA-CASE-NPO-17632-1-CU] c 60 N91-32805  
Special purpose parallel computer architecture for real-time control and simulation in robotic applications  
[NASA-CASE-NPO-17629-1-CU] c 60 N93-29608
- FILIP, G. L.**  
Storage container for electronic devices Patent  
[NASA-CASE-MFS-20075] c 09 N71-26133  
Method of coating through-holes Patent  
[NASA-CASE-XMF-05999] c 15 N71-29032
- FINCKENOR, JEFFREY**  
Apparatus for joining trusses  
[NASA-CASE-MFS-28545-1] c 31 N91-25306  
Wheels for wheelchairs and the like  
[NASA-CASE-MFS-28632-1] c 54 N93-17042
- FINDL, E.**  
Electrolytically regenerative hydrogen-oxygen fuel cell Patent  
[NASA-CASE-XLE-04526] c 03 N71-11052
- FINK, J. W.**  
Bus voltage compensation circuit for controlling direct current motor  
[NASA-CASE-XMS-04215-1] c 09 N69-39987
- FINKE, R. C.**  
Electrode and insulator with shielded dielectric junction  
[NASA-CASE-XLE-03778] c 09 N69-21542  
Pressure monitoring with a plurality of ionization gauges controlled at a central location Patent  
[NASA-CASE-XLE-00787] c 14 N71-21090  
Piezoelectric deicing device  
[NASA-CASE-LEW-13773-2] c 33 N86-20671
- FINKEL, MITCHELL W.**  
Optical scanner  
[NASA-CASE-GSC-12897-1] c 74 N87-21679
- FINLEY, T. D.**  
Split range transducer  
[NASA-CASE-XLA-11189] c 10 N72-20222
- FINLEY, W. R.**  
Analog-to-digital converter  
[NASA-CASE-MSC-13110-1] c 08 N72-22163
- FINNERTY, A. A.**  
Sphere forming method and apparatus  
[NASA-CASE-NPO-15070-1] c 31 N83-35176
- FINNIE, C. J.**  
Insertion loss measuring apparatus having transformer means connected across a pair of bolometers Patent  
[NASA-CASE-XNP-01193] c 10 N71-16057
- FISCHELL, D. R.**  
Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c 52 N82-22875
- FISCHER, J. A.**  
Adjustable tension wire guide Patent  
[NASA-CASE-XMS-02383] c 15 N71-15918
- FISCHER, J. R.**  
Interleaving device  
[NASA-CASE-GSC-12111-2] c 33 N81-29342
- FISH, D. C.**  
Spin forming tubular elbows Patent  
[NASA-CASE-XMF-01083] c 15 N71-22723
- FISH, R. H.**  
Fiber modified polyurethane foam for ballistic protection  
[NASA-CASE-ARC-10714-1] c 27 N76-15310
- FISH, R. M.**  
Auditory display for the blind  
[NASA-CASE-HQN-10832-1] c 71 N74-21014
- FISHER, A.**  
Process for making RF shielded cable connector assemblies and the products formed thereby  
[NASA-CASE-GSC-11215-1] c 09 N73-28083
- FISHER, TIMOTHY E.**  
Programmable remapper with single flow architecture  
[NASA-CASE-MSC-21481-1] c 60 N91-13890
- FITCH, E. J.**  
Modulator for tone and binary signals  
[NASA-CASE-GSC-11743-1] c 32 N75-24981
- FITTING, DALE W.**  
Methods of determining loads and fiber orientations in anisotropic non-crystalline materials using energy flux deviation  
[NASA-CASE-LAR-14399-1] c 39 N93-26102
- FITTING, R. C.**  
Phase modulator Patent  
[NASA-CASE-MSC-13201-1] c 07 N71-28429
- FITTON, J. A., JR.**  
Multiple orifice throttle valve Patent  
[NASA-CASE-XNP-09698] c 15 N71-18580
- FITZER, G. E.**  
Machine for use in monitoring fatigue life for a plurality of elastomeric specimens  
[NASA-CASE-NPO-13731-1] c 39 N78-10493
- FITZGERALD, D. J.**  
Ion thruster with a combination keeper electrode and electron baffle  
[NASA-CASE-NPO-11880] c 28 N73-24783  
Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c 37 N79-11405
- FITZGERALD, J. J.**  
Flow test device  
[NASA-CASE-XMS-04917] c 14 N69-24257
- FITZGERALD, J. W.**  
Visual examination apparatus  
[NASA-CASE-ARC-10329-1] c 05 N73-26072  
Visual examination apparatus  
[US-PATENT-RE-28,921] c 52 N76-30793
- FITZGERALD, T. M.**  
A solid state acoustic variable time delay line Patent  
[NASA-CASE-ERC-10032] c 10 N71-25900
- FITZMAURICE, M. W.**  
Retrodirective modulator Patent  
[NASA-CASE-GSC-10062] c 14 N71-15605  
Apparatus for simulating optical transmission links  
[NASA-CASE-GSC-11877-1] c 74 N76-18913  
Polarization compensator for optical communications  
[NASA-CASE-GSC-11782-1] c 74 N76-30053
- FLAGGE, B.**  
Vibrating structure displacement measuring instrument Patent  
[NASA-CASE-XLA-03135] c 32 N71-16428  
Arbitrarily shaped model survey system Patent  
[NASA-CASE-LAR-10098] c 32 N71-26681  
Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-10503-1] c 09 N72-21248  
Measuring probe position recorder  
[NASA-CASE-LAR-10806-1] c 35 N74-32877  
Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-11389-1] c 33 N77-26387  
Displacement probes with self-contained exciting medium  
[NASA-CASE-LAR-11690-1] c 35 N80-14371
- FLAHERTY, R.**  
Thermally cascaded thermoelectric generator  
[NASA-CASE-NPO-10753] c 03 N72-26031
- FLAMM, D. L.**  
Electric discharge for treatment of trace contaminants  
[NASA-CASE-ARC-10975-1] c 33 N79-15245
- FLANAGAN, DAVID T.**  
Biofilm monitoring coupon system and method of use  
[NASA-CASE-MSC-21585-1] c 51 N91-31755  
Purification system  
[NASA-CASE-MSC-21584-1] c 25 N92-33029
- FLANNERY, E. J.**  
Method and apparatus for controllably heating fluid  
Patent  
[NASA-CASE-XMF-04237] c 33 N71-16278
- FLATAU, C. R.**  
Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
[NASA-CASE-MSC-14245-1] c 18 N75-27041
- FLATTAU, T.**  
Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c 32 N77-28346
- FLECK, VINCENT J.**  
Single acting translation/rotational brake  
[NASA-CASE-LAR-14738-1] c 37 N93-29175
- FLEETWOOD, C. M.**  
Method of forming a sharp edge on an optical device  
[NASA-CASE-GSC-12348-1] c 74 N80-24149
- FLEETWOOD, C. M., JR.**  
Method of treating the surface of a glass member  
[NASA-CASE-GSC-12110-1] c 27 N77-32308
- FLEISCHMAN, G. L.**  
Flat-plate heat pipe  
[NASA-CASE-GSC-11998-1] c 34 N77-32413
- FLEMING, D. P.**  
Dual clearance squeeze film damper  
[NASA-CASE-LEW-13506-1] c 37 N85-33490
- FLETCHER, E. A.**  
Apparatus for igniting solid propellants Patent  
[NASA-CASE-XLE-00207] c 28 N70-33375

- Method of igniting solid propellants Patent  
[NASA-CASE-XLE-01988] c 27 N71-15634
- FLETCHER, I. L.**  
Satellite interlace synchronization system  
[NASA-CASE-GSC-10390-1] c 07 N72-11149
- FLETCHER, J. C.**  
Heat flow calorimeter  
[NASA-CASE-GSC-11434-1] c 34 N74-27859
- FLETCHER, JAMES C.**  
A digitally controlled system for effecting and presenting a selected electrical resistance  
[NASA-CASE-MFS-29149-1] c 33 N90-19492  
Polyimide processing additives  
[NASA-CASE-LAR-13669-1] c 27 N92-29157
- FLETNER, W. R.**  
Field effect transistor and method of construction thereof  
[NASA-CASE-MFS-23312-1] c 33 N78-27326
- FLIPPIN, A.**  
Sun angle calculator  
[NASA-CASE-MS-C-12617-1] c 35 N76-29552
- FLOM, YURY**  
Method and apparatus for determination of material residual stress  
[NASA-CASE-GSC-13451-1] c 39 N92-23549  
Superconducting bearings with levitation control configurations  
[NASA-CASE-GSC-13346-1] c 37 N92-29099  
Method and apparatus for determination of material residual stress  
[NASA-CASE-GSC-13451-1] c 39 N93-20118
- FLORES, A. L.**  
Field ionization electrodes Patent  
[NASA-CASE-ERC-10013] c 09 N71-26678
- FLOYD, E. L.**  
High impact pressure regulator Patent  
[NASA-CASE-NPO-10175] c 14 N71-18625
- FODALE, ROBERT**  
Miniaturization of flight deflection measurement system  
[NASA-CASE-LAR-13628-1] c 35 N90-23707  
Electro-optical spin measurement system  
[NASA-CASE-LAR-13629-1] c 09 N91-14356
- FOGAL, G. L.**  
Automatic biowaste sampling  
[NASA-CASE-MS-C-14640-1] c 54 N76-14804  
Fluid mass sensor for a zero gravity environment  
[NASA-CASE-MS-C-14653-1] c 35 N77-19385
- FOHLEN, G. M.**  
Intumescent paints Patent  
[NASA-CASE-ARC-10099-1] c 18 N71-15469  
Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c 27 N76-16230  
Phosphorus-containing bisimide resins  
[NASA-CASE-ARC-11321-1] c 27 N81-27272  
Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c 27 N83-31854  
Elastomer-modified phosphorus-containing imide resins  
[NASA-CASE-ARC-11400-1] c 27 N84-14322  
Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-3] c 27 N84-22745  
Metal phthalocyanine polymers  
[NASA-CASE-ARC-11405-1] c 27 N84-27884  
Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-2] c 27 N85-21347  
Phthalocyanine polymers  
[NASA-CASE-ARC-11413-1] c 27 N85-21348  
Metal (2,4,4',4'') phthalocyanine tetraamines as curing agents for epoxy resins  
[NASA-CASE-ARC-11424-1] c 27 N85-34281  
Maleimido substituted aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-1] c 23 N86-19376  
Metal phthalocyanine intermediates for the preparation of polymers  
[NASA-CASE-ARC-11405-2] c 27 N86-19455  
Laminate comprising fibers embedded in cured amine terminated bis-imide  
[NASA-CASE-ARC-11421-3] c 24 N86-25416  
Amine terminated bisaspartimide polymer  
[NASA-CASE-ARC-11421-2] c 27 N86-31726
- FOHLEN, GEORGE M.**  
Fire and heat resistant laminating resins based on maleimido substituted aromatic cyclotriphosphazene polymer  
[NASA-CASE-ARC-11428-2] c 27 N87-16909  
Process for preparing phthalocyanine polymer from imide containing bisphthalonitrile  
[NASA-CASE-ARC-11511-2] c 27 N87-21112  
Aminophenoxycyclotriphosphazene cured epoxy resins and the composites, laminates, adhesives and structures thereof  
[NASA-CASE-ARC-11548-1] c 27 N87-25469  
Aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-3] c 23 N88-24692
- FONG, W. S.**  
Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NPO-15767-1] c 23 N84-16255
- FONTANA, A.**  
Solar sensor having coarse and fine sensing with matched preirradiated cells and method of selecting cells Patent  
[NASA-CASE-XLA-01584] c 14 N71-23269
- FONTES, M. J.**  
Method of tracing contour patterns for use in making gradual contour resin matrix composites  
[NASA-CASE-ARC-11246-1] c 31 N83-34073
- FOOTE, MARC C.**  
Epitaxial heterojunctions of oxide semiconductors and metals on high temperature superconductors  
[NASA-CASE-NPO-18483-1-CU] c 76 N93-15151
- FOOTE, R. H.**  
Adaptive system and method for signal generation Patent  
[NASA-CASE-GSC-11367] c 10 N71-26374
- FORBES, JOHN C.**  
Orbital maneuvering end effectors  
[NASA-CASE-MFS-28161-1] c 37 N87-18817
- FORBES, S. G.**  
Apparatus for field strength measurement of a space vehicle Patent  
[NASA-CASE-XLE-00820] c 14 N71-16014
- FORD, A. G.**  
Rock drill for recovering samples  
[NASA-CASE-XNP-07478] c 14 N69-21923  
Electrically-operated rotary shutter Patent  
[NASA-CASE-XNP-00637] c 14 N70-40273  
Motion restraining device  
[NASA-CASE-NPO-13619-1] c 37 N78-16369  
Speed control device for a heavy duty shaft  
[NASA-CASE-NPO-14170-1] c 37 N81-15364
- FORD, F. C.**  
Hypervelocity gun  
[NASA-CASE-XLE-03186-1] c 09 N79-21084
- FORD, F. E.**  
Coulometer and third electrode battery charging circuit Patent  
[NASA-CASE-GSC-10487-1] c 03 N71-24719
- FORD, L. B.**  
Thermal reactor  
[NASA-CASE-NPO-14369-1] c 44 N83-10501
- FORD, R. R.**  
Antenna system using parasitic elements and two driven elements at 90 deg angle fed 180 deg out of phase Patent  
[NASA-CASE-XLA-00414] c 07 N70-38200
- FOREHAND, L.**  
Solar cell mounting Patent  
[NASA-CASE-NXP-00826] c 03 N71-20895
- FORESTIERI, A. F.**  
Method of making silicon solar cell array  
[NASA-CASE-LEW-11069-1] c 44 N74-14784  
Solar cell shingle  
[NASA-CASE-LEW-12587-1] c 44 N77-31601  
Method of making encapsulated solar cell modules  
[NASA-CASE-LEW-12185-1] c 44 N78-25528
- FORLIFER, W. R.**  
Landing gear Patent  
[NASA-CASE-XMF-01174] c 02 N70-41589
- FORMAN, R.**  
Ion sputter textured graphite  
[NASA-CASE-LEW-12919-1] c 24 N83-10117  
Ion sputter textured graphite electrode plates  
[NASA-CASE-LEW-12919-2] c 70 N84-28565
- FORMAN, RALPH**  
Apparatus for mounting a field emission cathode  
[NASA-CASE-LEW-14108-1] c 33 N87-28832
- FOROUHAR, SIAMAK**  
Wavelength-division multiplexed optical integrated circuit with vertical diffraction grating  
[NASA-CASE-NPO-18357-1-CU] c 74 N93-29848
- FORSQREN, ROGER C.**  
Adjustable depth gage  
[NASA-CASE-LEW-14880-1] c 35 N92-21723
- FORSYTHE, A. K.**  
Umbilical separator for rockets Patent  
[NASA-CASE-XNP-00425] c 11 N70-38202
- FORTIER, E. P.**  
Scriber for silicon wafers  
[NASA-CASE-NPO-15539-1] c 37 N82-11469
- FORTIER, EDWARD P.**  
Device for mechanically stabilizing web ribbon buttons during growth initiation  
[NASA-CASE-NPO-17074-2-CU] c 76 N92-21499
- FORTINI, A.**  
Method of electroforming a rocket chamber  
[NASA-CASE-LEW-11118-1] c 20 N74-32919  
Rocket chamber and method of making  
[NASA-CASE-LEW-11118-2] c 20 N76-14191  
Heat exchanger and method of making  
[NASA-CASE-LEW-12441-1] c 34 N79-13289
- Heat exchanger and method of making  
[NASA-CASE-LEW-12441-2] c 34 N80-24573  
Heat exchanger and method of making  
[NASA-CASE-LEW-12441-3] c 44 N81-24519
- FOSSUM, ERIC R.**  
Hybridization of detector array and integrated circuit for readout  
[NASA-CASE-NPO-18062-1-CU] c 33 N92-30542  
Digital parallel processor array for optimum path planning  
[NASA-CASE-NPO-18727-1-CU] c 62 N93-28427
- FOSTER, J. V.**  
Mechanically limited, electrically operated hydraulic valve system for aircraft controls Patent  
[NASA-CASE-XAC-00048] c 02 N71-29128  
Magnetic position detection method and apparatus  
[NASA-CASE-ARC-10179-1] c 21 N72-22619
- FOSTER, L. E.**  
Magnetomotive metal working device Patent  
[NASA-CASE-XMF-03793] c 15 N71-24853
- FOSTER, ROBERT E.**  
Metal etching composition  
[NASA-CASE-MFS-29576-1] c 25 N92-25399
- FOSTER, T.**  
Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c 37 N78-17384  
Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c 07 N78-18067
- FOURNIER, JOSEPH**  
EMU helmet mounted display  
[NASA-CASE-MS-C-21460-1] c 54 N91-13879
- FOUTCH, G. L.**  
Production of butanol by fermentation in the presence of cocultures of clostridium  
[NASA-CASE-NPO-16203-1] c 23 N85-35227
- FOWLER, J.**  
Bit error rate measurement above and below bit rate tracking threshold  
[NASA-CASE-MS-C-12743-1] c 32 N79-10263
- FOWLER, J. T.**  
Parasitic suppressing circuit  
[NASA-CASE-ERC-10403-1] c 10 N73-26228
- FOX, R. L.**  
One-step dual purpose joining technique  
[NASA-CASE-LAR-12595-1] c 33 N82-26571  
Hot melt adhesive attachment pad  
[NASA-CASE-LAR-12894-1] c 27 N85-20125  
Induction heating gun  
[NASA-CASE-LAR-13181-1] c 31 N85-29083
- FOX, ROBERT L.**  
Method of attaching strain gauges to various materials  
[NASA-CASE-LAR-13797-1] c 35 N88-30108  
Noninvasive method and apparatus for monitoring the cure of polymeric materials  
[NASA-CASE-LAR-13465-1] c 27 N90-23544  
Flexible heating head for induction heating apparatus and method  
[NASA-CASE-LAR-14679-2] c 32 N92-31150  
Flexible heating head for induction heating apparatus and method  
[NASA-CASE-LAR-14418-1] c 32 N92-31257  
Heating head for induction heating apparatus  
[NASA-CASE-LAR-14429-1] c 33 N93-29173
- FOX, W. E.**  
Event recorder Patent  
[NASA-CASE-XLA-01832] c 14 N71-21006
- FRALEY, T. O.**  
Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c 07 N80-18039
- FRANCISCO, A. C.**  
Process for applying a protective coating for salt bath brazing Patent  
[NASA-CASE-XLE-00046] c 15 N70-33311
- FRANCISCUS, L. C.**  
Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c 20 N74-13502
- FRANCISCUS, LEO C.**  
Multi-heat addition turbine engine  
[NASA-CASE-LEW-15094-1] c 07 N93-22034
- FRANK, ARTHUR M.**  
Sun shield  
[NASA-CASE-MS-C-20162-1] c 37 N87-17036
- FRANK, H. A.**  
Electrolytically regenerative hydrogen-oxygen fuel cell Patent  
[NASA-CASE-XLE-04526] c 03 N71-11052
- FRANKE, J. M.**  
Laser Doppler velocity simulator  
[NASA-CASE-LAR-12176-1] c 36 N80-16321  
Direction sensitive laser velocimeter  
[NASA-CASE-LAR-12177-1] c 36 N81-24422
- FRANKE, JOHN M.**  
Synchronous strobe apparatus for flow visualization  
[NASA-CASE-LAR-14556-1] c 36 N91-25392

- FRANKLIN, C. R.**  
Digital interface for bi-directional communication between a computer and a peripheral device  
[NASA-CASE-MSC-20258-1] c 60 N84-28492
- FRANKLIN, W. J.**  
Segmented back-up bar Patent  
[NASA-CASE-XMF-00640] c 15 N70-39924  
Portable alignment tool Patent  
[NASA-CASE-XMF-01452] c 15 N70-41371
- FRASCHETTI, GEORGE A.**  
Alkali metal for ultraviolet band-pass filter  
[NASA-CASE-NPO-18433-1-CU] c 74 N92-34241
- FRASER, A. S.**  
Water system virus detection  
[NASA-CASE-MSC-16098-1] c 51 N79-10693
- FRASER, WILSON M., JR.**  
Vortex motion phase separator for zero gravity liquid transfer  
[NASA-CASE-KSC-11387-1] c 29 N90-20236
- FRAZE, R. E.**  
Cryogenic cooling system Patent  
[NASA-CASE-NPO-10467] c 23 N71-26654
- FRAZER, R. E.**  
Vacuum evaporator with electromagnetic ion steering  
[NASA-CASE-NPO-10331] c 09 N71-26701  
Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c 52 N79-14751  
Strong thin membrane structure  
[NASA-CASE-NPO-14021-2] c 27 N80-16163  
Apparatus for endoscopic examination  
[NASA-CASE-NPO-14092-1] c 52 N80-16725  
Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N82-24072
- FRAZIER, DONALD O.**  
Method and apparatus for growing crystals  
[NASA-CASE-MFS-28137-1] c 76 N88-24544  
Liquid encapsulated float zone process and apparatus  
[NASA-CASE-MFS-28144-1] c 76 N88-24545
- FRAZIER, M. J.**  
Junction range finder  
[NASA-CASE-KSC-10108] c 14 N73-25461
- FRECHE, J. C.**  
High temperature nickel-base alloy Patent  
[NASA-CASE-XLE-00151] c 17 N70-33283  
External liquid-spray cooling of turbine blades Patent  
[NASA-CASE-XLE-00037] c 28 N70-33372  
Nickel-base alloy Patent  
[NASA-CASE-XLE-00283] c 17 N70-36616  
High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-00726] c 17 N71-15644  
High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-02991] c 17 N71-16025  
Nickel-base alloy containing Mo-W-Al-Cr-Ta-Zr-C-Nb-B Patent  
[NASA-CASE-XLE-02082] c 17 N71-16026  
High temperature ferromagnetic cobalt-base alloy Patent  
[NASA-CASE-XLE-03629] c 17 N71-23248  
Liquid spray cooling method Patent  
[NASA-CASE-XLE-00027] c 33 N71-29152  
Method of forming superalloys  
[NASA-CASE-LEW-10805-1] c 15 N73-13465  
Cobalt-base alloy  
[NASA-CASE-LEW-10436-1] c 17 N73-32415  
Method of heat treating a formed powder product material  
[NASA-CASE-LEW-10805-3] c 26 N74-10521  
Method of forming articles of manufacture from superalloy powders  
[NASA-CASE-LEW-10805-2] c 37 N74-13179  
Nickel base alloy  
[NASA-CASE-LEW-12270-1] c 26 N77-32280
- FREDD, E. H.**  
Television camera video level control system  
[NASA-CASE-MSC-18578-1] c 32 N85-21427
- FREDERICK, MARTIN E.**  
Microprocessor control of multiple peak power tracking DC/DC converters for use with solar cell arrays  
[NASA-CASE-GSC-13450-1] c 44 N92-23463
- FREDRICKSON, C. A.**  
Energy absorption device Patent  
[NASA-CASE-XNP-01848] c 15 N71-28959
- FREEDMAN, L. A.**  
Television camera video level control system  
[NASA-CASE-MSC-18578-1] c 32 N85-21427
- FREEMAN, E. T.**  
Film advance indicator  
[NASA-CASE-LAR-12474-1] c 35 N82-26628
- FREEMAN, R. S.**  
Air frame drag balance Patent  
[NASA-CASE-XLA-00113] c 14 N70-33386
- FREEMAN, WILLIAM T.**  
Reusable cryogenic liquid rocket propellant tank  
[NASA-CASE-LAR-14172-1] c 20 N93-31295
- FREGGENS, R. A.**  
Thermal flux transfer system  
[NASA-CASE-NPO-12070-1] c 28 N73-32606
- FRENCH, J. R.**  
Jet pump-drive system for heat removal  
[NASA-CASE-NPO-16494-1-CU] c 34 N85-29182
- FRENCH, K. R.**  
Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c 45 N80-14579
- FRENCH, RICHARD E.**  
Optical pressure sealing coupling apparatus  
[NASA-CASE-MFS-29348-1] c 74 N89-25689
- FRENCH, J. C.**  
Nickel base alloy  
[NASA-CASE-LEW-10874-1] c 17 N72-22535
- FREKING, MARGARET A.**  
Planar varactor frequency multiplier devices with blocking barrier  
[NASA-CASE-NPO-18428-1-CU] c 33 N92-23464
- FRIDRICH, C. W.**  
Apparatus for welding sheet material  
[NASA-CASE-MSC-01330] c 37 N75-27376
- FRIEDAN, H. J.**  
Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c 52 N79-12694
- FRIEDEL, M. V.**  
Positive isolation disconnect  
[NASA-CASE-MSC-16043-1] c 37 N79-11402
- FRIEDERICH, J. E.**  
Biomedical radiation detecting probe Patent  
[NASA-CASE-XMS-01177] c 05 N71-19440
- FRIEDLANDER, S. K.**  
Particle analyzing method and apparatus  
[NASA-CASE-NPO-15292-1] c 35 N83-27184
- FRIEDMAN, GARY L.**  
Local area network with fault-checking, priorities, and redundant backup  
[NASA-CASE-NPO-16949-1-CU] c 62 N90-19776
- FRIEDRICH, E. W.**  
Reentry vehicle leading edge Patent  
[NASA-CASE-XLA-00165] c 31 N70-33242
- FRIICHTENICHT, J. F.**  
Apparatus for handling micron size range particulate material  
[NASA-CASE-NPO-10151] c 37 N78-17386
- FRIPP, A. L.**  
Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c 35 N82-31659  
Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-2] c 33 N83-24763  
Reusable thermal cycling clamp  
[NASA-CASE-LAR-12868-1] c 37 N85-21651
- FRIPP, ARCHIBALD L., JR.**  
Apparatus and procedure to detect a liquid-solid interface during crystal growth in a bridgman furnace  
[NASA-CASE-LAR-13597-1-CU] c 25 N87-23713
- FRISBIE, H. F.**  
Device for determining relative angular position between a spacecraft and a radiation emitting celestial body  
[NASA-CASE-GSC-11444-1] c 14 N73-28490
- FRITZ, W. M.**  
Method of fabricating a photovoltaic module of a substantially transparent construction  
[NASA-CASE-NPO-14303-1] c 44 N80-18550
- FRITZEN, M., JR.**  
Noncontaminating swabs  
[NASA-CASE-MFS-18100] c 15 N72-11390
- FRIZZILL, A. W.**  
Hot melt adhesive attachment pad  
[NASA-CASE-LAR-12894-1] c 27 N85-20125
- FROEBEL, RICHARD C.**  
Volumetric measurement of tank volume  
[NASA-CASE-MSC-21500-1] c 35 N91-21493
- FROEHLING, S. C.**  
Casting propellant in rocket engine  
[NASA-CASE-LAR-11995-1] c 28 N77-10213
- FROST, J. D., JR.**  
EEG sleep analyzer and method of operation Patent  
[NASA-CASE-MSC-13282-1] c 05 N71-24729  
Compressible biomedical electrode  
[NASA-CASE-MSC-13648] c 05 N72-27103  
Snap-in compressible biomedical electrode  
[NASA-CASE-MSC-14623-1] c 52 N77-28717
- FRYE, MARK W.**  
Pultrusion die assembly  
[NASA-CASE-LAR-13719-1] c 37 N89-12867
- FRYER, T. B.**  
Telemeter adaptable for implanting in an animal Patent  
[NASA-CASE-XAC-05706] c 05 N71-12342  
RF controlled solid state switch  
[NASA-CASE-ARC-10136-1] c 09 N72-22202  
Low power electromagnetic flowmeter providing accurate zero set  
[NASA-CASE-ARC-10362-1] c 14 N73-32326
- Miniature ingestible telemeter devices to measure deep-body temperature  
[NASA-CASE-ARC-10583-1] c 52 N76-29894  
Induction powered biological radiosonde  
[NASA-CASE-ARC-11120-1] c 52 N80-18691
- FUCHS, J. C.**  
Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c 33 N79-10337
- FUHR, W.**  
Method for applying photographic resists to otherwise incompatible substrates  
[NASA-CASE-MSC-18107-1] c 27 N81-25209
- FUHRMEISTER, P. F.**  
Random function tracer Patent  
[NASA-CASE-XLA-01401] c 15 N71-21179
- FUJIOKA, R. S.**  
Folding structure fabricated of rigid panels  
[NASA-CASE-XHQ-02146] c 18 N75-27040
- FUJITA, TOSHIO**  
Thermal power transfer system using applied potential difference to sustain operating pressure difference  
[NASA-CASE-NPO-18034-1-CU] c 44 N92-16457
- FULCHER, C. W. G.**  
Automatic control of liquid cooling garment by cutaneous and external auditory meatus temperatures  
[NASA-CASE-MSC-13917-1] c 05 N72-15098
- FULCHER, R. W.**  
Low speed phaselock speed control system  
[NASA-CASE-GSC-11127-1] c 09 N75-24758
- FULLER, CHRIS R.**  
Method and apparatus for minimizing multiple degree of freedom vibration transmission between two regions of a structure  
[NASA-CASE-LAR-14508-1-CU] c 39 N93-13420
- FULLER, H. V.**  
Cable restraint  
[NASA-CASE-LAR-10129-1] c 15 N73-25512  
Reefing system  
[NASA-CASE-LAR-10129-2] c 37 N74-20063  
Binocular device for displaying numerical information in field of view  
[NASA-CASE-LAR-11782-1] c 74 N77-20882
- FULTON, D. S.**  
Spillage detector for liquid chromatography systems  
[NASA-CASE-MSC-20206-1] c 25 N86-27431
- FULTON, JAMES P.**  
High speed thin plate fatigue crack monitor  
[NASA-CASE-LAR-14816-1-SB] c 39 N93-19329
- FUNG, L. W.**  
Massively parallel processor computer  
[NASA-CASE-GSC-12223-1] c 60 N83-25378
- FUNK, B. H., JR.**  
Optical probing of supersonic flows with statistical correlation  
[NASA-CASE-MFS-20642] c 14 N72-21407
- FURCINTI, C. A.**  
Pulse-width modulation multiplier Patent  
[NASA-CASE-XER-0213] c 07 N71-12390
- FURMAN, E. R.**  
Closed loop spray cooling apparatus  
[NASA-CASE-LEW-11981-1] c 31 N78-17237  
Closed loop spray cooling apparatus  
[NASA-CASE-LEW-11981-2] c 34 N79-20336
- FURNER, R. L.**  
Automated analysis of oxidative metabolites  
[NASA-CASE-ARC-10469-1] c 25 N75-12086
- FURTSCH, T. A.**  
Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c 25 N82-26396
- FURUMOTO, H. W.**  
Optical pump and driver system for lasers  
[NASA-CASE-ERC-10283] c 16 N72-25485
- FUSARO, ROBERT L.**  
Pretreatment of lubricated surfaces with sputtered cadmium oxide  
[NASA-CASE-LEW-14474-1] c 27 N91-28423  
Solid lubricants on pretreated surfaces  
[NASA-CASE-LEW-14474-2] c 27 N92-11186
- FYLER, N. F.**  
Very high intensity light source using a cathode ray tube  
[NASA-CASE-XNP-01296] c 33 N75-27250
- FYMAT, A. L.**  
Interferometer-polarimeter  
[NASA-CASE-NPO-11239] c 14 N73-12446  
High resolution Fourier interferometer-spectrophotopolarimeter  
[NASA-CASE-NPO-13604-1] c 35 N76-31490  
Frequency-scanning particle size spectrometer  
[NASA-CASE-NPO-13606-2] c 35 N80-18364

## G

**GALEMA, S. D.**  
CCD correlated quadruple sampling processor  
[NASA-CASE-NPO-14426-1] c 33 N81-27396

**GABRIEL, ANDREW K.**  
Method for detecting surface motions and mapping small terrestrial or planetary surface deformations with synthetic aperture radar  
[NASA-CASE-NPO-17831-1-CU] c 43 N91-14642

**GABROVIC, L. J.**  
Bismuth-lead coatings for gas bearings used in atmospheric environments and vacuum chambers Patent  
[NASA-CASE-XGS-02011] c 15 N71-20739

**GADDIS, D. H.**  
Inorganic solid film lubricants Patent  
[NASA-CASE-XMF-03988] c 15 N71-21403

**GADDIS, JOSEPH L.**  
Method of forming dynamic membrane on stainless steel support  
[NASA-CASE-MSC-18172-3] c 31 N88-29052

**GADDY, E. M.**  
Optimum performance spacecraft solar cell system  
[NASA-CASE-GSC-10669-1] c 03 N72-20031

**GADE, D. W.**  
Temperature regulation circuit Patent  
[NASA-CASE-XNP-02792] c 14 N71-28958

**GAETANO, G.**  
Fast scan control for deflection type mass spectrometers  
[NASA-CASE-LAR-11428-1] c 35 N74-34857

**GAHN, R. F.**  
Analytical test apparatus and method for determining oxide content of alkali metal Patent  
[NASA-CASE-XLE-01997] c 06 N71-23527  
Gels as battery separators for soluble electrode cells  
[NASA-CASE-LEW-12364-1] c 44 N77-22606  
Zirconium carbide as an electrocatalyst for the chromous-chromic redox couple  
[NASA-CASE-LEW-13246-1] c 44 N83-27344  
Negative electrode catalyst for the iron chromium redox energy storage system  
[NASA-CASE-LEW-14028-1] c 44 N86-19721  
Method and apparatus for rebalancing a REDOX flow cell system  
[NASA-CASE-LEW-14127-1] c 33 N86-20680

**GAIER, J. R.**  
Heat transfer device  
[NASA-CASE-LEW-14162-4] c 24 N93-20568

**GAIER, JAMES R.**  
Heat transfer device and method of making the same  
[NASA-CASE-LEW-14162-1] c 34 N91-13668  
Method of intercalating large quantities of fibrous structures  
[NASA-CASE-LEW-15077-1] c 24 N92-16025  
Intercalated hybrid graphite fiber composite  
[NASA-CASE-LEW-15241-1] c 24 N92-17861  
Apparatus for intercalating large quantities of fibrous structures  
[NASA-CASE-LEW-15077-2] c 24 N93-29609  
Semiconductor cooling apparatus  
[NASA-CASE-LEW-14162-3] c 24 N93-29614  
Method for producing hybrid graphite composite  
[NASA-CASE-LEW-15241-2] c 24 N93-31296

**GAISER, E. E.**  
Color television systems using a single gun color cathode ray tube Patent  
[NASA-CASE-ERC-10098] c 09 N71-28618

**GALE, G. P.**  
Flow rate switch  
[NASA-CASE-NPO-10722] c 09 N72-20199

**GALEN, T. J.**  
Solid sorbent air sampler  
[NASA-CASE-MSC-20653-1] c 35 N86-26595

**GALL, PETER D.**  
Method for laminar boundary layer transition visualization in flight  
[NASA-CASE-LAR-13554-1] c 02 N89-12551

**GALLAGHER, B. D.**  
Increased voltage photovoltaic cell  
[NASA-CASE-NPO-16155-1] c 44 N85-30475

**GALLAGHER, BRIAN D.**  
Method for forming hermetic seals  
[NASA-CASE-NPO-16423-1-CU] c 37 N87-21334

**GALLAGHER, H. E.**  
Construction and method of arranging a plurality of ion engines to form a cluster Patent  
[NASA-CASE-XNP-02923] c 28 N71-23081  
High efficiency ionizer assembly Patent  
[NASA-CASE-XNP-01954] c 28 N71-28850

**GALLIMORE, FRANK H.**  
Method for maintaining precise suction strip porosities  
[NASA-CASE-LAR-13638-1] c 31 N90-19427

**GALLO, A. J.**  
Rapid sync acquisition system Patent  
[NASA-CASE-NPO-10214] c 10 N71-26577

**GALLOWAY, C. W.**  
Gas-to-hydraulic power converter  
[NASA-CASE-MSC-18794-1] c 44 N83-14693

**GAMMELL, P. M.**  
Hyperthermia heating apparatus  
[NASA-CASE-NPO-14549-2] c 52 N82-33996

**GANGULI, P. S.**  
Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c 44 N78-31527

**GARAVAGLIA, A. P.**  
Shoulder harness and lap belt restraint system  
[NASA-CASE-ARC-10519-2] c 05 N75-25915

**GARBA, J. A.**  
Pressure seal Patent  
[NASA-CASE-NPO-10796] c 15 N71-27068

**GARCIA, R. D.**  
Radiative cooler  
[NASA-CASE-NPO-15465-1] c 34 N84-22903

**GARD, L. H.**  
Computerized system for translating a torch head  
[NASA-CASE-MFS-23620-1] c 37 N79-10421

**GARDNER, D. E.**  
Wire grid forming apparatus Patent  
[NASA-CASE-XLE-00023] c 15 N70-33330

**GARDNER, DALE A.**  
Apparatus and method of capturing an orbiting spacecraft  
[NASA-CASE-MSC-20979-1] c 37 N87-22985

**GARDNER, J. N.**  
Technique of elbow bending small jacketed transfer lines Patent  
[NASA-CASE-XNP-10475] c 15 N71-24679

**GARDNER, M. R.**  
Heating and cooling system  
[NASA-CASE-LAR-12393-1] c 34 N83-34221

**GARDNER, M. S.**  
Differential pressure cell Patent  
[NASA-CASE-XAC-00042] c 14 N70-34816

**GARDOS, M. N.**  
Refractory porcelain enamel passive control coating for high temperature alloys  
[NASA-CASE-MFS-22324-1] c 27 N75-27160

**GARFEIN, A.**  
Pressure sensitive transducers Patent  
[NASA-CASE-ERC-10087] c 14 N71-27334  
Electricity measurement devices employing liquid crystalline materials  
[NASA-CASE-ERC-10275] c 26 N72-25680  
Semiconductor transducer device  
[NASA-CASE-ERC-10087-2] c 14 N72-31446

**GARMIRE, E. M.**  
Optical frequency waveguide Patent  
[NASA-CASE-HQN-10541-1] c 07 N71-26291  
Laser machining apparatus Patent  
[NASA-CASE-HQN-10541-2] c 15 N71-27135  
Optical frequency waveguide and transmission system Patent  
[NASA-CASE-HQN-10541-4] c 16 N71-27183  
Optical frequency waveguide and transmission system  
[NASA-CASE-HQN-10541-3] c 23 N72-23695

**GARMIRE, G.**  
X-ray position detector  
[NASA-CASE-NPO-12087-1] c 74 N81-19898

**GARNER, H. D.**  
Jet shoes  
[NASA-CASE-XLA-08491] c 05 N69-21380  
Dynamic precession damper for spin stabilized vehicles Patent  
[NASA-CASE-XLA-01989] c 21 N70-34295  
Attitude orientation of spin-stabilized space vehicles Patent  
[NASA-CASE-XLA-00281] c 21 N70-36943  
Fluid pressure amplifier and system  
[NASA-CASE-LAR-10868-1] c 33 N74-11050  
Magnetic heading reference  
[NASA-CASE-LAR-11387-1] c 04 N76-20114  
Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c 04 N77-19056  
Magnetic heading reference  
[NASA-CASE-LAR-12638-1] c 04 N84-14132  
Heads up display  
[NASA-CASE-LAR-12630-1] c 06 N84-27733

**GARNER, H. DOUGLAS**  
Braille reading system  
[NASA-CASE-LAR-13306-1] c 82 N87-29372

**GARRAHAN, N. M.**  
Solid state pulse generator with constant output width, for variable input width, in nanosecond range Patent  
[NASA-CASE-XGS-03427] c 10 N71-23029  
Resettable monostable pulse generator Patent  
[NASA-CASE-GSC-11139] c 09 N71-27016

**GARREN, J. F., JR.**  
Mechanical stability augmentation system Patent  
[NASA-CASE-XLA-06339] c 02 N71-13422

Filtering technique based on high-frequency plant modeling for high-gain control  
[NASA-CASE-LAR-12215-1] c 08 N79-23097

**GARRETT, H.**  
A dc to dc converter  
[NASA-CASE-MFS-25430-1] c 33 N84-16453

**GARRETT, STEVEN L.**  
Stabilization and oscillation of an acoustically levitated object  
[NASA-CASE-NPO-16896-1-CU] c 71 N89-13236

**GARRIOTT, OWEN K.**  
Nano-G research laboratory for a spacecraft  
[NASA-CASE-GSC-13197-1] c 18 N91-27201

**GARWOOD, D. C.**  
Ionization vacuum gauge Patent  
[NASA-CASE-XNP-00646] c 14 N70-35666

**GARY, B. L.**  
CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c 06 N83-10040  
System for indicating fuel-efficient aircraft altitude  
[NASA-CASE-NPO-15351-2] c 06 N84-34443

**GARY, BRUCE L.**  
Microwave temperature profiler for clear air turbulence prediction  
[NASA-CASE-NPO-18115-1-CU] c 47 N92-29148

**GASPAR, MARK S.**  
Controlled sample orientation and rotation in an acoustic levitator  
[NASA-CASE-NPO-17086-1-CU] c 35 N89-14422

**GASSER, M. G.**  
Stirling cycle cryogenic cooler  
[US-PATENT-4,389,849] c 44 N83-28574

**GASTON, D. H.**  
Masking device Patent  
[NASA-CASE-XNP-02092] c 15 N70-42033

**GASTON, R. P., JR.**  
Landing gear Patent  
[NASA-CASE-XMF-01174] c 02 N70-41589

**GATES, D. W.**  
Stabilized zinc oxide coating compositions Patent  
[NASA-CASE-XMF-07770-2] c 18 N71-26772  
Synthesis of zinc titanate pigment and coatings containing the same  
[NASA-CASE-MFS-13532] c 18 N72-17532  
Method of preparing zinc orthotitanate pigment  
[NASA-CASE-MFS-23345-1] c 27 N77-30237

**GATES, J. D.**  
Self-erecting reflector Patent  
[NASA-CASE-XGS-09190] c 31 N71-16102

**GATES, L. E., JR.**  
Method for fiberizing ceramic materials Patent  
[NASA-CASE-XNP-00597] c 18 N71-23088

**GATES, THOMAS S.**  
Apparatus for elevated temperature compression or tension testing of specimens  
[NASA-CASE-LAR-14775-1] c 39 N92-30099

**GATEWOOD, J. R.**  
Thin film temperature sensor and method of making same  
[NASA-CASE-NPO-11775] c 26 N72-28761

**GATEWOOD, JOHN R.**  
Joule Thomson refrigerator  
[NASA-CASE-NPO-17143-1-CU] c 31 N89-14351

**GATLIN, J. A.**  
Cartwheel satellite synchronization system Patent  
[NASA-CASE-XGS-05579] c 31 N71-15676  
Gravity gradient attitude control system Patent  
[NASA-CASE-GSC-10555-1] c 21 N71-27324  
Sampled data controller Patent  
[NASA-CASE-GSC-10554-1] c 08 N71-29033

**GATTI, A.**  
Catalyst for growth of boron carbide single crystal whiskers  
[NASA-CASE-XHQ-03903] c 15 N69-21922

**GAUSE, R. L.**  
Restraint system for ergometer  
[NASA-CASE-MFS-21046-1] c 14 N73-27377  
Ergometer  
[NASA-CASE-MFS-21109-1] c 05 N73-27941  
Tilting table for ergometer and for other biomedical devices  
[NASA-CASE-MFS-21010-1] c 05 N73-30078  
Manual actuator  
[NASA-CASE-MFS-21481-1] c 37 N74-18127  
Conductive elastomeric extensometer  
[NASA-CASE-MFS-21049-1] c 52 N74-27864  
Ergometer calibrator  
[NASA-CASE-MFS-21045-1] c 35 N75-15932

**GAUTHIER, M. K.**  
Method for analyzing radiation sensitivity of integrated circuits  
[NASA-CASE-NPO-14350-1] c 33 N80-14332

**GAVALAS, G. R.**  
Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c 44 N78-31527

## GAVIN, THOMAS R.

Thermal treatment of silicon integrated circuit chips to prevent and heal voids in aluminum metallization  
[NASA-CASE-NPO-17678-1-CU] c 76 N91-28014

## GAVIRA, H. E.

Failsafe multiple transformer circuit configuration  
[NASA-CASE-NPO-11078] c 09 N72-25262

## GAVRILLIS, T. G.

Turnstile and flared cone UHF antenna  
[NASA-CASE-LAR-10970-1] c 33 N76-14372

## GAY, C. H., JR.

Tip cap for a rotor blade  
[NASA-CASE-LEW-13654-1] c 07 N84-22560

## GDULA, W. G.

Recovery of radiation damaged solar cells through thermal annealing  
[NASA-CASE-XGS-04047-2] c 03 N72-11062

## GEBBEN, V. D.

Circuit for detecting initial systole and diastolic notch  
[NASA-CASE-LEW-11581-1] c 54 N75-13531

## GEDWILL, M. A.

Method of protecting the surface of a substrate  
[NASA-CASE-LEW-11696-1] c 37 N75-13261

## GEDWILL, M. A.

Duplex aluminized coatings  
[NASA-CASE-LEW-11696-2] c 26 N75-19408

## GEDWILL, M. A.

Coating with overlay metallic-cermet alloy systems  
[NASA-CASE-LEW-13639-2] c 26 N84-27855

## GEDWILL, M. A.

Overlay metallic-cermet alloy coating systems  
[NASA-CASE-LEW-13639-1] c 26 N84-33555

## GEDWILL, MICHAEL

High temperature, oxidation resistant noble metal-Al alloy thermocouple  
[NASA-CASE-LEW-15515-1] c 35 N93-31298

## GEE, S. W.

Terminal guidance system  
[NASA-CASE-FRC-10049-1] c 04 N74-13420

## GEHRING, W. E.

Apparatus for purging systems handling toxic, corrosive, noxious and other fluids Patent  
[NASA-CASE-XMS-01905] c 12 N71-21089

## GEIDEMAN, W. A., JR.

Electric arc light source having undercut recessed anode  
[NASA-CASE-ARC-10266-1] c 33 N75-29318

## GEIER, D. J.

Shock absorbing support and restraint means Patent  
[NASA-CASE-XMS-01240] c 05 N70-35152

## GEIPEL, D. H.

Omnidirectional acceleration device Patent  
[NASA-CASE-HQN-10780] c 14 N71-30265

## GEISE, P. E., JR.

FM/CW radar system  
[NASA-CASE-MFS-22234-1] c 32 N79-10264

## GEISSINGER, STEVE L.

Water cooled static pressure probe  
[NASA-CASE-LAR-14340-1-CU] c 35 N92-21586

## GELB, L. L.

Method of repairing discontinuity in fiberglass structures  
[NASA-CASE-LAR-10416-1] c 24 N74-30001

## GELDERLOOS, H. J. C.

Reconfiguring redundancy management  
[NASA-CASE-MSC-18498-1] c 60 N82-29013

## GELLES, R.

Wide angle long eye relief eyepiece Patent  
[NASA-CASE-XMS-06056-1] c 23 N71-24857

## GENNERY, D. B.

Neighborhood comparison operator  
[NASA-CASE-NPO-16464-1CU] c 60 N86-24224

## GENNERY, DONALD B.

Programmable pipelined image processor  
[NASA-CASE-NPO-16461-1CU] c 60 N89-26400

## GENTER, R. E.

Electronically resettable fuse Patent  
[NASA-CASE-XGS-11177] c 09 N71-27001

## GEORGE, CLIFFORD E.

Apparatus and method for cellulose processing using microwave pretreatment  
[NASA-CASE-MSC-21936-1-SB] c 25 N93-22036

## GEORGE, T. R., JR.

Device for installing rocket engines  
[NASA-CASE-MFS-19220-1] c 20 N76-22296

## GERBER, MARGARET K.

High temperature polymer from maleimide-acetylene terminated monomers  
[NASA-CASE-LAR-14475-1] c 27 N93-19327

## GERBER, MARGARET K.

Crosslinked polyimides prepared from N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14774-1] c 27 N93-19388

## GERBER, MARGARET K.

Polyimides prepared from 3,5-diamino benzo trifluoride  
[NASA-CASE-LAR-14206-1] c 27 N93-29083

## GERDTS, J. C.

Concentric differential gearing arrangement  
[NASA-CASE-ARC-10462-1] c 37 N74-27901

## GERINGER, H. J.

Induction furnace with perforated tungsten foil shielding Patent  
[NASA-CASE-XLE-04026] c 14 N71-23267

## GERMANN, E. F., JR.

Radiation direction detector including means for compensating for photocell aging Patent  
[NASA-CASE-XLA-00183] c 14 N70-40239

## GERTSMA, L. W.

Foldable conduit Patent  
[NASA-CASE-XLE-00620] c 32 N70-41579

## GETCHELL, D. E.

Pressure garment joint Patent  
[NASA-CASE-XMS-09636] c 05 N71-12344

## GETTELMAN, C. C.

High powered arc electrodes  
[NASA-CASE-LEW-11162-1] c 33 N74-12913

## GIACCONI, R.

X-ray reflection collimator adapted to focus X-radiation directly on a detector Patent  
[NASA-CASE-XHQ-04106] c 14 N70-40240

## GIANATASIO, A.

Adaptive polarization separation  
[NASA-CASE-LAR-12196-1] c 33 N81-26358

## GIANDOMENICO, A.

Millimeter wave radiometer for radio astronomy Patent  
[NASA-CASE-XNP-09832] c 30 N71-23723

## GIANDOMENICO, A.

High-torque open-end wrench  
[NASA-CASE-NPO-13541-1] c 37 N79-14383

## GIANNINI, G. M.

Combination automatic-starting electrical plasma torch and gas shutoff valve  
[NASA-CASE-XLE-10717] c 37 N75-29426

## GIBBONS, RANDALL E.

Purification system  
[NASA-CASE-MSC-21584-1] c 25 N92-33029

## GIBBS, GARY P.

Method and apparatus for minimizing multiple degree of freedom vibration transmission between two regions of a structure  
[NASA-CASE-LAR-14508-1-CU] c 39 N93-13420

## GIBSON, C. ROBERT

Portable dynamic fundus instrument  
[NASA-CASE-MSC-21675-1] c 52 N92-28755

## GIBSON, F. W.

Contour surveying system Patent  
[NASA-CASE-XLA-08646] c 14 N71-17586

## GIBSON, F. W.

Pressure operated electrical switch responsive to a pressure decrease after a pressure increase  
[NASA-CASE-LAR-10137-1] c 09 N72-22204

## GIBSON, JOHN C.

Self indexing latch system  
[NASA-CASE-MFS-25956-1] c 37 N87-21333

## GIBSON, JOHN C.

System for testing bearings  
[NASA-CASE-MFS-28589-1] c 37 N93-29618

## GIFFIN, C. E.

Mass spectrometer with magnetic pole pieces providing the magnetic fields for both the magnetic sector and an ion-type vacuum pump  
[NASA-CASE-NPO-13663-1] c 35 N77-14406

## GILBERT, G. J.

Apparatus for ballasting high frequency transistors  
[NASA-CASE-XGS-05003] c 09 N69-24318

## GILBREATH, W. P.

Electrical conductivity cell and method for fabricating the same  
[NASA-CASE-ARC-10810-1] c 33 N76-19339

## GILCHRIST, C. E.

Signal-to-noise ratio estimating by taking ratio of mean and standard deviation of integrated signal samples Patent  
[NASA-CASE-XNP-05254] c 07 N71-20791

## GILES, R. M. F.

Dye penetrant for surfaces subsequently contacted by liquid oxygen Patent  
[NASA-CASE-XMF-02221] c 18 N71-27170

## GILKISON, C. A.

Linear accelerator frequency control system Patent  
[NASA-CASE-XGS-05441] c 10 N71-22962

## GILL, W. L.

Burn rate testing apparatus  
[NASA-CASE-XMS-09690] c 33 N72-25913

## GILLERMAN, J. B.

Water management system and an electrolytic cell therefor Patent  
[NASA-CASE-MSC-10960-1] c 03 N71-24718

## GILLESPIE, W. J.

Infrared scanner Patent  
[NASA-CASE-XLA-00120] c 21 N70-33181

## GILLESPIE, W. J.

Passive communication satellite Patent  
[NASA-CASE-XLA-00210] c 30 N70-40309

## GILLESPIE, W. J.

Alleviation of divergence during rocket launch Patent  
[NASA-CASE-XLA-00256] c 31 N71-15663

## GILLESPIE, W. J.

Method of making an inflatable panel Patent  
[NASA-CASE-XLA-03497] c 15 N71-23052

## GILLETTE, R. B.

Plasma cleaning device  
[NASA-CASE-MFS-22906-1] c 75 N78-27913

## GILLEY, G. C.

Shared memory for a fault-tolerant computer  
[NASA-CASE-NPO-13139-1] c 60 N76-21914

## GILLEY, P. J.

Material fatigue testing system  
[NASA-CASE-MFS-20673] c 14 N73-20476

## GILLIGAN, J. E.

Method of preparing zinc orthotitanate pigment  
[NASA-CASE-MFS-23345-1] c 27 N77-30237

## GILLILAND, C. S.

Variable anodic thermal control coating  
[NASA-CASE-LAR-12719-1] c 44 N83-34449

## GILLMORE, W. F.

Method and apparatus for high resolution spectral analysis  
[NASA-CASE-NPO-10748] c 08 N72-20177

## GILMAN, M. M.

Flanged major modular assembly jig  
[NASA-CASE-MFS-23372-1] c 39 N76-31562

## GILREATH, M. C.

Omnidirectional microwave spacecraft antenna Patent  
[NASA-CASE-XLA-03114] c 09 N71-22888

## GILREATH, MELVIN C.

Almond test body  
[NASA-CASE-ARC-13747-1-CU] c 32 N89-28672

## GILWEE, W. J., JR.

Honeycomb-laminate composite structure  
[NASA-CASE-ARC-10913-1] c 24 N78-15180

## GILWEE, W. J., JR.

Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-1] c 24 N86-19380

## GILWEE, W. J., JR.

Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-2] c 27 N86-27451

## GIN, B.

High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c 15 N82-24272

## GIN, W.

Apparatus and method for control of a solid fueled rocket vehicle Patent  
[NASA-CASE-XNP-00217] c 28 N70-38181

## GINER, J. D.

Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c 33 N80-20487

## GINER, J. D.

Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c 44 N81-29524

## GINSBURG, A.

Supercharged topping rocket propellant feed system  
[NASA-CASE-XLE-02062-1] c 20 N80-14188

## GIORGINI, E. A.

Self-contained breathing apparatus  
[NASA-CASE-MSC-14733-1] c 54 N76-24900

## GIOVANNETTI, A., JR.

High-temperature, high-pressure spherical segment valve Patent  
[NASA-CASE-XAC-00074] c 15 N70-34817

## GIRALA, A. S.

Open type urine receptacle  
[NASA-CASE-MSC-12324-1] c 05 N72-22093

## GIRALA, A. S.

Open ended tubing cutters  
[NASA-CASE-MSC-18538-1] c 37 N82-26672

## GISLER, G. L.

Emitted vibration measurement device and method  
[NASA-CASE-MFS-25981-1] c 35 N87-14670

## GLASER, P. E.

Apparatus for measuring thermal conductivity Patent  
[NASA-CASE-XGS-01052] c 14 N71-15992

## GLASGOW, T. K.

Coating with overlay metallic-cermet alloy systems  
[NASA-CASE-LEW-13639-2] c 26 N84-27855

## GLASGOW, T. K.

Overlay metallic-cermet alloy coating systems  
[NASA-CASE-LEW-13639-1] c 26 N84-33555

## GLASS, JAMES S.

Self-contained, single-use hose and tubing cleaning module  
[NASA-CASE-MSC-20857-1] c 37 N87-17035

## GLASS, KRISTIN L.

Obstacle avoidance for redundant robots using configuration control  
[NASA-CASE-NPO-17852-1-CU] c 63 N92-33019

## GLASSEY, E. A.

Line following servosystem Patent  
[NASA-CASE-XAC-00001] c 15 N71-28952

## GLAW, G. E.

Enthalpy and stagnation temperature determination of a high temperature laminar flow gas stream Patent  
[NASA-CASE-XLE-00266] c 14 N70-34156

## GLAW, G. E.

Sensing probe  
[NASA-CASE-LEW-10281-1] c 14 N72-17327

- GLEASON, J. R.**  
Hot melt adhesive attachment pad  
[NASA-CASE-LAR-12894-1] c 27 N85-20125
- GLEASON, JOHN R.**  
Preparing composite materials from matrices of processable aromatic polyimide thermoplastic blends  
[NASA-CASE-LAR-14107-1] c 24 N91-25200
- GLEKAS, L. P.**  
Compact solar still Patent  
[NASA-CASE-XMS-04533] c 15 N71-23086
- GLENN, C. G.**  
Manual actuator  
[NASA-CASE-MFS-21481-1] c 37 N74-18127  
Conductive elastomeric extensometer  
[NASA-CASE-MFS-21049-1] c 52 N74-27864
- GLENN, D. C.**  
Method of lubricating rolling element bearings Patent  
[NASA-CASE-XLE-09527] c 15 N71-17688  
Rolling element bearings Patent  
[NASA-CASE-XLE-09527-2] c 15 N71-26189
- GLOBUS, R. H.**  
Process of forming particles in a cryogenic path Patent  
[NASA-CASE-NPO-10250] c 23 N71-16212
- GLOMB, W. L.**  
Time division radio relay synchronizing system using different sync code words for in sync and out of sync conditions Patent  
[NASA-CASE-GSC-10373-1] c 07 N71-19773  
Tracking receiver Patent  
[NASA-CASE-XGS-08679] c 10 N71-21473
- GLORIA, H. R.**  
Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c 27 N74-21156  
Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c 27 N76-32315
- GLOSS, BLAIR B.**  
Porous plug for reducing orifice induced pressure error in airfoils  
[NASA-CASE-LAR-13569-1] c 35 N89-12841
- GLOVER, DANIEL R.**  
Picture data compression coder using subband/transform coding with a Lempel-Ziv-based coder  
[NASA-CASE-LEW-15700-1] c 82 N93-28130
- GOERING, R. S.**  
Open tube guideway for high speed air cushioned vehicles  
[NASA-CASE-LAR-10256-1] c 85 N74-34672
- GOETZ, A. F. H.**  
Multispectral imaging and analysis system  
[NASA-CASE-NPO-13691-1] c 43 N79-17288  
Portable reflectance spectrometer  
[NASA-CASE-NPO-13556-1] c 35 N84-33766
- GOETZ, C.**  
Quartz ball valve  
[NASA-CASE-NPO-14473-1] c 37 N80-23654
- GOLD, H.**  
Automotive gas turbine fuel control  
[NASA-CASE-LEW-12785-1] c 37 N78-24545
- GOLD, H. S.**  
Gas turbine engine fuel control  
[NASA-CASE-LEW-11187-1] c 28 N73-19793
- GOLD, RONALD R.**  
Torsional suspension system for testing space structures  
[NASA-CASE-LAR-14149-1-SB] c 14 N91-21176
- GOLDBERG, G. I.**  
Reaction wheel scanner Patent  
[NASA-CASE-XGS-02629] c 14 N71-21082
- GOLDBERG, J.**  
Automatic fault correction system for parallel signal channels Patent  
[NASA-CASE-XNP-03263] c 09 N71-18843
- GOLDEN, D. C.**  
Slow-release fertilizer  
[NASA-CASE-MS-C-21953-1-NP] c 37 N93-17271
- GOLDEN, D. P., JR.**  
Contourgraph system for monitoring electrocardiograms  
[NASA-CASE-MS-C-13407-1] c 10 N72-20225  
Apparatus and method for processing Korotkov sounds  
[NASA-CASE-MS-C-13999-1] c 52 N74-26626
- GOLDEN, DAGIGAMUWAGE C.**  
Active synthetic soil  
[NASA-CASE-MS-C-21954-1-NP] c 51 N93-19054
- GOLDMAN, G. C.**  
High powered arc electrodes  
[NASA-CASE-LEW-11162-1] c 33 N74-12913
- GOLDOWSKIY, M. P.**  
Linear magnetic bearings  
[NASA-CASE-GSC-12582-2] c 37 N85-20337
- GOLDOWSKY, M. P.**  
Stirling cycle cryogenic cooler  
[US-PATENT-4,389,849] c 44 N83-28574
- GOLDOWSKY, MICHAEL P.**  
Reciprocating linear motor  
[NASA-CASE-GSC-12773-2] c 33 N87-23904
- GOLDSBERRY, R. E.**  
Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c 27 N74-21156  
Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c 27 N76-32315
- GOLDSCHMIED, F. R.**  
Shear modulated fluid amplifier Patent  
[NASA-CASE-MFS-10412] c 12 N71-17578
- GOLDSMITH, J. V.**  
Solar battery with interconnecting means for plural cells Patent  
[NASA-CASE-XNP-06506] c 03 N71-11050  
Solid state matrices  
[NASA-CASE-NPO-10591] c 03 N72-22041  
Solar cell panels with light transmitting plate  
[NASA-CASE-NPO-10747] c 03 N72-22042
- GOLDSTEIN, A. W.**  
Supersonic fan blading  
[NASA-CASE-LEW-11402-1] c 07 N74-28226
- GOLDSTEIN, B. E.**  
Ion mass spectrometer  
[NASA-CASE-NPO-15423-1] c 35 N84-28016
- GOLDSTEIN, C. S.**  
Dynamic capacitor having a peripherally driven element and system incorporating the same  
[NASA-CASE-XNP-02899-1] c 33 N79-21265
- GOLDSTEIN, H. E.**  
Silica reusable surface insulation  
[NASA-CASE-ARC-10721-1] c 27 N76-22376  
Reaction cured glass and glass coatings  
[NASA-CASE-ARC-11051-1] c 27 N78-32260  
Fibrous refractory composite insulation  
[NASA-CASE-ARC-11169-1] c 24 N79-24062  
Adjustable high emittance gap filler  
[NASA-CASE-ARC-11310-1] c 27 N82-24339  
High temperature glass thermal control structure and coating  
[NASA-CASE-ARC-11164-1] c 44 N83-34448
- GOLDSTEIN, HOWARD E.**  
Ceramic-ceramic shell tile thermal protection system and method thereof  
[NASA-CASE-ARC-11641-1] c 24 N88-18628  
Composite flexible blanket insulation  
[NASA-CASE-ARC-11907-1-NP] c 24 N91-31236
- GOLDSTEIN, I.**  
Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c 36 N75-15028
- GOLDSTEIN, R.**  
Optical gyroscope system  
[NASA-CASE-NPO-14258-1] c 35 N81-33448  
Ion mass spectrometer  
[NASA-CASE-NPO-15423-1] c 35 N84-28016
- GOLDSTEIN, R. M.**  
Correlation function apparatus Patent  
[NASA-CASE-XNP-00746] c 07 N71-21476  
Method and apparatus for mapping planets  
[NASA-CASE-NPO-11001] c 07 N72-21118  
Binary coded sequential acquisition ranging system  
[NASA-CASE-NPO-11194] c 08 N72-25209  
Apparatus for deriving synchronizing pulses from pulses in a single channel PCM communications system  
[NASA-CASE-NPO-11302-1] c 07 N73-13149  
Method and apparatus for a single channel digital communications system  
[NASA-CASE-NPO-11302-2] c 32 N74-10132  
Digital demodulator-correlator  
[NASA-CASE-NPO-13982-1] c 32 N79-14267  
Synthetic aperture radar target simulator  
[NASA-CASE-NPO-15024-1] c 32 N84-27951  
Method and apparatus for contour mapping using synthetic aperture radar  
[NASA-CASE-NPO-15939-1] c 43 N86-19711
- GOLDSTEIN, RICHARD M.**  
Method for detecting surface motions and mapping small terrestrial or planetary surface deformations with synthetic aperture radar  
[NASA-CASE-NPO-17831-1-CU] c 43 N91-14642
- GONDA, STEVE R.**  
Three-dimensional cultured glioma cell lines  
[NASA-CASE-MS-C-21843-1-NP] c 51 N92-24052
- GONZALEZ-SANABRIA, O. D.**  
Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c 33 N85-29144
- GOODFRIEND, R.**  
Cutting head for ultrasonic lithotripsy  
[NASA-CASE-GSC-12944-1] c 52 N86-19885
- GOODLOE, R. R.**  
Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c 32 N79-23310
- GOODRICH, J. A.**  
Locking device for turbine rotor blades Patent  
[NASA-CASE-XNP-00816] c 28 N71-28928
- GOODRICH, LEWIS R., SR.**  
Linear mass actuator  
[NASA-CASE-LAR-14352-1] c 37 N92-34173
- GOODWIN, F. E.**  
Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c 35 N77-27366
- GOODWIN, R. A.**  
Spectroscopy equipment using a slender cylindrical reflector as a substitute for a slit Patent  
[NASA-CASE-XGS-08269] c 23 N71-26206
- GOODWIN, THOMAS J.**  
Three-dimensional co-culture process  
[NASA-CASE-MS-C-21560-1] c 51 N92-34229
- GOODYER, M. J.**  
Stagnation pressure probe  
[NASA-CASE-LAR-11139-1] c 35 N74-32878
- GOOKIN, R. E.**  
System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c 32 N79-20296
- GORDAIA, C. P.**  
Method of making a high voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c 44 N82-29709  
High voltage planar multijunction solar cell  
[NASA-CASE-LEW-13400-1] c 44 N82-31764  
High voltage V-groove solar cell  
[NASA-CASE-LEW-13401-2] c 44 N83-32177
- GORDAN, ANDREW L.**  
Automatic system for installation and replacement of Space Station components  
[NASA-CASE-LEW-14906-1] c 37 N93-12203
- GORDON, ANDREW L.**  
Service equipment for use in hostile environments  
[NASA-CASE-LEW-14906-2] c 37 N93-31314
- GORDON, B. L.**  
Television noise reduction device  
[NASA-CASE-MS-C-12607-1] c 32 N75-21485
- GORDON, STEPHEN S.**  
Welding torch with arc light reflector  
[NASA-CASE-MFS-29134-1] c 74 N87-17493  
Self-clamping arc light reflector for welding torch  
[NASA-CASE-MFS-29207-1] c 74 N87-25843  
Welding monitoring system  
[NASA-CASE-MFS-29177-1] c 37 N88-14362  
Welding torch gas cup extension  
[NASA-CASE-MFS-29252-1] c 37 N88-23980  
Optically controlled welding system  
[NASA-CASE-MFS-29291-1] c 37 N89-12868
- GORDON, W. A.**  
Arc electrode of graphite with ball tip Patent  
[NASA-CASE-LEW-04788] c 09 N71-22987
- GORELICK, D.**  
Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c 52 N74-27566
- GORMAN, MICHAEL R.**  
System for determining the angle of impact of an object on a structure  
[NASA-CASE-LAR-14817-1] c 35 N93-17041  
System for determining the angle of impact of an object on a structure  
[NASA-CASE-LAR-14817-1] c 35 N93-20569
- GORSTEIN, M.**  
Two color horizon sensor  
[NASA-CASE-ERC-10174] c 14 N72-25409
- GOSS, W.**  
Laser pulse detection method and apparatus  
[NASA-CASE-NPO-16030-1] c 36 N84-25037
- GOSS, W. C.**  
High pulse rate high resolution optical radar system  
[NASA-CASE-NPO-11426] c 07 N73-26119  
Optical gyroscope system  
[NASA-CASE-NPO-14258-1] c 35 N81-33448  
Optical fiber coupling method and apparatus  
[NASA-CASE-NPO-15464-1] c 74 N85-29749  
Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629
- GOSS, WILLIS C.**  
Closed loop fiber optic rotation sensor  
[NASA-CASE-NPO-16558-1-CU] c 74 N87-23259
- GOULD, C. W.**  
Printed circuit board with bellows rivet connection Patent  
[NASA-CASE-XNP-05082] c 15 N70-41960
- GOULD, J. M.**  
Static inverters which sum a plurality of waves Patent  
[NASA-CASE-XMF-00663] c 08 N71-18752  
Acquisition and tracking system for optical radar  
[NASA-CASE-MFS-20125] c 16 N72-13437  
A dc to dc converter  
[NASA-CASE-MFS-25430-1] c 33 N84-16453



- GOULD, W. I., JR.**  
Millimeter wave antenna system Patent Application  
[NASA-CASE-GSC-10949-1] c 07 N71-28965
- GRAAB, J. W.**  
Analytical test apparatus and method for determining oxide content of alkali metal Patent  
[NASA-CASE-XLE-01997] c 06 N71-23527
- GRABOWSKI, J. P.**  
Target acquisition antenna  
[NASA-CASE-GSC-10064-1] c 10 N72-22235
- GRAFF, J.**  
Amino acid analysis  
[NASA-CASE-NPO-12130-1] c 25 N75-14844
- GRAFSTEIN, D.**  
Fluidic-thermochromic display device Patent  
[NASA-CASE-ERC-10031] c 12 N71-18603
- GRAHAM, LLOYD J.**  
Acoustic emission frequency discrimination  
[NASA-CASE-MSC-20467-1] c 35 N88-23966
- GRAHAM, O. L.**  
Color television system  
[NASA-CASE-MSC-12146-1] c 07 N72-17109
- GRAHAM, OLIN L.**  
Method and apparatus for telemetry adaptive bandwidth compression  
[NASA-CASE-MSC-20821-1] c 17 N87-25348  
Range and range rate system  
[NASA-CASE-MSC-20867-1] c 36 N88-24958
- GRAHAM, R. A.**  
Portable reflectance spectrometer  
[NASA-CASE-NPO-13556-1] c 35 N84-33766
- GRAHAM, R. W.**  
Liquid storage tank venting device for zero gravity environment Patent  
[NASA-CASE-XLE-01449] c 15 N70-41646  
Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c 34 N83-27144
- GRAINGER, JOHN L.**  
Method of characterizing residual stress in ferromagnetic materials using a pulse histogram of acoustic emission signals  
[NASA-CASE-LAR-14239-1] c 26 N93-14705
- GRAN, A. A.**  
Venting device for pressurized space suit helmet Patent  
[NASA-CASE-XMS-09652-1] c 05 N71-26333
- GRANA, D.**  
Apparatus and process for microbial detection and enumeration  
[NASA-CASE-LAR-12709-1] c 35 N82-28604
- GRANA, D. C.**  
Remote water monitoring system  
[NASA-CASE-LAR-11973-1] c 35 N78-27384  
Natural turbulence electrical power generator  
[NASA-CASE-LAR-11551-1] c 44 N80-29834  
Vertical shaft windmill  
[NASA-CASE-LAR-12923-1] c 37 N84-12493
- GRANATA, R. L.**  
Sideral frequency generator Patent  
[NASA-CASE-XGS-02610] c 14 N71-23174
- GRANETT, D.**  
Gravity enhanced acoustic levitation method and apparatus  
[NASA-CASE-NPO-16147-1-CU] c 71 N85-29693  
Vibrating-chamber levitation systems  
[NASA-CASE-NPO-16142-1-CU] c 35 N86-20752
- GRANT, D. J.**  
Passively regulated water electrolysis rocket engine Patent  
[NASA-CASE-XGS-08729] c 28 N71-14044  
Precision thrust gage Patent  
[NASA-CASE-XGS-02319] c 14 N71-22965  
Fluid flow meter with comparator reference means Patent  
[NASA-CASE-XGS-01331] c 14 N71-22996
- GRANT, G. R.**  
Dual wavelength scanning Doppler velocimeter  
[NASA-CASE-ARC-10637-1] c 35 N75-16783
- GRANT, M. M.**  
Spacecraft attitude sensor  
[NASA-CASE-GSC-10890-1] c 21 N73-30640
- GRANT, P. A.**  
Imaging X-ray spectrometer  
[NASA-CASE-GSC-12682-1] c 35 N84-33765
- GRANT, W. B.**  
Portable remote laser sensor for methane leak detection  
[NASA-CASE-NPO-15790-1] c 36 N85-21831
- GRANTHAM, W. L.**  
Means for measuring the electron density gradients of the plasma sheath formed around a space vehicle Patent  
[NASA-CASE-XLA-06232] c 25 N71-20563  
Antenna design for surface wave suppression Patent  
[NASA-CASE-XLA-10772] c 07 N71-28980
- GRASSO, A. P.**  
Reactant pressure differential control for fuel cell gases  
[NASA-CASE-MSC-20127-2] c 37 N85-34403
- GRATZ, ROY F.**  
Substituted 1,1,1-Triaryl-2,2,2-Trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-1] c 23 N88-26404  
New Condensation polyimides containing 1,1,1-triaryl-2,2,2-trifluoroethane structures  
[NASA-CASE-LEW-14346-1] c 23 N90-19300  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-2] c 25 N90-23497  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-3] c 23 N91-17141  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-4] c 23 N91-25185  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-6] c 23 N92-17882  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-7] c 23 N93-17412
- GRAVES, THOMAS J.**  
Four-terminal electrical testing device  
[NASA-CASE-MSC-21166-1] c 35 N87-25555
- GRAVES, THOMAS JOSEPH**  
Toggle release  
[NASA-CASE-MSC-21354-1] c 37 N88-24969  
Two fault tolerant toggle-hook release  
[NASA-CASE-MSC-21671-1] c 37 N91-32498
- GRAY, C. E.**  
Optical characteristics measuring apparatus Patent  
[NASA-CASE-XNP-08840] c 23 N71-16365
- GRAY, D. L.**  
Solar cell angular position transducer  
[NASA-CASE-LAR-11999-1] c 44 N80-18552
- GRAY, D. T.**  
Three-axis adjustable loading structure  
[NASA-CASE-FRC-10051-1] c 35 N74-13129
- GRAY, DAVID L.**  
Active thermal isolation for temperature responsive sensors  
[NASA-CASE-LAR-14612-1] c 34 N92-29954  
Storage control system  
[NASA-CASE-LAR-14651-1] c 82 N92-30386
- GRAY, J. L.**  
Automatic lightning detection and photographic system  
[NASA-CASE-KSC-10728-1] c 14 N73-32319
- GRAY, N. C.**  
Fire extinguishing apparatus having a slidable mass for a penetrator nozzle  
[NASA-CASE-KSC-11064-1] c 31 N81-14137
- GRAY, ORMAL E.**  
Hermetically sealable package for hybrid solid-state electronic devices and the like  
[NASA-CASE-MSC-20181-1] c 33 N88-23941
- GRAY, V. H.**  
Boiler for generating high quality vapor Patent  
[NASA-CASE-XLE-00785] c 33 N71-16104  
Ablative system  
[NASA-CASE-LEW-10359] c 33 N72-25911  
Ablative system  
[NASA-CASE-LEW-10359-2] c 33 N73-25952  
Space vehicle with artificial gravity and earth-like environment  
[NASA-CASE-LEW-11101-1] c 31 N73-32750
- GRAYSON, J. H.**  
Voltage-current characteristic simulator Patent  
[NASA-CASE-XMS-01554] c 10 N71-10578
- GREBE, V. J.**  
Inductive liquid level detection system Patent  
[NASA-CASE-XLE-01609] c 14 N71-10500
- GREEB, F. J.**  
Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
[NASA-CASE-MSC-14245-1] c 18 N75-27041
- GREEN, A. T.**  
Method and apparatus for nondestructive testing of pressure vessels  
[NASA-CASE-NPO-12142-1] c 38 N76-28563
- GREEN, C. W., JR.**  
Rocket injector head  
[NASA-CASE-XMF-04592-1] c 20 N79-21125
- GREEN, DAVID J.**  
Lightweight ceramic insulation and method  
[NASA-CASE-MSC-20782-1] c 27 N90-23566
- GREEN, E. D.**  
Linear sawtooth voltage-wave generator employing transistor timing circuit having capacitor-zener diode combination feedback Patent  
[NASA-CASE-XMS-01315] c 09 N70-41675
- GREEN, G.**  
Thin wire pointing method  
[NASA-CASE-NPO-15789-1] c 31 N83-19947
- GREEN, K. A.**  
Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NPO-13568-1] c 32 N76-21365  
Multifrequency broadband polarized horn antenna  
[NASA-CASE-NPO-14588-1] c 32 N81-25278
- GREEN, R. G.**  
Traversing probe Patent  
[NASA-CASE-XFR-02007] c 12 N71-24692  
Layout tool Patent  
[NASA-CASE-FRC-10005] c 15 N71-26145  
Method and apparatus for attaching physiological monitoring electrodes Patent  
[NASA-CASE-XFR-07658-1] c 05 N71-26293
- GREEN, R. R.**  
Serial digital decoder Patent  
[NASA-CASE-NPO-10150] c 08 N71-24650  
Apparatus for deriving synchronizing pulses from pulses in a single channel PCM communications system  
[NASA-CASE-NPO-11302-1] c 07 N73-13149  
Method and apparatus for a single channel digital communications system  
[NASA-CASE-NPO-11302-2] c 32 N74-10132
- GREEN, W. L.**  
Mass measuring system Patent  
[NASA-CASE-XMS-03371] c 05 N70-42000
- GREENBERG, J.**  
Combined electrolysis device and fuel cell and method of operation Patent  
[NASA-CASE-XLE-01645] c 03 N71-20904  
Heat activated cell with alkali anode and alkali salt electrolyte Patent  
[NASA-CASE-LEW-11358] c 03 N71-26084  
Heat activated cell Patent  
[NASA-CASE-LEW-11359] c 03 N71-28579  
Method of making emf cell  
[NASA-CASE-LEW-11359-2] c 03 N72-20034
- GREENHALL, CHARLES A.**  
Apparatus for using a time interval counter to measure frequency stability  
[NASA-CASE-NPO-17325-1-CU] c 32 N90-17005
- GREENLEAF, J. E.**  
Thermistor holder for skin temperature measurements  
[NASA-CASE-ARC-10855-1] c 52 N77-10780  
Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c 52 N81-29763
- GREENWOOD, JOHN E.**  
Payload deployment method and system  
[NASA-CASE-MSC-21330-1] c 16 N88-24660
- GREENWOOD, T. D.**  
Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-2] c 27 N84-22746  
Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-1] c 27 N85-20123
- GREENWOOD, T. L.**  
Seismic displacement transducer Patent  
[NASA-CASE-XMF-00479] c 14 N70-34794  
Condition and condition duration indicator Patent  
[NASA-CASE-XMF-01097] c 10 N71-16058
- GREGORY, D. A.**  
Apparatus for measuring charged particle beam  
[NASA-CASE-MFS-25641-1] c 72 N84-28575
- GREGORY, J. W.**  
Rocket motor system Patent  
[NASA-CASE-XLE-00323] c 28 N70-38505  
Combustion chamber Patent  
[NASA-CASE-XLE-04857] c 28 N71-23968  
Rocket thrust throttling system  
[NASA-CASE-LEW-10374-1] c 28 N73-13773
- GREGORY, T. J.**  
Rotating launch device for a remotely piloted aircraft  
[NASA-CASE-ARC-10979-1] c 09 N77-19076
- GRIEVE, S. M.**  
Apparatus for testing wiring harness by vibration generating means  
[NASA-CASE-MSC-15158-1] c 14 N72-17325
- GRIFFIN, C. E.**  
Particle analyzing method and apparatus  
[NASA-CASE-NPO-15292-1] c 35 N83-27184
- GRIFFIN, C. R.**  
Antenna deployment mechanism for use with a spacecraft  
[NASA-CASE-GSC-12331-1] c 18 N80-14183
- GRIFFIN, F. D.**  
Device for determining the accuracy of the flare on a flared tube  
[NASA-CASE-XKS-03495] c 14 N69-39785  
Optical monitor panel Patent  
[NASA-CASE-XKS-03509] c 14 N71-23175

- GRIFFIN, JOHN W.**  
Doppler radar with multiphase modulation of transmitted and reflected signal  
[NASA-CASE-MSC-18808-1] c 32 N90-20280
- GRIFFIN, R. N.**  
Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c 34 N74-27744
- GRIFFIN, W. S.**  
Fluid jet amplifier  
[NASA-CASE-XLE-03512] c 12 N69-21466  
Fluid jet amplifier Patent  
[NASA-CASE-XLE-09341] c 12 N71-28741
- GRIFFITH, G. E.**  
High intensity heat and light unit Patent  
[NASA-CASE-XLA-00141] c 09 N70-33312
- GRIGGER, DAVID J.**  
Static feed water electrolysis subsystem development  
[NASA-CASE-MSC-21577-1-SB] c 25 N91-23271  
Water electrolysis  
[NASA-CASE-MSC-21572-1-SB] c 25 N92-28756
- GRIMALDI, MARGARET E.**  
Space station erectable manipulator placement system  
[NASA-CASE-MSC-21096-1] c 18 N89-12621  
Thermally activated retainer means  
[NASA-CASE-MSC-21793-1] c 16 N91-28186
- GRINER, D. B.**  
System for the measurement of ultra-low stray light levels  
[NASA-CASE-MFS-23513-1] c 74 N79-11865
- GRISAFFE, S. J.**  
Method of making a diffusion bonded refractory coating Patent  
[NASA-CASE-XLE-01604-2] c 15 N71-15610  
Nickel aluminate coated low alloy stainless steel  
[NASA-CASE-LEW-11267-1] c 17 N73-32414  
Method of protecting the surface of a substrate  
[NASA-CASE-LEW-11696-1] c 37 N75-13261  
Duplex aluminized coatings  
[NASA-CASE-LEW-11696-2] c 26 N75-19408  
Fused silicide coatings containing discrete particles for protecting niobium alloys  
[NASA-CASE-LEW-11179-1] c 27 N76-16229
- GRISWOLD, R. H., JR.**  
Dual output variable pitch turbofan actuation system  
[NASA-CASE-LEW-12419-1] c 07 N77-14025
- GROBMAN, J.**  
Electric propulsion engine test chamber Patent  
[NASA-CASE-XLE-00252] c 11 N70-34844
- GROHMANN, K.**  
Coal desulfurization by aqueous chlorination  
[NASA-CASE-NPO-14902-1] c 25 N82-29371
- GROOM, N. J.**  
Electromagnetic mirror drive system  
[NASA-CASE-XLA-03724] c 14 N69-27461  
Variable pulse width multiplier Patent  
[NASA-CASE-XLA-02850] c 09 N71-20447  
Annular momentum control device used for stabilization of space vehicles and the like  
[NASA-CASE-LAR-11051-1] c 15 N76-14158  
Magnetic suspension and pointing system  
[NASA-CASE-LAR-11889-2] c 37 N78-27424  
Magnetic suspension and pointing system  
[NASA-CASE-LAR-11889-1] c 35 N79-26372  
Rim inertial measuring system  
[NASA-CASE-LAR-12052-1] c 18 N81-29152
- GROOM, NELSON J.**  
Single element magnetic suspension actuator  
[NASA-CASE-LAR-13981-1] c 37 N91-21539  
Permanent magnet flux-biased magnetic actuator with flux feedback  
[NASA-CASE-LAR-13785-1] c 70 N91-21824
- GROSE, W. L.**  
Combustion detector  
[NASA-CASE-LAR-10739-1] c 14 N73-16484
- GROSS, C.**  
Method of temperature compensating semiconductor strain gages Patent  
[NASA-CASE-XLA-04555-1] c 14 N71-25892  
Infrared detectors  
[NASA-CASE-LAR-10728-1] c 14 N73-12445  
Electronically scanned pressure sensor module with in SITU calibration capability  
[NASA-CASE-LAR-12230-1] c 35 N79-14347  
Self-correcting electronically scanned pressure sensor  
[NASA-CASE-LAR-12686-1] c 35 N84-14491
- GROSS, W. J.**  
Method of fabricating an object with a thin wall having a precisely shaped slit  
[NASA-CASE-LAR-10409-1] c 31 N74-21059
- GROSVELD, FERDINAND M. W. A.**  
Sound attenuation apparatus  
[NASA-CASE-LAR-13968-1] c 71 N91-27913
- GROTH, W. G.**  
Optical inspection apparatus Patent  
[NASA-CASE-XMF-00462] c 14 N70-34298
- GROVE, C. H.**  
Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c 33 N79-10337
- GROVE, CHARLES H.**  
Optical shutter switching matrix  
[NASA-CASE-XLE-11392-1] c 74 N90-22383
- GROVES, W. O.**  
Method for the preparation of inorganic single crystal and polycrystalline electronic materials  
[NASA-CASE-XLE-02545-1] c 76 N79-21910
- GRUBBS, T. M.**  
Discrete local altitude sensing device Patent  
[NASA-CASE-XMS-03792] c 14 N70-41812  
Line cutter Patent  
[NASA-CASE-XMS-04072] c 15 N70-42017  
Tension measurement device Patent  
[NASA-CASE-XMS-04545] c 15 N71-22878  
Winch having cable position and load indicators Patent  
[NASA-CASE-MSC-12052-1] c 15 N71-24599
- GRUBER, C. L.**  
Method and apparatus for optical modulating a light signal Patent  
[NASA-CASE-GSC-10216-1] c 23 N71-26722
- GRUBER, R. P.**  
Closed Loop solar array-ion thruster system with power control circuitry  
[NASA-CASE-LEW-12780-1] c 20 N79-20179  
Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12586-1] c 44 N80-14472  
Simplified dc to dc converter  
[NASA-CASE-LEW-13495-1] c 33 N84-33663
- GRUBER, ROBERT P.**  
Arcjet power supply and start circuit  
[NASA-CASE-LEW-14374-1] c 09 N88-28939
- GRUNBAUM, B. W.**  
Automatic multiple-sample applicator and electrophoresis apparatus  
[NASA-CASE-ARC-10991-1] c 25 N78-14104  
Microelectrophoretic apparatus and process  
[NASA-CASE-ARC-11121-1] c 25 N79-14169
- GRUNTHANER, F. J.**  
Photoelectron spectrometer with means for stabilizing sample surface potential  
[NASA-CASE-NPO-13772-1] c 35 N78-10429
- GRUNTHANER, FRANK J.**  
MBE growth technology for high quality strained III-V layers  
[NASA-CASE-NPO-17723-1-CU] c 76 N90-26685  
Growth of III-V films by control of MBE growth front stoichiometry  
[NASA-CASE-NPO-17724-1-CU] c 76 N92-22035  
Hybridization of detector array and integrated circuit for readout  
[NASA-CASE-NPO-18062-1-CU] c 33 N92-30542
- GUEST, S. H.**  
Method and apparatus for suppressing ignition overpressure in solid rocket propulsion systems  
[NASA-CASE-MFS-25843-1] c 20 N83-17588
- GUILLLOTTE, R. J.**  
Infrared scanner Patent  
[NASA-CASE-XLA-00120] c 21 N70-33181
- GUIRGUIS, KAMAL S.**  
Valve lock  
[NASA-CASE-MFS-29764-1] c 37 N93-19049
- GUISINGER, J. E.**  
Starting circuit for vapor lamps and the like Patent  
[NASA-CASE-XNP-01058] c 09 N71-12540  
Variable frequency nuclear magnetic resonance spectrometer Patent  
[NASA-CASE-XNP-09830] c 14 N71-26266  
High voltage transistor amplifier with constant current load  
[NASA-CASE-NPO-11023] c 09 N72-17155  
Thermomagnetic recording and magneto-optic playback system having constant intensity laser beam control  
[NASA-CASE-NPO-11317-2] c 36 N74-13205  
Magneto-optic detection system with noise cancellation  
[NASA-CASE-NPO-11954-1] c 35 N78-29421  
Thermomagnetic recording and magnetic-optic playback system  
[NASA-CASE-NPO-10872-1] c 35 N79-16246  
Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
[NASA-CASE-NPO-11336-1] c 76 N79-16678
- GUIST, L. R.**  
Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c 44 N74-33379
- GULATI, SANDEEP**  
Terminal slider control of nonlinear robotic systems  
[NASA-CASE-NPO-18584-1-CU] c 37 N93-11177
- GUNGLE, R. L.**  
Self-sealing, unbonded, rocket motor nozzle closure Patent  
[NASA-CASE-XLA-02651] c 28 N70-41967
- GUNTER, W. D., JR.**  
Multiple pass reimagining optical system  
[NASA-CASE-ARC-10194-1] c 23 N73-20741  
Dual wavelength scanning Doppler velocimeter  
[NASA-CASE-ARC-10637-1] c 35 N75-16783  
Pseudo-backscatter laser Doppler velocimeter employing antiparallel-reflector in the forward direction  
[NASA-CASE-ARC-10970-1] c 36 N77-25501
- GUNTER, WILLIAM D.**  
Multiple axis reticle  
[NASA-CASE-ARC-11886-1-SB] c 35 N91-14591  
Matching optics for Gaussian beams  
[NASA-CASE-ARC-11892-1-SB] c 74 N92-16810  
Apparatus for precision focussing and positioning of a beam waist on a target  
[NASA-CASE-ARC-11916-1-SB] c 74 N92-16811
- GUNTER, WILLIAM D., JR.**  
Projection lens scanning laser velocimeter system  
[NASA-CASE-ARC-11547-1] c 36 N87-17026  
Dual mode laser velocimeter  
[NASA-CASE-ARC-11634-1] c 36 N88-14350
- GUNTHER, MICHAEL F.**  
An interferometer having optical fibers, and apparatus and method using the interferometer  
[NASA-CASE-LAR-14640-1-CU] c 74 N93-17052
- GUPTA, A.**  
Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NPO-14657-1] c 74 N81-17887  
Broadband optical radiation detector  
[US-PATENT-4,262,198] c 74 N83-19597
- GURTLE, C. A.**  
Ablation sensor  
[NASA-CASE-XLA-01781] c 14 N69-39975  
Pressurized cell micrometeoroid detector Patent  
[NASA-CASE-XLA-00936] c 14 N71-14996  
Dual measurement ablation sensor  
[NASA-CASE-LAR-10105-1] c 34 N74-15652
- GUSSOW, S. S.**  
Pseudo-noise test set for communication system evaluation  
[NASA-CASE-MFS-22671-1] c 35 N75-21582  
Method of and means for testing a tape record/playback system  
[NASA-CASE-MFS-22671-2] c 35 N77-17426
- GUSTAFSON, G. L.**  
Apparatus for measuring thermal conductivity Patent  
[NASA-CASE-KSC-01052] c 14 N71-15992
- GUSTINCIC, J. J.**  
Microwave limb sounder  
[NASA-CASE-NPO-14544-1] c 46 N82-12685
- GUTKOWSKI, GARY P.**  
Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-2] c 28 N91-14495
- GUTSHALL, R. L.**  
Star scanner  
[NASA-CASE-GSC-11569-1] c 89 N74-30886
- GUY, J. T., SR.**  
Disk pack cleaning table Patent Application  
[NASA-CASE-LAR-10590-1] c 15 N70-26819
- GUY, WALTER**  
Glove attachment  
[NASA-CASE-MSC-21632-1] c 54 N92-34210
- GWIN, HAL S.**  
Low-noise nozzle valve  
[NASA-CASE-MFS-28383-1] c 34 N91-14563
- GYORGAK, C. A.**  
Process for applying a protective coating for salt bath brazing Patent  
[NASA-CASE-XLE-00046] c 15 N70-33311  
Protective device for machine and metalworking tools Patent  
[NASA-CASE-XLE-01092] c 15 N71-22797  
Extrusion die for refractory metals Patent  
[NASA-CASE-XLE-06773] c 15 N71-23817

## H

- HABBAL, N. A.**  
Analog signal integration and reconstruction system Patent  
[NASA-CASE-NPO-10344] c 10 N71-26544  
System for quantizing graphic displays  
[NASA-CASE-NPO-10745] c 08 N72-22164
- HABRA, J. H.**  
Multiple varactor frequency doubler Patent  
[NASA-CASE-XMF-04958-1] c 10 N71-26414

- HADDICK, CLYDE M., JR.**  
Adaptive data acquisition multiplexing system and method  
[NASA-CASE-MSC-21170-1] c 17 N91-14371
- HADDEK, V.**  
Apparatus and method for measuring the Seebeck coefficient and resistivity of materials  
[NASA-CASE-NPO-11749] c 14 N73-28486  
Durable antistatic coating for polymethylmethacrylate  
[NASA-CASE-NPO-13867-1] c 27 N78-14164
- HADLAND, W. O.**  
Control device Patent  
[NASA-CASE-XAC-10019] c 15 N71-23809  
Two degree inverted flexure  
[NASA-CASE-ARC-10345-1] c 15 N73-12488
- HADLEY, H. C., JR.**  
High field CdS detector for infrared radiation  
[NASA-CASE-LAR-11027-1] c 35 N74-18088
- HADT, W. F.**  
Shaft seal assembly for high speed and high pressure applications  
[NASA-CASE-LEW-11873-1] c 37 N79-22475
- HADY, W. F.**  
High speed, self-acting shaft seal  
[NASA-CASE-LEW-11274-1] c 37 N75-21631
- HAENNER, C. L.**  
Peen plating  
[NASA-CASE-GSC-11163-1] c 15 N73-32360  
Static coefficient test method and apparatus  
[NASA-CASE-GSC-11893-1] c 35 N76-31489
- HAENNER, CARL L.**  
High temperature solder device for flat cables  
[NASA-CASE-GSC-13344-1] c 26 N92-29094
- HAERTHER, L. W.**  
Chassis unit insert tightening-extract device  
[NASA-CASE-XMS-01077-1] c 37 N79-33467
- HAERTLING, GENE H.**  
Method of preforming and assembling superconducting circuit elements  
[NASA-CASE-LAR-14395-1-CU] c 33 N91-28490
- HAUSSERMANN, W.**  
Velocity measurement system  
[NASA-CASE-MFS-23363-1] c 35 N78-32396  
Magnetic field control  
[NASA-CASE-MFS-23828-1] c 33 N82-26569
- HAFLE, R. S.**  
Digital plus analog output encoder  
[NASA-CASE-GSC-12115-1] c 62 N76-31946
- HAGEDORN, N. H.**  
Negative electrode catalyst for the iron chromium redox energy storage system  
[NASA-CASE-LEW-14028-1] c 44 N86-19721
- HAGEDORN, NORMAN H.**  
Alkali metal carbon dioxide electrochemical system for energy storage and/or conversion of carbon dioxide to oxygen  
[NASA-CASE-LEW-14973-1] c 44 N93-28974
- HAGIHARA, F. S.**  
Frequency to analog converter Patent  
[NASA-CASE-XNP-07040] c 08 N71-12500
- HAGOOD, G. J., JR.**  
Function generator for synthesizing complex vibration mode patterns  
[NASA-CASE-LAR-10310-1] c 10 N73-20253
- HAINES, R. F.**  
Visual examination apparatus  
[NASA-CASE-ARC-10329-1] c 05 N73-26072  
Visual examination apparatus  
[US-PATENT-RE-28,921] c 52 N76-30793  
Optical instrument employing reticle having preselected visual response pattern formed thereon  
[NASA-CASE-ARC-10976-1] c 74 N77-22950  
Simulator scene display evaluation device  
[NASA-CASE-ARC-11504-1] c 09 N86-32447
- HALE, R. R.**  
Solar energy modulator  
[NASA-CASE-NPO-15388-1] c 44 N84-28203
- HALEY, C. T.**  
Clock setter  
[NASA-CASE-LAR-11458-1] c 35 N76-16392
- HALEY, F. C.**  
Cavity radiometer Patent  
[NASA-CASE-XNP-08961] c 14 N71-24809  
Plural output optometric sample cell and analysis system  
[NASA-CASE-NPO-10233-1] c 74 N78-33913
- HALL, A. C.**  
Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c 54 N81-27806
- HALL, D. F.**  
Apparatus for measuring electric field strength on the surface of a model vehicle Patent  
[NASA-CASE-XLE-02038] c 09 N71-16086
- HALL, E. D.**  
Spectroscope equipment using a slender cylindrical reflector as a substitute for a slit Patent  
[NASA-CASE-XGS-08269] c 23 N71-26206
- HALL, E. H.**  
Method for determining presence of OH in magnesium oxide  
[NASA-CASE-NPO-10774] c 06 N72-17095
- HALL, EARL T.**  
Passive fetal monitoring sensor  
[NASA-CASE-LAR-14088-1-CU] c 35 N92-33016
- HALL, J. B., JR.**  
Surface roughness detector Patent  
[NASA-CASE-XLA-00203] c 14 N70-34161  
Liquid waste feed system  
[NASA-CASE-LAR-10365-1] c 05 N72-27102  
Automatic liquid inventory collecting and dispensing unit  
[NASA-CASE-LAR-11071-1] c 35 N75-19611
- HALL, J. F., JR.**  
Illumination system including a virtual light source Patent  
[NASA-CASE-HQN-10781] c 23 N71-30292
- HALL, J. H.**  
High powered arc electrodes  
[NASA-CASE-LEW-11162-1] c 33 N74-12913
- HALL, WILLIAM A.**  
System for simultaneously loading program to master computer memory devices and corresponding slave computer memory devices  
[NASA-CASE-MSC-21387-1] c 61 N93-18855
- HALLAM, K. L.**  
Image tube  
[NASA-CASE-GSC-11602-1] c 33 N74-21850  
Wide-angle flat field telescope  
[NASA-CASE-GSC-12825-1] c 74 N86-28732
- HALLBERG, F. C.**  
Turn on transient limiter Patent  
[NASA-CASE-GSC-10413] c 10 N71-26531  
Method and apparatus for slicing crystals  
[NASA-CASE-GSC-12291-1] c 76 N80-18951  
Crystal cleaving machine  
[NASA-CASE-GSC-12584-1] c 37 N82-32730  
Workpiece positioning vise  
[NASA-CASE-GSC-12762-1] c 37 N84-28083
- HALLOCK, J. N.**  
Multiple hologram recording and readout system Patent  
[NASA-CASE-ERC-10151] c 16 N71-29131
- HALPERT, G.**  
Frangible electrochemical cell  
[NASA-CASE-XGS-10010] c 03 N72-15986
- HALPERT, GERALD**  
Overcharge and overdischarge protection of ambient temperature secondary lithium cells  
[NASA-CASE-NPO-18343-1-CU] c 33 N93-11456  
Anode for rechargeable ambient temperature lithium cells  
[NASA-CASE-NPO-18580-1-CU] c 33 N93-17278
- HAMERMESH, C. L.**  
Ambient cure polyimide foams  
[NASA-CASE-ARC-11170-1] c 27 N79-11215
- HAMILTON, DAVID A.**  
Pre-integrated truss space station and method of assembly  
[NASA-CASE-MSC-22015-1] c 18 N93-20042
- HAMILTON, WILLIAM DAVID**  
Directional solidification of superalloys  
[NASA-CASE-MFS-28314-1] c 26 N91-14462
- HAMLET, J. F.**  
Automatic quadrature control and measuring system  
[NASA-CASE-MFS-21660-1] c 35 N74-21017  
LC-oscillator with automatic stabilized amplitude via bias current control  
[NASA-CASE-MFS-21698-1] c 33 N74-26732
- HAMMACK, J. B.**  
Space capsule Patent  
[NASA-CASE-XLA-00149] c 31 N70-37938  
Space capsule Patent  
[NASA-CASE-XLA-01332] c 31 N71-15664
- HAMMOND, A. D.**  
Variable sweep aircraft Patent  
[NASA-CASE-XLA-03659] c 02 N71-11041
- HAMNER, RICHARD M.**  
Wet atmospheric generation apparatus  
[NASA-CASE-MFS-28177-1] c 35 N91-21496
- HAMPTON, HERBERT R.**  
Miniaturization of flight deflection measurement system  
[NASA-CASE-LAR-13628-1] c 35 N90-23707  
Electro-optical spin measurement system  
[NASA-CASE-LAR-13629-1] c 09 N91-14356
- HANCHEY, K. K.**  
Device for preventing high voltage arcing in electron beam welding Patent  
[NASA-CASE-XMF-08522] c 15 N71-19486
- HANCOCK, BRUCE R.**  
MBE growth technology for high quality strained III-V layers  
[NASA-CASE-NPO-17723-1-CU] c 76 N90-26685  
Growth of III-V films by control of MBE growth front stoichiometry  
[NASA-CASE-NPO-17724-1-CU] c 76 N92-22035
- HAND, P. J.**  
Temperature compensated digital inertial sensor  
[NASA-CASE-NPO-13044-1] c 35 N74-15094
- HANDLYKKEN, M. B.**  
Shaft transducer having dc output proportional to angular velocity  
[NASA-CASE-NPO-15706-1] c 35 N84-28017
- HANDSCHUH, ROBERT F.**  
Thermal stress minimized, two component, turbine shroud seal  
[NASA-CASE-LEW-14212-1] c 37 N88-23978
- HANGER, R. T.**  
Method and apparatus for fabricating improved solar cell modules  
[NASA-CASE-NPO-14416-1] c 44 N81-14389
- HANKINSON, T. W. E.**  
Fatigue-resistant shear pin  
[NASA-CASE-XLA-09122] c 15 N69-27505
- HANNA, M. F.**  
Dual polarity full wave dc motor drive Patent  
[NASA-CASE-XNP-07477] c 09 N71-26092  
Event sequence detector  
[NASA-CASE-NPO-11703-1] c 30 N73-32144  
High isolation RF signal selection switches  
[NASA-CASE-NPO-13081-1] c 33 N74-22814  
Method and apparatus for precision control of radiometer  
[NASA-CASE-NPO-15398-1] c 35 N84-22931
- HANSEN, D. O.**  
Particle parameter analyzing system  
[NASA-CASE-XLE-06094] c 33 N78-17293
- HANSEN, G. R.**  
Phase sensitive guidance sensor for wire-following vehicles  
[NASA-CASE-NPO-15341-1] c 35 N84-33769
- HANSEN, G. R., JR.**  
Automatic vehicle location system  
[NASA-CASE-NPO-11850-1] c 32 N74-12912  
Vehicle locating system utilizing AM broadcasting station carriers  
[NASA-CASE-NPO-13217-1] c 32 N75-26194
- HANSEN, I. G.**  
Flow angle sensor and read out system Patent  
[NASA-CASE-XLE-04503] c 14 N71-24864  
Low level signal limiter  
[NASA-CASE-XLE-04791] c 32 N74-22096
- HANSEN, S.**  
Thrust dynamometer Patent  
[NASA-CASE-XLE-00702] c 14 N70-40203  
Method of making screen by casting Patent  
[NASA-CASE-XLE-00953] c 15 N71-15966  
Fluid flow control valve Patent  
[NASA-CASE-XLE-00703] c 15 N71-15967  
Thrust dynamometer Patent  
[NASA-CASE-XLE-05260] c 14 N71-20429
- HANSON, M. P.**  
Turbo-machine blade vibration damper Patent  
[NASA-CASE-XLE-00155] c 28 N71-29154
- HANSON, P. W.**  
Lift balancing device  
[NASA-CASE-LAR-10348-1] c 11 N73-12264
- HANSON, R. N.**  
Tensile strength testing device Patent  
[NASA-CASE-XNP-05634] c 15 N71-24834  
Hydroforming techniques using epoxy molds Patent  
[NASA-CASE-XLE-05641-1] c 15 N71-26346
- HANST, P. L.**  
Repetitively pulsed, wavelength selective laser Patent  
[NASA-CASE-ERC-10178] c 16 N71-24832
- HAQ, K. E.**  
A method for the deposition of beta-silicon carbide by isopitaxy  
[NASA-CASE-ERC-10120] c 26 N69-33482
- HARADA, Y.**  
Method of preparing zinc orthotitanate pigment  
[NASA-CASE-MFS-23345-1] c 27 N77-30237
- HARALSON, H. S.**  
Ultrasonic scanning system for in-place inspection of brazed tube joints  
[NASA-CASE-MFS-20767-1] c 38 N74-15130
- HARAWAY, W. M., JR.**  
Thermal protection ablation spray system Patent  
[NASA-CASE-XLA-04251] c 18 N71-26100  
Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c 24 N75-30260  
Vacuum pressure molding technique  
[NASA-CASE-LAR-10073-1] c 37 N76-24575

- HARD, T. M.**  
Optical systems having spatially invariant outputs  
[NASA-CASE-ERC-10248] c 14 N72-17323
- HARDGROVE, W. F.**  
Omni-directional anisotropic molecular trap Patent  
[NASA-CASE-XGS-00783] c 30 N71-17788
- HARDY, J. C.**  
Omnidirectional joint Patent  
[NASA-CASE-XMS-09635] c 05 N71-24623  
Restraining mechanism  
[NASA-CASE-MS-13054] c 54 N78-17677
- HARF, FREDRIC H.**  
Heat treatment for superalloy  
[NASA-CASE-LEW-14262-1] c 26 N87-28647
- HARMAN, J. N., III**  
Pulse activated polarographic hydrogen detector Patent  
[NASA-CASE-XMF-06531] c 14 N71-17575
- HARMS, V. W.**  
Apparatus for automatically stabilizing the attitude of a nonguided vehicle  
[NASA-CASE-ARC-10134] c 30 N72-17873
- HAROULES, G. G.**  
Method and means for providing an absolute power measurement capability Patent  
[NASA-CASE-ERC-11020] c 14 N71-26774  
Clear air turbulence detector  
[NASA-CASE-ERC-10081] c 14 N72-28437  
Method and apparatus for measuring solar activity and atmospheric radiation effects  
[NASA-CASE-ERC-10276] c 14 N73-26432
- HARPER-TERVET, J.**  
Mixed polyvalent-monovalent metal coating for carbon-graphite fibers  
[NASA-CASE-NPO-14987-1] c 24 N83-33950
- HARPER, C. A.**  
Thermal conductive connection and method of making same Patent  
[NASA-CASE-XMS-02087] c 09 N70-41717
- HARPER, L. L.**  
Laser Resonator  
[NASA-CASE-GSC-12565-1] c 36 N84-14509
- HARPER, P. M., SR.**  
Tire/wheel concept  
[NASA-CASE-LAR-11695-2] c 37 N81-24443
- HARRAP, V.**  
Integrated circuit including field effect transistor and cermet resistor  
[NASA-CASE-ERC-10835-1] c 09 N72-33205
- HARRIGILL, W. T., JR.**  
Regulated high efficiency, lightweight capacitor-diode multiplier dc to dc converter  
[NASA-CASE-LEW-12791-1] c 33 N78-32341
- HARRIS, D. M.**  
Recorder using selective noise filter  
[NASA-CASE-ERC-10112] c 07 N72-21119
- HARRIS, FRANK W.**  
Polyphenylquinoxalines containing alkylendioxy groups  
[NASA-CASE-LAR-13601-1-CU] c 27 N89-14337
- HARRIS, J. MILTON**  
Polymer-coated surfaces to control surface zeta potential  
[NASA-CASE-MFS-26050-1] c 27 N92-25397
- HARRIS, R. F.**  
Method for fabricating a mass spectrometer inlet leak  
[NASA-CASE-GSC-12077-1] c 35 N77-24455
- HARRIS, R. P.**  
Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c 37 N84-12491  
High-temperature, high-pressure optical cell  
[NASA-CASE-MFS-26000-1] c 74 N87-14971
- HARRIS, R. V., JR.**  
Supersonic aircraft Patent  
[NASA-CASE-XLA-04451] c 02 N71-12243
- HARRIS, RICHARD A.**  
Discrete event simulation tool for analysis of qualitative models of continuous processing systems  
[NASA-CASE-MS-21465-1] c 61 N91-14741
- HARRISON, D. R.**  
Transducer circuit and catheter transducer Patent  
[NASA-CASE-ARC-10132-1] c 09 N71-24597  
Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-3] c 33 N75-19520  
Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-2] c 33 N75-25041
- HARRISON, DEAN R.**  
Laser Doppler velocimeter multiplexer interface for simultaneous measured events  
[NASA-CASE-ARC-11536-1] c 33 N89-14384
- HARRISON, E. S.**  
Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c 27 N78-31232
- HARRISON, F. L.**  
Life raft stabilizer  
[NASA-CASE-MS-12393-1] c 02 N73-26006
- HARRISON, R. G., JR.**  
Pressure variable capacitor  
[NASA-CASE-XNP-09752] c 14 N69-21541  
Temperature telemetric transmitter Patent  
[NASA-CASE-NPO-10649] c 07 N71-24840
- HARSTAD, K. G.**  
Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c 36 N77-26477
- HART-SMITH, L. J.**  
Optimized bolted joint  
[NASA-CASE-LAR-13250-1] c 37 N86-27630
- HARTENSTEIN, R. G.**  
Accelerometer with FM output Patent  
[NASA-CASE-XLA-00492] c 14 N70-34799  
Variable time constant smoothing circuit Patent  
[NASA-CASE-XGS-01983] c 10 N70-41964
- HARTING, D. R.**  
Strain gage Patent Application  
[NASA-CASE-FRC-10053] c 14 N70-35587
- HARTMANN, M. J.**  
Supercharged topping rocket propellant feed system  
[NASA-CASE-XLE-02062-1] c 20 N80-14188
- HARTOP, R. W.**  
Reflex feed system for dual frequency antenna with frequency cutoff filter  
[NASA-CASE-NPO-14022-1] c 32 N78-31321  
Waveguide cooling system  
[NASA-CASE-NPO-15401-1] c 32 N83-27085
- HARTZ, LESLIE S.**  
Extra-vehicular activity translation tool  
[NASA-CASE-MS-21955-1] c 37 N93-14842
- HARVEY, G. A.**  
Maksutov spectrograph Patent  
[NASA-CASE-XLA-10402] c 14 N71-29041  
Apparatus for photographing meteors  
[NASA-CASE-LAR-10226-1] c 14 N73-19419
- HARVEY, ROBERT LYNN**  
Apparatus for simulating an exoatmospheric structure  
[NASA-CASE-MS-21975-1] c 14 N93-22016
- HARVEY, W. D.**  
Heat sensing instrument Patent  
[NASA-CASE-XLA-01551] c 14 N71-22989
- HARWELL, R. J.**  
Nonflammable coating compositions  
[NASA-CASE-MFS-20486-2] c 27 N74-17283
- HARWELL, WILLIAM D.**  
Apparatus and method of capturing an orbiting spacecraft  
[NASA-CASE-MS-20979-1] c 37 N87-22985  
Magnetic attachment mechanism  
[NASA-CASE-MS-21095-1] c 37 N89-12866
- HASBACH, W. A.**  
Solid state matrices  
[NASA-CASE-NPO-10591] c 03 N72-22041
- HASKELL, R. E.**  
Optical process for producing classification maps from multispectral data  
[NASA-CASE-MS-14472-1] c 43 N77-10584  
Interactive color display for multispectral imagery using correlation clustering  
[NASA-CASE-MS-16253-1] c 32 N79-20297
- HASLETT, R. A.**  
Multi-leg heat pipe evaporator  
[NASA-CASE-MS-20812-1] c 34 N86-27593
- HASLIM, L. A.**  
Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797
- HASLIM, LEONARD A.**  
Electro-expulsive separation system  
[NASA-CASE-ARC-11613-1] c 33 N87-28833  
Airborne rescue system  
[NASA-CASE-ARC-11909-1] c 03 N91-31113
- HASSAN, AHMED A.**  
Geometries for roughness shapes in laminar flow  
[NASA-CASE-LAR-13255-1] c 02 N87-16793
- HASSLER, J. M., JR.**  
Remote pivot decoupler pylon: Wing/store flutter suppressor  
[NASA-CASE-LAR-13173-1] c 05 N87-14314
- HASSON, D. F.**  
Space and atmospheric reentry vehicle Patent  
[NASA-CASE-XGS-00260] c 31 N70-37924
- HATAKEYAMA, L. F.**  
Method and system for ejecting fairing sections from a rocket vehicle  
[NASA-CASE-GSC-10590-1] c 31 N73-14853
- HATCH, J. E.**  
Energy conversion apparatus Patent  
[NASA-CASE-XLE-00212] c 03 N70-34134
- HATCHER, N. M.**  
Electromagnetic mirror drive system  
[NASA-CASE-XLA-03724] c 14 N69-27461
- Infrared scanner Patent  
[NASA-CASE-XLA-00120] c 21 N70-33181  
Automatic balancing device Patent  
[NASA-CASE-LAR-10774] c 10 N71-13545  
Altitude sensor for space vehicles Patent  
[NASA-CASE-XLA-00793] c 21 N71-22880
- HATFIELD, J. J.**  
Integrated time shared instrumentation display Patent  
[NASA-CASE-XLA-01952] c 08 N71-12507
- HATHAWAY, M. E.**  
Frangible tube energy dissipation Patent  
[NASA-CASE-XLA-00754] c 15 N70-34850
- HAUER, ROBERT L.**  
Removable hand hold  
[NASA-CASE-LEW-15196-1] c 37 N92-29092
- HAUGE, G.**  
Low distortion automatic phase control circuit  
[NASA-CASE-MFS-21671-1] c 33 N74-22885
- HAURY, V. E.**  
Hydrazinium nitroformate propellant stabilized with nitroguanidine  
[NASA-CASE-NPO-12000] c 27 N72-25699  
Hydrazinium nitroformate propellant with saturated polymeric hydrocarbon binder  
[NASA-CASE-NPO-12015] c 27 N73-16764
- HAUSER, J. A.**  
High pressure gas filter system Patent  
[NASA-CASE-MFS-12806] c 14 N71-17588  
High pressure helium purifier Patent  
[NASA-CASE-XMF-06888] c 15 N71-24044
- HAVENS, D. E.**  
Meter for use in detecting tension in straps having predetermined elastic characteristics  
[NASA-CASE-MFS-22189-1] c 35 N75-19615
- HAVENS, S. J.**  
Polyarylene ethers with improved properties  
[NASA-CASE-LAR-13555-1] c 23 N86-32526
- HAVENS, STEPHEN J.**  
Ethylenyl terminated ester oligomers and polymers therefrom  
[NASA-CASE-LAR-13118-2] c 27 N87-16907  
Process for crosslinking and extending conjugated diene-containing polymers  
[NASA-CASE-LAR-13452-1] c 27 N87-22848  
Polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-13633-1] c 27 N87-24575  
Polyphenylquinoxalines containing alkylendioxy groups  
[NASA-CASE-LAR-13601-1-CU] c 27 N89-14337  
Process for crosslinking methylene-containing aromatic polymers with ionizing radiation  
[NASA-CASE-LAR-13448-1] c 27 N90-21198  
Acetylene terminated aspartimides and resins therefrom  
[NASA-CASE-LAR-14188-1] c 27 N90-23545  
N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14188-2] c 23 N91-14419  
Polyimides with carbonyl and ether connecting groups between the aromatic rings  
[NASA-CASE-LAR-14001-1] c 27 N92-33008  
Methyl substituted polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-14351-1] c 27 N92-33015  
Polyimides with improved compression moldability  
[NASA-CASE-LAR-14457-1] c 27 N93-25997
- HAWKINS, C. A.**  
System for the measurement of ultra-low stray light levels  
[NASA-CASE-MFS-23513-1] c 74 N79-11865
- HAWLEY, J. J.**  
Method of erasing target material of a vidicon tube or the like Patent  
[NASA-CASE-XNP-06028] c 09 N71-23189
- HAWLEY, W. W.**  
Omnidirectional acceleration device Patent  
[NASA-CASE-HQN-10780] c 14 N71-30265
- HAYATI, SAMAD A.**  
Bilevel shared control for teleoperators  
[NASA-CASE-NPO-17800-1-CU] c 37 N92-22036
- HAYDEN, R. R.**  
Magnetic counter Patent  
[NASA-CASE-XNP-08836] c 09 N71-12515
- HAYES, BENITA C.**  
Bright light delivery system  
[NASA-CASE-MFS-28723-1] c 52 N93-17058
- HAYNES, D. P.**  
Remote water monitoring system  
[NASA-CASE-LAR-11973-1] c 35 N78-27384
- HAYNES, DAVID P.**  
Adjustable mount for electro-optic transducers in an evacuated cryogenic system  
[NASA-CASE-LAR-13100-1] c 37 N87-23982

- HAYNES, J. L.**  
 Ultrasonic scanning system for in-place inspection of brazed tube joints  
 [NASA-CASE-MFS-20767-1] c 38 N74-15130
- HAYNIE, C. C.**  
 Variable contour securing system  
 [NASA-CASE-MSC-16270-1] c 37 N78-27423  
 Heat treat fixture and method of heat treating  
 [NASA-CASE-LAR-11821-1] c 26 N80-28492
- HAYNIG, C. C.**  
 Apparatus for positioning modular components on a vertical or overhead surface  
 [NASA-CASE-LAR-11465-1] c 37 N76-21554
- HAYNOS, J. G.**  
 Interconnection of solar cells Patent  
 [NASA-CASE-XGS-01475] c 03 N71-11058  
 Frangible electrochemical cell  
 [NASA-CASE-XGS-10010] c 03 N72-15986
- HAYS, L. G.**  
 Fluid phase analyzer Patent  
 [NASA-CASE-NPO-10691] c 14 N71-26199  
 Two phase flow system with discrete impinging two-phase jets  
 [NASA-CASE-NPO-11556] c 12 N72-25292  
 Observation window for a gas confining chamber  
 [NASA-CASE-NPO-10890] c 11 N73-12265  
 Flow control valve  
 [NASA-CASE-NPO-11951-1] c 37 N74-21065
- HEARN, C. P.**  
 Wideband VCO with high phase stability Patent  
 [NASA-CASE-XLA-03893] c 10 N71-27271  
 Multichannel logarithmic RF level detector  
 [NASA-CASE-LAR-11021-1] c 32 N76-14321  
 Phase modulating with odd and even finite power series of a modulating signal  
 [NASA-CASE-LAR-11607-1] c 32 N77-14292
- HEATH, D. MICHELE**  
 Thermal remote anemometer system  
 [NASA-CASE-LAR-13508-1] c 35 N92-21710  
 Method of remotely characterizing thermal properties of a sample  
 [NASA-CASE-LAR-13508-3-CU] c 09 N93-11057
- HEBERLIG, J. C.**  
 Survival couch Patent  
 [NASA-CASE-XLA-00118] c 05 N70-33285
- HECHT, DIANA L.**  
 Radiation sensitive area detection device and method  
 [NASA-CASE-MFS-28563-1] c 35 N91-25388
- HECHT, MICHAEL H.**  
 Surface modification using low energy ground state ion beams  
 [NASA-CASE-NPO-17498-1-CU] c 72 N91-14813
- HECHT, R.**  
 Apparatus for absolute pressure measurement  
 [NASA-CASE-LAR-10000] c 14 N73-30394
- HECKELMAN, J. D.**  
 Multialarm summary alarm Patent  
 [NASA-CASE-XLE-03061-1] c 10 N71-24798
- HECKLER, C. H.**  
 Mercury capillary interrupter Patent  
 [NASA-CASE-XNP-02251] c 12 N71-20896  
 Method for making conductors for ferrite memory arrays  
 [NASA-CASE-LAR-10994-1] c 24 N75-13032
- HEDGEPEETH, J. M.**  
 Foldable beam  
 [NASA-CASE-LAR-12077-1] c 31 N81-25259
- HEDGEPEETH, JOHN M.**  
 Synchronously deployable double fold beam and planar truss structure  
 [NASA-CASE-LAR-13490-1] c 18 N91-27199
- HEDLUND, R. C.**  
 Precision rectifier with FET switching means Patent  
 [NASA-CASE-ARC-10101-1] c 09 N71-33109  
 Self-tuning bandpass filter  
 [NASA-CASE-ARC-10264-1] c 09 N73-20231
- HEER, E.**  
 Pressure seal Patent  
 [NASA-CASE-NPO-10796] c 15 N71-27068
- HEFFERMAN, J. T.**  
 Surface finishing  
 [NASA-CASE-MSC-12631-3] c 27 N81-14077
- HEFFERMAN, J. T.**  
 Surface finishing  
 [NASA-CASE-MSC-12631-1] c 24 N77-28225
- HEFLINGER, L. O.**  
 Spatial filter for Q-switched lasers  
 [NASA-CASE-LEW-12164-1] c 36 N77-32478  
 Microbalance  
 [NASA-CASE-MSC-11242] c 35 N78-17358
- HEFNER, BILL BRYAN, JR.**  
 A quality monitor and monitoring technique employing optically stimulated electron emission  
 [NASA-CASE-LAR-15063-1] c 38 N93-30414
- HEFNER, JERRY N.**  
 Combined riblet and lebu drag reduction system  
 [NASA-CASE-LAR-13286-1] c 02 N88-14071
- HEIDMANN, M. F.**  
 Injector for bipropellant rocket engines Patent  
 [NASA-CASE-XMF-00148] c 28 N70-38710  
 Instrument for the quantitative measurement of radiation at multiple wave lengths Patent  
 [NASA-CASE-XLE-00011] c 14 N70-41946  
 Control of transverse instability in rocket combustors Patent  
 [NASA-CASE-XLE-04603] c 33 N71-21507  
 Burning rate control of solid propellants Patent  
 [NASA-CASE-XLE-03494] c 27 N71-21819
- HEIDT, M. F.**  
 Ultrastable calibrated light source  
 [NASA-CASE-MSC-12293-1] c 14 N72-27411
- HEIER, W. C.**  
 Method for molding compounds Patent  
 [NASA-CASE-XLA-01091] c 15 N71-10672  
 Evacuated displacement compression molding  
 [NASA-CASE-LAR-10782-1] c 31 N74-14133  
 Method for compression molding of thermosetting plastics utilizing a temperature gradient across the plastic to cure the article  
 [NASA-CASE-LAR-10489-1] c 31 N74-18124  
 Method of laminating structural members  
 [NASA-CASE-XLA-11028-1] c 24 N74-27035  
 Molding apparatus  
 [NASA-CASE-LAR-10489-2] c 31 N74-32920  
 Evacuated, displacement compression mold  
 [NASA-CASE-LAR-10782-2] c 31 N75-13111  
 Molded composite pyrogen igniter for rocket motors  
 [NASA-CASE-LAR-12018-1] c 20 N78-24275
- HEIMBUCH, A. H.**  
 Chromato-fluorographic drug detector  
 [NASA-CASE-ARC-10633-1] c 25 N74-26947  
 Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
 [NASA-CASE-ARC-11429-1-CU] c 27 N86-20560  
 High performance mixed bismide resins and composites based thereon  
 [NASA-CASE-ARC-11538-1SB] c 24 N86-21590
- HEIMBUCH, ALVIN H.**  
 Process for curing bismaleimide resins  
 [NASA-CASE-ARC-11429-4CU] c 27 N87-15304  
 Vinyl stilbazoles  
 [NASA-CASE-ARC-11429-3CU] c 27 N87-16908  
 Structural panels  
 [NASA-CASE-ARC-11429-2CU] c 27 N87-22845
- HEIMERL, G. J.**  
 Extensometer frame  
 [NASA-CASE-XLA-10322] c 15 N72-17452
- HEIN, L. A.**  
 Mechanical thermal motor  
 [NASA-CASE-MFS-23062-1] c 37 N77-12402  
 Spherical bearing  
 [NASA-CASE-MFS-23447-1] c 37 N79-11404  
 Amplified wind turbine apparatus  
 [NASA-CASE-MFS-23830-1] c 44 N82-24639  
 Resilient seal ring assembly with spring means applying force to wedge member  
 [NASA-CASE-MFS-25678-1] c 37 N84-11497
- HEIN, LEOPOLD A.**  
 Tube coupling device  
 [NASA-CASE-MFS-25964-2] c 37 N87-22977
- HEINDL, J. C.**  
 Fluid lubricant system Patent  
 [NASA-CASE-XNP-03972] c 15 N71-23048
- HEINEMANN, K.**  
 Method of forming aperture plate for electron microscope  
 [NASA-CASE-ARC-10448-2] c 74 N75-12732  
 Electron microscope aperture system  
 [NASA-CASE-ARC-10448-3] c 35 N77-14408
- HEINEY, O. K.**  
 Self-obturator, gas operated launcher  
 [NASA-CASE-NPO-11013] c 11 N72-22247
- HEISMAN, R. M.**  
 Tube dimpling tool Patent  
 [NASA-CASE-XMS-06876] c 15 N71-21536  
 Heat treat fixture and method of heat treating  
 [NASA-CASE-LAR-11821-1] c 26 N80-28492
- HELBERT, W. B., JR.**  
 Method of repairing discontinuity in fiberglass structures  
 [NASA-CASE-LAR-10416-1] c 24 N74-30001
- HELD, D. N.**  
 Synthetic aperture radar target simulator  
 [NASA-CASE-NPO-15024-1] c 32 N84-27951
- HELD, DANIEL N.**  
 Data volume reduction for imaging radar polarimetry  
 [NASA-CASE-NPO-17184-1-CU] c 32 N88-26541
- HELLBAUM, R. F.**  
 Logic AND gate for fluid circuits Patent  
 [NASA-CASE-XLA-07391] c 12 N71-17579
- Technique of duplicating fragile core  
 [NASA-CASE-XLA-07829] c 15 N72-16329  
 Fluid pressure amplifier and system  
 [NASA-CASE-LAR-10868-1] c 33 N74-11050
- HELLBAUM, RICHARD F.**  
 An interferometer having fused optical fibers, and apparatus and method using the interferometer  
 [NASA-CASE-LAR-14640-1-CU] c 74 N93-17052
- HELLER, C.**  
 Space probe/satellite ejection apparatus for spacecraft  
 [NASA-CASE-MFS-15429-1] c 18 N84-22609  
 Adjustable indicating device for load position  
 [NASA-CASE-MFS-28008-1] c 35 N85-20300  
 Space probe/satellite ejection apparatus for spacecraft  
 [NASA-CASE-MFS-25429-1] c 18 N86-20469
- HELLER, J. A.**  
 Apparatus and method for reducing thermal stress in a turbine rotor  
 [NASA-CASE-LEW-12232-1] c 07 N79-10057
- HELLMANN, R. F.**  
 Apparatus for purging systems handling toxic, corrosive, noxious and other fluids Patent  
 [NASA-CASE-XMS-01905] c 12 N71-21089
- HELMAN, D. D.**  
 Method for repair of thin glass coatings  
 [NASA-CASE-KSC-11097-1] c 27 N82-33520
- HELMS, C. R.**  
 Prosthetic urinary sphincter  
 [NASA-CASE-MFS-23717-1] c 52 N81-25660
- HEMMATI, HAMID**  
 Tm,Ho:YLF laser end-pumped by a semiconductor diode laser array  
 [NASA-CASE-NPO-17282-1-CU] c 36 N91-15528  
 Electro-optic resonant phase modulator  
 [NASA-CASE-NPO-18702-1-CU] c 74 N92-23551
- HENDEL, F. J.**  
 Thermoplastic rubber comprising ethylene-vinyl acetate copolymer, asphalt and fluxing oil  
 [NASA-CASE-NPO-08835-1] c 27 N78-33228
- HENDERSON, DAVID E.**  
 Reconfigurable work station for a video display unit and keyboard  
 [NASA-CASE-MFS-26009-1-SB] c 54 N88-24163
- HENDERSON, M. E.**  
 Gas chromatograph injection system  
 [NASA-CASE-ARC-10344-2] c 35 N75-26334
- HENDRICKS, H. D.**  
 Method of detecting oxygen in a gas  
 [NASA-CASE-LAR-10668-1] c 06 N73-16106
- HENLEY, W. H.**  
 Method of fabricating an object with a thin wall having a precisely shaped slit  
 [NASA-CASE-LAR-10409-1] c 31 N74-21059
- HENNIGAN, T. J.**  
 Apparatus for measuring swelling characteristics of membranes  
 [NASA-CASE-XGS-03865] c 14 N69-21363  
 Prevention of pressure build-up in electrochemical cells Patent  
 [NASA-CASE-XGS-01419] c 03 N70-41864  
 Non-magnetic battery case Patent  
 [NASA-CASE-XGS-00886] c 03 N71-11053  
 Method and apparatus for battery charge control Patent  
 [NASA-CASE-XGS-05432] c 03 N71-19438  
 Sealing device for an electrochemical cell Patent  
 [NASA-CASE-XGS-02630] c 03 N71-22974  
 Sealed electrochemical cell provided with a flexible casing Patent  
 [NASA-CASE-XGS-01513] c 03 N71-23336
- HENNINGER, DONALD L.**  
 Active synthetic soil  
 [NASA-CASE-MSC-21954-1-NP] c 51 N93-19054
- HENRY, A. W.**  
 Dicyanoacetylene polymers Patent  
 [NASA-CASE-XNP-03250] c 06 N71-23500
- HENRY, B. Z., JR.**  
 Variable geometry manned orbital vehicle Patent  
 [NASA-CASE-XLA-03691] c 31 N71-15674
- HENRY, PAUL K.**  
 Device for mechanically stabilizing web ribbon buttons during growth initiation  
 [NASA-CASE-NPO-17074-2-CU] c 76 N92-21499
- HENRY, V. F.**  
 Systems and methods for determining radio frequency interference  
 [NASA-CASE-GSC-12150-1] c 32 N79-11265
- HEPNER, T. E.**  
 Auto covariance computer  
 [NASA-CASE-LAR-12968-1] c 60 N86-21154
- HEPPNER, J. P.**  
 Wide range linear fluxgate magnetometer Patent  
 [NASA-CASE-XGS-01587] c 14 N71-15962

## HERBELL, T. P.

- Gas purged dry box glove Patent  
[NASA-CASE-XLE-02531] c 05 N71-23080  
Method of producing refractory composites containing tantalum carbide, hafnium carbide, and hafnium boride Patent  
[NASA-CASE-XLE-03940] c 18 N71-26153  
Refractory metal base alloy composites  
[NASA-CASE-XLE-03940-2] c 17 N72-28536

## HERGENROTHER, P. M.

- Polyphenylquinoxalines containing pendant phenylethynyl and ethynyl groups  
[NASA-CASE-LAR-12838-1] c 27 N83-34040  
Ethynyl and substituted ethynyl-terminated polysulfones  
[NASA-CASE-LAR-12931-1] c 27 N84-22747  
Phenoxy resins containing pendent ethynyl groups and cured resins obtained therefrom  
[NASA-CASE-LAR-13262-1] c 23 N85-28973  
Ethynyl and substituted ethynyl-terminated polysulfones  
[NASA-CASE-LAR-12931-2] c 27 N86-21675  
Sulfone-ester polymers containing pendent ethynyl groups  
[NASA-CASE-LAR-13316-1] c 27 N86-27450  
Polyarylene ethers with improved properties  
[NASA-CASE-LAR-13555-1] c 23 N86-32526  
The 5-(4-Ethynylphenoxy) isophthalic chloride  
[NASA-CASE-LAR-13316-2] c 27 N87-14515

## HERGENROTHER, PAUL M.

- Ethynyl terminated ester oligomers and polymers therefrom  
[NASA-CASE-LAR-13118-2] c 27 N87-16907  
Polyenamines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-1-CU] c 27 N87-22847  
Polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-13633-1] c 27 N87-24575  
Polyphenylquinoxalines via aromatic nucleophilic displacement  
[NASA-CASE-LAR-13988-1] c 23 N89-11814  
Polyenamines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-2-CU] c 23 N89-12667  
Polyphenylquinoxalines containing alkylendioxo groups  
[NASA-CASE-LAR-13601-1-CU] c 27 N89-14337  
Acetylene terminated aspartimides and resins therefrom  
[NASA-CASE-LAR-14188-1] c 27 N90-23545  
N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14188-2] c 23 N91-14419  
Ethynyl terminated imidothioethers and resins therefrom  
[NASA-CASE-LAR-13910-2-CU] c 27 N91-31307  
Poly 1, 2, 4-triazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14440-1] c 23 N92-10066  
Polyimidazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14145-1] c 27 N92-28751  
Poly(1,3,4-oxadiazoles) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14427-1] c 23 N92-29141  
Polybenzimidazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14643-1] c 27 N92-29953  
Imide/arylene ether copolymers  
[NASA-CASE-LAR-14159-1-CU] c 27 N92-31792  
Polyimides with carbonyl and ether connecting groups between the aromatic rings  
[NASA-CASE-LAR-14001-1] c 27 N92-33008  
Methyl substituted polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-14351-1] c 27 N92-33015  
Poly(1,2,4-triazole) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14440-1] c 23 N93-18283  
Polybenzoxazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14606-1-CU] c 23 N93-23077  
Polyimides with improved compression moldability  
[NASA-CASE-LAR-14457-1] c 27 N93-25997  
Phenylethynyl endcapping reagents and reactive diluents  
[NASA-CASE-LAR-14796-1] c 25 N93-31459
- HERMAN, C. F.**  
Differential pulse code modulation  
[NASA-CASE-MSC-12506-1] c 32 N77-12239
- HERMANN, A. M.**  
Method of using photovoltaic cell using poly-N-vinylcarbazole complex Patent  
[NASA-CASE-NPO-10373] c 03 N71-18698

## HERMESMEYER, C. E.

- Method and apparatus for quadriphase-shift-key and linear phase modulation  
[NASA-CASE-NPO-14444-1] c 33 N81-15192

## HEROLD, C. P.

- Quick attach and release fluid coupling assembly Patent  
[NASA-CASE-XKS-01985] c 15 N71-10782

## HERR, R. W.

- A support technique for vertically oriented launch vehicles  
[NASA-CASE-XLA-02704] c 11 N69-21540

## HERREN, BLAIR J.

- Crystal growth apparatus  
[NASA-CASE-MFS-28182-1] c 76 N90-24169  
Polymer-coated surfaces to control surface zeta potential  
[NASA-CASE-MFS-26050-1] c 27 N92-25397  
Macromolecular crystal growing system  
[NASA-CASE-MFS-26088-1-CU] c 76 N92-25398

## HERRMANN, A. L.

- Locking device with rolling detents Patent  
[NASA-CASE-XMF-01371] c 15 N70-41829

## HERRMANN, FREDERICK T.

- Crystal growth apparatus  
[NASA-CASE-MFS-28182-1] c 76 N90-24169

## HERRON, B. G.

- Power control circuit  
[NASA-CASE-XNP-02713] c 10 N69-39888

## HERTZ, LESLIE S.

- Thermally activated retainer means  
[NASA-CASE-MSC-21793-1] c 16 N91-28186

## HESLIN, T. M.

- Inorganic spark chamber frame and method of making the same  
[NASA-CASE-GSC-12354-1] c 35 N82-24471

## HESPENHIDE, W. H.

- Variable direction force coupler  
[NASA-CASE-MFS-20317] c 15 N73-13463

## HESS, CLIFFORD W.

- Method and apparatus for positioning a robotic end effector  
[NASA-CASE-MSC-21476-1] c 37 N91-21542

## HESS, D. A.

- Passive propellant system  
[NASA-CASE-MFS-23642-2] c 20 N78-27176  
Passive propellant system  
[NASA-CASE-MFS-23642-1] c 20 N80-10278

## HESS, R. V.

- A technique for breaking ice in the path of a ship  
[NASA-CASE-LAR-10815-1] c 16 N72-22520

## HESS, R. W.

- Contour surveying system Patent  
[NASA-CASE-XLA-08646] c 14 N71-17586

## HESS, ROBERT V.

- Isotope exchange in oxide-containing catalyst  
[NASA-CASE-LAR-13542-2-SB] c 25 N90-20154

## HESTER, H. B.

- Current regulating voltage divider  
[NASA-CASE-MFS-20935] c 09 N71-34212

## HETHCOAT, J. P.

- Thruster maintenance system Patent  
[NASA-CASE-MFS-20325] c 28 N71-27095

## HEWES, D. E.

- Rotating space station simulator Patent  
[NASA-CASE-XLA-03127] c 11 N71-10776  
Reduced gravity simulator Patent  
[NASA-CASE-XLA-01787] c 11 N71-16028

## HEWITT, D. R.

- Thermal control system  
[NASA-CASE-GSC-12771-1] c 34 N84-14461

## HEYMAN, J. S.

- Ultrasonic calibration device  
[NASA-CASE-LAR-11435-1] c 35 N76-15432  
CW ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c 39 N78-15512  
Pseudo continuous wave instrument  
[NASA-CASE-LAR-12260-1] c 35 N79-10390  
CDS solid state phase insensitive ultrasonic transducer  
[NASA-CASE-LAR-12304-1] c 35 N80-20559  
Liquid-immersible electrostatic ultrasonic transducer  
[NASA-CASE-LAR-12465-1] c 33 N82-26572  
Acoustic tooth cleaner  
[NASA-CASE-LAR-12471-1] c 52 N82-29862  
Pulsed phase locked loop strain monitor  
[NASA-CASE-LAR-12772-1] c 33 N83-16626  
Error correction method and apparatus for electronic timepieces  
[NASA-CASE-LAR-12654-1] c 33 N83-36357  
Method for thermal monitoring subcutaneous tissue  
[NASA-CASE-LAR-13028-1] c 52 N85-30618  
Double reference pulsed phase locked loop  
[NASA-CASE-LAR-13310-1] c 32 N87-14559

## HEYMAN, JOSEPH S.

- Rapid quantification of an internal property  
[NASA-CASE-LAR-13689-1-NP] c 35 N87-23941  
Radio Frequency (RF) strain monitor  
[NASA-CASE-LAR-13705-1] c 39 N88-25011  
Phase length optical phase-locked-loop sensor  
[NASA-CASE-LAR-13387-1] c 74 N88-25302  
Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-1-NP] c 52 N90-21519  
Impact tolerant material  
[NASA-CASE-LAR-12887-3] c 24 N90-21822  
Method of recertifying a loaded bearing member using a phase point  
[NASA-CASE-LAR-14741-1] c 39 N92-11384  
Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-2] c 52 N92-11621  
Thermal remote anemometer system  
[NASA-CASE-LAR-13508-1] c 35 N92-21710  
Method and apparatus for thermographically and quantitatively analyzing a structure for disbands and/or inclusions  
[NASA-CASE-LAR-14559-1] c 38 N92-29829  
Acoustophoresis method and apparatus  
[NASA-CASE-LAR-13388-1] c 25 N92-33611  
Method of remotely characterizing thermal properties of a sample  
[NASA-CASE-LAR-13508-3-CU] c 09 N93-11057  
Method and apparatus for evaluating multilayer objects for imperfections  
[NASA-CASE-LAR-14581-1-SB] c 38 N93-12204  
High speed thin plate fatigue crack monitor  
[NASA-CASE-LAR-14816-1-SB] c 39 N93-19329  
Acoustophoresis separation method  
[NASA-CASE-LAR-13388-2] c 25 N93-20570

## HEYMAN, JOSEPH SAUL

- Mining volume measurement system  
[NASA-CASE-LAR-13519-1] c 35 N88-23963

## HEYSE, R. C.

- Temperature control system with a pulse width modulated bridge  
[NASA-CASE-NPO-11304] c 14 N73-26430  
Method for shaping and aiming narrow beams  
[NASA-CASE-NPO-14632-1] c 32 N82-18443

## HEYSON, H. H.

- Variable geometry wind tunnels  
[NASA-CASE-XLA-07430] c 11 N72-22246

## HIEDA, L. S.

- Controller for computer control of brushless dc motors  
[NASA-CASE-NPO-13970-1] c 33 N81-20352

## HIGA, W. H.

- Refrigeration apparatus  
[NASA-CASE-NPO-10309] c 15 N69-23190  
Refrigeration apparatus Patent  
[NASA-CASE-XNP-08877] c 15 N71-23025  
Stirling cycle engine and refrigeration systems  
[NASA-CASE-NPO-13613-1] c 37 N76-29590  
Centrifugal-reciprocating compressor  
[NASA-CASE-NPO-14597-2] c 37 N84-28081

## HIGBY, R. F.

- Electronic background suppression method and apparatus for a field scanning sensor  
[NASA-CASE-XGS-05211] c 07 N69-39980

## HIGH, R. W.

- Meteoroid capture cell construction  
[NASA-CASE-MSC-12423-1] c 91 N76-30131

## HILBERT, E. E.

- Data multiplexer using tree switching configuration  
[NASA-CASE-NPO-11333] c 08 N72-22162  
Flexible computer accessed telemetry  
[NASA-CASE-NPO-11358] c 07 N72-25172  
Space communication system for compressed data with a concatenated Reed-Solomon-Viterbi coding channel  
[NASA-CASE-NPO-13545-1] c 32 N77-12240

## HILBORN, E. H.

- Method and means for an improved electron beam scanning system Patent  
[NASA-CASE-ERC-10552] c 09 N71-12539  
Fluidic-thermochromic display device Patent  
[NASA-CASE-ERC-10031] c 12 N71-18603  
Plasma fluidic hybrid display Patent  
[NASA-CASE-ERC-10100] c 09 N71-33519

## HILDEBRANDT, A. F.

- Helium refining by superfluidity Patent  
[NASA-CASE-XNP-00733] c 06 N70-34946  
Continuous magnetic flux pump  
[NASA-CASE-XNP-01187] c 15 N73-28516  
Superconductive magnetic-field-trapping device  
[NASA-CASE-XNP-01185] c 26 N73-28710  
Magnetic-flux pump  
[NASA-CASE-XNP-01188] c 15 N73-32361

## HILDNER, E.

- Spectral slicing X-ray telescope with variable magnification  
[NASA-CASE-MFS-25942-1] c 74 N86-20124



- HILKER, W. R.**  
Folding structure fabricated of rigid panels  
[NASA-CASE-XHQ-02146] c 18 N75-27040
- HILL, E. K.**  
Ultrasonic scanner for radial and flat panels  
[NASA-CASE-MFS-20335-1] c 35 N74-10415
- HILL, O. E.**  
Burst diaphragm flow initiator Patent  
[NASA-CASE-MFS-12915] c 11 N71-17600  
Wind tunnel test section  
[NASA-CASE-MFS-20509] c 11 N72-17183
- HILL, P. R.**  
Heat protection apparatus Patent  
[NASA-CASE-XLA-00892] c 33 N71-17897  
Kinesthetic control simulator  
[NASA-CASE-LAR-10276-1] c 09 N75-15662
- HILL, W. E.**  
Sprayable low density ablator and application process  
[NASA-CASE-MFS-23506-1] c 24 N78-24290
- HILL, WILLIAM E.**  
Sprayable lightweight ablative coating  
[NASA-CASE-MFS-28372-1] c 27 N92-16123
- HILLBERG, E. T.**  
Load relieving device Patent  
[NASA-CASE-XMS-06329-1] c 15 N71-20441
- HILLBORN, E. H.**  
Color television systems using a single gun color cathode ray tube Patent  
[NASA-CASE-ERC-10098] c 09 N71-28618
- HILLIS, D. A.**  
Drift compensation circuit for analog to digital converter Patent  
[NASA-CASE-XNP-04780] c 08 N71-19687
- HILLMAN, C. E., JR.**  
Snap-in compressible biomedical electrode  
[NASA-CASE-MSC-14623-1] c 52 N77-28717
- HILLMAN, J. J.**  
Thermal compensator for closed-cycle helium refrigerator  
[NASA-CASE-GSC-12168-1] c 31 N79-17029
- HILTON, G. E.**  
Position location and data collection system and method Patent  
[NASA-CASE-GSC-10083-1] c 30 N71-16090
- HIMMELRIGHT, R. M.**  
High-temperature, high-pressure spherical segment valve Patent  
[NASA-CASE-XAC-00074] c 15 N70-34817
- HINEDI, SAMI M.**  
Real-time edge-enhanced optical correlator  
[NASA-CASE-NPO-18521-1-CU] c 74 N93-14404
- HINKLEY, E. D., JR.**  
Portable remote laser sensor for methane leak detection  
[NASA-CASE-NPO-15790-1] c 36 N85-21901
- HIRAYAMA, C.**  
Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c 37 N74-21063
- HIRSHFIELD, S. M.**  
Gas liquefaction and dispensing apparatus Patent  
[NASA-CASE-NPO-10070] c 15 N71-27372  
Novel polymers and method of preparing same  
[NASA-CASE-NPO-10998-1] c 06 N73-32029
- HITCHMAN, M. J.**  
Automatic real-time pair-feeding system for animals  
[NASA-CASE-ARC-10302-1] c 51 N74-15778
- HOBERT, H. F.**  
Liquid flow sight assembly Patent  
[NASA-CASE-XLE-02998] c 14 N70-42074
- HOBBS, A. J.**  
Method and apparatus for determining the contents of contained gas samples  
[NASA-CASE-GSC-10903-1] c 14 N73-12444
- HOBLIN, L. E.**  
Unfurlable structure including coiled strips thrust launched upon tension release Patent  
[NASA-CASE-HON-00937] c 07 N71-28979
- HOCHMAIR, E. S.**  
Gyator employing field effect transistors  
[NASA-CASE-MFS-21433] c 09 N73-20232  
Integrated P-channel MOS gyator  
[NASA-CASE-MFS-22343-1] c 33 N74-34638  
Integrable power gyator  
[NASA-CASE-MFS-22342-1] c 33 N75-30428
- HODDER, D. T.**  
Apparatus for remote handling of materials  
[NASA-CASE-LAR-10634-1] c 37 N74-18123
- HODGE, P. E.**  
Corrosion resistant thermal barrier coating  
[NASA-CASE-LEW-13088-1] c 26 N81-25188
- HODGES, D. H.**  
Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c 05 N77-17029
- HODO, JAMES D.**  
Fatigue testing a plurality of test specimens and method  
[NASA-CASE-MFS-28118-1] c 39 N87-25601
- HOFFLER, G. W.**  
Apparatus and method for processing Korotkov sounds  
[NASA-CASE-MSC-13999-1] c 52 N74-26626  
Logic-controlled occlusive cuff system  
[NASA-CASE-MSC-14836-1] c 52 N82-11770
- HOFFMAN, C. A.**  
Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-1] c 24 N81-17170  
Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c 24 N81-26179
- HOFFMAN, D. G.**  
Light detection instrument Patent  
[NASA-CASE-XGS-05534] c 23 N71-16355
- HOFFMAN, E. L.**  
Flexible foam erectable space structures Patent  
[NASA-CASE-XLA-00686] c 31 N70-34135
- HOFFMAN, H. C.**  
Gravity gradient attitude control system Patent  
[NASA-CASE-GSC-10555-1] c 21 N71-27324  
Active nutation controller  
[NASA-CASE-GSC-12273-1] c 35 N80-21719  
Method of damping nutation motion with minimum spin axis attitude disturbance  
[NASA-CASE-GSC-12551-1] c 18 N83-28064
- HOFFMAN, I. S.**  
Impact energy absorber Patent  
[NASA-CASE-XLA-01530] c 14 N71-23092  
Self-supporting strain transducer  
[NASA-CASE-LAR-11263-1] c 35 N75-33369  
Miniature biaxial strain transducer  
[NASA-CASE-LAR-11648-1] c 35 N77-14407
- HOFFMAN, L. A.**  
Compensating bandwidth switching transients in an amplifier circuit Patent  
[NASA-CASE-XNP-01107] c 10 N71-28859
- HOFFMAN, T. E.**  
Tunable cavity resonator with ramp shaped supports  
[NASA-CASE-HON-10790-1] c 36 N74-11313
- HOFFMAN, WILLIAM C., III**  
Four-terminal electrical testing device  
[NASA-CASE-MSC-21166-1] c 35 N87-25555
- HOHL, F.**  
Volumetric direct nuclear pumped laser  
[NASA-CASE-LAR-12183-1] c 36 N79-18307  
Large volume multiple-path nuclear pumped laser  
[NASA-CASE-LAR-12592-1] c 36 N82-13415  
Solar driven liquid metal MHD power generator  
[NASA-CASE-LAR-12495-1] c 44 N83-28573  
Solar pumped laser  
[NASA-CASE-LAR-12870-1] c 36 N84-16542
- HOKLO, K. H.**  
Welding blades to rotors  
[NASA-CASE-LEW-10533-1] c 15 N73-28515
- HOLBEN, MILFORD S., JR.**  
Radio Frequency (RF) strain monitor  
[NASA-CASE-LAR-13705-1] c 39 N88-25011
- HOLDEMAN, L. B.**  
Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MFS-23845-1] c 33 N81-17348
- HOLDEN, G. R.**  
Balanced bellows spirometer  
[NASA-CASE-XAR-01547] c 05 N69-21473
- HOLDERER, O. C.**  
Electric arc driven wind tunnel Patent  
[NASA-CASE-XMF-00411] c 11 N70-36913
- HOLDERMAN, L. B.**  
Germanium coated microbridge and method  
[NASA-CASE-MFS-23274-1] c 33 N78-13320
- HOLDREN, R. T., III**  
Radar calibration sphere  
[NASA-CASE-XLA-11154] c 07 N72-21117
- HOLES, J. K.**  
Digital second-order phase-locked loop  
[NASA-CASE-NPO-11905-1] c 33 N74-12887
- HOLESKI, D. E.**  
Apparatus for absorbing and measuring power Patent  
[NASA-CASE-XLE-00720] c 14 N70-40201
- HOLKO, K. H.**  
Enhanced diffusion welding  
[NASA-CASE-LEW-11388-1] c 15 N73-32358  
Apparatus for welding blades to rotors  
[NASA-CASE-LEW-10533-2] c 37 N74-11300  
Diffusion welding in air  
[NASA-CASE-LEW-11387-1] c 37 N74-18128  
Diffusion welding  
[NASA-CASE-LEW-11388-2] c 37 N74-21055
- HOLLAHAN, J. R.**  
Method of preparing water purification membranes  
[NASA-CASE-ARC-10643-1] c 25 N75-12087
- HOLLAND, L. R.**  
Apparatus and method for heating a material in a transparent ampoule  
[NASA-CASE-MFS-25436-1] c 27 N83-36220  
High-temperature, high-pressure optical cell  
[NASA-CASE-MFS-26000-1] c 74 N87-14971
- HOLLAND, S. DOUGLAS**  
Electronic still camera  
[NASA-CASE-MSC-21797-1] c 35 N93-17076
- HOLLAND, V. B.**  
Signal conditioning circuit apparatus  
[NASA-CASE-ARC-10348-1] c 33 N75-19518
- HOLLANDER, J.**  
Polyurethanes of fluorine containing polycarbonates  
[NASA-CASE-MFS-10512] c 06 N73-30099  
Highly fluorinated polymers  
[NASA-CASE-MFS-11492] c 06 N73-30102
- HOLLANHAN, J. R., JR.**  
Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers  
[NASA-CASE-ARC-10915-2] c 27 N79-18052
- HOLLEMAN, E. C.**  
Three axis controller Patent  
[NASA-CASE-XFR-00181] c 21 N70-33279
- HOLLENBAUGH, R. C.**  
Position location system and method Patent  
[NASA-CASE-GSC-10087-2] c 21 N71-13958  
Position location and data collection system and method Patent  
[NASA-CASE-GSC-10083-1] c 30 N71-16090  
Traffic control system and method Patent  
[NASA-CASE-GSC-10087-1] c 02 N71-19287  
Position location system and method  
[NASA-CASE-GSC-10087-3] c 07 N72-12080  
Doppler compensation by shifting transmitted object frequency within limits  
[NASA-CASE-GSC-10087-4] c 07 N73-20174
- HOLLEY, L. D.**  
Automatic lightning detection and photographic system  
[NASA-CASE-KSC-10728-1] c 14 N73-32319  
Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c 35 N78-28411  
Digital automatic gain amplifier  
[NASA-CASE-KSC-11008-1] c 33 N79-22373
- HOLLIDAY, M. L.**  
Precision alignment apparatus for cutting a workpiece  
[NASA-CASE-LAR-11658-1] c 37 N77-14478
- HOLLIDAY, R. J.**  
Method of making macrocrystalline or single crystal semiconductor material  
[NASA-CASE-NPO-15904-1] c 76 N86-28760
- HOLLIS, B. R., JR.**  
Multilevel metallization method for fabricating a metal oxide semiconductor device  
[NASA-CASE-MFS-23541-1] c 76 N79-14906  
Method of construction of a multi-cell solar array  
[NASA-CASE-MFS-23540-1] c 44 N79-26475  
Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c 37 N82-12441
- HOLLOW, R. H.**  
Thumb-actuated two-axis controller  
[NASA-CASE-ARC-11372-1] c 08 N86-27288  
Load positioning system with gravity compensation  
[NASA-CASE-ARC-11525-1] c 37 N86-27629
- HOLLOWAY, SIDNEY E., III**  
Linear mass actuator  
[NASA-CASE-LAR-14352-1] c 37 N92-34173
- HOLMAN, E. V.**  
Latching mechanism Patent  
[NASA-CASE-XMS-03745] c 15 N71-21076
- HOLMAN, EARL V.**  
Payload deployment method and system  
[NASA-CASE-MSC-21330-1] c 16 N88-24660
- HOLMES, B. K.**  
Inflatable transpiration cooled nozzle  
[NASA-CASE-MFS-20619] c 28 N72-11708
- HOLMES, BRUCE J.**  
Geometries for roughness shapes in laminar flow  
[NASA-CASE-LAR-13255-1] c 02 N87-16793  
Crossflow vorticity sensor  
[NASA-CASE-LAR-13436-1-CU] c 02 N88-23759  
Method for laminar boundary layer transition visualization in flight  
[NASA-CASE-LAR-13554-1] c 02 N89-12551  
Passive laminar flow control of crossflow vorticity  
[NASA-CASE-LAR-13563-1] c 34 N91-23410  
Serrated trailing edges for improving lift and drag characteristics of lifting surfaces  
[NASA-CASE-LAR-13870-1-CU] c 05 N92-21587  
Swept wing attachment line contamination fence  
[NASA-CASE-LAR-13400-1] c 02 N93-22015

- HOLMES, H. K.**  
Velocity limiting safety system Patent  
[NASA-CASE-XLA-07473] c 15 N71-24895
- HOLMES, HARLAN K.**  
Crossflow vorticity sensor  
[NASA-CASE-LAR-13436-1-CU] c 02 N88-23759  
Circumferential pressure probe  
[NASA-CASE-LAR-13775-1] c 35 N90-23706
- HOLMES, J. F.**  
Oceanic wave measurement system  
[NASA-CASE-MFS-23862-1] c 48 N80-18667
- HOLMES, L. JR.**  
Ruler for making navigational computations  
[NASA-CASE-XNP-01458] c 04 N78-17031
- HOLMES, M.**  
Wind and solar powered turbine  
[NASA-CASE-NPO-15496-1] c 44 N84-23018
- HOLMES, R. F.**  
Catalyst cartridge for carbon dioxide reduction unit  
[NASA-CASE-LAR-10551-1] c 25 N74-12813  
Heat exchanger  
[NASA-CASE-MFS-22991-1] c 34 N77-10463
- HOLMES, RICHARD R.**  
Method of fabricating a rocket engine combustion chamber  
[NASA-CASE-MFS-28569-1] c 27 N93-30565
- HOLMES, S. J.**  
Ultraviolet filter  
[NASA-CASE-XNP-02340] c 23 N69-24332
- HOLMES, T. H.**  
Vibration damping system Patent  
[NASA-CASE-XMS-01620] c 23 N71-15673
- HOLMES, W. T.**  
Lifting body Patent Application  
[NASA-CASE-FRC-10063] c 01 N71-12217
- HOLMSTROM, F. R.**  
Shielded cathode mode bulk effect devices  
[NASA-CASE-ERC-10119] c 26 N72-21701
- HOLOWACH, J.**  
Sound-suppressing structure with thermal relief  
[NASA-CASE-LEW-12658-1] c 71 N79-14871
- HOLT, H. M.**  
Transient-compensated SCR inverter  
[NASA-CASE-XLA-08507] c 09 N69-39984  
SCR blocking pulse gate amplifier Patent  
[NASA-CASE-XLA-07497] c 09 N71-12514
- HOLT, J. W.**  
Attachment system for silica tiles  
[NASA-CASE-MSC-18741-1] c 27 N82-29456  
Method for repair of thin glass coatings  
[NASA-CASE-KSC-11097-1] c 27 N82-33520
- HOLT, N. I.**  
Scan converting video tape recorder  
[NASA-CASE-NPO-10166-1] c 07 N73-22076  
Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c 35 N76-16391  
Electromagnetic transducer recording head having a laminated core section and tapered gap  
[NASA-CASE-NPO-10711-1] c 35 N77-21392
- HOLT, WILLIAM H.**  
Castable hot corrosion resistant alloy  
[NASA-CASE-LEW-14134-2] c 26 N89-14303
- HOLTZE, R. F.**  
Coating process  
[NASA-CASE-XNP-06508] c 18 N69-39895
- HOLWAY, H. P.**  
Model launcher for wind tunnels Patent  
[NASA-CASE-XNP-03578] c 11 N71-23030  
Mobile sampler for use in acquiring samples of terrestrial atmospheric gases  
[NASA-CASE-NPO-15220-1] c 45 N83-25217
- HOMKES, R. J.**  
Multiparameter vision testing apparatus  
[NASA-CASE-MSC-13601-2] c 54 N75-27759
- HONESS, SHAWN B.**  
Precision measurement of magnetic characteristics of an article with nullification of external magnetic fields  
[NASA-CASE-NPO-18187-1-CU] c 70 N92-29130
- HONEY, R. W.**  
Optimum predetection diversity receiving system Patent  
[NASA-CASE-XGS-00740] c 07 N71-23098
- HONEYCUTT, L., III**  
Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c 27 N78-17206
- HONG, J. P.**  
Real time analysis of voiced sounds  
[NASA-CASE-NPO-13465-1] c 32 N76-31372  
System and method for character recognition  
[NASA-CASE-NPO-11337-1] c 74 N81-19896
- HONG, S. D.**  
Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NPO-14657-1] c 74 N81-17887
- Broadband optical radiation detector  
[US-PATENT-4,262,198] c 74 N83-19597
- HONNELL, M. A.**  
Automatic frequency control for FM transmitter  
[NASA-CASE-MFS-21540-1] c 32 N74-19790  
Isolated output system for a class D switching-mode amplifier  
[NASA-CASE-MFS-21616-1] c 33 N75-30429  
Frequency modulated oscillator  
[NASA-CASE-MFS-23181-1] c 33 N77-17351
- HOOD, R. T.**  
Hall current measuring apparatus having a series resistor for temperature compensation Patent  
[NASA-CASE-XAC-01662] c 14 N71-23037
- HOOD, W. R.**  
Detection of the transitional layer between laminar and turbulent flow areas on a wing surface  
[NASA-CASE-LAR-12261-1] c 02 N80-20224
- HOOKER, MATTHEW W.**  
Process for applying a superconductive powder to a wide variety of substrates  
[NASA-CASE-LAR-14729-1-CU] c 33 N93-19051
- HOOP, J. M.**  
Method and apparatus for nondestructive testing  
[NASA-CASE-MFS-21233-1] c 38 N74-15395  
Ultrasonic bone densitometer  
[NASA-CASE-MFS-20994-1] c 35 N75-12271
- HOOPER, C. D.**  
Extensometer Patent  
[NASA-CASE-XMF-04680] c 15 N71-19489
- HOOPER, S. L.**  
Self-charging metering and dispensing device for fluids  
[NASA-CASE-MSC-20275-1] c 35 N85-21595
- HOOVER, R. B.**  
Collimator of multiple plates with axially aligned identical random arrays of apertures  
[NASA-CASE-MFS-20546-2] c 14 N73-30389  
Automatic lightning detection and photographic system  
[NASA-CASE-KSC-10728-1] c 14 N73-32319  
Three mirror glancing incidence system for X-ray telescope  
[NASA-CASE-MFS-21372-1] c 74 N74-27866  
Multiplate focusing collimator  
[NASA-CASE-MFS-20932-1] c 35 N75-19616  
Method for retarding dye fading during archival storage of developed color photographic film  
[NASA-CASE-MFS-23250-1] c 35 N82-11432  
Extended range X-ray telescope  
[NASA-CASE-MFS-25282-1] c 34 N83-19015  
Spectral slicing X-ray telescope with variable magnification  
[NASA-CASE-MFS-25942-1] c 74 N86-20124  
Multispectral glancing incidence X-ray telescope  
[NASA-CASE-MFS-28013-1] c 89 N86-22459
- HOOVER, R. J.**  
Extrusion die for refractory metals Patent  
[NASA-CASE-XLE-06773] c 15 N71-23817
- HOOVER, RICHARD**  
Variable magnification variable dispersion glancing incidence imaging x ray spectroscopic telescope  
[NASA-CASE-MFS-28013-3] c 89 N90-27594  
Variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-2] c 89 N91-14096
- HOOVER, RICHARD B.**  
Water window imaging x ray microscope  
[NASA-CASE-MFS-28485-1] c 35 N92-29135  
Multispectral variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-4] c 89 N92-33012  
X-ray monochromator  
[NASA-CASE-MFS-28492-1] c 74 N93-14711
- HOPKINS, P. M.**  
Differential phase shift keyed communication system  
[NASA-CASE-MSC-14065-1] c 32 N74-26654  
Differential phase shift keyed signal resolver  
[NASA-CASE-MSC-14066-1] c 33 N74-27705  
Apparatus and method for stabilized phase detection for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c 33 N79-11313
- HOPKINS, V.**  
Inorganic solid film lubricants Patent  
[NASA-CASE-MF-03988] c 15 N71-21403
- HOPPER, J. H.**  
Thermal garment  
[NASA-CASE-XMS-03694-1] c 54 N82-29002
- HOPPING, R. L.**  
Landing gear Patent  
[NASA-CASE-XMF-01174] c 02 N70-41589
- HOPSON, PURNELL, JR.**  
Method of forming a multiple layer dielectric and a hot film sensor therewith  
[NASA-CASE-LAR-13678-1] c 76 N90-24168
- High temperature fiber optic microphone having a pressure-sensing reflective membrane under tensile stress  
[NASA-CASE-LAR-14402-1-CU] c 74 N92-33017  
Method of forming a multiple layer dielectric and a hot film sensor therewith  
[NASA-CASE-LAR-13678-3] c 35 N93-14714
- HORNE, W. B.**  
Aircraft wheel spray drag alleviator Patent  
[NASA-CASE-XLA-01583] c 02 N70-36825
- HORNE, WARREN L.**  
Wind tunnel balance  
[NASA-CASE-ARC-11877-1-SB] c 09 N91-14357
- HORNER, J. L.**  
Optical noise suppression device and method  
[NASA-CASE-MSC-12640-1] c 74 N76-31998
- HORTON, D. B.**  
Instrument support with precise lateral adjustment Patent  
[NASA-CASE-XMF-00480] c 14 N70-39898
- HORTON, J. C.**  
Method of making impurity-type semiconductor electrical contacts Patent  
[NASA-CASE-MF-01016] c 26 N71-17818
- HORTON, R. L.**  
Method and apparatus for mapping planets  
[NASA-CASE-NPO-11001] c 07 N72-21118
- HOSETHIEN, H. H.**  
Adaptive tracking notch filter system Patent  
[NASA-CASE-XMF-01892] c 10 N71-22986
- HOTZ, G. M.**  
Soil penetrometer  
[NASA-CASE-XNP-05530] c 14 N73-32321  
Burrowing apparatus  
[NASA-CASE-XNP-07169] c 15 N73-32362
- HOU, TAN-HUNG**  
Low pressure process for continuous fiber reinforced polyamic acid resin matrix composite laminates  
[NASA-CASE-LAR-14954-1] c 24 N92-34214
- HOUCK, W. H.**  
Voltage dropout sensor Patent  
[NASA-CASE-KSC-10020] c 10 N71-27338  
Ripple indicator  
[NASA-CASE-KSC-10162] c 09 N72-11225  
Signal conditioner test set  
[NASA-CASE-KSC-10750-1] c 35 N75-12270
- HOUSEMAN, J.**  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-1] c 37 N76-16446  
Hydrogen-rich gas generator  
[NASA-CASE-NPO-13464-1] c 44 N76-18642  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c 44 N76-29700  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13464-2] c 44 N76-29704  
Hydrogen-rich gas generator  
[NASA-CASE-NPO-13560-1] c 44 N77-10636  
Combustion engine  
[NASA-CASE-NPO-13671-1] c 37 N77-31497  
Start up system for hydrogen generator used with an internal combustion engine  
[NASA-CASE-NPO-13849-1] c 28 N80-10374
- HOWARD, DAVID E.**  
Control circuitry using electronic emulation of a synchro signal for accurate control of position and rate of rotation for shafts  
[NASA-CASE-MFS-28458-1] c 33 N91-26459
- HOWARD, E. A.**  
Soil penetrometer  
[NASA-CASE-NXP-05530] c 14 N73-32321  
Burrowing apparatus  
[NASA-CASE-XNP-07169] c 15 N73-32362
- HOWARD, F. S.**  
Zero gravity shadow shield aligner  
[NASA-CASE-KSC-10622-1] c 31 N72-21893  
Geysering inhibitor for vertical cryogenic transfer pipe  
[NASA-CASE-KSC-10615] c 15 N73-12486  
Floating baffle to improve efficiency of liquid transfer from tanks  
[NASA-CASE-KSC-10639] c 15 N73-26472  
Zero gravity liquid transfer screen  
[NASA-CASE-KSC-10626] c 14 N73-27378
- HOWARD, FLOYD G.**  
Serrated trailing edges for improving lift and drag characteristics of lifting surfaces  
[NASA-CASE-LAR-13870-1-CU] c 05 N92-21587
- HOWARD, FRANK S.**  
Vortex motion phase separator for zero gravity liquid transfer  
[NASA-CASE-KSC-11387-1] c 29 N90-20236  
Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-2] c 28 N91-14495
- HOWARD, J. C.**  
Means for suppressing or attenuating bending motion of elastic bodies Patent  
[NASA-CASE-XAC-05632] c 32 N71-23971

- G-load measuring and indicator apparatus  
[NASA-CASE-ARC-10806-1] c 35 N75-29381
- HOWARD, P. W.**  
Apparatus for reducing aerodynamic noise in a wind tunnel  
[NASA-CASE-MFS-23099-1] c 09 N76-23273
- HOWARD, RICHARD T.**  
Standard remote manipulator system docking target augmentation for automated docking  
[NASA-CASE-MFS-28419-1] c 18 N91-27200  
Closed-loop autonomous docking system  
[NASA-CASE-MFS-28421-1] c 18 N92-28750
- HOWARD, W. D.**  
Method and device for detecting voids in low density material Patent  
[NASA-CASE-MFS-20044] c 14 N71-28993
- HOWARD, W. H.**  
Skeletal stressing method and apparatus Patent  
[NASA-CASE-ARC-10100-1] c 05 N71-24738  
Programmable physiological infusion  
[NASA-CASE-ARC-10447-1] c 52 N74-22771  
Tread drum for animals  
[NASA-CASE-ARC-10917-1] c 51 N78-27733
- HOWARTH, J. T.**  
Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c 27 N76-24405  
Flame retardant spandex type polyurethanes  
[NASA-CASE-MSC-14331-2] c 27 N78-17213  
Process for spinning flame retardant elastomeric compositions  
[NASA-CASE-MSC-14331-3] c 27 N78-32262
- HOWE, R. D.**  
Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c 45 N80-14579
- HOWE, T. L.**  
Strain gauge ambiguity sensor for segmented mirror active optical system  
[NASA-CASE-MFS-20506-1] c 35 N75-12273
- HOWELL, B. J.**  
Wide-angle flat field telescope  
[NASA-CASE-GSC-12825-1] c 74 N86-28732
- HOWELL, HAROLD R.**  
Pressurized bellows flat contact heat exchanger interface  
[NASA-CASE-MSC-21271-1] c 34 N90-21999
- HOWELL, J. R.**  
Device for directionally controlling electromagnetic radiation Patent  
[NASA-CASE-XLE-01716] c 09 N70-40234
- HOWELL, W. E.**  
Fringe counter for interferometers Patent  
[NASA-CASE-LAR-10204] c 14 N71-27215  
Star image motion compensator  
[NASA-CASE-LAR-10523-1] c 14 N72-22444  
Heads up display  
[NASA-CASE-LAR-12630-1] c 06 N84-27733
- HOWELL, W. L.**  
Fluid thrust control system  
[NASA-CASE-XMF-05964-1] c 20 N79-21124
- HOWLAND, B. T.**  
High pressure air valve Patent  
[NASA-CASE-MSC-11010] c 15 N71-19485
- HOYT, H. E.**  
Process of treating cellulosic membrane and alkaline with membrane separator  
[NASA-CASE-GSC-10019-1] c 44 N82-24641  
Separator for alkaline batteries and method of making same  
[NASA-CASE-GSC-10350-1] c 44 N82-24642  
Separator for alkaline electric cells and method of making  
[NASA-CASE-GSC-10017-1] c 44 N82-24643  
Separator for alkaline electric batteries and method of making  
[NASA-CASE-GSC-10018-1] c 44 N82-24644  
Alkaline electrochemical cells and method of making  
[NASA-CASE-GSC-10349-1] c 44 N82-24645  
Aqueous alkali metal hydroxide insoluble cellulose ether membrane  
[NASA-CASE-XGS-05584-1] c 25 N82-29370
- HOYT, R. F.**  
In situ transfer standard for ultrahigh vacuum gage calibration  
[NASA-CASE-LAR-10862-1] c 35 N74-15092
- HOYT, RONALD F.**  
Isotope exchange in oxide-containing catalyst  
[NASA-CASE-LAR-13542-2-SB] c 25 N90-20154
- HRACH, F. J.**  
Capacitor and method of making same Patent  
[NASA-CASE-LEW-10364-1] c 09 N71-13522
- HRACH, FRANK**  
Method of reducing drag in aerodynamic systems  
[NASA-CASE-LEW-14791-1] c 02 N92-34243
- HRASTAR, J. A.**  
Apparatus for and method of compensating dynamic unbalance  
[NASA-CASE-GSC-12550-1] c 37 N84-28082
- HRON, R. L.**  
Load current sensor for a series pulse width modulated power supply  
[NASA-CASE-GSC-10656-1] c 09 N72-25249
- HRUBY, R. J.**  
Microwave flaw detector Patent  
[NASA-CASE-ARC-10009-1] c 15 N71-17822  
Transient video signal recording with expanded playback Patent  
[NASA-CASE-ARC-10003-1] c 09 N71-25866  
Method and apparatus for swept-frequency impedance measurements of welds  
[NASA-CASE-ARC-10176-1] c 15 N72-21464  
Coaxial inverted geometry transistor having buried emitter  
[NASA-CASE-ARC-10330-1] c 09 N73-32112  
Twin-capacitive shaft angle encoder with analog output signal  
[NASA-CASE-ARC-10897-1] c 33 N77-31404
- HRYNIEWIECKI, E.**  
Vehicle for use in planetary exploration  
[NASA-CASE-NPO-11366] c 11 N73-26238
- HSU, G. C.**  
Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c 27 N77-30236  
Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c 44 N78-31527  
Surfactant-assisted liquefaction of particulate carbonaceous substances  
[NASA-CASE-NPO-13904-1] c 25 N79-11152  
Coal desulfurization  
[NASA-CASE-NPO-14272-1] c 25 N81-33246  
Crude oil desulfurization  
[NASA-CASE-NPO-14542-1] c 25 N82-23282
- HSU, IN-SHEK**  
Method for Viterbi decoding of large constraint length convolutional codes  
[NASA-CASE-NPO-17310-1-CU] c 17 N88-28946  
VLSI single-chip (255,223) Reed-Solomon encoder with interleaver  
[NASA-CASE-NPO-17280-1-CU] c 17 N90-21061  
VLSI binary updown counter  
[NASA-CASE-NPO-17205-1-CU] c 60 N90-21525  
VLSI architecture for a Reed-Solomon decoder  
[NASA-CASE-NPO-17897-1-CU] c 33 N92-33011
- HSU, L. C.**  
Trimerization of aromatic nitriles  
[NASA-CASE-LEW-12053-1] c 27 N78-15276  
In situ self cross-linking of polyvinyl alcohol battery separators  
[NASA-CASE-LEW-12972-1] c 44 N79-25481  
Catalytic trimerization of aromatic nitriles and triaryl-s-triazine ring cross-linked high temperature resistant polymers and copolymers made thereby  
[NASA-CASE-LEW-12053-2] c 27 N79-28307  
Method of cross-linking polyvinyl alcohol and other water soluble resins  
[NASA-CASE-LEW-13103-1] c 27 N80-32516  
In-situ cross linking of polyvinyl alcohol  
[NASA-CASE-LEW-13135-2] c 27 N81-24257  
Polyvinyl alcohol battery separator containing inert filler  
[NASA-CASE-LEW-13556-1] c 44 N81-27615  
Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13101-2] c 23 N81-29160  
Polyvinyl alcohol cross-linked with two aldehydes  
[NASA-CASE-LEW-13504-1] c 25 N83-13188  
Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c 33 N85-29144
- HSU, M. T. S.**  
Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
[NASA-CASE-ARC-11429-1-CU] c 27 N86-20560  
High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1SB] c 24 N86-21590  
Light weight fire resistant graphite composites  
[US-PATENT-4,598,007] c 24 N86-28131
- HSU, MING-TA**  
Boron-carbon-silicon polymers and ceramic and a process for the production thereof  
[NASA-CASE-ARC-11891-2-SB] c 27 N92-34160
- HSU, MING-TA S.**  
Process for curing bismaleimide resins  
[NASA-CASE-ARC-11429-4CU] c 27 N87-15304  
Vinyl stilbazoles  
[NASA-CASE-ARC-11429-3CU] c 27 N87-16908  
Structural panels  
[NASA-CASE-ARC-11429-2-CU] c 27 N87-22845
- Preparation of B-trichloroborazine  
[NASA-CASE-ARC-11643-1-SB] c 23 N87-23698  
Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-1-SB] c 27 N88-29040  
Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-2-SB] c 27 N90-21177
- HSU, Y.-Y.**  
Slug flow magnetohydrodynamic generator  
[NASA-CASE-XLE-02083] c 03 N69-39983
- HUA, GRACE C.**  
System and method for a general purpose architecture for intelligent computer-aided training  
[NASA-CASE-MSC-21381-1] c 63 N91-13944
- HUANG, CHEN-KUO**  
Overcharge and overdischarge protection of ambient temperature secondary lithium cells  
[NASA-CASE-NPO-18343-1-CU] c 33 N93-11456  
Anode for rechargeable ambient temperature lithium cells  
[NASA-CASE-NPO-18580-1-CU] c 33 N93-17278
- HUANG, HO-CHUNG**  
Microwave field effect transistor  
[NASA-CASE-GSC-12442-2] c 33 N90-20282
- HUANG, JOHN**  
Stripline feed for a microstrip array of patch elements with teardrop shaped probes  
[NASA-CASE-NPO-17548-1-CU] c 32 N90-16104  
Parallel and series fed microstrip array with high efficiency and low cross polarization  
[NASA-CASE-NPO-18678-1-CU] c 32 N93-28422  
Planar microstrip YAGI antenna array  
[NASA-CASE-NPO-17873-2-CU] c 32 N93-29507
- HUANG, M. Y.**  
Self-calibrating threshold detector  
[NASA-CASE-MSC-16370-1] c 35 N81-19427
- HUBBARD, W. P.**  
Digital demodulator-correlator  
[NASA-CASE-NPO-13982-1] c 32 N79-14267
- HUBBELL, THEODORE E.**  
Ion-beam nitriding of steels  
[NASA-CASE-LEW-14104-2] c 26 N88-14179
- HUBER, C. S.**  
Modification of the physical properties of freeze-dried rice  
[NASA-CASE-MSC-13540-1] c 05 N72-33096
- HUBER, R. F.**  
Compensating linkage for main rotor control  
[NASA-CASE-LAR-11797-1] c 05 N81-19087
- HUBER, W. C.**  
Hand-held self-maneuvering unit Patent  
[NASA-CASE-XMS-05304] c 05 N71-12336  
Inflatable tether Patent  
[NASA-CASE-XMS-10993] c 15 N71-28936  
Foldable construction block  
[NASA-CASE-MSC-12233-1] c 15 N72-25454  
Foldable construction block  
[NASA-CASE-MSC-12233-2] c 32 N73-13921  
Fluid valve assembly  
[NASA-CASE-MSC-12731-1] c 37 N78-25426
- HUCK, FREDRICH O.**  
Multiresponse imager and imaging process for improved resolution  
[NASA-CASE-LAR-14779-1] c 74 N92-29951
- HUDGINS, J. L.**  
Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c 43 N80-14423  
Apparatus for sequentially transporting containers  
[NASA-CASE-MFS-23846-1] c 37 N82-32731
- HUDIS, M.**  
Preparation of dielectric coating of variable dielectric constant by plasma polymerization  
[NASA-CASE-ARC-10892-2] c 27 N79-14214
- HUDOCK, R. J.**  
Reference apparatus for medical ultrasonic transducer  
[NASA-CASE-ARC-10753-1] c 54 N75-27760
- HUDSON, O. K.**  
Gravimeter Patent  
[NASA-CASE-XMF-05844] c 14 N71-17587
- HUDSPETH, T.**  
Phase demodulation system with two phase locked loops Patent  
[NASA-CASE-XNP-00777] c 10 N71-19469
- HUELSMAN, L. P.**  
RC networks and amplifiers employing the same  
[NASA-CASE-XAC-05462-2] c 10 N72-17171
- HUEY, D. C.**  
Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c 33 N81-17349
- HUFF, R. G.**  
Apparatus for sensing temperature  
[NASA-CASE-XLE-05230] c 14 N72-27410  
Method of making apparatus for sensing temperature  
[NASA-CASE-XLE-05230-2] c 14 N73-13417

- Jet exhaust noise suppressor  
[NASA-CASE-LEW-11286-1] c 07 N74-27490
- HUFFAKER, R. M.**  
Laser Doppler system for measuring three dimensional vector velocity Patent  
[NASA-CASE-MFS-20386] c 21 N71-19212  
Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c 36 N75-15028  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c 35 N77-10493  
Wind measurement system  
[NASA-CASE-MFS-23362-1] c 47 N77-10753
- HUGGINS, C. T.**  
Solid state television camera system Patent  
[NASA-CASE-XMF-06092] c 07 N71-24612
- HUGHES, B. C.**  
Air bearing Patent  
[NASA-CASE-XMF-00339] c 15 N70-39896
- HUGHES, C. T.**  
Method for forming pyrrone molding powders and products of said method  
[NASA-CASE-LAR-10423-1] c 23 N82-29358
- HUGHES, D. B.**  
Fast scan control for deflection type mass spectrometers  
[NASA-CASE-LAR-11428-1] c 35 N74-34857
- HUGHES, F. M.**  
Meteoroid detector  
[NASA-CASE-LAR-10483-1] c 14 N73-32327
- HULL, R. A.**  
Moving body velocity arresting line  
[NASA-CASE-LAR-12372-1] c 37 N82-18601
- HULS, MARY H.**  
Three-dimensional cell to tissue assembly process  
[NASA-CASE-MSC-21559-1] c 51 N92-34231
- HULT, T. D.**  
Joint for deployable structures  
[NASA-CASE-NPO-16038-1] c 37 N86-19605
- HUMBERT, J. E.**  
Automatic real-time pair-feeding system for animals  
[NASA-CASE-ARC-10302-1] c 51 N74-15778
- HUMENIK, F. M.**  
Gas turbine combustor Patent  
[NASA-CASE-LEW-10286-1] c 28 N71-28915
- HUMES, D. H.**  
Impact measuring technique  
[NASA-CASE-LAR-10913] c 14 N72-16282
- HUMES, DONALD H.**  
Method and apparatus for determining time, direction, and composition of impacting space particles  
[NASA-CASE-LAR-13392-1-CU] c 19 N91-14412
- HUMMER, R. F.**  
Scanner  
[NASA-CASE-GSC-12032-2] c 43 N82-13465
- HUMPHREY, D. E.**  
Modulated voltage metastable ionization detector  
[NASA-CASE-ARC-11503-1] c 35 N85-34374
- HUMPHREY, M. F.**  
Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c 85 N79-17747  
Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c 45 N80-14579  
Mixed polyvalent-monovalent metal coating for carbon-graphite fibers  
[NASA-CASE-NPO-14987-1] c 24 N83-33950
- HUNEIDI, F.**  
Device for determining frost depth and density  
[NASA-CASE-MFS-25754-1] c 35 N84-28018
- HUNG, CHING-CHIEH**  
Graphite fluoride fiber polymer composite material  
[NASA-CASE-LEW-14472-1] c 24 N91-15320  
Brominated graphitized carbon fibers  
[NASA-CASE-LEW-14698-2] c 27 N92-10090  
Graphite fluoride from iodine intercalated graphitized carbon  
[NASA-CASE-LEW-15360-1] c 25 N92-34206
- HUNGERFORD, W. J.**  
Conforming polisher for aspheric surface of revolution Patent  
[NASA-CASE-XGS-02884] c 15 N71-22705
- HUNKELER, R. E.**  
Foamed in place ceramic refractory insulating material Patent  
[NASA-CASE-XGS-02435] c 18 N71-22998
- HUNT, B. D.**  
An improved SNS superconducting junction with weak link barrier and method of producing  
[NASA-CASE-NPO-18552-1-CU] c 33 N92-24246
- HUNT, BRIAN D.**  
Edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-1-CU] c 76 N90-17456
- Method for producing edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-2-CU] c 76 N92-22040
- Edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-3-CU] c 76 N92-22041
- Epitaxial heterojunctions of oxide semiconductors and metals on high temperature superconductors  
[NASA-CASE-NPO-18483-1-CU] c 76 N93-15151
- HUNT, G. H.**  
System for the measurement of ultra-low stray light levels  
[NASA-CASE-MFS-23513-1] c 74 N79-11865
- HUNT, J. G.**  
Extrusion can  
[NASA-CASE-NPO-10812] c 15 N73-13464
- HUNT, J. L.**  
Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c 15 N78-32168
- HUNT, S. R., JR.**  
Multiparameter vision testing apparatus  
[NASA-CASE-MSC-13601-2] c 54 N75-27759
- HUNTER, NORWOOD R.**  
Portable dynamic fundus instrument  
[NASA-CASE-MSC-21675-1] c 52 N92-28755
- HUNTER, R. E.**  
Method and apparatus for neutralizing potentials induced on spacecraft surfaces  
[NASA-CASE-GSC-11963-1] c 33 N77-10429
- HUNTRESS, W. T.**  
Ion and electron detector for use in an ICR spectrometer  
[NASA-CASE-NPO-13479-1] c 35 N77-10492
- HUNTRESS, W. T., JR.**  
Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c 72 N80-27163
- HURD, W. A.**  
System for the measurement of ultra-low stray light levels  
[NASA-CASE-MFS-23513-1] c 74 N79-11865
- HURD, W. J.**  
Digital filter for reducing sampling jitter in digital control systems Patent  
[NASA-CASE-NPO-11088] c 08 N71-29034  
Transition tracking bit synchronization system  
[NASA-CASE-NPO-10844] c 07 N72-20140  
Digital quasi-exponential function generator  
[NASA-CASE-NPO-11130] c 08 N72-20176  
Code regenerative clean-up loop transponder for a mu-type ranging system  
[NASA-CASE-NPO-11707] c 07 N73-25161  
High dynamic global positioning system receiver  
[NASA-CASE-NPO-16171-1-CU] c 04 N86-27270
- HURD, WILLIAM J.**  
Digital phase-lock loop having an estimator and predictor of error  
[NASA-CASE-NPO-17196-1-CU] c 32 N88-29076  
Digital carrier demodulator employing components working beyond normal limits  
[NASA-CASE-NPO-17628-1-CU] c 32 N92-21712
- HURSTA, W. N.**  
Logic-controlled occlusive cuff system  
[NASA-CASE-MSC-14836-1] c 52 N82-11770
- HURWITZ, F. I.**  
Method and apparatus for gripping uniaxial fibrous composite materials  
[NASA-CASE-LEW-13758-1] c 24 N84-27829
- HUSAIN-ABIDI, A. S.**  
Optical data processing using paraboloidal mirror segments  
[NASA-CASE-GSC-11296-1] c 23 N73-30666
- HUSCHKE, E. G., JR.**  
Method of joining aluminum to stainless steel Patent  
[NASA-CASE-MFS-07369] c 15 N71-20443  
Brazing alloy composition  
[NASA-CASE-XMF-06053] c 26 N75-27126  
Brazing alloy  
[NASA-CASE-XNP-03878] c 26 N75-27127
- HUSMANN, O. K.**  
Multilayer porous ionizer Patent  
[NASA-CASE-NXP-04338] c 17 N71-23046
- HUSSEY, M. W.**  
Filter regeneration systems  
[NASA-CASE-MSC-14273-1] c 34 N75-33342
- HUTCHINSON, W. D.**  
Manually actuated heat pump  
[NASA-CASE-NPO-10677] c 05 N72-11084
- HUTCHISON, J. J.**  
Trifunctional alcohol  
[NASA-CASE-NPO-10714] c 06 N69-31244  
Novel polycarboxylic prepolymeric materials and polymers thereof Patent  
[NASA-CASE-NPO-10596] c 06 N71-25929
- HUTTO, R. J.**  
Radiation sensitive solid state switch  
[NASA-CASE-NPO-10817-1] c 08 N73-30135
- HUTTO, WILLIAM R.**  
Pressure rig for repetitive casting  
[NASA-CASE-LAR-14050-1] c 31 N90-21216
- HYMER, R. L.**  
Audio signal processor Patent  
[NASA-CASE-MSC-12223-1] c 07 N71-26181
- I-LECHAO, J.**  
Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-1] c 54 N76-22914
- IANNINI, A. A.**  
Pressure sensitive transducers Patent  
[NASA-CASE-ERC-10087] c 14 N71-27334  
Semiconductor transducer device  
[NASA-CASE-ERC-10087-2] c 14 N72-31446
- IANNONE, M.**  
Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c 27 N79-22300
- ICELAND, W. F.**  
Grain refinement control in TIG arc welding  
[NASA-CASE-MSC-19095-1] c 37 N75-19683
- ICELAND, WILLIAM F.**  
ARC length control for plasma welding  
[NASA-CASE-MSC-20900-1] c 37 N88-30131
- IDEN, R. B.**  
Method for determining presence of OH in magnesium oxide  
[NASA-CASE-NPO-10774] c 06 N72-17095
- IGENBERGS, E. B.**  
Self-energized plasma compressor  
[NASA-CASE-MFS-22145-1] c 75 N75-13625  
Two stage light gas-plasma projectile accelerator  
[NASA-CASE-MFS-22287-1] c 75 N76-14931  
Self-energized plasma compressor  
[NASA-CASE-MFS-22145-2] c 75 N76-17951
- IGOE, W. B.**  
Dynamic vibration absorber Patent  
[NASA-CASE-LAR-10083-1] c 15 N71-27006
- ILES, P. A.**  
Method for producing a solar cell having an integral protective covering  
[NASA-CASE-XGS-04531] c 03 N69-24267  
Method of coating solar cell with borosilicate glass and resultant product  
[NASA-CASE-GSC-11514-1] c 03 N72-24037
- ILLG, W.**  
Hydraulic grip Patent  
[NASA-CASE-XLA-05100] c 15 N71-17696  
Light shield and infrared reflector for fatigue testing Patent  
[NASA-CASE-XLA-01782] c 14 N71-26136
- IMBOLDI, E.**  
Tracking receiver Patent  
[NASA-CASE-XGS-08679] c 10 N71-21473
- IMHOFF, MARC L.**  
Generation of topographic terrain models utilizing synthetic aperture radar and surface level data  
[NASA-CASE-GSC-13212-1] c 43 N91-32546
- IMIG, L. A.**  
Anti-buckling fatigue test assembly  
[NASA-CASE-LAR-10426-1] c 09 N74-19528  
Fatigue failure load indicator  
[NASA-CASE-LAR-12027-1] c 39 N79-22537  
Heating and cooling system  
[NASA-CASE-LAR-12393-1] c 34 N83-34221
- IMLAY, E. H.**  
Binary to binary-coded-decimal converter Patent  
[NASA-CASE-XNP-00432] c 08 N70-35423
- INGE, S. V., JR.**  
Vertical shaft windmill  
[NASA-CASE-LAR-12923-1] c 37 N84-12493
- INGHAM, J. D.**  
Dual membrane hollow fiber fuel cell and method of operating same  
[NASA-CASE-NPO-13732-1] c 44 N79-10513  
Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same  
[NASA-CASE-NPO-13137-1] c 27 N80-32514  
Prepolymer dianhydrides  
[NASA-CASE-NPO-13899-1] c 27 N80-32515  
Sewage sludge additive  
[NASA-CASE-NPO-13877-1] c 45 N82-11634  
Elastomer coated filler and composites thereof comprising at least 60% by weight of a hydrated filler and an elastomer containing an acid substituent  
[NASA-CASE-NPO-14857-1] c 27 N83-19900
- INGHAM, K. T.**  
Locking device for turbine rotor blades Patent  
[NASA-CASE-XNP-00816] c 28 N71-28928

- INGLE, W. M.**  
Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c 26 N80-14229  
Quartz ball valve  
[NASA-CASE-NPO-14473-1] c 37 N80-23654
- IRICK, S. C.**  
Ejectable underwater sound source recovery assembly  
[NASA-CASE-LAR-10595-1] c 35 N74-16135  
Hydraulic actuator mechanism to control aircraft spoiler movements through dual input commands  
[NASA-CASE-LAR-12412-1] c 08 N82-24205  
Continuous self-locking spiral wound seal  
[NASA-CASE-LAR-12315-1] c 37 N82-24490
- IRONS, A. S.**  
Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c 54 N75-27761
- IRVIN, TIMOTHY B.**  
Optical pressure sealing coupling apparatus  
[NASA-CASE-MFS-29348-1] c 74 N89-25689
- IRWIN, A. S.**  
Drilled ball bearing with a one piece anti-tipping cage assembly  
[NASA-CASE-LEW-11925-1] c 37 N75-31446
- IRWIN, K. S.**  
Controlled visibility device for an aircraft Patent  
[NASA-CASE-XFR-04147] c 11 N71-10748
- IRWIN, T. P.**  
Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c 24 N77-19170
- ISKENDERIAN, THEODORE C.**  
Fluid-loop reaction system  
[NASA-CASE-NPO-17204-1-CU] c 34 N91-25380
- ISLEY, W. C.**  
Heated porous plug microthruster  
[NASA-CASE-GSC-10640-1] c 28 N72-18766
- ITO, T. I.**  
Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c 23 N82-28353
- IVES, R. E.**  
Computerized system for translating a torch head  
[NASA-CASE-MFS-23620-1] c 37 N79-10421
- IVIE, C. V.**  
Multi-channel rotating optical interface for data transmission  
[NASA-CASE-NPO-14066-1] c 74 N79-34011
- IWASAKI, N.**  
Control device Patent  
[NASA-CASE-XAC-10019] c 15 N71-23809
- IWASAKI, R. S.**  
Electromagnetic power absorber  
[NASA-CASE-NPO-13830-1] c 32 N80-14281
- IWASAKI, RICHARD S.**  
Switched steerable multiple beam antenna system  
[NASA-CASE-MSC-20873-1-SB] c 32 N89-11961

**J**

- JACK, J. R.**  
Electro-thermal rocket Patent  
[NASA-CASE-XLE-00267] c 28 N70-33356  
Electrothermal rockets having improved heat exchangers Patent  
[NASA-CASE-XLE-01783] c 28 N70-34175
- JACKSON, C. M., JR.**  
Wind tunnel model and method  
[NASA-CASE-LAR-10812-1] c 09 N74-17955  
Metric half-span model support system  
[NASA-CASE-LAR-12441-1] c 09 N82-23254
- JACKSON, J. W., JR.**  
Imaging X-ray spectrometer  
[NASA-CASE-GSC-12682-1] c 35 N84-33765
- JACKSON, K. R.**  
Optical alignment system Patent  
[NASA-CASE-XNP-02029] c 14 N70-41955
- JACKSON, L. R.**  
Techniques for insulating cryogenic fuel containers Patent  
[NASA-CASE-XLA-01967] c 31 N70-42015  
Orbiter/launch system  
[NASA-CASE-LAR-12250-1] c 14 N81-26161  
Multiwall thermal protection system  
[NASA-CASE-LAR-12620-1] c 24 N82-32417  
Curved cap corrugated sheet  
[NASA-CASE-LAR-12884-1] c 18 N84-33450  
Daze fasteners  
[NASA-CASE-LAR-13009-1] c 37 N85-29285  
Aerospace vehicle  
[NASA-CASE-LAR-13155-1] c 05 N86-19310
- JACKSON, L. ROBERT**  
Daze fasteners  
[NASA-CASE-LAR-13009-2] c 37 N87-22976  
Cryogenic insulation system  
[NASA-CASE-LAR-13506-1] c 27 N89-12741

- JACKSON, M. R.**  
Directionally solidified eutectic gamma plus beta nickel-base superalloys  
[NASA-CASE-LEW-12906-1] c 26 N77-32279  
Directionally solidified eutectic gamma-gamma nickel-base superalloys  
[NASA-CASE-LEW-12905-1] c 26 N78-18183
- JACKSON, ROBERT**  
Truss-core corrugation for compressive loads  
[NASA-CASE-LAR-13438-1] c 31 N89-12786
- JACOB, D. S.**  
Pressure modulating valve  
[NASA-CASE-MSC-14905-1] c 37 N77-28487
- JACOBI, N.**  
Acoustic levitation methods and apparatus  
[NASA-CASE-NPO-15562-1] c 71 N82-27086  
Acoustic system for material transport  
[NASA-CASE-NPO-15453-1] c 71 N83-32515  
Acoustic particle separation  
[NASA-CASE-NPO-15559-1] c 71 N85-30765
- JACOBS, I. M.**  
Data compression system  
[NASA-CASE-XNP-09785] c 08 N69-21928
- JACOBS, J. M.**  
Biocontamination and particulate detection system  
[NASA-CASE-NPO-13953-1] c 35 N79-28527
- JACOBS, R. B.**  
Densitometer Patent  
[NASA-CASE-XLE-00688] c 14 N70-41330
- JACOBS, V. L.**  
Passive propellant system  
[NASA-CASE-MFS-23642-2] c 20 N78-27176  
Passive propellant system  
[NASA-CASE-MFS-23642-1] c 20 N80-10278
- JACOBSON, D. S.**  
Hermetically sealed semiconductor  
[NASA-CASE-GSC-10791-1] c 15 N73-14469
- JACOY, PAUL J.**  
Core design for use with precision composite reflectors  
[NASA-CASE-NPO-17858-1-CU] c 24 N93-14700
- JAGOW, R. B.**  
Process of forming catalytic surfaces for wet oxidation reactions  
[NASA-CASE-MSC-14831-1] c 25 N78-10225
- JAIN, A.**  
Surface roughness measuring system  
[NASA-CASE-NPO-13862-1] c 35 N79-10391  
Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-1] c 32 N79-19195  
Clutter free synthetic aperture radar correlator  
[NASA-CASE-NPO-14035-1] c 32 N83-19968  
Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c 32 N83-31918  
Method and apparatus for Delta Kappa synthetic aperture radar measurement of ocean current  
[NASA-CASE-NPO-15704-1] c 32 N85-34327
- JAIN, ABHINANDAN**  
High level language-based robotic control system  
[NASA-CASE-NPO-17918-2-CU] c 63 N92-17895  
Controlling flexible robot arms using a high speed dynamics process  
[NASA-CASE-NPO-18499-1-CU] c 37 N92-24042  
Controlling under-actuated robot arms using a high speed dynamics process  
[NASA-CASE-NPO-18498-1-CU] c 37 N92-24043
- JAKSTYS, V. J.**  
Composite antenna feed  
[NASA-CASE-GSC-11046-1] c 07 N73-28013
- JALAN, V.**  
Chromium electrodes for REDOX cells  
[NASA-CASE-LEW-13653-1] c 44 N84-28205
- JALINK, A. JR.**  
Method for improving the signal-to-noise ratio of the Wheatstone bridge type bolometer Patent  
[NASA-CASE-XLA-02810] c 14 N71-25901  
Infrared horizon locator  
[NASA-CASE-LAR-10726-1] c 14 N73-20475
- JALINK, ANTONY, JR.**  
Thermal compensating mount  
[NASA-CASE-LAR-14207-1] c 35 N91-14590
- JALUFKA, N. W.**  
Volumetric direct nuclear pumped laser  
[NASA-CASE-LAR-12183-1] c 36 N79-18307
- JAMES, GORDON E.**  
Mechanical strain isolator mount  
[NASA-CASE-LAR-13580-1] c 37 N91-21541
- JAMES, L. W.**  
III-V photocathode with nitrogen doping for increased quantum efficiency  
[NASA-CASE-NPO-12134-1] c 33 N76-31409
- JAMES, N. J.**  
Resilient wheel Patent  
[NASA-CASE-MFS-13929] c 15 N71-27091

- JAMES, R.**  
System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c 06 N82-16075
- JAMIESON, ROBERT S.**  
Rotary stepping device with memory metal actuator  
[NASA-CASE-NPO-15482-1] c 37 N87-23970
- JAMISON, H. H.**  
Ion-exchange membrane with platinum electrode assembly Patent  
[NASA-CASE-XMS-02063] c 03 N71-29044
- JAMNEJAD, VAHRAZ**  
A satellite-tracking millimeter-wave reflector antenna system for mobile satellite-tracking  
[NASA-CASE-NPO-18772-1-CU] c 32 N93-28955
- JANEFF, W.**  
Tracking receiver Patent  
[NASA-CASE-XGS-08679] c 10 N71-21473
- JANESICK, J. R.**  
Laser pulse detection method and apparatus  
[NASA-CASE-NPO-16030-1] c 36 N84-25037
- JANKOWSKI, F.**  
Quick disconnect filter coupling  
[NASA-CASE-MFS-22323-1] c 37 N76-14463
- JANNICHE, P. J., JR.**  
Passive synchronized spike generator with high input impedance and low output impedance and capacitor power supply Patent  
[NASA-CASE-XGS-03632] c 09 N71-23311
- JANSEN, H. B.**  
Fluid thrust control system  
[NASA-CASE-XMF-05964-1] c 20 N79-21124
- JANSSEN, MICHAEL A.**  
Miniature modular microwave end-to-end receiver  
[NASA-CASE-NPO-18713-1-CU] c 32 N93-29087
- JARRELL, LAMONT**  
Combined air and water pollution control system  
[NASA-CASE-NST-00007-1] c 45 N91-14662
- JARVIS, M. J.**  
Spillage detector for liquid chromatography systems  
[NASA-CASE-MSC-20206-1] c 25 N86-27431
- JASKOWIAK, MARTHA H.**  
Guandine based vehicle/binders for use with oxides, metals, and ceramics  
[NASA-CASE-LEW-15314-1] c 27 N92-23461  
Guandine based vehicle/binders for use with oxides, metals, and ceramics  
[NASA-CASE-LEW-15314-2] c 27 N93-28423
- JAVAN, A.**  
Method and apparatus for stabilizing a gaseous optical maser Patent  
[NASA-CASE-XGS-03644] c 16 N71-18614
- JEANE, H. L.**  
Priority interrupt system  
[NASA-CASE-NPO-13067-1] c 60 N76-18800
- JECH, R. W.**  
Reinforced metallic composites Patent  
[NASA-CASE-XLE-02428] c 17 N70-33288  
Method of making fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-00231] c 17 N70-38198  
Reinforced metallic composites Patent  
[NASA-CASE-XLE-00228] c 17 N70-38490  
Method for producing fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-03925] c 18 N71-22894
- JEDLICKA, J. R.**  
Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c 44 N74-33379
- JEFFERS, E. L.**  
Method and apparatus for eliminating luminol interference material  
[NASA-CASE-MSC-16260-1] c 51 N80-16714  
Method and automated apparatus for detecting coliform organisms  
[NASA-CASE-MSC-16777-1] c 51 N80-27067  
Rapid, quantitative determination of bacteria in water  
[NASA-CASE-GSC-12158-1] c 51 N83-27569  
Method for detecting coliform organisms  
[NASA-CASE-ARC-11322-1] c 51 N83-28849
- JEFFERY, P. A. E.**  
Compensating linkage for main rotor control  
[NASA-CASE-LPO-11797-1] c 05 N81-19087
- JEFFREYS, H. B.**  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c 35 N77-10493
- JEFFRIES-NAKAMURA, BARBARA**  
AMTEC vapor-vapor series connected cells  
[NASA-CASE-NPO-18667-1-CU] c 33 N93-19330
- JELALIAN, A. V.**  
Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c 36 N75-15028  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c 35 N77-10493

# PERSONAL AUTHOR INDEX

# JOHNSON, ROBERT R.

**JELLISON, J. C.**  
Resilience testing device Patent  
[NASA-CASE-XLA-08254] c 14 N71-26161

**JENKINS, K. H.**  
Diode and protection fuse unit Patent  
[NASA-CASE-XKS-03381] c 09 N71-22796

**JENKINS, L. M.**  
Indexed keyed connection Patent  
[NASA-CASE-XMS-02532] c 15 N70-41808

**JENKINS, R. K.**  
Thermally conductive polymers  
[NASA-CASE-GSC-11304-1] c 06 N72-21105

**JENNINGS, D. E.**  
Thermal compensator for closed-cycle helium refrigerator  
[NASA-CASE-GSC-12168-1] c 31 N79-17029  
Shock isolator for operating a diode laser on a closed-cycle refrigerator  
[NASA-CASE-GSC-12297-1] c 37 N79-28549

**JENSEN, A. R.**  
Separation nut Patent  
[NASA-CASE-XGS-01971] c 15 N71-15922

**JENSEN, B. J.**  
Sulfone-ester polymers containing pendent ethynyl groups  
[NASA-CASE-LAR-13316-1] c 27 N86-27450  
Polyarylene ethers with improved properties  
[NASA-CASE-LAR-13555-1] c 23 N86-32526  
The 5-(4-Ethynylphenoxy) isophthalic chloride  
[NASA-CASE-LAR-13316-2] c 27 N87-14515

**JENSEN, BRIAN J.**  
Imide/arylene ether copolymers  
[NASA-CASE-LAR-14159-1-CU] c 27 N92-31792  
Imide/arylene ether copolymers containing phosphine oxide groups  
[NASA-CASE-LAR-14925-1] c 27 N93-20567  
Phenylethynyl endcapping reagents and reactive diluents  
[NASA-CASE-LAR-14796-1] c 25 N93-31459

**JENSEN, C. A.**  
Continuous plasma light source  
[NASA-CASE-XNP-04167-2] c 25 N72-24753  
Continuous plasma laser  
[NASA-CASE-XNP-04167-3] c 36 N77-19416

**JENSEN, J. KERMIT**  
Mobile remote manipulator vehicle system  
[NASA-CASE-LAR-13393-1] c 54 N87-29118

**JENSEN, K. A.**  
Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587

**JENSEN, K. J.**  
Failure sensing and protection circuit for converter networks Patent  
[NASA-CASE-GSC-10114-1] c 10 N71-27366

**JENSEN, P. A.**  
Low noise single aperture multimode monopulse antenna feed system Patent  
[NASA-CASE-XNP-01735] c 07 N71-22750

**JENSEN, R. N.**  
Solar heating system  
[NASA-CASE-LAR-12009-1] c 44 N78-15560  
Combined solar collector and energy storage system  
[NASA-CASE-LAR-12205-1] c 44 N80-20810  
Solar engine  
[NASA-CASE-LAR-12148-1] c 44 N82-24640

**JENSEN, RONALD N.**  
Multi-colored layers for visualizing aerodynamic flow effects  
[NASA-CASE-LAR-13742-1] c 02 N92-21588

**JEPPSEN, G. L.**  
Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c 37 N76-22540

**JERMAKIAN, JOEL**  
Microprocessor control of multiple peak power tracking DC/DC converters for use with solar cell arrays  
[NASA-CASE-GSC-13450-1] c 44 N92-23463

**JESSUP, A. D.**  
Variable angle tube holder  
[NASA-CASE-LAR-10507-1] c 11 N72-25284  
Lyophilized spore dispenser  
[NASA-CASE-LAR-10544-1] c 37 N74-13178

**JETER, J. D.**  
Flammability test chamber Patent  
[NASA-CASE-KSC-10126] c 11 N71-24985

**JEWELL, P. A.**  
Data handling system based on source significance, storage availability and data received from the source Patent Application  
[NASA-CASE-XNP-04162-1] c 08 N70-34675

**JEWELL, R. A.**  
Production of high purity silicon carbide Patent  
[NASA-CASE-XLA-00158] c 26 N70-36805  
Apparatus for producing high purity silicon carbide crystals Patent  
[NASA-CASE-XLA-02057] c 26 N70-40015

Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00284] c 15 N71-16075

Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00302] c 15 N71-16077

**JEX, D. W.**  
Liquid aerosol dispenser  
[NASA-CASE-MFS-20829] c 12 N72-21310  
Two stage light gas-plasma projectile accelerator  
[NASA-CASE-MFS-22287-1] c 75 N76-14931

**JHABVALA, M. D.**  
Method of making V-MOS field effect transistors utilizing a two-step anisotropic etching and ion implantation  
[NASA-CASE-GSC-12515-1] c 33 N81-26360  
Implantable electrical device  
[NASA-CASE-GSC-12560-1] c 52 N82-29863

**JHABVALA, M. O.**  
Complementary DMOS-VMOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c 33 N79-12321

**JHABVALA, MURZBAN**  
Method of fabricating germanium and gallium arsenide devices  
[NASA-CASE-GSC-13265-1] c 76 N91-14066

**JHABVALA, MURZBAN D.**  
Integrated photo-responsive metal oxide semiconductor circuit  
[NASA-CASE-GSC-12782-1] c 33 N88-14271  
Visual aid for the hearing impaired  
[NASA-CASE-GSC-13027-1-CU] c 35 N91-27522

**JING, SUN**  
Method for Viterbi decoding of large constraint length convolutional codes  
[NASA-CASE-NPO-17310-1-CU] c 17 N88-28946

**JOBSON, D. J.**  
Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c 35 N75-19613

**JOE, EDMOND J.**  
A quality monitor and monitoring technique employing optically stimulated electron emission  
[NASA-CASE-LAR-15063-1] c 38 N93-30414

**JOHANNSEN, K. G.**  
Systems and methods for determining radio frequency interference  
[NASA-CASE-GSC-12150-1] c 32 N79-11265

**JOHANSEN, D. L.**  
Articulated multiple couch assembly Patent  
[NASA-CASE-MSC-11253] c 05 N71-12343  
Collapsible Apollo couch  
[NASA-CASE-MSC-13140] c 05 N72-11085

**JOHNS, C. E.**  
Continuously variable voltage controlled phase shifter  
[NASA-CASE-NPO-11129] c 09 N72-33204

**JOHNSON, A. L., JR.**  
Microelectronic module package Patent  
[NASA-CASE-XMS-02182] c 10 N71-28783

**JOHNSON, C. B.**  
Hypersonic test facility Patent  
[NASA-CASE-XLA-00378] c 11 N71-15925  
Hypersonic test facility Patent  
[NASA-CASE-XLA-05378] c 11 N71-21475  
Image tube  
[NASA-CASE-GSC-11602-1] c 33 N74-21850

**JOHNSON, C. C.**  
Visual target for retrofire attitude control  
[NASA-CASE-XMS-12158-1] c 31 N69-27499  
Orbital escape device Patent  
[NASA-CASE-XMS-06162] c 31 N71-28851  
Stand-off type ablative heat shield  
[NASA-CASE-MSC-12143-1] c 33 N72-17947  
Amplitude steered array  
[NASA-CASE-GSC-11446-1] c 33 N74-20860  
Reverse osmosis membrane of high urea rejection properties  
[NASA-CASE-ARC-10980-1] c 27 N80-23452

**JOHNSON, C. C., JR.**  
Space capsule Patent  
[NASA-CASE-XLA-00149] c 31 N70-37938  
Space capsule Patent  
[NASA-CASE-XLA-01332] c 31 N71-15664

**JOHNSON, C. E.**  
Impact testing machine Patent  
[NASA-CASE-XNP-04817] c 14 N71-23225

**JOHNSON, C. L.**  
Molding process for imidazopyrrolone polymers  
[NASA-CASE-LAR-10547-1] c 31 N74-13177

**JOHNSON, C. W.**  
Method of resolving clock synchronization error and means therefor Patent  
[NASA-CASE-XNP-08875] c 10 N71-23099

**JOHNSON, D. L.**  
Reciprocating magnetic refrigerator employing tandem porous matrices within a reciprocating displacer  
[NASA-CASE-NPO-16257-1] c 31 N85-29082

**JOHNSON, DENNIS A.**  
Laser velocimeter for near-surface measurements  
[NASA-CASE-ARC-11917-1] c 35 N91-15520

**JOHNSON, E. G.**  
System and method for tracking a signal source  
[NASA-CASE-HQN-10880-1] c 17 N78-17140

**JOHNSON, E. T.**  
Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c 52 N79-12694

**JOHNSON, F. W.**  
Heat conductive resiliently compressible structure for space electronics package modules Patent  
[NASA-CASE-MSC-12389] c 33 N71-29052

**JOHNSON, GARY S.**  
Pultrusion die assembly  
[NASA-CASE-LAR-13719-1] c 37 N89-12867  
Continuous fiber thermoplastic prepreg  
[NASA-CASE-LAR-14459-1] c 24 N91-15334  
Continuous fiber thermoplastic prepreg  
[NASA-CASE-LAR-14459-1] c 24 N93-24597

**JOHNSON, GORDON G.**  
Dynamic pattern matcher using incomplete data  
[NASA-CASE-MSC-21415-1-SB] c 61 N93-18858

**JOHNSON, H. G.**  
Electronic checkout system for space vehicles Patent  
[NASA-CASE-XKS-08012-2] c 31 N71-15566

**JOHNSON, H. I.**  
Training vehicle for controlling attitude Patent  
[NASA-CASE-XMS-02977] c 11 N71-10746  
Gravity stabilized flying vehicle Patent  
[NASA-CASE-MSC-12111-1] c 02 N71-11039  
Hand-held self-manuevering unit Patent  
[NASA-CASE-XMS-05304] c 05 N71-12336  
Fluid power transmission Patent  
[NASA-CASE-XMS-01445] c 12 N71-16031  
Subgravity simulator Patent  
[NASA-CASE-XMS-04798] c 11 N71-21474  
Pneumatic amplifier Patent  
[NASA-CASE-MSC-12121-1] c 15 N71-27147

**JOHNSON, J. C., JR.**  
Mechanical actuator Patent  
[NASA-CASE-XGS-04548] c 15 N71-24045

**JOHNSON, J. D.**  
Wrist joint assembly  
[NASA-CASE-MFS-23311-1] c 54 N78-17676

**JOHNSON, J. E.**  
Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c 37 N78-17384

**JOHNSON, J. E., JR.**  
Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c 51 N81-14605

**JOHNSON, J. L.**  
Method and apparatus for shaping and enhancing acoustical levitation forces  
[NASA-CASE-MFS-25050-1] c 71 N81-15767  
Sonic levitation apparatus  
[NASA-CASE-MFS-25828-1] c 71 N84-28568

**JOHNSON, J. L., JR.**  
High lift aircraft  
[NASA-CASE-LAR-11252-1] c 05 N75-25914

**JOHNSON, JOSEPH L., JR.**  
Over-the-wing propeller  
[NASA-CASE-LAR-13134-2] c 07 N87-16828  
Stall departure resistance enhancer  
[NASA-CASE-LAR-14221-1] c 06 N93-19023

**JOHNSON, K. G.**  
Positioning mechanism  
[NASA-CASE-NPO-10679] c 15 N72-21462

**JOHNSON, R. C.**  
Enthalpy and stagnation temperature determination of a high temperature laminar flow gas stream Patent  
[NASA-CASE-XLE-00266] c 14 N70-34156

**JOHNSON, R. D.**  
Gas path seal  
[NASA-CASE-NPO-12131-3] c 37 N80-18400

**JOHNSON, R. E.**  
Acquisition and tracking system for optical radar  
[NASA-CASE-MFS-20125] c 16 N72-13437

**JOHNSON, R. L.**  
Gas lubricant compositions Patent  
[NASA-CASE-XLE-00353] c 18 N70-39897  
Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-01765] c 18 N71-10772  
Alloys for bearings Patent  
[NASA-CASE-XLE-05033] c 15 N71-23810  
Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-10337] c 15 N71-24046

**JOHNSON, R. W.**  
Microwave switching power divider  
[NASA-CASE-GSC-12420-1] c 33 N82-16340

**JOHNSON, ROBERT R.**  
Seamless metal-clad fiber-reinforced organic matrix composite structures and process for their manufacture  
[NASA-CASE-LAR-13562-1] c 24 N90-25196



## JOHNSON, SAMUEL D.

Process for the manufacture of seamless metal-clad fiber-reinforced organic matrix composite structures  
[NASA-CASE-LAR-13562-2] c 24 N91-25199

## JOHNSON, SAMUEL D.

Flexible heating head for induction heating apparatus and method  
[NASA-CASE-LAR-14418-1] c 32 N92-31257

Heating head for induction heating apparatus  
[NASA-CASE-LAR-14429-1] c 33 N93-29173

## JOHNSON, SAMUEL D. JR.

Flexible heating head for induction heating apparatus and method  
[NASA-CASE-LAR-14679-2] c 32 N92-31150

## JOHNSON, V. E., JR.

Hydrofoil Patent  
[NASA-CASE-XLA-00229] c 12 N70-33305

## JOHNSTON, A. R.

Polarimeter for transient measurement Patent  
[NASA-CASE-XNP-08883] c 23 N71-16101

Light direction sensor  
[NASA-CASE-NPO-11201] c 14 N72-27409

Cooperative multi-axis sensor for teleoperation of article manipulating apparatus  
[NASA-CASE-NPO-13386-1] c 54 N75-27758

Stark-effect modulation of CO<sub>2</sub> laser with NH<sub>2</sub>D  
[NASA-CASE-NPO-11945-1] c 36 N76-18427

Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c 74 N85-22139

## JOHNSTON, D. F.

Induction heating gun  
[NASA-CASE-LAR-13181-1] c 31 N85-29083

## JOHNSTON, DAVID

Mold bolt and means for achieving close tolerances between bolts and bolt holes  
[NASA-CASE-MFS-28720-1] c 37 N93-30567

## JOHNSTON, DAVID F.

Electronic precipitator control  
[NASA-CASE-LAR-13273-2] c 33 N90-20320

Nonintrusive method and apparatus for monitoring the cure of polymeric materials  
[NASA-CASE-LAR-13465-1] c 27 N90-23544

## JOHNSTON, E. A.

Variable area exhaust nozzle  
[NASA-CASE-LEW-12378-1] c 07 N79-14097

Thrust reverser for a long duct fan engine  
[NASA-CASE-LEW-13199-1] c 07 N82-26293

## JOHNSTON, G. D.

Insulation bonding test system  
[NASA-CASE-MFS-25862-1] c 27 N85-20126

## JOHNSTON, J. D.

Combined docking and grasping device  
[NASA-CASE-MFS-23088-1] c 37 N77-23483

Apparatus for assembling space structure  
[NASA-CASE-MFS-23579-1] c 18 N79-11108

Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c 54 N81-26718

## JOHNSTON, J. E.

Electrostatic measurement system  
[NASA-CASE-MFS-22129-1] c 33 N75-18477

## JOHNSTON, M. F.

Synchronized voltage contrast display analysis system  
[NASA-CASE-NPO-14567-1] c 33 N83-18996

## JOHNSTON, M. H.

Preparation of monotelect alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
[NASA-CASE-MFS-23816-1] c 26 N80-23419

## JOHNSTON, MARY H.

Laser schlieren crystal monitor  
[NASA-CASE-MFS-28060-1] c 76 N87-25862

## JOHNSTON, NORMAN J.

Preparing composite materials from matrices of processable aromatic polyimide thermoplastic blends  
[NASA-CASE-LAR-14107-1] c 24 N91-25200

A tough high performance composite matrix  
[NASA-CASE-LAR-14338-1] c 24 N93-13416

## JOHNSTON, R. L.

Multiple environment materials test chamber having a multiple port X-ray tube for irradiating a plurality of samples Patent  
[NASA-CASE-XMS-02930] c 11 N71-23042

## JOHNSTON, R. P.

Active clearance control system for a turbomachine  
[NASA-CASE-LEW-12938-1] c 07 N82-32366

## JOHNSTON, R. S.

Shock absorbing support and restraint means Patent  
[NASA-CASE-XMS-01240] c 05 N70-35152

Fabric for micrometeoroid protection garment Patent  
[NASA-CASE-MSC-12109] c 18 N71-26285

## JOHNSTON, W. V.

Heat flow calorimeter  
[NASA-CASE-GSC-14134-1] c 34 N74-27859

## JOLLEY, J.

Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c 74 N77-28933

## JOLLY, CLIFFORD D.

Regenerable biocide delivery unit  
[NASA-CASE-MSC-21763-1-SB] c 51 N93-18351

## JONES, E. W.

Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c 43 N79-31706

## JONES, HOWARD C.

Adjustable mount for electro-optic transducers in an evacuated cryogenic system  
[NASA-CASE-LAR-13100-1] c 37 N87-23982

## JONES, IRBY W.

Adjustable mount for electro-optic transducers in an evacuated cryogenic system  
[NASA-CASE-LAR-13100-1] c 37 N87-23982

Linear mass actuator  
[NASA-CASE-LAR-14352-1] c 37 N92-34173

## JONES, J. C.

Shock absorber Patent  
[NASA-CASE-XMS-03722] c 15 N71-21530

## JONES, J. F.

Reinforced structural plastics  
[NASA-CASE-LEW-10199-1] c 27 N74-23125

## JONES, J. H.

Lightning tracking system  
[NASA-CASE-KSC-10729-1] c 09 N73-32110

Lightning current measuring systems  
[NASA-CASE-KSC-10807-1] c 33 N75-26246

Method and apparatus for suppressing ignition overpressure in solid rocket propulsion systems  
[NASA-CASE-MFS-25843-1] c 20 N83-17588

## JONES, J. L.

Multiple circuit switch apparatus with improved pivot actuator structure Patent  
[NASA-CASE-XAC-03777] c 10 N71-15909

Stereoscopic television system and apparatus  
[NASA-CASE-ARC-10160-1] c 23 N72-27728

## JONES, JACK A.

Ten degree Kelvin hydride refrigerator  
[NASA-CASE-NPO-16393-1-CU] c 31 N87-21159

Oxygen chemisorption cryogenic refrigerator  
[NASA-CASE-NPO-16734-1-CU] c 31 N88-14223

Krypton based adsorption type cryogenic refrigerator  
[NASA-CASE-NPO-17334-1-CU] c 31 N88-23917

Cryogenic regenerator including saran-carbon heat conduction matrix  
[NASA-CASE-NPO-17291-1-CU] c 34 N88-23946

Two stage sorption type cryogenic refrigerator including heat regeneration system  
[NASA-CASE-NPO-17630-1-CU] c 31 N89-29577

Flexible thermal apparatus for mounting of thermoelectric cooler  
[NASA-CASE-NPO-17806-1-CU] c 31 N91-27385

Multicomponent gas sorption Joule-Thomson refrigerator  
[NASA-CASE-NPO-17569-1-CU] c 31 N92-15203

Three-stage sorption type cryogenic refrigeration systems and methods employing heat regeneration  
[NASA-CASE-NPO-18366-1-CU] c 31 N93-13422

## JONES, KENNETH L.

Improving the geometric fidelity of imaging systems employing sensor arrays  
[NASA-CASE-NPO-17970-1-CU] c 43 N90-26384

## JONES, R. A.

Flow field simulation Patent  
[NASA-CASE-LAR-11138] c 12 N71-20436

Method for determining thermo-physical properties of specimens  
[NASA-CASE-LAR-11053-1] c 25 N74-18551

Apparatus for determining thermophysical properties of test specimens  
[NASA-CASE-LAR-11883-1] c 09 N77-27131

## JONES, R. E.

Swirl can primary combustor  
[NASA-CASE-LEW-11326-1] c 23 N73-30665

## JONES, R. H.

Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c 34 N74-27730

## JONES, R. J.

Capillary flow weld-bonding  
[NASA-CASE-LAR-11726-1] c 37 N76-27568

## JONES, R. L.

Helmet assembly and latch means therefor Patent  
[NASA-CASE-XMS-04935] c 05 N71-11190

## JONES, R. T.

Dual-fuselage aircraft having yawable wing and horizontal stabilizer  
[NASA-CASE-ARC-10470-1] c 02 N73-26005

Oblique-wing supersonic aircraft  
[NASA-CASE-ARC-10470-3] c 05 N76-29217

## JONES, STEPHEN B.

Synchronous strobe apparatus for flow visualization  
[NASA-CASE-LAR-14556-1] c 36 N91-25392

Schlieren system for visualizing the flow within a pipe of circular cross-section  
[NASA-CASE-LAR-13944-1] c 35 N92-11336

## JONES, W. C.

Rotational joint assembly for the prosthetic leg  
[NASA-CASE-KSC-11004-1] c 54 N77-30749

## JONES, W. P.

Folded traveling wave maser structure Patent  
[NASA-CASE-XNP-05219] c 16 N71-15550

Superconducting magnet Patent  
[NASA-CASE-XNP-06503] c 23 N71-29049

## JORDAN, A. W.

Electric storage battery  
[NASA-CASE-NPO-11021] c 03 N72-20032

## JORDON, W. J.

Inspection gage for boss Patent  
[NASA-CASE-XMF-04966] c 14 N71-17658

## JOSIAS, C. S.

Micro current measuring device using plural logarithmic response heated filamentary type diodes Patent  
[NASA-CASE-XNP-00384] c 09 N71-13530

## JOSLYN, A. W.

Boiler for generating high quality vapor Patent  
[NASA-CASE-XLE-00785] c 33 N71-16104

## JOYNER, U. T.

Nose gear steering system for vehicle with main skids Patent  
[NASA-CASE-XLA-01804] c 02 N70-34160

## JUANG, JER-NAN

Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N91-28184

Noncircular rolling joints for vibrational reduction in slewing maneuvers  
[NASA-CASE-LAR-14515-1-CU] c 37 N92-33031

Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N93-24598

## JUDAY, RICHARD D.

Optical joint correlator for real-time image tracking and retinal surgery  
[NASA-CASE-MSC-21509-1] c 74 N91-25840

Three dimensional moire pattern alignment  
[NASA-CASE-MSC-21416-1] c 74 N91-32922

Programmable remapper for image processing  
[NASA-CASE-MSC-21350-1] c 60 N92-16563

Two dimensional vernier  
[NASA-CASE-MSC-21700-1] c 35 N92-22039

Full complex modulation using two one-parameter spatial light modulators  
[NASA-CASE-MSC-22255-1] c 74 N93-28135

## JUDD, B. W.

Garments for controlling the temperature of the body Patent  
[NASA-CASE-XMS-10269] c 05 N71-24147

## JUDD, J. H.

Air frame drag balance Patent  
[NASA-CASE-XLA-00113] c 14 N70-33386

Spacecraft airlock Patent  
[NASA-CASE-XLA-02050] c 31 N71-22968

Light regulator  
[NASA-CASE-LAR-10836-1] c 26 N72-27784

Deposition apparatus  
[NASA-CASE-LAR-10541-1] c 15 N72-32487

## JUDY, P. F.

Method and system for in vivo measurement of bone tissue using a two level energy source  
[NASA-CASE-MSC-14276-1] c 52 N77-14737

## JUERGENSEN, K.

Regenerative braking system Patent  
[NASA-CASE-XMF-01096] c 10 N71-16030

## JUHAS, JOHN J.

One step HIP canning of powder metallurgy composites  
[NASA-CASE-LEW-14719-1] c 24 N90-23493

Process for HIP canning of composites  
[NASA-CASE-LEW-14990-1-CU] c 24 N91-17145

## JUHASZ, A. J.

Controlled separation combustor  
[NASA-CASE-LEW-11593-1] c 20 N76-14190

## JURSCAGA, G. M.

Method of fabricating an article with cavities  
[NASA-CASE-LAR-10318-1] c 31 N74-18089

## JUSTAK, JOHN F.

Hybrid bearings for turbopumps and the like  
[NASA-CASE-MFS-28491-1] c 37 N93-28326

## JUVINALL, G. L.

Trialkyl-dihaloantimony and niobium compounds Patent  
[NASA-CASE-XNP-04023] c 06 N71-28808

## K

## KABANA, W. P.

Butt welder for fine gauge tungsten/rhenium thermocouple wire  
[NASA-CASE-LAR-10103-1] c 15 N73-14468

## KACHARE, AKARAM H.

High band gap 2-6 and 3-5 tunneling junctions for silicon multijunction solar cells  
[NASA-CASE-NPO-16526-1CU] c 44 N87-17399

- KAHLBAUM, W. M., JR.**  
Chromatically corrected virtual image visual display  
[NASA-CASE-LAR-12251-1] c 74 N80-27185
- KAHN, JON B.**  
Docking system for spacecraft  
[NASA-CASE-MS-C-21327-1] c 18 N90-11798  
Load limiting energy absorbing lightweight debris catcher  
[NASA-CASE-MS-C-21562-1] c 16 N92-16007  
Pressure vessel flex joint  
[NASA-CASE-MS-C-21748-1] c 37 N92-21727  
Pre-integrated truss space station and method of assembly  
[NASA-CASE-MS-C-22015-1] c 18 N93-20042  
Method and apparatus for preloading a joint by remotely operable means  
[NASA-CASE-MS-C-21940-1] c 37 N93-20120
- KAISER, J. A., JR.**  
Scannable beam forming interferometer antenna array system  
[NASA-CASE-GSC-12365-1] c 32 N80-28578
- KALFAYAN, S. H.**  
Epoxy-aziridine polymer product Patent  
[NASA-CASE-NPO-10701-1] c 06 N71-28620  
Strain gage mounting assembly  
[NASA-CASE-NPO-13170-1] c 35 N76-14430  
Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c 44 N78-31527
- KALIL, L. F.**  
Temperature averaging thermal probe  
[NASA-CASE-GSC-12795-1] c 35 N86-19580
- KALKBRENNER, R. W.**  
Heat transfer device  
[NASA-CASE-NPO-11120-1] c 34 N74-18552
- KALLINS, C.**  
Rotary actuator  
[NASA-CASE-NPO-10244-1] c 15 N72-26371
- KALLVINSKAS, J. J.**  
Fluidized bed desulfurization  
[NASA-CASE-NPO-15924-1] c 25 N85-35253
- KALSHOVEN, J. E., JR.**  
Method of and apparatus for measuring temperature and pressure  
[NASA-CASE-GSC-12558-1] c 36 N85-21639
- KALVINSKAS, J. J.**  
Sewage sludge additive  
[NASA-CASE-NPO-13877-1] c 45 N82-11634  
Crude oil desulfurization  
[NASA-CASE-NPO-14542-1] c 25 N82-23282  
Coal desulfurization by aqueous chlorination  
[NASA-CASE-NPO-14902-1] c 25 N82-29371  
Hydrodesulfurization of chlorinated coal  
[NASA-CASE-NPO-15304-1] c 25 N83-31743
- KAMAR, DEVENDRA**  
Aromatic cyclotriphenylphenes  
[NASA-CASE-ARC-11428-3] c 23 N88-24692
- KAMI, S.**  
Gas regulator Patent  
[NASA-CASE-NPO-10298-1] c 12 N71-17661
- KAMINSKAS, R. A.**  
Penetrating radiation system for detecting the amount of liquid in a tank Patent  
[NASA-CASE-MS-C-12280-1] c 27 N71-16348
- KAMMERMEYER, K.**  
Mixture separation cell Patent  
[NASA-CASE-XMS-02952-1] c 18 N71-20742
- KAMPINSKY, A.**  
Method and apparatus for determining electromagnetic characteristics of large surface area passive reflectors  
[NASA-CASE-XGS-02608-1] c 07 N70-41678  
Apparatus providing a directive field pattern and attitude sensing of a spin stabilized satellite Patent  
[NASA-CASE-XGS-02607-1] c 31 N71-23009
- KANABUS, E. W.**  
Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means  
[NASA-CASE-NPO-13910-1] c 52 N79-27836
- KANBER, H.**  
Acoustic driving of rotor  
[NASA-CASE-NPO-14005-1] c 71 N79-20827
- KANE, J. O.**  
Thermal barrier pressure seal  
[NASA-CASE-MS-C-18134-1] c 37 N81-15363
- KANE, T. R.**  
Spacecraft attitude control method and apparatus  
[NASA-CASE-HQN-10439-1] c 21 N72-21624
- KANETKAR, SHARAD V.**  
Frequency domain laser velocimeter signal processor  
[NASA-CASE-LAR-13552-1-CU] c 33 N89-14385
- KAPUSTKA, R. E.**  
Method and apparatus for conditioning of nickel-cadmium batteries  
[NASA-CASE-MFS-23270-1] c 44 N78-25531
- KARIGAN, G. H.**  
Accumulator  
[NASA-CASE-MFS-19287-1] c 34 N77-30399
- KARIOTIS, A. H.**  
Compression test assembly  
[NASA-CASE-LAR-10440-1] c 14 N73-32323
- KARSH, I.**  
Tape guidance system and apparatus for the provision thereof Patent  
[NASA-CASE-XNP-09453-1] c 08 N71-19420  
Incremental tape recorder and data rate converter Patent  
[NASA-CASE-XNP-02778-1] c 08 N71-22710
- KASPARECK, W. E.**  
Precision stepping drive Patent  
[NASA-CASE-MFS-14772-1] c 15 N71-17692  
Fine adjustment mount  
[NASA-CASE-MFS-20249-1] c 15 N72-11386  
Adjustable force probe  
[NASA-CASE-MFS-20760-1] c 14 N72-33377
- KASSEL, PHILIP C., JR.**  
Method and apparatus for determining time, direction, and composition of impacting space particles  
[NASA-CASE-LAR-13392-1-CU] c 19 N91-14412
- KAST, H. B.**  
Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c 07 N77-23106  
Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c 37 N78-10467
- KASTAN, H.**  
Absorptive splitter for closely spaced supersonic engine air inlets Patent  
[NASA-CASE-XLA-02865-1] c 28 N71-15563
- KASTNER, S. O.**  
Diffraction grating configuration for X-ray and ultraviolet focusing  
[NASA-CASE-GSC-12357-1] c 74 N80-21140
- KATOW, M. S.**  
Multi-feed cone Cassegrain antenna Patent  
[NASA-CASE-NPO-10539-1] c 07 N71-11285
- KATTI, ROMNEY R.**  
Integrated, non-volatile, high-speed analog random access memory  
[NASA-CASE-NPO-17998-1-CU] c 60 N92-12438  
High speed magneto-resistive random access memory  
[NASA-CASE-NPO-17954-1-CU] c 60 N93-14704
- KATVALA, V. W.**  
Reaction cured glass and glass coatings  
[NASA-CASE-ARC-11051-1] c 27 N78-32260  
Spray coating apparatus having a rotatable workpiece holder  
[NASA-CASE-ARC-11110-1] c 37 N82-24492
- KATVALA, VICTOR W.**  
Toughened uni-piece fibrous insulation  
[NASA-CASE-ARC-11888-1] c 24 N92-16026
- KATZ, J.**  
Arrangement for damping the resonance in a laser diode  
[NASA-CASE-NPO-15980-1] c 36 N85-30305
- KATZ, L.**  
Force measuring instrument Patent  
[NASA-CASE-XMF-00456-1] c 14 N70-34705  
Optimum predetection diversity receiving system Patent  
[NASA-CASE-XGS-00740-1] c 07 N71-23098  
Apparatus for obtaining isotropic irradiation of a specimen  
[NASA-CASE-MFS-20095-1] c 24 N72-11595  
Method and apparatus for supercooling and solidifying substances  
[NASA-CASE-MFS-25242-1] c 35 N83-29650
- KATZ, M. G.**  
Method for the preparation of thin-skinned asymmetric reverse osmosis membranes and products thereof  
[NASA-CASE-ARC-11359-1] c 51 N84-28361
- KATZ, N. H.**  
Temperature reducing coating for metals subject to flame exposure Patent  
[NASA-CASE-XLE-00035-1] c 33 N71-29151
- KATZBERG, S. J.**  
Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c 35 N75-15014  
Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c 35 N75-19613  
Device for measuring the contour of a surface  
[NASA-CASE-LAR-11869-1] c 74 N78-27904
- KATZEN, E. D.**  
Protected isotope heat source  
[NASA-CASE-LEW-11227-1] c 73 N75-30876
- KATZIN, L.**  
Breakaway connector  
[NASA-CASE-NPO-11140-1] c 15 N72-17455
- KAUFMAN, H. R.**  
Ion thruster cathode  
[NASA-CASE-XLE-07087-1] c 06 N69-39889
- Ion rocket Patent  
[NASA-CASE-XLE-00376-1] c 28 N70-37245  
Electrostatic ion engine having a permanent magnetic circuit Patent  
[NASA-CASE-XLE-01124-1] c 28 N71-14043  
Electrostatic ion rocket engine Patent  
[NASA-CASE-XLE-02066-1] c 28 N71-15661  
Ion beam deflector Patent  
[NASA-CASE-LEW-10689-1] c 28 N71-26173
- KAUFMAN, J. W.**  
Maxometers (peak wind speed anemometers)  
[NASA-CASE-MFS-20916-1] c 14 N73-25460  
Wind wheel electric power generator  
[NASA-CASE-MFS-23515-1] c 44 N80-21828
- KAUFMAN, W. B.**  
High current electrical lead  
[NASA-CASE-LEW-10950-1] c 33 N74-27683
- KAUFMANN, J. J.**  
Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c 44 N76-27664
- KAUKLER, WILLIAM F.**  
Method for investigating the formation of crystals in a transparent material  
[NASA-CASE-MFS-26008-1-CU] c 76 N88-14835
- KAVANAUGH, C.**  
Shuttle-launch triangular space station  
[NASA-CASE-MS-C-20676-1] c 18 N86-24729
- KAVAYA, M. J.**  
Stark effect spectrophone for continuous absorption spectra monitoring  
[NASA-CASE-NPO-15102-1] c 25 N81-25159  
Spectrophone stabilized laser with line center offset frequency control  
[NASA-CASE-NPO-15516-1] c 36 N84-22943  
Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333
- KAZAROFF, J. M.**  
Heat exchanger and method of making  
[NASA-CASE-LEW-12441-1] c 34 N79-13289  
Heat exchanger and method of making  
[NASA-CASE-LEW-12441-2] c 34 N80-24573  
Heat exchanger and method of making  
[NASA-CASE-LEW-12441-3] c 44 N81-24519
- KAZNOFF, A. I.**  
Method of making a cermet Patent  
[NASA-CASE-LEW-10219-1] c 18 N71-28729
- KAZOKAS, G. P.**  
Vacuum leak detector  
[NASA-CASE-LAR-11237-1] c 35 N75-19612
- KEAFER, L. S., JR.**  
Transmitting and reflecting diffuser  
[NASA-CASE-LAR-10385-2] c 70 N74-13436  
Transmitting and reflecting diffuser  
[NASA-CASE-LAR-10385-3] c 74 N78-15879
- KEARNS, W. J.**  
Mount for thermal control system Patent  
[NASA-CASE-NPO-10138-1] c 33 N71-16357
- KEATHLEY, W. H.**  
Energy absorbing structure Patent Application  
[NASA-CASE-MS-C-12279-1] c 15 N70-35679  
Low onset rate energy absorber  
[NASA-CASE-MS-C-12279-1] c 15 N72-17450
- KEATING, J. M.**  
Method and apparatus for attaching physiological monitoring electrodes Patent  
[NASA-CASE-XFR-07658-1] c 05 N71-26293
- KEEFER, J. M.**  
Phonocardiogram simulator Patent  
[NASA-CASE-XKS-10804-1] c 05 N71-24606
- KEENE, W. H.**  
Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c 36 N75-15028  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c 35 N77-10493
- KEETON, A. R.**  
Sodium storage and injection system  
[NASA-CASE-NPO-14384-1] c 37 N80-10494
- KEHLET, A. B.**  
Parachute glider Patent  
[NASA-CASE-XLA-00898-1] c 02 N70-36804  
Space and atmospheric reentry vehicle Patent  
[NASA-CASE-XGS-00260-1] c 31 N70-37924  
Space capsule Patent  
[NASA-CASE-XLA-00149-1] c 31 N70-37938  
Space capsule Patent  
[NASA-CASE-XLA-01332-1] c 31 N71-15664
- KELBAUGH, B. N.**  
Automatic instrument for chemical processing to detect microorganism in biological samples by measuring light reactions  
[NASA-CASE-GSC-11169-2] c 05 N73-32011
- KELLER, E. E.**  
Heat exchanger  
[NASA-CASE-MFS-22991-1] c 34 N77-10463

# KELLER, G. C.

- KELLER, G. C.**  
Plural beam antenna  
[NASA-CASE-GSC-11013-1] c 09 N73-19234
- KELLER, O. F.**  
Pressure regulating system Patent  
[NASA-CASE-XNP-00450] c 15 N70-38603
- KELLER, V. W.**  
Double window viewing chamber assembly  
[NASA-CASE-MFS-28057-1] c 09 N87-14355
- KELLER, VERNON W.**  
Warm fog dissipation using large volume water sprays  
[NASA-CASE-MFS-25962-1] c 09 N89-25242
- KELLEY, H. L.**  
Helicopter anti-torque system using strakes  
[NASA-CASE-LAR-13233-1] c 05 N84-33400
- KELLEY, HENRY L.**  
Helicopter anti-torque system using fuselage strakes  
[NASA-CASE-LAR-13630-1] c 08 N88-23809  
Process for bonding elastomers to metals  
[NASA-CASE-LAR-13645-1] c 27 N93-25995  
Helicopter low-speed yaw control  
[NASA-CASE-LAR-14219-1] c 08 N93-25998
- KELLEY, J. R.**  
Mechanical stability augmentation system Patent  
[NASA-CASE-XLA-06339] c 02 N71-13422
- KELLEY, W. W.**  
Pitch attitude stabilization system utilizing engine pressure ratio feedback signals  
[NASA-CASE-LAR-12562-1] c 08 N81-26152
- KELLS, M. C.**  
Device for measuring pressure Patent  
[NASA-CASE-XAC-04458] c 14 N71-24232
- KELLY, D. L.**  
Multistage aerospace craft  
[NASA-CASE-XMF-02263] c 05 N74-10907
- KELLY, H. N.**  
Shell tile thermal protection system  
[NASA-CASE-LAR-12862-1] c 27 N84-27886
- KELLY, W. L., IV**  
Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c 35 N75-19613  
Device for measuring the contour of a surface  
[NASA-CASE-LAR-11869-1] c 74 N78-27904
- KELLY, W. W.**  
Velocity vector control system augmented with direct lift control  
[NASA-CASE-LAR-12268-1] c 08 N81-24106
- KELM, J. S.**  
Flow modifying device  
[NASA-CASE-LEW-13562-2] c 07 N85-35195
- KELSEY, E. L.**  
Transient-compensated SCR inverter  
[NASA-CASE-XLA-08507] c 09 N69-39984  
SCR blocking pulse gate amplifier Patent  
[NASA-CASE-XLA-07497] c 09 N71-12514
- KEMENY, SABRINA E.**  
Digital parallel processor array for optimum path planning  
[NASA-CASE-NPO-18727-1-CU] c 62 N93-28427
- KEMP, K. L.**  
Pneumatic mirror support system  
[NASA-CASE-XLA-03271] c 11 N69-24321
- KEMP, R. F.**  
Apparatus for field strength measurement of a space vehicle Patent  
[NASA-CASE-XLE-00820] c 14 N71-16014
- KEMP, R. H.**  
Thin-walled pressure vessel Patent  
[NASA-CASE-XLE-04677] c 15 N71-10577
- KENDAL, J. M.**  
Pressure letdown method and device for coal conversion systems  
[NASA-CASE-NPO-15100-1] c 44 N84-14583
- KENDALL, J. M.**  
Resolution enhanced sound detecting apparatus  
[NASA-CASE-NPO-14134-1] c 71 N79-23753
- KENDALL, J. M., JR.**  
Method of forming frozen spheres in a force-free drop tower  
[NASA-CASE-NPO-14845-1] c 27 N82-28442
- KENDALL, J. M., SR.**  
Conically shaped cavity radiometer with a dual purpose cone winding Patent  
[NASA-CASE-XNP-09701] c 14 N71-26475  
Black body cavity radiometer Patent  
[NASA-CASE-NPO-10810] c 14 N71-27323
- KENDALL, JAMES M., JR.**  
Measurement of waves in flows across a surface  
[NASA-CASE-NPO-17479-1-CU] c 34 N91-13658
- KENDRICK, W. P.**  
Ablative resin Patent  
[NASA-CASE-XLE-05913] c 33 N71-14032  
Reinforced structural plastics  
[NASA-CASE-LEW-10199-1] c 27 N74-23125

# KENNEDY, B. W.

- Electrical connector Patent Application  
[NASA-CASE-MFS-14741] c 09 N70-20737
- Filter system for control of outgas contamination in vacuum Patent  
[NASA-CASE-MFS-14711] c 15 N71-26185
- Method of making shielded flat cable Patent  
[NASA-CASE-MFS-13687] c 09 N71-28691
- Shielded flat cable  
[NASA-CASE-MFS-13687-2] c 09 N72-22198
- Polyimide resin-fiberglass cloth laminates for printed circuit boards  
[NASA-CASE-MFS-20408] c 18 N73-12604
- Integrated circuit package with lead structure and method of preparing the same  
[NASA-CASE-MFS-21374-1] c 33 N74-12951
- KENNEWAY, A. J., III**  
Space suit  
[NASA-CASE-MSC-12609-1] c 05 N73-32012
- KENNEY, R. L.**  
Geneva mechanism  
[NASA-CASE-NPO-13281-1] c 37 N75-13266
- KENT, W. D.**  
Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c 54 N75-27761
- KENYON, G. C.**  
Flight craft Patent  
[NASA-CASE-XAC-02058] c 02 N71-16087
- KEPLER, C. E.**  
Tertiary flow injection thrust vectoring system Patent  
[NASA-CASE-MFS-20831] c 28 N71-29153
- KERLEY, J. J.**  
Portable appliance security apparatus  
[NASA-CASE-GSC-12399-1] c 33 N81-25299
- KERLEY, J. J., JR.**  
Apparatus for vibrational testing of articles  
[NASA-CASE-GSC-11302-1] c 14 N73-13416
- KERLEY, JAMES**  
Climbing robot  
[NASA-CASE-GSC-13442-1] c 37 N92-23547
- KERLEY, JAMES J.**  
Compliant joint  
[NASA-CASE-GSC-13153-1] c 37 N91-17387  
User friendly joystick  
[NASA-CASE-GSC-13187-1] c 33 N92-29153  
Page turning system  
[NASA-CASE-GSC-13415-1] c 37 N92-33616  
Compliant walker  
[NASA-CASE-GSC-13348-2] c 52 N93-14708
- KERLEY, JAMES J., JR.**  
Robot cable-compliant devices  
[NASA-CASE-GSC-13127-1] c 37 N91-17388
- KERN, C. V.**  
Deformable vehicle wheel Patent  
[NASA-CASE-MFS-20400] c 31 N71-18611
- KERN, J. D.**  
Magnetic recording head and method of making same Patent  
[NASA-CASE-GSC-10097-1] c 08 N71-27210
- KERNODLE, B. H.**  
Inherent redundancy electric heater  
[NASA-CASE-MFS-21462-1] c 33 N74-14935
- KERR, J. H.**  
Traffic survey system  
[NASA-CASE-MFS-22631-1] c 66 N76-19888
- KERR, JOSEPH H.**  
Photorefractor ocular screening system  
[NASA-CASE-MFS-26011-1-SB] c 52 N87-24874
- KERSEY, E. D., JR.**  
Angular displacement indicating gas bearing support system Patent  
[NASA-CASE-XLA-09346] c 15 N71-28740
- KERSHNER, D. D.**  
Miniature electrooptical air flow sensor  
[NASA-CASE-LAR-13065-1] c 35 N85-20295
- KERSLAKE, W. R.**  
Ion thruster cathode  
[NASA-CASE-XLE-07087] c 06 N69-39889
- Electronic cathode having a brush-like structure and a relatively thick oxide emissive coating Patent  
[NASA-CASE-XLE-04501] c 09 N71-23190
- KERSTEN, L.**  
Wrist joint assembly  
[NASA-CASE-MFS-23311-1] c 54 N78-17676
- KERWIN, W. J.**  
Nonmagnetic thermal motor for a magnetometer  
[NASA-CASE-XAR-03786] c 09 N69-21313
- Demodulation system Patent  
[NASA-CASE-XAC-04030] c 10 N71-19472
- Transducer circuit and catheter transducer Patent  
[NASA-CASE-ARC-10132-1] c 09 N71-24597
- Active RC networks  
[NASA-CASE-ARC-10042-2] c 10 N72-11256
- RC networks and amplifiers employing the same  
[NASA-CASE-XAC-05462-2] c 10 N72-17171

# PERSONAL AUTHOR INDEX

- Active RC networks  
[NASA-CASE-ARC-10020] c 10 N72-17172
- Multiloop RC active filter apparatus having low parameter sensitivity with low amplifier gain  
[NASA-CASE-ARC-10192] c 09 N72-21245
- Integrated structure vacuum tube  
[NASA-CASE-ARC-10445-1] c 31 N76-31365
- KESSEL, J. E.**  
Plural recorder system  
[NASA-CASE-XMS-06949] c 09 N69-21467
- KESSINGER, R. L.**  
Hearing aid malfunction detection system  
[NASA-CASE-MSC-14916-1] c 33 N78-10375
- KEY, C. F.**  
Nonflammable coating compositions  
[NASA-CASE-MFS-20486-2] c 27 N74-17283
- KEYNTON, R. J.**  
Technique for control of free-flight rocket vehicles Patent  
[NASA-CASE-XLA-00937] c 31 N71-17691
- KHAN, A. S.**  
Nical ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LEW-13339-1] c 26 N82-31505
- KHANNA, S. K.**  
Corrosion resistant coating  
[NASA-CASE-NPO-15928-1] c 26 N85-29005
- KHANNA, S. M.**  
Direct current transformer  
[NASA-CASE-MFS-23659-1] c 33 N79-17133
- KHANNA, SATISH K.**  
Method of producing high T(subc) superconducting NBN films  
[NASA-CASE-NPO-16681-1-CU] c 76 N88-24543
- KHATTAR, MUKESH K.**  
Heat tube device  
[NASA-CASE-KSC-11395-1-CU] c 34 N91-21473
- KIBBE, R. K.**  
Load cell protection device Patent  
[NASA-CASE-XMS-06782] c 32 N71-15974
- KICHAK, R. A.**  
Inrush current limiter  
[NASA-CASE-GSC-11789-1] c 33 N77-14333
- KIDDER, PAUL W.**  
Low pressure process for continuous fiber reinforced polyamic acid resin matrix composite laminates  
[NASA-CASE-LAR-14954-1] c 24 N92-34214
- KIEFER, P. J., JR.**  
Thermal conductive connection and method of making same Patent  
[NASA-CASE-XMS-02087] c 09 N70-41717
- KIKIN, G. M.**  
Multiducted electromagnetic pump Patent  
[NASA-CASE-NPO-10755] c 15 N71-27084  
Shell side liquid metal boiler  
[NASA-CASE-NPO-10831] c 33 N72-20915
- KILLALEA, W. P.**  
Clamping assembly for inertial components Patent  
[NASA-CASE-XMS-02184] c 15 N71-20813
- KILLGROVE, T. O.**  
Self-locking double retention redundant full pin release  
[NASA-CASE-NPO-16233-1] c 37 N86-20801
- KILLION, DERLING**  
Ground plane interference elimination by passive element  
[NASA-CASE-NPO-16632-1-CU] c 32 N87-15390
- KIM, C.**  
Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c 52 N74-27566
- KIM, H. H.**  
A multichannel photoionization chamber for absorption analysis Patent  
[NASA-CASE-ERC-10044-1] c 14 N71-27090
- KIM, JAE H.**  
High-gain AlGaAs/GaAs double heterojunction Darlington phototransistors for optical neural networks  
[NASA-CASE-NPO-18101-1-CU] c 74 N91-25841  
GaAs-based optoelectronic neurons  
[NASA-CASE-NPO-18497-1-CU] c 63 N92-24245  
Quantum well, beam deflecting surface emitting lasers  
[NASA-CASE-NPO-18243-1-CU] c 36 N93-13418  
GaAs-based optoelectronic neurons  
[NASA-CASE-NPO-18497-1-CU] c 63 N93-24599
- KIM, K. M.**  
Means for growing ribbon crystals without subjecting the crystals to thermal shock-induced strains  
[NASA-CASE-NPO-14298-1] c 76 N80-32244
- KIM, WON S.**  
Position-error-based force reflection and compliance control  
[NASA-CASE-NPO-18668-1-CU] c 37 N92-29765
- KIMBALL, R. B.**  
Apparatus for remote handling of materials  
[NASA-CASE-LAR-10634-1] c 37 N74-18123

- KINARD, W. H.**  
Particle detection apparatus Patent  
[NASA-CASE-XLA-00135] c 14 N70-33322  
Gas actuated bolt disconnect Patent  
[NASA-CASE-XLA-00326] c 03 N70-34667  
Micrometeoroid velocity measuring device Patent  
[NASA-CASE-XLA-00495] c 14 N70-41332  
Micrometeoroid penetration measuring device Patent  
[NASA-CASE-XLA-00941] c 14 N71-23240  
Deployable pressurized cell structure for a micrometeoroid detector  
[NASA-CASE-LAR-10295-1] c 35 N74-21062  
Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c 35 N76-22509
- KINARD, WILLIAM H.**  
Method and apparatus for determining time, direction, and composition of impacting space particles  
[NASA-CASE-LAR-13392-1-CU] c 19 N91-14412
- KINELL, D. K.**  
Four phase logic systems  
[NASA-CASE-MSC-14240-1] c 33 N75-14957
- KING, C. B.**  
Method of obtaining permanent record of surface flow phenomena Patent  
[NASA-CASE-XLA-01353] c 14 N70-41366  
Method and apparatus for bonding a plastics sleeve onto a metallic body Patent  
[NASA-CASE-XLA-01262] c 15 N71-21404  
Dielectric molding apparatus Patent  
[NASA-CASE-LAR-10121-1] c 15 N71-26721  
Butt welder for fine gauge tungsten/rhenium thermocouple wire  
[NASA-CASE-LAR-10103-1] c 15 N73-14468
- KING, DAVID Q.**  
High temperature refractory member with radiation emissive overcoat  
[NASA-CASE-NPO-17122-1-CU] c 27 N91-14489
- KING, GUY L.**  
Double swivel toggle release  
[NASA-CASE-MSC-21436-1] c 37 N90-21390
- KING, H. J.**  
Gas regulator Patent  
[NASA-CASE-NPO-10298] c 12 N71-17661
- KING, H. M.**  
Method of making impurity-type semiconductor electrical contacts Patent  
[NASA-CASE-XMF-01016] c 26 N71-17818  
Sprayable low density ablator and application process  
[NASA-CASE-MFS-23506-1] c 24 N78-24290
- KING, JULIAN V.**  
Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-2] c 28 N91-14495
- KING, R. B.**  
Preparation of high purity copper fluoride  
[NASA-CASE-LEW-10794-1] c 06 N72-17093
- KING, R. F.**  
Anthropomorphic master/slave manipulator system  
[NASA-CASE-ARC-10756-1] c 54 N77-32721
- KING, R. W.**  
Method and apparatus for making a heat insulating and ablative structure Patent  
[NASA-CASE-XMS-02009] c 33 N71-20834  
High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c 15 N82-24272
- KING, W. L.**  
Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c 74 N77-26942
- KINKEAD, REBECCA L.**  
Space spider crane  
[NASA-CASE-LAR-13411-1-SB] c 18 N88-23828
- KINKEL, J. F.**  
Data transfer system Patent  
[NASA-CASE-NPO-12107] c 08 N71-27255
- KINNARD, K. F.**  
Laser Doppler system for measuring three dimensional vector velocity Patent  
[NASA-CASE-MFS-20386] c 21 N71-19212
- KINO, G. S.**  
Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility  
[NASA-CASE-HQN-10069] c 33 N75-27251
- KINSEL, R. C.**  
Signal multiplexer  
[NASA-CASE-XGS-01110] c 07 N69-24334
- KINZLER, J. A.**  
Emergency escape system Patent  
[NASA-CASE-MSC-12086-1] c 05 N71-12345  
Surface finishing  
[NASA-CASE-MSC-12631-1] c 24 N77-28225  
Surface finishing  
[NASA-CASE-MSC-12631-3] c 27 N81-14077  
Structural members, method and apparatus  
[NASA-CASE-MSC-16217-1] c 31 N81-27323
- KIRALY, L. J.**  
Piezoelectric composite materials  
[NASA-CASE-LEW-12582-1] c 76 N83-34796
- KIRBY, C. A.**  
Translatory shock absorber for attitude sensors  
[NASA-CASE-MFS-22905-1] c 19 N76-22284
- KIRCHMAN, E. J.**  
Accelerometer with FM output Patent  
[NASA-CASE-XLA-00492] c 14 N70-34799
- KIRSTEN, C. C.**  
Solar-powered pump  
[NASA-CASE-NPO-13567-1] c 44 N76-29701
- KIS, G.**  
Optical alignment system Patent  
[NASA-CASE-XNP-02029] c 14 N70-41955
- KISSEL, R. R.**  
Tetherless system for orbiting satellites  
[NASA-CASE-MFS-23564-1] c 15 N78-25119  
Contour measurement system  
[NASA-CASE-MFS-23726-1] c 43 N79-26439  
Angular measurement system  
[NASA-CASE-MFS-25825-1] c 31 N86-29055
- KISSEL, RALPH R.**  
Cylindrical surface profile and diameter measuring tool and method  
[NASA-CASE-MFS-28287-1] c 35 N88-23959
- KISSELL, R. R.**  
Ratometer  
[NASA-CASE-MFS-20418] c 14 N73-24473
- KISZKO, W.**  
Portable superclean air column device Patent  
[NASA-CASE-XMF-03212] c 15 N71-22721
- KITTS, W. T.**  
Cryogenic connector for vacuum use Patent  
[NASA-CASE-XGS-02441] c 15 N70-41629
- KLECHKE, E. W.**  
Nickel aluminide coated low alloy stainless steel  
[NASA-CASE-LEW-11267-1] c 17 N73-32414
- KLEIN, E.**  
Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c 25 N81-19244
- KLEIN, E. L.**  
Apparatus for inspecting microfilm Patent  
[NASA-CASE-MFS-20240] c 14 N71-26788
- KLEIN, M. G.**  
Electrolytically regenerative hydrogen-oxygen fuel cell Patent  
[NASA-CASE-XLE-04526] c 03 N71-11052
- KLEINBERG, L. L.**  
Stable amplifier having a stable quiescent point Patent  
[NASA-CASE-XGS-02812] c 09 N71-19466  
Complementary regenerative switch Patent  
[NASA-CASE-XGS-02751] c 09 N71-23015  
Monostable multivibrator  
[NASA-CASE-GSC-10082-1] c 10 N72-20221  
Active tuned circuit  
[NASA-CASE-GSC-11340-1] c 10 N72-33230  
Ultra-stable oscillator with complementary transistors  
[NASA-CASE-GSC-11513-1] c 33 N74-20862  
Tuned analog network  
[NASA-CASE-GSC-12650-1] c 33 N84-14421  
Low noise tuned amplifier  
[NASA-CASE-GSC-12567-1] c 33 N84-22887  
Reactanceless synthesized impedance bandpass amplifier  
[NASA-CASE-GSC-12788-1] c 33 N85-29145  
JFET reflection oscillator  
[NASA-CASE-GSC-12555-1] c 33 N86-19515  
Temperature sensitive oscillator  
[NASA-CASE-GSC-12958-1] c 33 N86-32624
- KLEINBERG, LEONARD L.**  
Low phase noise oscillator using two parallel connected amplifiers  
[NASA-CASE-GSC-13018-1] c 33 N87-21232  
Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N87-22895  
Reflection oscillators employing series resonant crystals  
[NASA-CASE-GSC-13173-1] c 33 N90-23635
- KLEINROCK, L.**  
Data compression system  
[NASA-CASE-XNP-09785] c 08 N69-21928  
Method and apparatus for data compression by a decreasing slope threshold test  
[NASA-CASE-NPO-10769] c 08 N72-11171
- KLIMA, S. J.**  
High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-00726] c 17 N71-15644
- KLINE, A. J.**  
Capacitance multiplier and filter synthesizing network  
[NASA-CASE-NPO-11948-1] c 33 N74-32712
- KLINE, A. J., JR.**  
Automatic frequency discriminators and control for a phase-lock loop providing frequency preset capabilities Patent  
[NASA-CASE-XMF-08665] c 10 N71-19467
- KLINGMAN, E. E., III**  
Apparatus for calibrating an image dissector tube  
[NASA-CASE-MFS-22208-1] c 33 N75-26244  
Electronic optical transfer function analyzer  
[NASA-CASE-MFS-21672-1] c 74 N76-19935
- KLISCH, J. A.**  
Combustion products generating and metering device  
[NASA-CASE-GSC-11095-1] c 14 N72-10375
- KLOC, I.**  
Penetrometer  
[NASA-CASE-NPO-11103-1] c 35 N77-27367
- KNAPP, M. H.**  
Active clearance control system for a turbomachine  
[NASA-CASE-LEW-12938-1] c 07 N82-32366
- KNAUER, W.**  
Ion thruster  
[NASA-CASE-LEW-10770-1] c 28 N72-22770
- KNECHTEL, E. D.**  
Two force component measuring device Patent  
[NASA-CASE-XAC-04886-1] c 14 N71-20439  
Floating two force component measuring device Patent  
[NASA-CASE-XAC-04885] c 14 N71-23790
- KNOELL, A. C.**  
Method of adhering bone to a rigid substrate using a graphite fiber reinforced bone cement  
[NASA-CASE-NPO-13764-1] c 27 N78-17215  
Vehicular impact absorption system  
[NASA-CASE-NPO-14014-1] c 37 N79-10420
- KNOOS, S. P.**  
Shock tube bypass piston tunnel  
[NASA-CASE-NPO-12109] c 11 N72-22245
- KO, W. L.**  
Superplastically formed diffusion bonded metallic structure  
[NASA-CASE-FRC-11026-1] c 24 N82-24296
- KOBAYASHI, H. S.**  
Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12462-1] c 32 N74-20809  
Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12494-1] c 32 N74-20810  
Doppler radar having phase modulation of both transmitted and reflected return signals  
[NASA-CASE-MSC-18675-1] c 32 N84-22820  
Method and apparatus for receiving and tracking phase modulated signals  
[NASA-CASE-MSC-16170-2] c 32 N84-27952
- KOBAYASHI, HERBERT S.**  
Method and apparatus for measuring frequency and phase difference  
[NASA-CASE-MSC-20865-1] c 32 N87-18692  
Method and apparatus for measuring distance  
[NASA-CASE-MSC-20912-1] c 32 N88-26568  
Doppler radar with multiphase modulation of transmitted and reflected signal  
[NASA-CASE-MSC-18808-1] c 32 N90-20280
- KOBAYASKI, H. S.**  
Bit error rate measurement above and below bit rate tracking threshold  
[NASA-CASE-MSC-12743-1] c 32 N79-10263
- KOCH, E. F.**  
Expulsion bladder-equipped storage tank structure Patent  
[NASA-CASE-XNP-00612] c 11 N70-38182  
Combined pressure regulator and shutoff valve  
[NASA-CASE-NPO-13201-1] c 37 N75-15050
- KOCH, JOHN, JR.**  
Plug-type heat flux gauge  
[NASA-CASE-LEW-14967-1] c 35 N91-31608  
Method of producing a plug-type heat flux gauge  
[NASA-CASE-LEW-14967-2] c 35 N92-22038
- KOCH, K. F.**  
CRT blanking and brightness control circuit  
[NASA-CASE-KSC-10647-1] c 10 N72-31273
- KOCH, N. G.**  
Multispectral scanner optical system  
[NASA-CASE-MSC-18255-1] c 74 N80-33210
- KOCZELA, L. J.**  
Adaptive voting computer system  
[NASA-CASE-MSC-13932-1] c 62 N74-14920
- KODA, N. J.**  
Liquid crystal light valve structures  
[NASA-CASE-MSC-20036-1] c 76 N85-33826
- KODIS, R. D.**  
Clear air turbulence detector  
[NASA-CASE-ERC-10081] c 14 N72-28437
- KOEING, DAVID W.**  
Kinetic tetrazolium microtiter assay  
[NASA-CASE-MSC-21979-1] c 51 N93-17049
- KOENIG, DAVID G.**  
High performance forward swept wing aircraft  
[NASA-CASE-ARC-11636-1] c 05 N88-28914
- KOEPP, G. A.**  
Laser apparatus  
[NASA-CASE-GSC-12237-1] c 36 N80-14384

- Off-axis coherently pumped laser  
[NASA-CASE-GSC-12592-1] c 36 N84-28065
- KOFEL, W. K.**  
Tip cap for a rotor blade  
[NASA-CASE-LEW-13654-1] c 07 N84-22560
- KOGER, THOMAS L.**  
Predictive sensor method and apparatus  
[NASA-CASE-SSC-00006-1] c 35 N91-13691
- KOH, J. L.**  
Wind and solar powered turbine  
[NASA-CASE-NPO-15496-1] c 44 N84-23018
- KOHL, W. H.**  
Distributed multiport memory architecture  
[NASA-CASE-NPO-15342-1] c 60 N83-32342
- KOJIMA, G. K.**  
Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c 52 N79-18580
- KOJIRO, D. R.**  
Modulated voltage metastable ionization detector  
[NASA-CASE-ARC-11503-1] c 35 N85-34374
- KOLBLY, R. B.**  
High power microwave power divider Patent  
[NASA-CASE-NPO-11031] c 07 N71-33606  
System for controlling the operation of a variable signal device  
[NASA-CASE-NPO-11064] c 07 N72-11150
- KOLBY, R. B.**  
Direct reading inductance meter  
[NASA-CASE-NPO-13792-1] c 35 N77-32455
- KOLIAD, K. M.**  
Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NPO-14670-1] c 44 N81-19558  
Method of increasing minority carrier lifetime in silicon web or the like  
[NASA-CASE-NPO-15530-1] c 76 N83-35888
- KOLOBOFF, G. J.**  
Amplitude steered array  
[NASA-CASE-GSC-11446-1] c 33 N74-20860
- KOLSTEE, H. M.**  
Radiator deployment actuator Patent  
[NASA-CASE-MS-C-11817-1] c 15 N71-26611
- KONIGSBERG, E.**  
Accelerometer telemetry system  
[NASA-CASE-ARC-10849-1] c 17 N76-29347
- KOONTZ, STEVEN**  
Method for anisotropic etching in the manufacture of semiconductor devices  
[NASA-CASE-MS-C-21631-1] c 75 N91-32947  
A method for making biocompatible polymer articles using atomic oxygen  
[NASA-CASE-MS-C-21529-1] c 27 N92-30100
- KOONTZ, STEVEN L.**  
Atmospheric pressure flow reactor: Gas phase chemical kinetics under tropospheric conditions without wall effects  
[NASA-CASE-MS-C-21384-1] c 34 N92-16243  
Microporous structure with layered interstitial surface treatment, and method and apparatus for preparation thereof  
[NASA-CASE-MS-C-21487-1] c 25 N92-33009  
Atmospheric pressure flow reactor: Gas phase chemical kinetics under tropospheric conditions without wall effects  
[NASA-CASE-MS-C-21384-2] c 35 N93-17626  
Method for preparation of a microporous structure with layered interstitial surface treatment  
[NASA-CASE-MS-C-21487-2] c 24 N93-29023
- KOPELSON, S.**  
Rate augmented digital to analog converter Patent  
[NASA-CASE-XLA-07828] c 08 N71-27057
- KOPETSKI, F. J.**  
Ring counter  
[NASA-CASE-XG-33095] c 09 N69-27463
- KOPIA, L. P.**  
Transmitting and reflecting diffuser  
[NASA-CASE-LAR-10385-2] c 70 N74-13436  
Transmitting and reflecting diffuser  
[NASA-CASE-LAR-10385-3] c 74 N78-15879
- KORABOWSKI, J. J.**  
Pressure garment joint Patent  
[NASA-CASE-XMS-09636] c 05 N71-12344  
Method of forming a root cord restrained convolute section  
[NASA-CASE-MS-C-12398] c 05 N72-20098
- KORB, C. L.**  
Method of and apparatus for measuring temperature and pressure  
[NASA-CASE-GSC-12558-1] c 36 N85-21639
- KORB, LARRY**  
Edge technique for measurement of laser frequency shifts including the Doppler shift  
[NASA-CASE-GSC-13343-1] c 36 N91-28557
- KORDES, E. E.**  
High intensity heat and light unit Patent  
[NASA-CASE-XLA-00141] c 09 N70-33312

- KORNFIELD, D. M.**  
Process for preparation of large-particle-size monodisperse latexes  
[NASA-CASE-MFS-25000-1] c 25 N81-19242
- KORSCH, D. G.**  
Anastigmatic three-mirror telescope  
[NASA-CASE-MFS-23675-1] c 89 N79-10969
- KORUS, R. A.**  
Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c 27 N81-17259
- KORVIN, W.**  
Self-erecting reflector Patent  
[NASA-CASE-XGS-09190] c 31 N71-16102  
Tracking antenna system Patent  
[NASA-CASE-GSC-10553-1] c 07 N71-19854  
Antenna array at focal plane of reflector with coupling network for beam switching Patent  
[NASA-CASE-GSC-10220-1] c 07 N71-27233
- KOSCHMEDER, L. A.**  
Bi-polar phase detector and corrector for split phase PCM data signals Patent  
[NASA-CASE-XGS-01590] c 07 N71-12392
- KOSMAHL, H. C.**  
Multistage depressed collector for dual mode operation  
[NASA-CASE-LEW-13282-1] c 33 N82-24415
- KOSMAHL, H. G.**  
Linear magnetic brake with two windings Patent  
[NASA-CASE-XLE-05079] c 15 N71-17652  
Electrostatic collector for charged particles  
[NASA-CASE-LEW-11192-1] c 09 N73-13208  
Electron beam controller  
[NASA-CASE-LEW-11617-1] c 33 N74-10195  
Gyrotron transmitting tube  
[NASA-CASE-LEW-13429-1] c 33 N83-31952  
Ladder supported ring bar circuit  
[NASA-CASE-LEW-13570-1] c 33 N84-16452  
Dielectric based submillimeter backward wave oscillator circuit  
[NASA-CASE-LEW-13736-1] c 33 N84-27974  
Linearized traveling wave amplifier with hard limiter characteristics  
[NASA-CASE-LEW-13981-2] c 33 N86-21742
- KOSMAHL, HENRY G.**  
Miniature traveling wave tube and method of making  
[NASA-CASE-LEW-14520-1] c 33 N90-22724
- KOSMO, J. J.**  
Extravehicular tunnel suit system Patent  
[NASA-CASE-MS-C-12243-1] c 05 N71-24728
- KOSMO, JOSEPH**  
Glove attachment  
[NASA-CASE-MS-C-21632-1] c 54 N92-34210
- KOSMO, JOSEPH J.**  
Don/doff support stand for use with rear entry space suits  
[NASA-CASE-MS-C-21364-1] c 54 N89-13889  
Hazards protection for space suits and spacecraft  
[NASA-CASE-MS-C-21366-1] c 54 N90-25498  
Helmet of a laminate construction of polycarbonate and polysulfone polymeric material  
[NASA-CASE-MS-C-21503-1] c 27 N92-10091
- KOSSON, R. L.**  
Monogroove heat pipe design: Insulated liquid channel with bridging wick  
[NASA-CASE-MS-C-20497-1] c 34 N85-29180
- KOTHE, E.**  
Helmet feedport  
[NASA-CASE-XMS-09653] c 54 N78-17680
- KOURTIDES, D. A.**  
Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-2] c 24 N78-27184  
Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c 24 N79-16915  
Fire blocking systems for aircraft seat cushions  
[NASA-CASE-ARC-11423-1] c 03 N84-33394  
Light weight fire resistant graphite composites  
[US-PATENT-4,598,007] c 24 N86-28131  
Polymer of phosphonylmethyl-2,4- and -2,6-diamino benzene and polyfunctional monomer  
[NASA-CASE-ARC-11506-2] c 23 N86-32525  
Fire resistant polyamide based on 1-(diorganooxyphosphonyl)methyl-2,4- and -2,6-diamino benzene  
[NASA-CASE-ARC-11512-2] c 27 N86-32568
- KOURTIDES, DEMETRIUS A.**  
Fire and heat resistant laminating resins based on maleimide and citraconimide substituted 1-2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-1] c 27 N87-23751

- Fire and heat resistant laminating resins based on maleimide and citraconimide substituted 1-(diorgano oxyphosphonyl) methyl -2,4- and -2,6- diaminobenzenes  
[NASA-CASE-ARC-11533-3] c 27 N87-24564
- The 1-(diorganooxy phosphonyl) methyl-2,4- and -2,6-diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-2] c 23 N87-28605
- Fire and heat resistant laminating resin based on maleimide and citraconimide substituted 1-(diorganooxyphosphonyl-methyl)-2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-2] c 27 N89-16042
- The 1-(diorganooxyphosphonyl)-methyl-2,4- and -2,6-diamido benzenes  
[NASA-CASE-ARC-11425-4] c 23 N90-20133
- Some 1-(diorganooxyphosphonyl)methyl-2,4- and -2,6-dinitro-benzenes  
[NASA-CASE-ARC-11425-3] c 23 N90-23475
- Composite flexible blanket insulation  
[NASA-CASE-ARC-11907-1-NP] c 24 N91-31236
- KOVALL, S. P.**  
Method for etching copper Patent  
[NASA-CASE-XGS-06306] c 17 N71-16044
- KOVTUN, JOHN B.**  
Numerical control fabrication technique for dynamic composite models  
[NASA-CASE-LAR-14004-1] c 63 N93-19024
- KOYBAYASHI, H. S.**  
Unbalanced quadrature demodulator  
[NASA-CASE-MS-C-14840-1] c 32 N77-24331
- KOZIOL, J. S., JR.**  
Aircraft control system  
[NASA-CASE-ERC-10439] c 02 N73-19004
- KRAMER, F.**  
Device for suppressing sound and heat produced by high-velocity exhaust jets Patent  
[NASA-CASE-XMF-01813] c 28 N70-41582
- KRAMER, J. S.**  
Apparatus for determining thermophysical properties of test specimens  
[NASA-CASE-LAR-11883-1] c 09 N77-27131
- KRAMER, M.**  
Electronic amplifier with power supply switching Patent  
[NASA-CASE-XMS-00945] c 09 N71-10798  
Power supply Patent  
[NASA-CASE-XMS-02159] c 10 N71-22961
- KRASIN, F. E.**  
Discriminator aided phase lock acquisition for suppressed carrier signals  
[NASA-CASE-NPO-14311-1] c 33 N82-29539
- KRATZER, R. H.**  
Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c 23 N82-28353
- KRAUSE, F. R.**  
Passive optical wind and turbulence detection system Patent  
[NASA-CASE-XMF-14032] c 20 N71-16340
- KRAUSE, I. A.**  
Satellite interlace synchronization system  
[NASA-CASE-GSC-10390-1] c 07 N72-11149
- KRAUSE, L. N.**  
Enthalpy and stagnation temperature determination of a high temperature laminar flow gas stream Patent  
[NASA-CASE-XLE-00266] c 14 N70-34156  
Sensing probe  
[NASA-CASE-LEW-10281-1] c 14 N72-17327
- KRAUSE, M. C.**  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c 35 N77-10493  
Wind measurement system  
[NASA-CASE-MFS-23362-1] c 47 N77-10753
- KRAUSE, S. J.**  
Method and device for determining battery state of charge Patent  
[NASA-CASE-NPO-10194] c 03 N71-20407
- KRAUSHAAR, W. L.**  
Coaxial anode wire for gas radiation counters  
[NASA-CASE-GSC-11492-1] c 35 N74-26949
- KRAVITZ, M.**  
Television camera video level control system  
[NASA-CASE-MS-C-18578-1] c 32 N85-21427
- KRAY, W. D.**  
The 1,1,1-triaryl-2,2,2-trifluoroethanes and process for their synthesis  
[NASA-CASE-ARC-11097-1] c 25 N82-24312
- KRCH, GARY D.**  
Quick acting gimbal joint  
[NASA-CASE-GSC-21918-1] c 37 N93-23076
- KREISMAN, W. S.**  
Inflation system for balloon type satellites Patent  
[NASA-CASE-XGS-03351] c 31 N71-16081  
Bakeable McLeod gauge  
[NASA-CASE-XGS-01293-1] c 35 N79-33450

- KRIEG, H. C., JR.**  
Moisture content and gas sampling device  
[NASA-CASE-MSC-18866-1] c 35 N85-29213
- KRIEVE, W. F.**  
High-voltage cable Patent  
[NASA-CASE-XNP-00738] c 09 N70-38201
- KRISHEN, KUMAR**  
Method and apparatus for sensor fusion  
[NASA-CASE-MSC-21334-1] c 32 N91-25317
- KRIZ, RONALD D.**  
Methods of determining loads and fiber orientations in anisotropic non-crystalline materials using energy flux deviation  
[NASA-CASE-LAR-14399-1] c 39 N93-26102
- KROES, ROGER L.**  
Crystal growth in a microgravity environment  
[NASA-CASE-MFS-28473-1] c 76 N93-14707
- KROPP, C. J.**  
Determination of spot weld quality Patent  
[NASA-CASE-XNP-02588] c 15 N71-18613
- KRSEK, A., JR.**  
Optical torqueometer Patent  
[NASA-CASE-XLE-00503] c 14 N70-34818
- KRUER, MARK ARTHUR**  
Wide acceptance angle, high concentration ratio, optical collector  
[NASA-CASE-MFS-28295-1] c 74 N91-13999
- KRUETZ, KENNETH K.**  
High level language-based robotic control system  
[NASA-CASE-NPO-17918-2-CU] c 63 N92-17895
- KRUPNICK, A. C.**  
Method for detecting hydrogen gas  
[NASA-CASE-XMF-03873] c 06 N69-39733  
Inorganic thermal control coatings  
[NASA-CASE-MFS-20011] c 18 N72-22566  
Nonflammable coating compositions  
[NASA-CASE-MFS-20486-2] c 27 N74-17283  
Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c 44 N79-11469  
Aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-3] c 44 N80-16452
- KUBACKI, R. M.**  
Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c 27 N78-31233  
Process for producing a well-adhered durable optical coating on an optical plastic substrate  
[NASA-CASE-ARC-11039-1] c 74 N78-32854
- KUBICA, A. J.**  
Decomposition unit Patent  
[NASA-CASE-XMS-00583] c 28 N70-38504
- KUBICZ, A. P.**  
Signal path series step biased multidevice high efficiency amplifier Patent  
[NASA-CASE-GSC-10668-1] c 07 N71-28430  
Power responsive overload sensing circuit Patent  
[NASA-CASE-GSC-10667-1] c 10 N71-33129  
Infinite range electronics gain control circuit  
[NASA-CASE-GSC-10786-1] c 10 N72-28241
- KUBIK, C. F.**  
Method and construction for protecting heat sensitive bodies from thermal radiation and convective heat Patent  
[NASA-CASE-XNP-01310] c 33 N71-28852
- KUBIK, J. S.**  
Device for preventing high voltage arcing in electron beam welding Patent  
[NASA-CASE-MFS-08522] c 15 N71-19486
- KUBOKAWA, C. C.**  
Fastener apparatus Patent  
[NASA-CASE-ARC-10140-1] c 15 N71-17653
- KUEBLER, M. E.**  
Method and means for damping nutation in a satellite Patent  
[NASA-CASE-XMF-00442] c 31 N71-10747
- KUENZLY, J. D.**  
Low thrust monopropellant engine  
[NASA-CASE-GSC-12194-2] c 20 N82-18314
- KUGATH, D. A.**  
Remote manipulator system  
[NASA-CASE-MFS-22022-1] c 37 N76-15460
- KUHN, R. F., JR.**  
Universal restrainer and joint Patent  
[NASA-CASE-XNP-02278] c 15 N71-28951  
Internally supported flexible duct joint  
[NASA-CASE-MFS-19193-1] c 37 N75-19686
- KUHNS, P. W.**  
Generator for a space power system Patent  
[NASA-CASE-XLE-04250] c 09 N71-20446
- KUMAR, D.**  
Maleimido substituted aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-1] c 23 N86-19376
- Laminate comprising fibers embedded in cured amine terminated bis-imide  
[NASA-CASE-ARC-11421-3] c 24 N86-25416  
Amine terminated bispartimide polymer  
[NASA-CASE-ARC-11421-2] c 27 N86-31726
- KUMAR, DEVENDRA**  
Fire and heat resistant laminating resins based on maleimido substituted aromatic cyclotriphosphazene polymer  
[NASA-CASE-ARC-11428-2] c 27 N87-16909  
Aminophenoxycyclotriphosphazene cured epoxy resins and the composites, laminates, adhesives and structures thereof  
[NASA-CASE-ARC-11548-1] c 27 N87-25469
- KUMAR, RAJENDRA**  
Multistage estimation of received carrier signal parameters under very high dynamic conditions of the receiver  
[NASA-CASE-NPO-17911-1-CU] c 32 N90-27016  
Efficient detection and signal parameter estimation with application to high dynamic GPS receiver  
[NASA-CASE-NPO-17820-1-CU] c 04 N91-14321  
Modified fast frequency acquisition via adaptive least squares algorithm  
[NASA-CASE-NPO-17845-2-CU] c 61 N93-14882
- KUMINECZ, J. F.**  
Spray applicator for spraying coatings and other fluids in space  
[NASA-CASE-MSC-18852-1] c 37 N85-29283
- KUNZ, NANS**  
Wind tunnel balance  
[NASA-CASE-ARC-11877-1-SB] c 09 N91-14357
- KUO, STEVE**  
Parallel inferencing method and apparatus for rule-based expert systems  
[NASA-CASE-NPO-18004-1-CU] c 60 N93-29504
- KUO, Y. S.**  
Ingot slicing machine and method  
[NASA-CASE-NPO-15483-1] c 37 N85-21650
- KUPPERIAN, J. E., JR.**  
Low friction magnetic recording tape Patent  
[NASA-CASE-XGS-00373] c 23 N71-15978
- KURAL, M. H.**  
Strain arrestor plate for fused silica tile  
[NASA-CASE-MSC-14182-1] c 27 N76-14264
- KURIGER, W. L.**  
Short range laser obstacle detector  
[NASA-CASE-NPO-11856-1] c 36 N74-15145
- KURPLE, W.**  
Bit error rate measurement above and below bit rate tracking threshold  
[NASA-CASE-MSC-12743-1] c 32 N79-10263
- KURTZ, G. W.**  
Two-dimensional scanner apparatus  
[NASA-CASE-MFS-25687-1] c 35 N84-22928
- KURTZ, R. L.**  
Hybrid holographic system using reflected and transmitted object beams simultaneously Patent  
[NASA-CASE-MFS-20074] c 16 N71-15565  
Multiple image storing system for high speed projective holography  
[NASA-CASE-MFS-20596] c 14 N72-17324  
Real time moving scene holographic camera system  
[NASA-CASE-MFS-21087-1] c 35 N74-17153  
Holographic system for nondestructive testing  
[NASA-CASE-MFS-21704-1] c 35 N75-25124  
Real time, large volume, moving scene holographic camera system  
[NASA-CASE-MFS-22537-1] c 35 N75-27328  
Holographic motion picture camera with Doppler shift compensation  
[NASA-CASE-MFS-22517-1] c 35 N76-18402  
Projection system for display of parallax and perspective  
[NASA-CASE-MFS-23194-1] c 35 N78-17357  
Hybrid holographic non-destructive test system  
[NASA-CASE-MFS-23114-1] c 38 N78-32447
- KURVIN, C. W.**  
Remote platform power conserving system  
[NASA-CASE-GSC-11182-1] c 15 N75-13007
- KURYLO, M. J., III**  
Ultraviolet atomic emission detector  
[NASA-CASE-HQN-10756-1] c 14 N72-25428
- KURZHALS, P. R.**  
Spacecraft experiment pointing and attitude control system Patent  
[NASA-CASE-XLA-05464] c 21 N71-14132  
Attitude control and damping system for spacecraft Patent  
[NASA-CASE-XLA-02551] c 21 N71-21708
- KUSHIDA, R. O.**  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-1] c 37 N76-16446  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c 44 N76-29700
- KUSHNICK, ANNE C.**  
Apparatus and method for explosive bonding to edge of flyer plate  
[NASA-CASE-LAR-14096-1] c 31 N91-31476  
Permanent wire splicing by an explosive joining process  
[NASA-CASE-LAR-13825-1] c 31 N92-16162
- KUSHNICK, PETER W.**  
Method of characterizing residual stress in ferromagnetic materials using a pulse histogram of acoustic emission signals  
[NASA-CASE-LAR-14239-1] c 26 N93-14705  
Constant frequency pulsed phase-locked loop measuring device  
[NASA-CASE-LAR-13823-1] c 35 N93-29084
- KWACK, EUG Y.**  
Acoustic device and method for measuring gas densities  
[NASA-CASE-NPO-18155-1-CU] c 71 N93-13421
- KWONG, H.**  
The 1,2,4-oxadiazole elastomers  
[NASA-CASE-ARC-11253-1] c 27 N81-17262  
Preparation of crosslinked 1,2,4-oxadiazole polymer  
[NASA-CASE-ARC-11253-2] c 27 N82-24338
- KWONGS, H.**  
Bifunctional monomers having terminal oxime and cyano or amidine groups  
[NASA-CASE-ARC-11253-3] c 27 N81-24256

## L

- Laumann, E. A.**  
Hydrogen-fueled engine  
[NASA-CASE-NPO-13763-1] c 44 N78-33526
- LA RUSSA, F. J.**  
Array phasing device Patent  
[NASA-CASE-ERC-10046] c 10 N71-18722
- LA VIGNA, T. A.**  
Buck boost voltage regulation circuit Patent  
[NASA-CASE-GSC-10735-1] c 10 N71-26085
- LABAW, CLAYTON C.**  
Integrated filter and detector array for spectral imaging  
[NASA-CASE-NPO-18317-1-CU] c 74 N93-13419
- LACEY, R. E.**  
Infusible silazane polymer and process for producing same  
[NASA-CASE-XMF-02526-1] c 27 N79-21190
- LACKNER, H. G.**  
Method and apparatus of simulating zero gravity conditions Patent  
[NASA-CASE-MFS-12750] c 27 N71-16223  
Method and apparatus for checking the stability of a setup for making reflection type nolograms  
[NASA-CASE-MFS-21455-1] c 35 N74-15146
- LACY, L. L.**  
Containerless high temperature calorimeter apparatus  
[NASA-CASE-MFS-23923-1] c 35 N81-19426  
Method and apparatus for supercooling and solidifying substances  
[NASA-CASE-MFS-25242-1] c 35 N83-29650
- LACY, LEWIS L.**  
Apparatus and method for quiescent containerless processing of high temperature metals and alloys in low gravity  
[NASA-CASE-MFS-28087-1] c 35 N87-23944
- LA FEVER, A. E.**  
Directional gear ratio transmissions  
[NASA-CASE-LAR-12644-1] c 37 N84-28084
- LA FLAME, D. T.**  
Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c 32 N81-15179
- LA FLEUR, SHARON S.**  
Real-time dynamic holographic image storage device  
[NASA-CASE-LAR-13989-1] c 35 N91-13694
- LAGEN, NICHOLAS T.**  
Water cooled static pressure probe  
[NASA-CASE-LAR-14340-1-CU] c 35 N92-21586
- LAHMEYER, CHARLES R.**  
Reed-Solomon decoder  
[NASA-CASE-NPO-15982-1] c 60 N87-21591  
Nanosequencer digital logic controller  
[NASA-CASE-NPO-16116-2] c 60 N88-29310
- LA IACONA, F. P.**  
Bonding of reinforced Teflon to metals  
[NASA-CASE-MFS-20482] c 15 N72-22492  
Method of preparing graphite reinforced aluminum composite  
[NASA-CASE-MFS-21077-1] c 24 N75-28135
- LAINE, D. D.**  
Electromechanical actuator  
[NASA-CASE-XNP-05975] c 15 N69-23185
- LAMAR, J. E.**  
Vortex-lift roll-control device  
[NASA-CASE-LAR-11868-2] c 08 N79-14108



**LAMB, JAMES L.**  
Method of producing high T(subc) superconducting NBN films  
[NASA-CASE-NPO-16681-1-CU] c 76 N88-24543

**LAMB, R. H.**  
Hypersonic reentry vehicle Patent  
[NASA-CASE-XMS-04142] c 31 N70-41631

**LAMBE, JOHN J.**  
Hybrid analog-digital associative neural network  
[NASA-CASE-NPO-17058-1-CU] c 62 N87-25803

**LAMBERT, JAMES L.**  
Improved real-time imaging spectrometer  
[NASA-CASE-NPO-18410-1-CU] c 74 N93-29086

**LAMBSON, K. H.**  
Pressure control valve  
[NASA-CASE-ARC-11251-1] c 37 N81-17433  
Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c 52 N81-25662

**LAMPERT, H. M.**  
Bismuth-lead coatings for gas bearings used in atmospheric environments and vacuum chambers Patent  
[NASA-CASE-XGS-02011] c 15 N71-20739

**LAMPTON, M. L.**  
Resistive anode image converter  
[NASA-CASE-HQN-10876-1] c 33 N76-27473

**LANDAUER, F. P.**  
Means for generating a sync signal in an FM communication system Patent  
[NASA-CASE-XNP-10830] c 07 N71-11281

**LANDAUER, F. P., JR.**  
Multispectral imaging and analysis system  
[NASA-CASE-NPO-13691-1] c 43 N79-17288

**LANDEL, R. F.**  
Method for controlling vapor content of a gas  
[NASA-CASE-NPO-10633] c 03 N72-28025  
Parallel-plate viscometer with double diaphragm suspension  
[NASA-CASE-NPO-11387] c 14 N73-14429  
Preparation of alkali metal dispersions  
[NASA-CASE-XNP-08876] c 17 N73-28573  
Polymeric compositions and their method of manufacture  
[NASA-CASE-NPO-10424-1] c 27 N81-24258

**LANDES, H. S.**  
Active microwave irises and windows  
[NASA-CASE-LAR-10513-1] c 07 N72-25170  
Thin film microwave iris  
[NASA-CASE-LAR-10511-1] c 09 N72-29172

**LANE, J. W.**  
Wide range dynamic pressure sensor  
[NASA-CASE-ARC-10263-1] c 14 N72-22438

**LANEY, C. C., JR.**  
Micrometeoroid velocity measuring device Patent  
[NASA-CASE-XLA-00495] c 14 N70-41332  
Micrometeoroid penetration measuring device Patent  
[NASA-CASE-XLA-00941] c 14 N71-23240

**LANFORD, W. E.**  
Folding apparatus Patent  
[NASA-CASE-XLA-00137] c 15 N70-33180  
Reflector space satellite Patent  
[NASA-CASE-XLA-00138] c 31 N70-37981

**LANG, R.**  
Venting device for pressurized space suit helmet Patent  
[NASA-CASE-XMS-09652-1] c 05 N71-26333  
Protective garment ventilation system  
[NASA-CASE-XMS-04928] c 54 N78-17679

**LANG, ROBERT J.**  
Multiperiod-grating surface-emitting lasers  
[NASA-CASE-NPO-17763-1-CU] c 36 N93-14703  
Self-collimated unstable resonator semiconductor laser  
[NASA-CASE-NPO-18386-1-CU] c 36 N93-18277  
Aberration correction of unstable resonators  
[NASA-CASE-NPO-18662-1-CU] c 74 N93-28428  
Wavelength-division multiplexed optical integrated circuit with vertical diffraction grating  
[NASA-CASE-NPO-18357-1-CU] c 74 N93-29848

**LANGE, GREGORY A.**  
Docking mechanism for spacecraft  
[NASA-CASE-MSC-21386-1] c 18 N90-20126

**LANGE, O. H.**  
Continuous detonation reaction engine Patent  
[NASA-CASE-XMF-06926] c 28 N71-22983

**LANGE, R. A.**  
Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c 32 N77-28346

**LANGMUIR, R. V.**  
Quadrupole mass filter with means to generate a noise spectrum exclusive of the resonant frequency of the desired ions to deflect stable ions  
[NASA-CASE-XNP-04231] c 14 N73-32325

**LANSING, F. L.**  
Stable density stratification solar pond  
[NASA-CASE-NPO-15419-2] c 44 N85-30474

**LANSING, J. C., JR.**  
Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c 74 N74-21304

**LANTZ, E.**  
Gaseous control system for nuclear reactors  
[NASA-CASE-XLE-04599] c 22 N72-20597

**LAPOINTE, DONAT J. E.**  
Tapered, tubular polyester fabric  
[NASA-CASE-MSC-21082-1] c 27 N87-29672

**LARK, R. F.**  
Hybrid composite laminate structures  
[NASA-CASE-LEW-12118-1] c 24 N77-27188

**LARKIN, DAVID J.**  
Process for the controlled growth of single-crystal films of silicon carbide polytypes on silicon carbide wafers  
[NASA-CASE-LEW-15222-3] c 76 N93-17413

**LARMER, J. W.**  
Conforming polisher for aspheric surface of revolution Patent  
[NASA-CASE-XGS-02884] c 15 N71-22705

**LARSON, L. L.**  
Coaxial injector for reaction motors  
[NASA-CASE-NPO-11095] c 15 N72-25455

**LARSON, T. P.**  
Filter regeneration systems  
[NASA-CASE-MSC-14273-1] c 34 N75-33342

**LATHAM, E. A.**  
The engine air intake system  
[NASA-CASE-ARC-10761-1] c 07 N77-18154  
Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c 07 N80-32392

**LATTO, W. T., JR.**  
Small rocket engine Patent  
[NASA-CASE-XLE-00685] c 28 N70-41992

**LAU, K. Y.**  
Fiber optic transmission line stabilization apparatus and method  
[NASA-CASE-NPO-15036-1] c 74 N82-19029

**LAUB, GEORGE H.**  
Swashplate control system  
[NASA-CASE-ARC-11633-1] c 08 N87-23631

**LAUB, J. H.**  
Attitude control for spacecraft Patent  
[NASA-CASE-XNP-00294] c 21 N70-36938  
Silt regulated gas journal bearing Patent  
[NASA-CASE-XNP-00476] c 15 N70-38620

**LAUDENSLAGER, J. B.**  
Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c 33 N82-24418

**LAUDENSLAGER, JAMES B.**  
Multiplex electric discharge gas laser system  
[NASA-CASE-NPO-16433-1] c 36 N87-23961

**LAUDERDALE, W. R.**  
Method and apparatus for securing to a spacecraft Patent  
[NASA-CASE-MFS-11133] c 31 N71-16222

**LAUDENSLAGER, J. B.**  
Charge transfer reaction laser with preionization means  
[NASA-CASE-NPO-13945-1] c 36 N78-27402

**LAUE, E. G.**  
Irradiance measuring device  
[NASA-CASE-NPO-11493] c 14 N73-12447  
Wind sensor  
[NASA-CASE-NPO-13462-1] c 35 N76-24524  
Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c 33 N80-23559  
Cloud cover sensor  
[NASA-CASE-NPO-14936-1] c 47 N83-32232  
Trace water sensor  
[NASA-CASE-NPO-15722-1] c 35 N85-29212

**LAUE, ERIC G.**  
Water-absorbing capacitor system for measuring relative humidity  
[NASA-CASE-NPO-16544-1-CU] c 35 N87-22953

**LAUE, H. H.**  
Driving lamps by induction  
[NASA-CASE-MFS-21214-1] c 09 N73-30181

**LAUE, J. H.**  
Multi-mission module Patent  
[NASA-CASE-XMF-01543] c 31 N71-17730

**LAUGHLIN, C. R., JR.**  
Position location system and method Patent  
[NASA-CASE-GSC-10087-2] c 21 N71-13958  
Position location and data collection system and method Patent  
[NASA-CASE-GSC-10083-1] c 30 N71-16090  
Traffic control system and method Patent  
[NASA-CASE-GSC-10087-1] c 02 N71-19287  
Diversity receiving system with diversity phase lock Patent  
[NASA-CASE-XGS-01222] c 10 N71-20841  
Position location system and method  
[NASA-CASE-GSC-10087-3] c 07 N72-12080

Doppler compensation by shifting transmitted object frequency within limits  
[NASA-CASE-GSC-10087-4] c 07 N73-20174

**LAURENCE, J. C.**  
Method of fabricating a twisted composite superconductor  
[NASA-CASE-LEW-11015] c 26 N73-32571

**LAURIE, R. O.**  
Adjustable mount for a trihedral mirror Patent  
[NASA-CASE-NPO-08907] c 23 N71-29123

**LAUSTEN, M. F.**  
Spray applicator for spraying coatings and other fluids in space  
[NASA-CASE-MSC-18852-1] c 37 N85-29283

**LAUVER, R. W.**  
Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-1] c 27 N84-27885  
Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-3] c 27 N85-21350  
Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-4] c 27 N85-21351  
Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-5] c 27 N85-21352  
Chemical control of nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-2] c 25 N85-28982  
Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-6] c 25 N85-30039

**LAUVIGNE, R. C.**  
Position location and data collection system and method Patent  
[NASA-CASE-GSC-10083-1] c 30 N71-16090

**LAWHITE, E.**  
Drying apparatus for photographic sheet material  
[NASA-CASE-GSC-11074-1] c 14 N73-28489

**LAWING, P. L.**  
Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c 15 N78-32168  
Cooling system for high speed aircraft  
[NASA-CASE-LAR-12406-1] c 05 N81-26114

**LAWRENCE, E. D.**  
Variable frequency oscillator with temperature compensation Patent  
[NASA-CASE-XNP-03916] c 09 N71-28810

**LAWRENCE, T. R.**  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c 35 N77-10493  
Wind measurement system  
[NASA-CASE-MFS-23362-1] c 47 N77-10753

**LAWSON, A. G.**  
Modified spiral wound retaining ring  
[NASA-CASE-LAR-12361-1] c 37 N83-19091  
Shell tile thermal protection system  
[NASA-CASE-LAR-12862-1] c 27 N84-27886

**LAWSON, B. D.**  
Assembly for recovering a capsule Patent  
[NASA-CASE-XMF-00641] c 31 N70-36410  
Space capsule ejection assembly Patent  
[NASA-CASE-XMF-03169] c 31 N71-15675  
Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking  
[NASA-CASE-MFS-23267-1] c 35 N77-20401

**LAWSON, BOBBY E.**  
Thermally isolated deployable shield for spacecraft  
[NASA-CASE-MFS-28524-1] c 18 N91-25167

**LAWSON, D. D.**  
Polymeric electrolytic hygrometer  
[NASA-CASE-NPO-13948-1] c 35 N78-25391  
Dual membrane hollow fiber fuel cell and method of operating same  
[NASA-CASE-NPO-13732-1] c 44 N79-10513  
Thermochemical generation of hydrogen  
[NASA-CASE-NPO-15015-1] c 25 N82-28368  
Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NPO-15767-1] c 23 N84-16255

**LAWTON, RUSSELL A.**  
Thermal treatment of silicon integrated circuit chips to prevent and heal voids in aluminum metallization  
[NASA-CASE-NPO-17678-1-CU] c 76 N91-28014

**LAWTON, TERI B.**  
Method and apparatus for predicting the direction of movement in machine vision  
[NASA-CASE-NPO-17552-1-CU] c 54 N92-29129

**LAYLAND, J. W.**  
Communications link for computers  
[NASA-CASE-NPO-11161] c 08 N72-25207  
Digital demodulator-correlator  
[NASA-CASE-NPO-13982-1] c 32 N79-14267

- LE BEL, P. J.**  
Ablation sensor Patent  
[NASA-CASE-XLA-01794] c 33 N71-21586
- LE DOUX, F. N.**  
Bacteriostatic conformal coating and methods of application Patent  
[NASA-CASE-GSC-10007] c 18 N71-16046
- LE VAY, K. H.**  
Holder for crystal resonators Patent  
[NASA-CASE-XNP-03637] c 15 N71-21311
- LEATHERWOOD, J. D.**  
Active vibration isolator for flexible bodies Patent  
[NASA-CASE-LAR-10106-1] c 15 N71-27169  
Ride quality meter  
[NASA-CASE-LAR-12882-1] c 35 N84-12445
- LEAVY, W. A.**  
Switching mechanism with energy storage means Patent  
[NASA-CASE-XGS-00473] c 03 N70-38713  
Antenna deployment mechanism for use with a spacecraft  
[NASA-CASE-GSC-12331-1] c 18 N80-14183
- LEBLANC, L. P.**  
Thermocouple, multiple junction reference oven  
[NASA-CASE-FRC-10112-1] c 35 N81-26431
- LEDBETTER, F. E., III**  
Method of bonding plasticized elastomer to metal and articles produced thereby  
[NASA-CASE-MFS-25181-1] c 27 N82-24340  
Process for producing tris (n-methylamino) methylsilane  
[NASA-CASE-MFS-25721-1] c 25 N85-21280
- LEDBETTER, FRANK E., III**  
Method for machining holes in composite materials  
[NASA-CASE-MFS-28044-1] c 31 N87-25491
- LEDERICH, RICHARD J.**  
Elevated temperature aluminum alloys  
[NASA-CASE-LAR-13632-1] c 26 N87-29650
- LEDUC, HENRY G.**  
Edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-1-CU] c 76 N90-17456  
Method for producing edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-2-CU] c 76 N92-22040  
Edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-3-CU] c 76 N92-22041
- LEE, ANGELENE M.**  
Sharps container  
[NASA-CASE-MSC-21776-1] c 31 N92-33612
- LEE, C. E.**  
Trigonometric vehicle guidance assembly which aligns the three perpendicular axes of two three-axes systems Patent  
[NASA-CASE-XMF-00684] c 21 N71-21688
- LEE, D. A.**  
Hermetically sealed explosive release mechanism Patent  
[NASA-CASE-XGS-00824] c 15 N71-16078
- LEE, D. H.**  
Ignition means for monopropellant Patent  
[NASA-CASE-XNP-00876] c 28 N70-41311
- LEE, J. H.**  
Solar driven liquid metal MHD power generator  
[NASA-CASE-LAR-12495-1] c 44 N83-28573  
Solar pumped laser  
[NASA-CASE-LAR-12870-1] c 36 N84-16542
- LEE, J. S.**  
High voltage transistor circuit Patent  
[NASA-CASE-XNP-06937] c 09 N71-19516
- LEE, JA H.**  
Method for remotely powering a device such as a lunar rover  
[NASA-CASE-LAR-14789-1] c 37 N92-30388
- LEE, M. C.**  
Dual resonant cavity absorption cell Patent  
[NASA-CASE-LAR-10305] c 14 N71-26137  
Acoustic suspension system  
[NASA-CASE-NPO-15435-1] c 71 N83-36846  
Contactless pellet fabrication  
[NASA-CASE-NPO-15592-1] c 71 N84-16940  
Vibrating-chamber levitation systems  
[NASA-CASE-NPO-16142-1-CU] c 35 N86-20752  
Apparatus for production of ultrapure amorphous metals utilizing acoustic cooling  
[NASA-CASE-NPO-15658-1] c 26 N86-32551  
Noncontact temperature pattern measuring device  
[NASA-CASE-NPO-17024-1-CU] c 35 N88-24943
- LEE, MARK C.**  
Noncontact temperature pattern measuring device  
[NASA-CASE-NPO-17824-1-CU] c 36 N90-17132  
Method and apparatus for producing microshells  
[NASA-CASE-NPO-16635-1-CU] c 31 N91-32240
- LEE, R. D.**  
Telemetry actuated switch  
[NASA-CASE-ARC-10105] c 09 N72-17153  
Metallic intrusion detector system  
[NASA-CASE-ARC-10265-1] c 10 N72-28240  
Intruder detection system  
[NASA-CASE-ARC-10097-2] c 07 N73-25160  
Ultrasonic biomedical measuring and recording apparatus  
[NASA-CASE-ARC-10597-1] c 52 N74-20726  
Bio-isolated dc operational amplifier  
[NASA-CASE-ARC-10596-1] c 33 N74-21851  
Reference apparatus for medical ultrasonic transducer  
[NASA-CASE-ARC-10753-1] c 54 N75-27760  
Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-1] c 52 N76-33835  
Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-2] c 52 N79-26771  
Scanning seismic intrusion detection method and apparatus  
[NASA-CASE-ARC-11317-1] c 35 N83-34272
- LEE, ROBERT D.**  
Electro-expulsive separation system  
[NASA-CASE-ARC-11613-1] c 33 N87-28833
- LEE, S. H.**  
Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c 74 N77-28932
- LEE, S. Y.**  
Physical correction filter for improving the optical quality of an image  
[NASA-CASE-HQN-10542-1] c 74 N75-25706  
Method of neutralizing the corrosive surface of amine-cured epoxy resins  
[NASA-CASE-GSC-12686-1] c 27 N83-34039
- LEE, SHENG Y.**  
Cellular thermosetting fluoropolymers and process for making them  
[NASA-CASE-GSC-13008-1] c 27 N88-23894  
Cellular thermosetting fluorodiepoxy polymers  
[NASA-CASE-GSC-13008-2] c 27 N90-16949
- LEE, SUKHAN**  
Distributed proximity sensor system  
[NASA-CASE-NPO-17275-1-CU] c 37 N89-29750  
Backward assembly planning with DFA analysis  
[NASA-CASE-NPO-18817-1-CU] c 31 N93-12202
- LEE, THOMAS S.**  
Configuration control of seven-degree-of-freedom arms  
[NASA-CASE-NPO-18607-1-CU] c 37 N92-23553
- LEE, W. S.**  
Surface finishing  
[NASA-CASE-MSC-12631-1] c 24 N77-28225  
Surface finishing  
[NASA-CASE-MSC-12631-3] c 27 N81-14077
- LEEB, W. R.**  
Method and apparatus for splitting a beam of energy  
[NASA-CASE-GSC-12083-1] c 73 N78-32848
- LEEPER, W. A.**  
High efficiency multifrequency feed  
[NASA-CASE-GSC-11909] c 32 N74-20863
- LEES, W. L.**  
Field ionization electrodes Patent  
[NASA-CASE-ERC-10013] c 09 N71-26678  
Method and apparatus for limiting field emission current  
[NASA-CASE-ERC-10015-2] c 10 N72-27246
- LEFFKE, W. O.**  
Flexibly connected support and skin Patent  
[NASA-CASE-XLA-01027] c 31 N71-24035
- LEFTWICH, R. F.**  
Multi-lobe scan horizon sensor Patent  
[NASA-CASE-XGS-00809] c 21 N70-35427
- LEGER, L. J.**  
Method and device for detection of surface discontinuities or defects  
[NASA-CASE-MSC-14187-1] c 35 N74-32879  
Thermal insulation attaching means  
[NASA-CASE-MSC-12619-2] c 27 N79-12221
- LEHMANN, E. N.**  
Fluid thrust control system  
[NASA-CASE-XMF-05964-1] c 20 N79-21124
- LEHOCZYK, SANDOR L.**  
Method and apparatus for growing crystals  
[NASA-CASE-MFS-28137-1] c 76 N88-24544  
Liquid encapsulated float zone process and apparatus  
[NASA-CASE-MFS-28144-1] c 76 N88-24545  
Method of preparing radially homogeneous mercury cadmium telluride crystals  
[NASA-CASE-MFS-25786-2] c 76 N90-20896  
Crystal growth in a microgravity environment  
[NASA-CASE-MFS-28473-1] c 76 N93-14707
- LEIBECKI, H. F.**  
Electrically conductive fluorocarbon polymer  
[NASA-CASE-XLE-06774-2] c 06 N72-25150
- LEIBERT, C. H.**  
Thermal barrier coating system  
[NASA-CASE-LEW-12554-1] c 34 N78-18355
- LEIBOWITZ, L. P.**  
Annular arc accelerator shock tube  
[NASA-CASE-NPO-13528-1] c 09 N77-10071
- LEIGHTY, BRADLEY D.**  
Arc lamp power supply using a voltage multiplier  
[NASA-CASE-LAR-13202-1] c 33 N88-23942  
Synchronous strobe apparatus for flow visualization  
[NASA-CASE-LAR-14556-1] c 36 N91-25392
- LEININGER, D. B.**  
Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c 32 N79-23310
- LEINKRAM, C. Z.**  
GaAs Schottky barrier photo-responsive device and method of fabrication  
[NASA-CASE-GSC-12816-1] c 76 N86-20150
- LEIPOLO, M. H.**  
Method of controlling defect orientation in silicon crystal ribbon growth  
[NASA-CASE-NPO-13918-1] c 76 N79-11920
- LEISER, D. B.**  
Silica reusable surface insulation  
[NASA-CASE-ARC-10721-1] c 27 N76-22376  
Reaction cured glass and glass coatings  
[NASA-CASE-ARC-11051-1] c 27 N78-32260  
Fibrous refractory composite insulation  
[NASA-CASE-ARC-11169-1] c 24 N79-24062  
Adjustable high emittance gap filler  
[NASA-CASE-ARC-11310-1] c 27 N82-24339  
High temperature glass thermal control structure and coating  
[NASA-CASE-ARC-11164-1] c 44 N83-34448
- LEISER, DANIEL B.**  
Toughened uni-piece fibrous insulation  
[NASA-CASE-ARC-11888-1] c 24 N92-16026
- LEISS, A.**  
Air frame drag balance Patent  
[NASA-CASE-XLA-00113] c 14 N70-33386
- LEMCOE, M. M.**  
Attaching of strain gages to substrates  
[NASA-CASE-FRC-10093-1] c 35 N80-20560
- LEMONS, F. R.**  
Metallic hot wire anemometer  
[NASA-CASE-ARC-10911-1] c 35 N77-20400
- LEMONSON, P. H.**  
Broadband modified turnstile antenna Patent  
[NASA-CASE-MSC-12209] c 09 N71-24842
- LENAHAN, D. T.**  
Air modulation apparatus  
[NASA-CASE-LEW-13524-1] c 07 N84-33410
- LENETT, S. D.**  
Method and apparatus for receiving and tracking phase modulated signals  
[NASA-CASE-MSC-16170-2] c 32 N84-27952
- LENNON, C. L.**  
Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c 33 N79-11315  
Lightning discharge identification system  
[NASA-CASE-KSC-11099-1] c 47 N82-24779
- LENT, W. E.**  
Method for fiberizing ceramic materials Patent  
[NASA-CASE-XNP-00597] c 18 N71-23088
- LENTSCH, STEVEN E.**  
Whole body cleaning agent containing N-acyltaurate  
[NASA-CASE-MSC-21589-1] c 54 N92-29137
- LEON, H. A.**  
Stirring apparatus for plural test tubes Patent  
[NASA-CASE-XAC-06956] c 15 N71-21177  
Automatic real-time pair-feeding system for animals  
[NASA-CASE-ARC-10302-1] c 51 N74-15778
- LEONARD, E. T.**  
Alignment apparatus using a laser having a gravitationally sensitive cavity reflector  
[NASA-CASE-ARC-10444-1] c 16 N73-33397
- LEPP, D. R.**  
Phototropic composition of matter  
[NASA-CASE-XGS-03736] c 14 N72-22443
- LERMA, GUILLERMO**  
Method of making a flexible diaphragm  
[NASA-CASE-MSC-20797-1] c 37 N87-23981  
Flexible diaphragm-extreme temperature usage  
[NASA-CASE-MSC-20797-2] c 35 N91-21494
- LERNER, N. R.**  
Method of carbonizing polyacrylonitrile fibers  
[NASA-CASE-ARC-11261-1] c 24 N83-25789
- LERNER, NARCINDA R.**  
Etching method for photoresists or polymers  
[NASA-CASE-ARC-11873-2] c 25 N91-31258
- LERNER, T.**  
Modulator for tone and binary signals  
[NASA-CASE-GSC-11743-1] c 32 N75-24981

- LESH, J. R.**  
Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c 32 N77-20289
- LESH, JAMES R.**  
Means for phase locking the outputs of a surface emitting laser diode array  
[NASA-CASE-NPO-16542-1-CU] c 36 N87-23960
- LESKO, J. G., JR.**  
Programmable telemetry system Patent  
[NASA-CASE-GSC-10131-1] c 07 N71-24624
- LESKY, EDWARD S.**  
Induction-type metal detector with increased scanning area capability  
[NASA-CASE-KSC-11386-1] c 35 N90-22023
- LESNIEWSKI, R. J.**  
Variable digital processor including a register for shifting and rotating bits in either direction Patent  
[NASA-CASE-GSC-10186] c 08 N71-33110  
Data processor with conditionally supplied clock signals  
[NASA-CASE-GSC-10975-1] c 08 N73-13187
- LESSLEY, R. L.**  
Rotating shaft seal Patent  
[NASA-CASE-XNP-02862-1] c 15 N71-26294
- LESSMANN, G. G.**  
Bimetallic junctions  
[NASA-CASE-LEW-11573-1] c 26 N77-28265
- LEUNG, EMILY W.**  
Acoustic transducer apparatus with reduced thermal conduction  
[NASA-CASE-NPO-17620-1-CU] c 71 N91-14808
- LEVIN, H.**  
Refractory porcelain enamel passive control coating for high temperature alloys  
[NASA-CASE-MFS-22324-1] c 27 N75-27160  
Thermal reactor  
[NASA-CASE-NPO-14369-1] c 44 N83-10501
- LEVIN, K. L.**  
Lunar landing flight research vehicle Patent  
[NASA-CASE-XFR-00929] c 31 N70-34966
- LEVINE, M. W.**  
Atomic hydrogen maser with bulb temperature control to remove wall shift in maser output frequency  
[NASA-CASE-HQN-10654-1] c 16 N73-13489  
Tunable cavity resonator with ramp shaped supports  
[NASA-CASE-HQN-10790-1] c 36 N74-11313
- LEVINE, S. R.**  
Fused silicide coatings containing discrete particles for protecting niobium alloys  
[NASA-CASE-LEW-11179-1] c 27 N76-16229  
Corrosion resistant thermal barrier coating  
[NASA-CASE-LEW-13088-1] c 26 N81-25188  
Coating with overlay metallic-cermet alloy systems  
[NASA-CASE-LEW-13639-2] c 26 N84-27855  
Overlay metallic-cermet alloy coating systems  
[NASA-CASE-LEW-13639-1] c 26 N84-33555  
Sintering silicon nitride  
[NASA-CASE-LEW-15489-1] c 27 N93-17062
- LEVINSOHN, M.**  
Conforming polisher for aspheric surface of revolution Patent  
[NASA-CASE-XGS-02884] c 15 N71-22705
- LEVIS, C. A.**  
Distributed-switch Dicke radiometers  
[NASA-CASE-GSC-12219-1] c 35 N80-18359
- LEVITON, DOUGLAS B.**  
Control system for ruling blazed, aberration corrected diffraction gratings  
[NASA-CASE-GSC-3240-1] c 35 N92-10186
- LEVY, G. S.**  
Multi-feed cone Cassegrain antenna Patent  
[NASA-CASE-NPO-10539] c 07 N71-11285
- LEWICKI, G. W.**  
High voltage transistor amplifier with constant current load  
[NASA-CASE-NPO-11023] c 09 N72-17155  
Thermomagnetic recording and magneto-optic playback system having constant intensity laser beam control  
[NASA-CASE-NPO-11317-2] c 36 N74-13205  
Use of thin film light detector  
[NASA-CASE-NPO-11432-2] c 35 N74-15090  
Stored charge transistor  
[NASA-CASE-NPO-11156-2] c 33 N75-31331  
Magneto-optic detection system with noise cancellation  
[NASA-CASE-NPO-11954-1] c 35 N78-29421  
Thermomagnetic recording and magnetic-optic playback system  
[NASA-CASE-NPO-10872-1] c 35 N79-16246  
Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
[NASA-CASE-NPO-11336-1] c 76 N79-16678
- LEWIS, B. F.**  
Photoelectron spectrometer with means for stabilizing sample surface potential  
[NASA-CASE-NPO-13772-1] c 35 N78-10429
- LEWIS, B. W.**  
Process for applying black coating to metals Patent  
[NASA-CASE-XLA-06199] c 15 N71-24875  
Barium release system  
[NASA-CASE-LAR-10670-1] c 06 N73-30097  
Rocket having barium release system to create ion clouds in the upper atmosphere  
[NASA-CASE-LAR-10670-2] c 15 N74-27360
- LEWIS, BLAIR F.**  
Distributed computing system with dual independent communications paths between computers and employing split tokens  
[NASA-CASE-NPO-17185-1-CU] c 62 N91-14772
- LEWIS, CAROL R.**  
High energy and high power density ultracapacitors and supercapacitors  
[NASA-CASE-NPO-18568-1-CU] c 33 N93-17274
- LEWIS, D. J.**  
Mandrel for shaping solid propellant rocket fuel into a motor casing Patent  
[NASA-CASE-XLA-00304] c 27 N70-34783  
Solid propellant rocket motor and method of making same  
[NASA-CASE-XLA-01349] c 20 N77-17143
- LEWIS, DAVID A.**  
Rocket engine nozzle attenuator  
[NASA-CASE-MFS-28739-1] c 20 N93-28324
- LEWIS, G. W.**  
Subminiature insertable force transducer  
[NASA-CASE-NPO-13423-1] c 33 N75-31329  
Miniature muscle displacement transducer  
[NASA-CASE-NPO-13519-1] c 33 N76-19338  
Myocardium wall thickness transducer and measuring method  
[NASA-CASE-NPO-13844-1] c 52 N76-29895  
Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NPO-13643-1] c 52 N76-29896  
Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c 52 N80-27072  
Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c 52 N81-20703
- LEWIS, J. R.**  
Automatic transponder  
[NASA-CASE-GSC-12075-1] c 32 N77-31350
- LEWIS, MARIAN L.**  
Three-dimensional cell to tissue assembly process  
[NASA-CASE-MS-C-21559-1] c 51 N92-34231
- LEWIS, R.**  
High temperature ferromagnetic cobalt-base alloy Patent  
[NASA-CASE-XLE-03629] c 17 N71-23248
- LEWIS, T. L.**  
Acoustical transducer calibrating system and apparatus  
[NASA-CASE-FRC-10060-1] c 14 N73-27379
- LEWYN, L. L.**  
Analog-to-digital converter  
[NASA-CASE-XNP-00477] c 08 N73-28045
- LI, LARRY C. H.**  
Method and apparatus for positioning a robotic end effector  
[NASA-CASE-MS-C-21476-1] c 37 N91-21542
- LI, S. P.**  
Induced junction solar cell and method of fabrication  
[NASA-CASE-NPO-13786-1] c 44 N80-29835
- LIANG, RANTY H.**  
Silicon containing electroconductive polymers and structures made therefrom  
[NASA-CASE-NPO-17826-1-CU] c 27 N92-16121
- LIBBEY, C. E.**  
Flexible wing deployment device Patent  
[NASA-CASE-XLA-01220] c 02 N70-41863
- LIBBY, J. N.**  
Ultra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit Patent  
[NASA-CASE-XGS-00381] c 09 N70-34819  
Reversible ring counter employing cascaded single SCR stages Patent  
[NASA-CASE-XGS-01473] c 09 N71-10673
- LIBBY, W. F.**  
Continuous plasma light source  
[NASA-CASE-XNP-04167-2] c 25 N72-24753  
Continuous plasma laser  
[NASA-CASE-NPO-04167-3] c 36 N77-19416
- LIBEROTTI, J.**  
Valving device for automatic refilling in cryogenic liquid systems  
[NASA-CASE-NPO-11177] c 15 N72-17453
- LICHTENBERG, CHRISTOPHER**  
Method and apparatus for measuring frequency and phase difference  
[NASA-CASE-MS-C-20865-1] c 32 N87-18692
- LICHTENBERG, CHRISTOPHER L.**  
Method and apparatus for measuring distance  
[NASA-CASE-MS-C-20912-1] c 32 N88-26568
- LIEBERMAN, S.**  
Resonant infrasonic gauging apparatus  
[NASA-CASE-MS-C-11847-1] c 14 N72-11363
- LIEBERT, C. H.**  
Covering solid, film cooled surfaces with a duplex thermal barrier coating  
[NASA-CASE-LEW-13450-1] c 31 N83-35177
- LIEBERT, CURT H.**  
Plug-type heat flux gauge  
[NASA-CASE-LEW-14967-1] c 35 N91-31608  
Method of producing a plug-type heat flux gauge  
[NASA-CASE-LEW-14967-2] c 35 N92-22038
- LIENEWEG, U.**  
Cross-contact chain  
[NASA-CASE-NPO-16784-1] c 33 N87-10231
- LIENEWEG, UDO**  
Planar varactor frequency multiplier devices with blocking barrier  
[NASA-CASE-NPO-18428-1-CU] c 33 N92-23464
- LIERKE, ERNST G.**  
Acoustic transducer apparatus with reduced thermal conduction  
[NASA-CASE-NPO-17620-1-CU] c 71 N91-14808
- LIGHT, D. J.**  
Fixture for supporting articles during vibration tests  
[NASA-CASE-MFS-20523] c 14 N72-27412
- LIGHTSEY, G. R.**  
Preparation of polyimides from mixtures of monomeric diamines and esters of polycarboxylic acids  
[NASA-CASE-LEW-11325-1] c 06 N73-27980
- LIGHTSEY, GEORGE R.**  
Apparatus and method for cellulose processing using microwave pretreatment  
[NASA-CASE-MS-C-21936-1-SB] c 25 N93-22036
- LILLEY, A. E.**  
Clear air turbulence detector  
[NASA-CASE-ERC-10081] c 14 N72-28437
- LIM, L. Y.**  
Signal processing apparatus for multiplex transmission Patent  
[NASA-CASE-NPO-10388] c 07 N71-24622
- LIN, E. I. H.**  
Saltless solar pond  
[NASA-CASE-NPO-15808-1] c 44 N84-34792
- LIN, HUNG C.**  
Visual aid for the hearing impaired  
[NASA-CASE-GSC-13027-1-CU] c 35 N91-27522
- LIN, STEVEN H.**  
High-gain AlGaAs/GaAs double heterojunction Darlington phototransistors for optical neural networks  
[NASA-CASE-NPO-18101-1-CU] c 74 N91-25841  
GaAs-based optoelectronic neurons  
[NASA-CASE-NPO-18497-1-CU] c 63 N92-24245  
GaAs-based optoelectronic neurons  
[NASA-CASE-NPO-18497-1-CU] c 63 N93-24599
- LIN, TRUE-LON**  
Laterally stacked Schottky diodes for infrared sensor applications  
[NASA-CASE-NPO-17426-1-CU] c 33 N91-21434  
Formation of self-aligned guard rings for monolithic Schottky-barrier diode arrays  
[NASA-CASE-NPO-17734-1-CU] c 33 N92-10146  
Fabrication of nanometer single crystal metallic CoSi<sub>2</sub> structures on Si  
[NASA-CASE-NPO-17736-2-CU] c 24 N92-18561
- LINDBERG, J. G.**  
Method and apparatus for varying thermal conductivity Patent  
[NASA-CASE-XNP-05524] c 33 N71-24876
- LINDBERG, R. A.**  
High temperature beryllium oxide capacitor  
[NASA-CASE-LEW-11938-1] c 33 N76-15373  
Bimetallic junctions  
[NASA-CASE-LEW-11573-1] c 26 N77-28265
- LINDERFELT, H. R.**  
An airlock  
[NASA-CASE-MFS-20922] c 31 N72-20840  
Airlock  
[NASA-CASE-MFS-20922-1] c 18 N74-22136
- LINDSEY, J. F., III**  
Flexible blade antenna Patent  
[NASA-CASE-MS-C-12101] c 09 N71-18720
- LINDSEY, R. S., JR.**  
Pulse stretcher for narrow pulses  
[NASA-CASE-MS-C-14130-1] c 33 N74-32711  
Random pulse generator  
[NASA-CASE-MS-C-14131-1] c 33 N75-19515

- LINDSEY, W. C.**  
Transition tracking bit synchronization system  
[NASA-CASE-NPO-10844] c 07 N72-20140  
Data-aided carrier tracking loops  
[NASA-CASE-NPO-11282] c 10 N73-16205  
Coherent receiver employing nonlinear coherence detection for carrier tracking  
[NASA-CASE-NPO-11921-1] c 32 N74-30523
- LINDSEY, W. F.**  
Stereo photomicrography system  
[NASA-CASE-LAR-10176-1] c 14 N72-20380
- LINEBACK, L. D.**  
Thermal shock resistant hafnia ceramic material  
[NASA-CASE-LAR-10894-1] c 18 N73-14584
- LINFORD, R. M. F.**  
Flame detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c 19 N74-29410
- LING, A. C.**  
Fire extinguishant materials  
[NASA-CASE-ARC-11252-1] c 25 N83-36118
- LING, S. C.**  
Flux sensing device using a tubular core with toroidal gating coil and solenoidal output coil wound thereon  
Patent  
[NASA-CASE-XGS-01881] c 09 N70-40123
- LINGLE, J. T.**  
Frequency control network for a current feedback oscillator Patent  
[NASA-CASE-GSC-10041-1] c 10 N71-19418  
Static inverter Patent  
[NASA-CASE-XGS-05289] c 09 N71-19470
- LIJOR, W. I.**  
Optical system with reflective baffles  
[NASA-CASE-ARC-11502-1] c 74 N86-20125
- LINKER, JAMES F.**  
Blind fastening apparatus  
[NASA-CASE-LAR-14542-1] c 37 N93-22384
- LIPANOVICH, M. I.**  
Medical subject monitoring systems  
[NASA-CASE-MSC-14180-1] c 52 N76-14757
- LIPKE, D. W.**  
Doppler frequency spread correction device for multiplex transmissions  
[NASA-CASE-XGS-02749] c 07 N69-39978
- LIPKIS, R. R.**  
Electromagnetic radiation energy arrangement  
[NASA-CASE-WOO-00426-1] c 32 N79-19186
- LIPOMA, P. C.**  
Television signal scan rate conversion system Patent  
[NASA-CASE-XMS-07168] c 07 N71-11300  
Burst synchronization detection system Patent  
[NASA-CASE-XMS-05605-1] c 10 N71-19468  
Data storage, image tube type  
[NASA-CASE-MSC-14053-1] c 60 N74-12088  
System for producing chroma signals  
[NASA-CASE-MSC-14683-1] c 74 N77-18893
- LIPPITT, M. W., JR.**  
Electrode for biological recording  
[NASA-CASE-XMS-02872] c 05 N69-21925  
Instrument for use in performing a controlled Valsalva maneuver Patent  
[NASA-CASE-XMS-01615] c 05 N70-41329
- LIPSHITZ, A.**  
Modified face seal for positive film stiffness  
[NASA-CASE-LEW-12989-1] c 37 N82-12442
- LISAGOR, W. B.**  
Controlled glass bead peening Patent  
[NASA-CASE-XLA-07390] c 15 N71-18616  
Fixture for environmental exposure of structural materials under compression load  
[NASA-CASE-LAR-12602-1] c 39 N83-32081
- LISLE, R. V.**  
Lightning current measuring systems  
[NASA-CASE-KSC-10807-1] c 33 N75-26246  
Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c 34 N81-26402
- LISOVICZ, E. J.**  
High contrast cathode ray tube  
[NASA-CASE-ERC-10468] c 09 N72-20206
- LIST, W. F.**  
Solid state television camera system Patent  
[NASA-CASE-XMF-06092] c 07 N71-24612  
Phototransistor imaging system  
[NASA-CASE-MFS-20809] c 23 N73-13660
- LISTER, J. L.**  
Thermally conductive polymers  
[NASA-CASE-GSC-11304-1] c 06 N72-21105
- LITANT, I.**  
Apparatus and method for separating a semiconductor wafer Patent  
[NASA-CASE-ERC-10138] c 26 N71-14354  
Method for detecting leaks in hermetically sealed containers Patent  
[NASA-CASE-ERC-10045] c 15 N71-24910
- LITCHFORD, G. B.**  
Altitude measuring system  
[NASA-CASE-ERC-10412-1] c 09 N73-12211
- LITTLE, B. D.**  
Hot melt adhesive attachment pad  
[NASA-CASE-LAR-12894-1] c 27 N85-20125
- LITTLE, BRUCE D.**  
Tensile film clamps and mounting block for the rheovibron and autovibron viscoelastometer  
[NASA-CASE-LAR-13696-1] c 37 N90-20409
- LITTLE, R. E.**  
Method of making pressure tight seal for super alloy  
[NASA-CASE-LAR-10170-1] c 37 N74-11301
- LITTLEJOHN, D. P.**  
High power-high voltage waterload Patent  
[NASA-CASE-XNP-05381] c 09 N71-20842
- LIU, C. C.**  
Method and device for the detection of phenol and related compounds  
[NASA-CASE-LEW-12513-1] c 25 N79-22235
- LIU, F. F.**  
Respiratory analysis system and method  
[NASA-CASE-MSC-13436-1] c 05 N73-32015
- LIU, HOWARD T.**  
Dynamic resource allocation scheme for distributed heterogeneous computer systems  
[NASA-CASE-NPO-17197-1-CU] c 62 N91-25693
- LIU, HUA KUANG**  
Real-time optical multiple object recognition and tracking system and method  
[NASA-CASE-NPO-17139-1-CU] c 74 N88-25301
- LIU, HUA-KUANG**  
Large TV display system  
[NASA-CASE-NPO-16932-1CU] c 33 N87-15413  
Real-time image difference detection using a polarization rotation spatial light modulator  
[NASA-CASE-NPO-17144-1-CU] c 74 N88-25305  
Dynamic range compression/expansion of light beams by photorefractive crystals  
[NASA-CASE-NPO-17140-1-CU] c 74 N89-14077  
Remotely controllable real-time optical processor  
[NASA-CASE-NPO-16750-1-CU] c 74 N89-14078  
Method and apparatus for second-rank tensor generation  
[NASA-CASE-NPO-17512-1-CU] c 74 N91-26918  
Optical inner product neural associative memory  
[NASA-CASE-NPO-18491-1-CU] c 60 N92-23546  
Real time pre-detection dynamic range compression  
[NASA-CASE-NPO-18098-1-CU] c 74 N92-33028  
Large area projection liquid-crystal video display system with inherent grid pattern optically removed  
[NASA-CASE-NPO-16932-2-CU] c 74 N93-13711
- LIU, J. K.**  
Method of increasing minority carrier lifetime in silicon web or the like  
[NASA-CASE-NPO-15530-1] c 76 N83-35888
- LIU, JOHN K.**  
MBE growth technology for high quality strained III-V layers  
[NASA-CASE-NPO-17723-1-CU] c 76 N90-26685  
Growth of III-V films by control of MBE growth front stoichiometry  
[NASA-CASE-NPO-17724-1-CU] c 76 N92-22035
- LIU, K. Y.**  
Pipelined digital SAR azimuth correlator using hybrid FFT-transversal filter  
[NASA-CASE-NPO-15519-1] c 32 N84-34651
- LIU, TSUEN-HSI**  
Motion detection, novelty filtering, and target tracking using an interferometric technique with a GaAs phase conjugate mirror  
[NASA-CASE-NPO-17784-1-CU] c 74 N91-13998  
Real-time edge-enhanced optical correlator  
[NASA-CASE-NPO-18379-1-CU] c 74 N92-33022  
Motion-sensitive optical correlator  
[NASA-CASE-NPO-18769-1-CU] c 74 N93-28133
- LIVERMORE, S. F.**  
Lightning current detector  
[NASA-CASE-KSC-11057-1] c 33 N79-14305
- LLEWELIN, WILLIAM R.**  
Non-backdrivable free wheeling coupling  
[NASA-CASE-MSC-20475-1] c 37 N87-17037
- LLOYD, JAMES**  
Hazardous materials emergency response mobile robot  
[NASA-CASE-NPO-18690-1-CU] c 37 N92-34205
- LLOYD, W. B.**  
Bearing and gimbal lock mechanism and spiral flex lead module Patent  
[NASA-CASE-GSC-10556-1] c 31 N71-26537
- LOCH, F. J.**  
Frequency modulation demodulator threshold extension device Patent  
[NASA-CASE-MSC-12165-1] c 07 N71-33696
- LOCKARD, GEORGE E.**  
Method and apparatus for detection and control of prelasers in a Q-switched laser  
[NASA-CASE-LAR-14790-1] c 36 N93-19373
- LOCKARD, M. L.**  
Leak detector Patent  
[NASA-CASE-LAR-10323-1] c 12 N71-17573
- LOCKMAN, C. S.**  
Method and apparatus for nondestructive testing of pressure vessels  
[NASA-CASE-NPO-12142-1] c 38 N76-28563
- LOCKWOOD, V. E.**  
Landing arrangement for aerial vehicles Patent  
[NASA-CASE-XLA-00142] c 02 N70-33286  
Landing arrangement for aerial vehicle Patent  
[NASA-CASE-XLA-00806] c 02 N70-34858  
Landing arrangement for aerospace vehicle Patent  
[NASA-CASE-XLA-00805] c 31 N70-38010
- LOFTIN, L. K., JR.**  
Wind tunnel airstream oscillating apparatus Patent  
[NASA-CASE-XLA-00112] c 11 N70-33287
- LOFTIN, R. BOWEN**  
System and method for a general purpose architecture for intelligent computer-aided training  
[NASA-CASE-MSC-21381-1] c 63 N91-13944
- LOGAN, K. E.**  
Active lamp pulse driver circuit  
[NASA-CASE-GSC-12566-1] c 33 N83-34189
- LOGAN, W. R.**  
Method of preparing zinc orthotitanate pigment  
[NASA-CASE-MFS-23345-1] c 27 N77-30237
- LOH, G. M.**  
Medical subject monitoring systems  
[NASA-CASE-MSC-14180-1] c 52 N76-14757
- LOHR, J. J.**  
Variable stiffness polymeric damper  
[NASA-CASE-XAC-11225] c 14 N69-27486
- LOKERSON, D. C.**  
Voltage to frequency converter Patent  
[NASA-CASE-GSC-10022-1] c 10 N71-25882  
X-Y alphanumeric character generator for oscilloscopes  
[NASA-CASE-GSC-11582-1] c 33 N75-19517  
Speech analyzer  
[NASA-CASE-GSC-11898-1] c 32 N77-30309
- LOMAX, CURTIS**  
Cooling apparatus and couplings therefor  
[NASA-CASE-ARC-11921-1] c 34 N92-11286
- LOMBARDI, F.**  
Head for high speed spinner having a vacuum chuck  
[NASA-CASE-NPO-15227-1] c 37 N81-33482  
Hermetic seal for a shaft  
[NASA-CASE-NPO-15115-1] c 37 N82-24493
- LONBORG, J. O.**  
Attitude control for spacecraft Patent  
[NASA-CASE-XNP-02982] c 31 N70-41855
- LONG, E. R., JR.**  
Thermoluminescent aerosol analysis  
[NASA-CASE-LAR-12046-1] c 25 N78-15210
- LONG, H. R.**  
Precipitation detector Patent  
[NASA-CASE-XLA-02619] c 10 N71-26334
- LONG, MARK K.**  
Configuration control of seven-degree-of-freedom arms  
[NASA-CASE-NPO-18607-1-CU] c 37 N92-23553  
Extended task space control for robotic manipulators  
[NASA-CASE-NPO-18902-1-CU] c 37 N93-28129
- LONG, W. C.**  
Technique for extending the frequency range of digital dividers  
[NASA-CASE-LAR-10730-1] c 33 N74-10223  
Non-destructive method for applying and removing instrumentation on helicopter rotor blades  
[NASA-CASE-LAR-11201-1] c 35 N78-24515
- LONGYEAR, W. D.**  
Omnidirectional acceleration device Patent  
[NASA-CASE-HQN-10780] c 14 N71-30265
- LOO, S.**  
Fluid leak indicator  
[NASA-CASE-MSC-20783-1] c 35 N86-20756
- LOOK, G. F.**  
Foam generator Patent  
[NASA-CASE-XLA-00838] c 03 N70-36778
- LOOP, R. W.**  
Absolute focus lock for microscopes  
[NASA-CASE-LAR-10184] c 14 N72-22445
- LOOSE, J. D.**  
Steady state thermal radiometers  
[NASA-CASE-MFS-21108-1] c 34 N74-27861
- LOPEZ, A. E.**  
Three-axis finger tip controller for switches Patent  
[NASA-CASE-XAC-02405] c 09 N71-16089
- LOPEZ, OSVALDO F.**  
Method of continuously determining crack length  
[NASA-CASE-LAR-14480-1-CU] c 39 N93-29612

- LORD, H. C., III**  
Analysis of hydrogen-deuterium mixtures  
[NASA-CASE-NPO-11322] c 06 N72-25146
- LORD, MARK T.**  
Shaft mount for data coupler system  
[NASA-CASE-LAR-13805-1] c 37 N92-30097
- LORELL, K. R.**  
High temperature lens construction Patent  
[NASA-CASE-XNP-04111] c 14 N71-15622  
All sky pointing attitude control system  
[NASA-CASE-ARC-10716-1] c 35 N77-20399
- LOTHSCHUETZ, F. X.**  
Stretcher Patent  
[NASA-CASE-XMF-06589] c 05 N71-23159
- LOTT, D. R.**  
Method of fabricating a photovoltaic module of a substantially transparent construction  
[NASA-CASE-NPO-14303-1] c 44 N80-18550
- LOUGHEAD, A. G.**  
Linear differential pressure sensor Patent  
[NASA-CASE-XMF-01974] c 14 N71-22752
- LOUGHEAD, T. E.**  
Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c 18 N83-29303
- LOUNSBERRY, E. D.**  
Jet shoes  
[NASA-CASE-XLA-08491] c 05 N69-21380
- LOVALL, D. D.**  
Electric field measuring and display system  
[NASA-CASE-KSC-10731-1] c 33 N74-27862
- LOVELACE, A. M.**  
Control means for a solid state crossbar switch  
[NASA-CASE-NPO-15066-1] c 33 N82-29538
- LOVELAND, ROHAN C.**  
Power supply conditioning circuit  
[NASA-CASE-NPO-17233-1-CU] c 33 N88-29095
- LOVELL, J. S.**  
Portable breathing system  
[NASA-CASE-MSC-16182-1] c 54 N80-10799
- LOVELL, R. R.**  
Process for preparing liquid metal electrical contact device  
[NASA-CASE-LEW-11978-1] c 33 N77-26385
- LOVELOCK, J. E.**  
Atmospheric sampling devices  
[NASA-CASE-NPO-11373] c 13 N72-25323
- LOVINGER, D. N.**  
Voice operated controller Patent  
[NASA-CASE-XLA-04063] c 31 N71-33160
- LOWE, E. G.**  
Continuous turning slip ring assembly Patent  
[NASA-CASE-XMF-01049] c 15 N71-23049
- LOWELL, C. E.**  
Niral ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LEW-13339-1] c 26 N82-31505  
Nickel base coating alloy  
[NASA-CASE-LEW-13834-1] c 26 N87-14482
- LOWELL, CARL E.**  
Light weight polymer matrix composite material  
[NASA-CASE-LEW-14734-1] c 24 N89-23623
- LOWEN, I. B.**  
Spacecraft attitude detection system by stellar reference Patent  
[NASA-CASE-XGS-03431] c 21 N71-15642  
Roll alignment detector  
[NASA-CASE-GSC-10514-1] c 14 N72-20379
- LOWERY, J. R.**  
Panel for selectively absorbing solar thermal energy and the method of producing said panel  
[NASA-CASE-MFS-22562-1] c 44 N76-14595
- LOWRY, J. G.**  
Jet aircraft configuration Patent  
[NASA-CASE-XLA-00087] c 02 N70-33332  
Variable-span aircraft Patent  
[NASA-CASE-XLA-00166] c 02 N70-34178
- LOY, C. A.**  
Tank construction for space vehicles Patent  
[NASA-CASE-XMF-01899] c 31 N70-41948
- LOYD, C.**  
System for maintaining a motor at a predetermined speed utilizing digital feedback means Patent  
[NASA-CASE-XMF-06892] c 09 N71-24805  
RC rate generator for slow speed measurement Patent  
[NASA-CASE-XMF-02966] c 10 N71-24863
- LUBOWITZ, H. R.**  
Ablative resin Patent  
[NASA-CASE-XLE-05913] c 33 N71-14032  
Reinforced structural plastics  
[NASA-CASE-LEW-10199-1] c 27 N74-23125
- LUCAS, C. H.**  
Analog to digital converter  
[NASA-CASE-NPO-13385-1] c 33 N76-18345
- LUCERO, D. P.**  
Method for detecting hydrogen gas  
[NASA-CASE-XMF-03873] c 06 N69-39733
- LUCHT, R. A.**  
A technique for breaking ice in the path of a ship  
[NASA-CASE-LAR-10815-1] c 16 N72-22520
- LUCY, M. H.**  
Molded composite pyrogen igniter for rocket motors  
[NASA-CASE-LAR-12018-1] c 20 N78-24275
- LUCY, MELVIN H.**  
Fully redundant mechanical release actuator  
[NASA-CASE-LAR-13198-1] c 37 N87-23983
- LUDWIG, A. C.**  
Dual waveguide mode source having control means for adjusting the relative amplitude of two modes Patent  
[NASA-CASE-XNP-03134] c 07 N71-10676  
Singly-curved reflector for use in high-gain antennas  
[NASA-CASE-NPO-11361] c 07 N72-32169  
Dual frequency microwave reflex feed  
[NASA-CASE-NPO-13091-1] c 09 N73-12214  
Low loss dichroic plate  
[NASA-CASE-NPO-13171-1] c 32 N74-11000
- LUDWIG, L. P.**  
Foil seal  
[NASA-CASE-XLE-05130] c 15 N69-21362  
Foil seal Patent  
[NASA-CASE-XLE-05130-2] c 15 N71-19570  
Spiral groove seal  
[NASA-CASE-XLE-10326-2] c 15 N72-29488  
Spiral groove seal  
[NASA-CASE-LEW-10326-3] c 37 N74-10474  
Spiral groove seal  
[NASA-CASE-XLE-10326-4] c 37 N74-15125  
High speed, self-acting shaft seal  
[NASA-CASE-LEW-11274-1] c 37 N75-21631  
Fluid seal for rotating shafts  
[NASA-CASE-LEW-11676-1] c 37 N76-22541  
Counter pumping debris excluder and separator  
[NASA-CASE-LEW-11855-1] c 07 N78-25090  
Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-1] c 37 N79-18318  
Shaft seal assembly for high speed and high pressure applications  
[NASA-CASE-LEW-11873-1] c 37 N79-22475  
Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c 37 N80-26658  
Circumferential shaft seal  
[NASA-CASE-LEW-12119-1] c 37 N80-28711  
Multiple plate hydrostatic viscous damper  
[NASA-CASE-LEW-12445-1] c 37 N81-22360  
Circumferential shaft seal  
[NASA-CASE-LEW-12119-2] c 37 N81-26447  
Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-3] c 37 N82-19540
- LUEBBERS, S. S.**  
Thermionic tantalum emitter doped with oxygen Patent  
Application  
[NASA-CASE-NPO-11138] c 03 N70-34646  
Thermionic diode switch Patent  
[NASA-CASE-NPO-10404] c 03 N71-12255
- LUEBERING, G. W.**  
Blade retainer assembly  
[NASA-CASE-LEW-12608-1] c 07 N77-27116
- LUKENS, F. E.**  
Amplifier for measuring low-level signals in the presence of high common mode voltage  
[NASA-CASE-MFS-25868-1] c 33 N86-20670
- LUM, H.**  
Sampling video compression system  
[NASA-CASE-ARC-10984-1] c 32 N77-24328
- LUNA, PHILLIP M.**  
Wind tunnel balance  
[NASA-CASE-ARC-11877-1-SB] c 09 N91-14357
- LUNCE, R. S.**  
Medical subject monitoring systems  
[NASA-CASE-MSC-14180-1] c 52 N76-14757
- LUND, G. F.**  
Pocket ECG electrode  
[NASA-CASE-ARC-11258-1] c 52 N80-33081  
Subcutaneous electrode structure  
[NASA-CASE-ARC-11117-1] c 52 N81-14612
- LUND, W. C.**  
Heated porous plug microthruster  
[NASA-CASE-GSC-10640-1] c 28 N72-18766
- LUNDQUIST, J. R.**  
Preparation of high purity copper fluoride  
[NASA-CASE-LEW-10794-1] c 06 N72-17093
- LUPTON, M. W.**  
Micronized coal burner facility  
[NASA-CASE-LEW-13426-1] c 25 N84-16276
- LURIE, BORIS J.**  
Balanced bridge feedback control system  
[NASA-CASE-NPO-17430-1-CU] c 33 N90-21951  
Torque sensor having a spoked sensor element support structure  
[NASA-CASE-NPO-17461-1-CU] c 35 N91-17350
- Fluid-loop reaction system  
[NASA-CASE-NPO-17204-1-CU] c 34 N91-25380  
Three-parameter tunable Tilt-Integral-Derivative (TID) controller  
[NASA-CASE-NPO-18492-1-CU] c 63 N93-29176
- LUSHBAUGH, W. A.**  
Data compression system  
[NASA-CASE-XNP-09785] c 08 N69-21928  
Data compressor Patent  
[NASA-CASE-XNP-04067] c 08 N71-22707  
Error correcting method and apparatus Patent  
[NASA-CASE-XNP-02748] c 08 N71-22749  
Comparator for the comparison of two binary numbers Patent  
[NASA-CASE-XNP-04819] c 08 N71-23295  
Parallel generation of the check bits of a PN sequence Patent  
[NASA-CASE-XNP-04623] c 10 N71-26103  
Versatile arithmetic unit for high speed sequential decoder  
[NASA-CASE-NPO-11371] c 08 N73-12177
- LUTES, G. F.**  
Precise RF timing signal distribution to remote stations  
[NASA-CASE-NPO-14749-1] c 32 N81-14186
- LUTES, G. F., JR.**  
Broadband stable power multiplier Patent  
[NASA-CASE-XNP-10854] c 10 N71-26331  
Cascaded complementary pair broadband transistor amplifiers Patent  
[NASA-CASE-NPO-10003] c 10 N71-26415  
Low phase noise digital frequency divider  
[NASA-CASE-NPO-11569] c 10 N73-26229  
Fiber optic transmission line stabilization apparatus and method  
[NASA-CASE-NPO-15036-1] c 74 N82-19029
- LUTES, GEORGE F.**  
Low-loss, high-isolation, fiber-optic isolator  
[NASA-CASE-NPO-17207-1-CU] c 74 N88-25304  
Fiber optic frequency transfer link  
[NASA-CASE-NPO-17703-1-CU] c 74 N91-27957
- LUTUS, P.**  
Direct current ballast circuit for metal halide lamp  
[NASA-CASE-MSC-18407-1] c 33 N82-24427
- LUTZ, E. B.**  
Operational integrator Patent  
[NASA-CASE-NPO-10230] c 09 N71-12520
- LYCOU, PETER P.**  
High-temperature, high-pressure oxygen metering valve  
[NASA-CASE-MSC-21823-1] c 37 N93-14843
- LYLAND, J. W.**  
Versatile arithmetic unit for high speed sequential decoder  
[NASA-CASE-NPO-11371] c 08 N73-12177
- LYNCH, DANA H.**  
Apparatus for precision focussing and positioning of a beam waist on a target  
[NASA-CASE-ARC-11916-1-SB] c 74 N92-16811
- LYNCH, E. J.**  
Three-axis adjustable loading structure  
[NASA-CASE-FRC-10051-1] c 35 N74-13129
- LYNCH, T. L.**  
Pulsed excitation voltage circuit for transducers  
[NASA-CASE-FRC-10036] c 09 N72-22200
- LYON, W. E.**  
Optical range finder having nonoverlapping complete images  
[NASA-CASE-MSC-12105-1] c 14 N72-21409
- LYONS, JOHN C.**  
Integrated photo-responsive metal oxide semiconductor circuit  
[NASA-CASE-GSC-12782-1] c 33 N88-14271

## M

- MA, L. N.**  
Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c 33 N81-17349
- MACCONNELL, J. W.**  
Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c 32 N78-15323
- MACCONOCHIE, I. O.**  
Excessive temperature warning system Patent  
[NASA-CASE-XLA-01926] c 14 N71-15620  
Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c 35 N83-21311  
Shell tile thermal protection system  
[NASA-CASE-LAR-12862-1] c 27 N84-27886
- MACCONOCHIE, IAN O.**  
Space spider crane  
[NASA-CASE-LAR-13411-1-SB] c 18 N88-23828  
A two-stage earth-to-orbit transport with translating oblique wings for booster recovery  
[NASA-CASE-LAR-14156-1] c 16 N90-16781

- Shuttle orbiter with telescoping main propulsion unit and payload  
[NASA-CASE-LAR-13586-1] c 16 N92-10035
- Shuttle orbiter with telescoping main propulsion unit and payload  
[NASA-CASE-LAR-13586-1] c 16 N93-20115
- Reusable cryogenic liquid rocket propellant tank  
[NASA-CASE-LAR-14172-1] c 20 N93-31295
- MACDAVID, K. S.**  
Thermocouple installation  
[NASA-CASE-NPO-13540-1] c 35 N77-14409
- MACDORAN, P. F.**  
System for real-time crustal deformation monitoring  
[NASA-CASE-NPO-14124-1] c 46 N80-14603
- Interferometric locating system  
[NASA-CASE-NPO-14173-1] c 04 N80-32359
- Method and apparatus for calibrating the ionosphere and application to surveillance of geophysical events  
[NASA-CASE-NPO-15430-1] c 46 N85-21846
- MACFADDEN, J. A.**  
Rotating mandrel for assembly of inflatable devices  
[NASA-CASE-XLA-04143] c 15 N71-17687
- MACGLASHAN, W. F.**  
Power control for hot gas engines  
[NASA-CASE-NPO-14220-1] c 37 N81-14318
- MACGLASHAN, W. F., JR.**  
Belleville spring assembly with elastic guides  
[NASA-CASE-XNP-09452] c 15 N69-27504
- High pressure four-way valve Patent  
[NASA-CASE-XNP-00214] c 15 N70-36908
- Multiple Belleville spring assembly Patent  
[NASA-CASE-XNP-00840] c 15 N70-38225
- Pressure regulating system Patent  
[NASA-CASE-XNP-00450] c 15 N70-38603
- Ejection unit Patent  
[NASA-CASE-XNP-00676] c 15 N70-38996
- Reinforcing means for diaphragms Patent  
[NASA-CASE-XNP-01962] c 32 N70-41370
- High pressure filter Patent  
[NASA-CASE-XNP-00732] c 28 N70-41447
- Antiflutter ball check valve Patent  
[NASA-CASE-XNP-01152] c 15 N70-41811
- High pressure regulator valve Patent  
[NASA-CASE-XNP-00710] c 15 N71-10778
- Filler valve Patent  
[NASA-CASE-XNP-01747] c 15 N71-23024
- MACKAY, C. A.**  
Quick disconnect latch and handle combination Patent  
[NASA-CASE-MFS-11132] c 15 N71-17649
- MACKAY, REBECCA**  
An apparatus for gripping test specimens  
[NASA-CASE-LEW-15345-2] c 37 N93-28127
- MACKAY, REBECCA A.**  
Method and apparatus for gripping test specimens  
[NASA-CASE-LEW-15345-1] c 37 N93-12327
- MACLEOD, N. H.**  
Bacterial contamination monitor  
[NASA-CASE-GSC-10879-1] c 14 N72-25413
- MACVEIGH, G. E.**  
Analog spatial maneuver computer  
[NASA-CASE-GSC-10880-1] c 08 N72-11172
- MADAN, HERB S.**  
Fault tolerant hypercube computer system architecture  
[NASA-CASE-NPO-16859-1-CU] c 60 N90-21527
- MADARAS, ERIC I.**  
A method and apparatus for indicating disbands in joint regions  
[NASA-CASE-LAR-14626-1] c 38 N92-17859
- MADDALON, DAL V.**  
Method of measuring cross-flow vortices by use of an array of hot-film sensors  
[NASA-CASE-LAR-14824-1-SB] c 34 N93-26000
- MADDOX, J. W.**  
Air bearing  
[NASA-CASE-WLP-10002] c 15 N72-17451
- MADEY, J. M.**  
Satellite appendage tie down cord Patent  
[NASA-CASE-XGS-02554] c 31 N71-21064
- Redundant actuating mechanism Patent  
[NASA-CASE-XGS-08718] c 15 N71-24600
- Rotary electric device  
[NASA-CASE-GSC-12138-1] c 33 N79-20314
- MADISON, I. B.**  
Aerodynamic spike nozzle Patent  
[NASA-CASE-XGS-01143] c 31 N71-15647
- MADSEN, B.**  
Apparatus and method for skin packaging articles  
[NASA-CASE-MFS-20855] c 15 N73-27405
- MADZSAR, GEORGE C.**  
Spectroscopic wear detector  
[NASA-CASE-LEW-15200-1] c 20 N93-18856
- MAESTRELLO, L.**  
Apparatus and method for jet noise suppression  
[NASA-CASE-LAR-11903-2] c 71 N84-14873
- MAESTRELLO, LUCIO**  
Active control of boundary layer transition and turbulence  
[NASA-CASE-LAR-13532-1] c 34 N91-14562
- MAGNER, THOMAS J.**  
Cryogenic shutter  
[NASA-CASE-GSC-13189-2] c 37 N92-29151
- MAHAN, J. C.**  
Device for preventing high voltage arcing in electron beam welding Patent  
[NASA-CASE-XMF-08522] c 15 N71-19486
- MAIDEN, D. L.**  
Flow velocity and directional instrument  
[NASA-CASE-LAR-10855-1] c 14 N73-13415
- Two dimensional wedge/translating shroud nozzle  
[NASA-CASE-LAR-11919-1] c 07 N78-27121
- MAILLOUX, R. J.**  
Array phasing device Patent  
[NASA-CASE-ERC-10046] c 10 N71-18722
- Circularly polarized antenna  
[NASA-CASE-ERC-10214] c 09 N72-31235
- Phase control circuits using frequency multiplications for phased array antennas  
[NASA-CASE-ERC-10285] c 10 N73-16206
- MAJOR, C. J.**  
Mixture separation cell Patent  
[NASA-CASE-XMS-02952] c 18 N71-20742
- MALARIK, DIANE C.**  
Vinyl capped addition polyimides  
[NASA-CASE-LEW-15027-1] c 27 N91-13566
- Vinyl capped addition polyimides  
[NASA-CASE-LEW-15027-2] c 27 N92-24053
- MALEKI, LUTFOLLAH**  
Dual frequency optical carrier technique for transmission of reference frequencies in dispersive media  
[NASA-CASE-NPO-18007-1-CU] c 74 N92-11791
- MALIN, JANE T.**  
Discrete event simulation tool for analysis of qualitative models of continuous processing systems  
[NASA-CASE-MSC-21465-1] c 61 N91-14741
- MALLING, L. R.**  
Digital television camera control system Patent  
[NASA-CASE-XNP-01472] c 14 N70-41807
- Reduced bandwidth video communication system utilizing sampling techniques Patent  
[NASA-CASE-XNP-02791] c 07 N71-23026
- MALMBERG, J. H.**  
Waveform simulator Patent  
[NASA-CASE-NPO-10251] c 10 N71-27365
- MALONE, L. B.**  
Emergency lunar communications system  
[NASA-CASE-MFS-21042] c 07 N72-25171
- MANATT, S. L.**  
Audio frequency marker system  
[NASA-CASE-NPO-11147] c 14 N72-27408
- MANDEL, C. H.**  
Azimuth laying system Patent  
[NASA-CASE-XMF-01669] c 21 N71-23289
- MANDELKORN, J.**  
Method of making a silicon semiconductor device Patent  
[NASA-CASE-XLE-02792] c 26 N71-10607
- Method of making electrical contact on silicon solar cell and resultant product Patent  
[NASA-CASE-XLE-04787] c 03 N71-20492
- Gd or Sm doped silicon semiconductor composition Patent  
[NASA-CASE-XLE-10715] c 26 N71-23292
- Silicon solar cell with cover glass bonded to cell by metal pattern Patent  
[NASA-CASE-XLE-08569] c 03 N71-23449
- Semiconductor material and method of making same Patent  
[NASA-CASE-XLE-02798] c 26 N71-23654
- Method of attaching a cover glass to a silicon solar cell Patent  
[NASA-CASE-XLE-08569-2] c 03 N71-24681
- MANDELL, A.**  
Condition sensor system and method  
[NASA-CASE-MSC-14805-1] c 54 N78-32720
- MANFREDI, LAWRENCE**  
Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-2] c 28 N91-14495
- MANGALAM, SIVA M.**  
Method of measuring cross-flow vortices by use of an array of hot-film sensors  
[NASA-CASE-LAR-14824-1-SB] c 34 N93-26000
- MANGALAM, SIVARAMAKRISHNAN M.**  
Method and apparatus for detecting laminar flow separation and reattachment  
[NASA-CASE-LAR-13952-1-SB] c 34 N90-19534
- Method and apparatus for detecting laminar flow separation and reattachment  
[NASA-CASE-LAR-13952-2-SB] c 34 N91-31596
- MANGES, D. R.**  
Rotatable electric cable connecting system  
[NASA-CASE-GSC-12899-1] c 33 N86-20669
- MANGION, C.**  
System for preconditioning a combustible vapor  
[NASA-CASE-NPO-12072] c 28 N72-22772
- MANGOLD, D. W.**  
Medical subject monitoring systems  
[NASA-CASE-MSC-14180-1] c 52 N76-14757
- MANHART, PAUL K.**  
Equal path, phase shifting, sample point interferometer for monitoring the configuration of surfaces  
[NASA-CASE-NPO-17913-1-CU] c 74 N92-22034
- Method and apparatus for phasing segmented mirror arrays  
[NASA-CASE-NPO-18095-1-CU] c 74 N92-29122
- MANN, C. W.**  
Rotary target V-block  
[NASA-CASE-LAR-12007-3] c 35 N84-16523
- MANN, FRANKLIN D.**  
Universal precision sine bar attachment  
[NASA-CASE-MFS-28253-1] c 37 N89-28831
- MANN, W. A.**  
Compact artificial hand  
[NASA-CASE-NPO-13906-1] c 54 N79-24652
- MANNING, C. R.**  
Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c 27 N78-17206
- MANNING, C. R., JR.**  
Controlled glass bead peening Patent  
[NASA-CASE-XLA-07390] c 15 N71-18616
- Thermal shock resistant hafnia ceramic material  
[NASA-CASE-LAR-10894-1] c 18 N73-14584
- MANNING, ROBERT M.**  
Distributed computing system with dual independent communications paths between computers and employing split tokens  
[NASA-CASE-NPO-17185-1-CU] c 62 N91-14772
- MANOLI, R.**  
Aircraft-mounted crash-activated transmitter device  
[NASA-CASE-MFS-16609-3] c 03 N76-32140
- MANSOUR, M. N.**  
Servo-controlled intravital microscope system  
[NASA-CASE-NPO-13214-1] c 35 N75-25123
- MANTLER, R. L.**  
Rocket propellant injector Patent  
[NASA-CASE-XLE-00103] c 28 N70-33241
- MANUEL, GREGORY S.**  
Off-surface infrared flow visualization  
[NASA-CASE-LAR-14568-1] c 74 N93-22037
- MANUS, E. A.**  
Active microwave irises and windows  
[NASA-CASE-LAR-10513-1] c 07 N72-25170
- Thin film microwave iris  
[NASA-CASE-LAR-10511-1] c 09 N72-29172
- Logarithmic circuit with wide dynamic range  
[NASA-CASE-GSC-12145-1] c 33 N78-32339
- MANZO, M. A.**  
Polyvinyl alcohol battery separator containing inert filler  
[NASA-CASE-LEW-13556-1] c 44 N81-27615
- Polyvinyl alcohol cross-linked with two aldehydes  
[NASA-CASE-LEW-13504-1] c 25 N83-13188
- MAPLE, W. E.**  
Analytical test apparatus and method for determining oxide content of alkali metal Patent  
[NASA-CASE-XLE-01997] c 06 N71-23527
- MAPLES, H. E.**  
Light intensity modulator controller Patent  
[NASA-CASE-XMS-04300] c 09 N71-19479
- MARAK, R. J.**  
Life raft stabilizer  
[NASA-CASE-MSC-12393-1] c 02 N73-26006
- MARCELL, G. V.**  
Method and apparatus for preparing multiconductor cable with flat conductors  
[NASA-CASE-MFS-10946-1] c 31 N79-21226
- Edge coating of flat wires  
[NASA-CASE-XMF-05757-1] c 31 N79-21227
- MARCHELLO, JOSEPH M.**  
Process for application of powder particles to filamentary materials  
[NASA-CASE-LAR-14231-1] c 24 N92-10070
- MARCOLINI, MICHAEL A.**  
Calibration apparatus for recess mounted pressure transducers  
[NASA-CASE-LAR-14724-1] c 35 N92-30030
- MARCUM, D. C., JR.**  
Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c 15 N78-32168
- MARCUS, B. D.**  
Flat-plate heat pipe  
[NASA-CASE-GSC-111998-1] c 34 N77-32413



**MARCUS, H. L.**  
Laser extensometer  
[NASA-CASE-MFS-19259-1] c 36 N78-14380

**MARDESICH, NICK**  
Alkali metal for ultraviolet band-pass filter  
[NASA-CASE-NPO-18433-1-CU] c 74 N92-34241

**MAREK, C. J.**  
Fuel combustor  
[NASA-CASE-LEW-12137-1] c 25 N78-10224  
Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c 07 N81-29129

**MARGALIT, RUTH**  
Pseudomonas screening assay  
[NASA-CASE-NPO-17653-1-CU] c 51 N93-25994

**MARGALIT, S.**  
Arrangement for damping the resonance in a laser diode  
[NASA-CASE-NPO-15980-1] c 36 N85-30305

**MARGOLIS, J. S.**  
Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c 32 N80-24510  
Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c 25 N81-14015  
Coherently pulsed laser source  
[NASA-CASE-NPO-15111-1] c 36 N82-29589  
Correlation spectrometer having high resolution and multiplexing capability  
[NASA-CASE-NPO-15558-1] c 35 N84-34705

**MARGOSIAN, P. M.**  
Electrostatic thruster with improved insulators Patent  
[NASA-CASE-XLE-01902] c 28 N71-10574  
Single grid accelerator for an ion thruster  
[NASA-CASE-XLE-10453-2] c 28 N73-27699

**MARGRAF, H. J.**  
High pressure four-way valve Patent  
[NASA-CASE-XNP-00214] c 15 N70-36908

**MARINOS, CHARALAMPUS**  
Heat exchanger for electrothermal devices  
[NASA-CASE-LEW-14037-1] c 20 N87-16875

**MARKLEY, R. A.**  
Self-adjusting multisegment, deployable, natural circulation radiator Patent  
[NASA-CASE-XHQ-03673] c 33 N71-29046

**MARLEY, GARRY M.**  
Three-dimensional cultured glioma cell lines  
[NASA-CASE-MSC-21843-1-NP] c 51 N92-24052

**MARLOW, M. O.**  
Method of making a cermet Patent  
[NASA-CASE-LEW-10219-1] c 18 N71-28729

**MARLOW, R. E.**  
System for enhancing tool-exchange capabilities of a portable wrench  
[NASA-CASE-MFS-22283-1] c 37 N75-33395  
Remotely operable articulated manipulator  
[NASA-CASE-MFS-22707-1] c 37 N76-15457

**MARMOLEJO, JOSE**  
EMU helmet mounted display  
[NASA-CASE-MSC-21460-1] c 54 N91-13879

**MAROPIS, N.**  
Methods and apparatus employing vibratory energy for wrenching Patent  
[NASA-CASE-MFS-20586] c 15 N71-17686

**MARRKLE, R. A.**  
Process for preparation of dianilinosilanes Patent  
[NASA-CASE-XMF-06409] c 06 N71-23230

**MARRONI, M. A., JR.**  
Pressure garment joint Patent  
[NASA-CASE-XMS-09636] c 05 N71-12344  
Omnidirectional joint Patent  
[NASA-CASE-XMS-09635] c 05 N71-24623  
Foreshortened convolute section for a pressurized suit Patent  
[NASA-CASE-XMS-09637-1] c 05 N71-24730  
Method of forming a root cord restrained convolute section  
[NASA-CASE-MSC-12398] c 05 N72-20098  
Restraint torso for a pressurized suit  
[NASA-CASE-MSC-12397-1] c 05 N72-25119

**MARSH, H. E., JR.**  
Trifunctional alcohol  
[NASA-CASE-NPO-10714] c 06 N69-31244  
Novel polycarboxylic prepolymeric materials and polymers thereof Patent  
[NASA-CASE-NPO-10596] c 06 N71-25929  
Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c 27 N77-30236  
Oil and fat absorbing polymers  
[NASA-CASE-NPO-11609-2] c 27 N77-31308  
Solid propellant motor  
[NASA-CASE-NPO-11458A] c 20 N78-32179

**MARSH, H. W.**  
Fluid pressure balanced seal  
[NASA-CASE-XGS-01286-1] c 37 N79-33469

**MARSHALL, F. E.**  
Imaging X-ray spectrometer  
[NASA-CASE-GSC-12682-1] c 35 N84-33765

**MARSHALL, J. H.**  
Baseline stabilization system for ionization detector Patent  
[NASA-CASE-XNP-03128] c 10 N70-41991

**MARSHALL, T. N., JR.**  
Nuclear mass flowmeter  
[NASA-CASE-MFS-20485] c 14 N72-11365

**MARSHALL, W. R.**  
Three stage rocket vehicle with parallel staging  
[NASA-CASE-MFS-25878-1] c 18 N84-27787

**MARSIK, S. J.**  
Selective nickel deposition  
[NASA-CASE-LEW-10965-1] c 15 N72-25452  
Production of pure metals  
[NASA-CASE-LEW-10906-1] c 25 N74-30502  
Process for making anhydrous metal halides  
[NASA-CASE-LEW-11860-1] c 37 N76-18458

**MARTEL, R. J.**  
Amplitude steered array  
[NASA-CASE-GSC-11446-1] c 33 N74-20860

**MARTIN, CARL J., JR.**  
Combined load test apparatus for flat panels  
[NASA-CASE-LAR-14698-1] c 39 N92-30028

**MARTIN, GLENN L.**  
Geometries for roughness shapes in laminar flow  
[NASA-CASE-LAR-13255-1] c 02 N87-16793

**MARTIN, J. A.**  
Orbiter/launch system  
[NASA-CASE-LAR-12250-1] c 14 N81-26161

**MARTIN, J. W.**  
Dynamic Doppler simulator Patent  
[NASA-CASE-XMS-05454-1] c 07 N71-12391

**MARTIN, JAMES A.**  
Dual-fuel, dual-mode rocket engine  
[NASA-CASE-LAR-13773-1] c 20 N90-19298  
Earth-to-orbit vehicle providing a reusable orbital stage  
[NASA-CASE-LAR-13486-1] c 16 N90-22584  
Integrated launch and emergency vehicle system  
[NASA-CASE-LAR-13780-1] c 18 N92-33013

**MARTIN, N. C.**  
Segmented back-up bar Patent  
[NASA-CASE-XMF-00640] c 15 N70-39924  
Portable alignment tool Patent  
[NASA-CASE-XMF-01452] c 15 N70-41371

**MARTIN, R. B.**  
Color perception tester  
[NASA-CASE-KSC-10278] c 05 N72-16015

**MARTIN, RUTH M.**  
Calibration apparatus for recess mounted pressure transducers  
[NASA-CASE-LAR-14724-1] c 35 N92-30030

**MARTIN, S. C.**  
Correlation type phase detector  
[NASA-CASE-GSC-11744-1] c 33 N75-26243

**MARTIN, W. L.**  
Phase-locked loop with sideband rejecting properties Patent  
[NASA-CASE-XNP-02723] c 07 N70-41680  
Method of resolving clock synchronization error and means therefor Patent  
[NASA-CASE-XNP-08875] c 10 N71-23099  
Communications link for computers  
[NASA-CASE-NPO-11161] c 08 N72-25207  
Binary coded sequential acquisition ranging system  
[NASA-CASE-NPO-11194] c 08 N72-25209  
Digital video display system using cathode ray tube  
[NASA-CASE-NPO-11342] c 09 N72-25248  
Digital demodulator-correlator  
[NASA-CASE-NPO-13982-1] c 32 N79-14267

**MARTINAGE, L. H.**  
Power supply Patent  
[NASA-CASE-XMS-02159] c 10 N71-22961

**MARTINECK, H. G.**  
Electrical connector for flat cables Patent  
[NASA-CASE-XMF-00324] c 09 N70-34596  
Printed cable connector Patent  
[NASA-CASE-XMF-00369] c 09 N70-36494  
Method of making a molded connector Patent  
[NASA-CASE-XMF-03498] c 15 N71-15986  
Electrical connector  
[NASA-CASE-MFS-20757] c 09 N72-28225

**MARTINSON, SCOTT D.**  
Active thermal isolation for temperature responsive sensors  
[NASA-CASE-LAR-14612-1] c 34 N92-29954

**MARTONCHIK, J. V.**  
Correlation spectrometer having high resolution and multiplexing capability  
[NASA-CASE-NPO-15558-1] c 35 N84-34705

**MARTUCCI, V. J.**  
Tuning arrangement for an electron discharge device or the like Patent  
[NASA-CASE-XNP-09771] c 09 N71-24841

**MARTZ, E. L.**  
Externally pressurized fluid bearing Patent  
[NASA-CASE-XMF-00515] c 15 N70-34664

**MARVIN, I. E.**  
Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c 07 N81-19116

**MARZEK, R. A.**  
Tool for use in lifting pin supported objects  
[NASA-CASE-NPO-13157-1] c 37 N74-32918

**MASCV, A. C.**  
Deep space monitor communication satellite system Patent  
[NASA-CASE-XAC-06029-1] c 31 N71-24813

**MASEK, T. D.**  
Electron bombardment ion engine Patent  
[NASA-CASE-XNP-04124] c 28 N71-21822  
Feed system for an ion thruster  
[NASA-CASE-NPO-10737] c 28 N72-11709

**MASERIAN, JOSEPH**  
Planar varactor frequency multiplier devices with blocking barrier  
[NASA-CASE-NPO-18428-1-CU] c 33 N92-23464

**MASERJIAN, J.**  
Temperature sensitive capacitor device  
[NASA-CASE-XNP-09750] c 14 N69-39937  
Thin film capacitive bolometer and temperature sensor Patent  
[NASA-CASE-NPO-10607] c 09 N71-27232  
Thin film temperature sensor and method of making same  
[NASA-CASE-NPO-11775] c 26 N72-28761  
Use of thin film light detector  
[NASA-CASE-NPO-11432-2] c 35 N74-15090  
Deep trap, laser activated image converting system  
[NASA-CASE-NPO-13131-1] c 36 N75-19652  
Stored charge transistor  
[NASA-CASE-NPO-11156-2] c 33 N75-31331  
Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NPO-13443-1] c 76 N76-20994  
Chemical vapor deposition reactor  
[NASA-CASE-NPO-13650-1] c 25 N79-28253  
Induced junction solar cell and method of fabrication  
[NASA-CASE-NPO-13786-1] c 44 N80-29835  
Laser activated MTOS microwave device  
[NASA-CASE-NPO-16112-1] c 33 N86-19516

**MASERJIAN, JOSEPH**  
Alternating gradient photodetector  
[NASA-CASE-NPO-17235-1-CU] c 35 N90-21358  
Millimeter-wave monolithic diode-grid frequency multiplier  
[NASA-CASE-NPO-17258-1-CU] c 33 N91-14551  
INAs hole-immobilized doping superlattice long-wave-infrared detector  
[NASA-CASE-NPO-17880-1-CU] c 76 N93-11056

**MASLOWSKI, E. A.**  
Method of making an insulation foil  
[NASA-CASE-LEW-11484-1] c 24 N75-33181

**MASON, J. W.**  
Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c 35 N78-28411

**MASON, R. J.**  
Collapsible reflector Patent  
[NASA-CASE-XMS-03454] c 09 N71-20658

**MASON, R. M.**  
Radial module space station Patent  
[NASA-CASE-XMS-01906] c 31 N70-41373

**MASSUCCO, A. A.**  
Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c 27 N76-24405  
Flame retardant spandex type polyurethanes  
[NASA-CASE-MSC-14331-2] c 27 N78-17213  
Process for spinning flame retardant elastomeric compositions  
[NASA-CASE-MSC-14331-3] c 27 N78-32262

**MATEER, G. C.**  
Flow separation detector  
[NASA-CASE-ARC-11046-1] c 35 N78-14364

**MATHENEY, J. L.**  
A dc to dc converter  
[NASA-CASE-MFS-25430-1] c 33 N84-16453

**MATHUR, F. P.**  
Program for computer aided reliability estimation  
[NASA-CASE-NPO-13086-1] c 15 N73-12495

**MATSUHIRO, D. S.**  
Shoulder harness and lap belt restraint system  
[NASA-CASE-ARC-10519-2] c 05 N75-25915

**MATSUMOTO, Y.**  
Sampling video compression system  
[NASA-CASE-ARC-10984-1] c 32 N77-24328

**MATSUMOTO, YUTAKA**  
Self-compensating solenoid valve  
[NASA-CASE-ARC-11620-1] c 37 N87-25573

- Airborne tracking sunphotometer apparatus and system  
[NASA-CASE-ARC-11622-1] c 44 N88-14492
- MATTAUCH, R. J.**  
Infrared detectors  
[NASA-CASE-LAR-10728-1] c 14 N73-12445  
Thin wire pointing method  
[NASA-CASE-NPO-15789-1] c 31 N83-19947  
Controlled in situ etch-back  
[NASA-CASE-NPO-15625-1] c 76 N83-20789
- MATTAUCH, ROBERT J.**  
Whiskerless Schottky diode  
[NASA-CASE-GSC-13063-2-CU] c 33 N92-16197
- MATTHEWS, F. R., JR.**  
Lightweight, variable solidity knitted parachute fabric  
[NASA-CASE-LAR-10776-1] c 02 N74-10034
- MATTHEWS, PAUL R.**  
System for connecting fluid couplings  
[NASA-CASE-MFS-26042-1-SB] c 37 N91-14613
- MATTHIES, LARRY H.**  
Near real-time stereo vision system  
[NASA-CASE-NPO-18593-1-CU] c 74 N93-18276
- MATZEN, W. J.**  
Apparatus for measuring semiconductor device resistance  
[NASA-CASE-NPO-14424-1] c 33 N80-32650
- MAUDGAL, S.**  
Poly(carbonate-mide) polymer  
[NASA-CASE-LAR-13292-1] c 27 N86-24841  
Acetylene (ethynyl) terminated polyimide siloxane and process for preparation thereof  
[NASA-CASE-LAR-13318-1] c 27 N87-14516
- MAULDIN, D. G.**  
Contourograph system for monitoring electrocardiograms  
[NASA-CASE-MSC-13407-1] c 10 N72-20225
- MAXWELL, H. G.**  
Method of adhering bone to a rigid substrate using a graphite fiber reinforced bone cement  
[NASA-CASE-NPO-13764-1] c 27 N78-17215
- MAXWELL, M. S.**  
Spacecraft attitude detection system by stellar reference Patent  
[NASA-CASE-XGS-03431] c 21 N71-15642  
Programmable telemetry system Patent  
[NASA-CASE-GSC-10131-1] c 07 N71-24624  
Plural beam antenna  
[NASA-CASE-GSC-11013-1] c 09 N73-19234
- MAXWELL, M. W.**  
Helical coaxial resonator RF filter  
[NASA-CASE-XGS-02816] c 07 N69-24323
- MAXWELL, R. F., JR.**  
Electronic background suppression method and apparatus for a field scanning sensor  
[NASA-CASE-XGS-05211] c 07 N69-39980
- MAXWELL, W. A.**  
Process of casting heavy slips Patent  
[NASA-CASE-XLE-00106] c 15 N71-16076
- MAY, C. E.**  
Selective nickel deposition  
[NASA-CASE-LEW-10965-1] c 15 N72-25452  
Production of pure metals  
[NASA-CASE-LEW-10906-1] c 25 N74-30502  
Process for making anhydrous metal halides  
[NASA-CASE-LEW-11860-1] c 37 N76-18458  
Method of cross-linking polyvinyl alcohol and other water soluble resins  
[NASA-CASE-LEW-13103-1] c 27 N80-32516
- MAY, EDWARD**  
Climbing robot  
[NASA-CASE-GSC-13442-1] c 37 N92-23547
- MAYALL, S. D.**  
Frictionless universal joint Patent  
[NASA-CASE-NPO-10646] c 15 N71-28467
- MAYALL, SHERWOOD D.**  
Alkali metal for ultraviolet band-pass filter  
[NASA-CASE-NPO-18433-1-CU] c 74 N92-34241
- MAYER, L. A.**  
Chelate-modified polymers for atmospheric gas chromatography  
[NASA-CASE-ARC-11154-1] c 25 N80-23383  
Fire extinguishant materials  
[NASA-CASE-ARC-11252-1] c 25 N83-36118
- MAYNARD, O. E.**  
Radial module space station Patent  
[NASA-CASE-XMS-01906] c 31 N70-41373
- MAYNARD, RONALD S.**  
Fluidic momentum controller  
[NASA-CASE-MSC-20906-2] c 35 N89-15379
- MAYNE, R. C.**  
Shock absorbing mount for electrical components  
[NASA-CASE-NPO-13253-1] c 37 N75-18573
- MAYO, E. E.**  
Hypersonic reentry vehicle Patent  
[NASA-CASE-XMS-04142] c 31 N70-41631
- MAYO, J. W.**  
Connector - Electrical  
[NASA-CASE-XLA-01288] c 09 N69-21470  
Tubular coupling having frangible connecting means  
[NASA-CASE-XLA-02854] c 15 N69-27490  
Missile stage separation indicator and stage initiator Patent  
[NASA-CASE-XLA-00791] c 03 N70-39930  
Detector panels-micrometeoroid impact Patent  
[NASA-CASE-XLA-05906] c 31 N71-16221
- MAYO, R. F.**  
Electric-arc heater Patent  
[NASA-CASE-XLA-00330] c 33 N70-34540
- MAZARIS, G. A.**  
Application of semiconductor diffusants to solar cells by screen printing  
[NASA-CASE-LEW-12775-1] c 44 N79-11468  
Screen printed interdigitated back contact solar cell  
[NASA-CASE-LEW-13414-1] c 44 N85-20530
- MAZEL, DAVID S.**  
Ultrasonic depth gauge for liquids under high pressure  
[NASA-CASE-LAR-13300-1-CU] c 35 N89-14407
- MAZER, L.**  
Analog-to-digital conversion system Patent  
[NASA-CASE-XAC-00404] c 08 N70-40125
- MAZIQUE, J. C.**  
Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c 52 N82-22875
- MAZUR, J. T.**  
Telescoping columns  
[NASA-CASE-LAR-12195-1] c 31 N81-27324
- MCAFFEE, D. F.**  
Bi-polar phase detector and corrector for split phase PCM data signals Patent  
[NASA-CASE-XGS-01590] c 07 N71-12392  
Radio frequency coaxial high pass filter Patent  
[NASA-CASE-XGS-01418] c 09 N71-23573
- MCAFFEE, DOUGLAS A.**  
Force reflecting hand controller  
[NASA-CASE-NPO-17851-1-CU] c 37 N93-23078
- MCALEXANDER, B. T.**  
Laser head for simultaneous optical pumping of several dye lasers  
[NASA-CASE-LAR-11341-1] c 36 N75-19655
- MALISTER, KENNETH W.**  
Apparatus for precision focussing and positioning of a beam waist on a target  
[NASA-CASE-ARC-11916-1-SB] c 74 N92-16811
- MCAULEY, JAMES M.**  
Precision measurement of magnetic characteristics of an article with nullification of external magnetic fields  
[NASA-CASE-NPO-18187-1-CU] c 70 N92-29130
- MCAULIFFE, PATRICK S.**  
Cryogenic insulation system  
[NASA-CASE-LAR-13506-1] c 27 N89-12741
- MCBRYAR, R. O.**  
Soft frame adjustable eyeglasses Patent  
[NASA-CASE-XMS-06064] c 05 N71-23096
- MCBRYAR**  
Ion-exchange membrane with platinum electrode assembly Patent  
[NASA-CASE-XMS-02063] c 03 N71-29044
- MCBRYAR, H.**  
Reconstituted asbestos matrix  
[NASA-CASE-MSC-12568-1] c 24 N76-14204
- MCCAIG, J. C.**  
Electric arc welding Patent  
[NASA-CASE-XMF-00392] c 15 N70-34814
- MCCALLUM, J.**  
Porous electrode comprising a bonded stack of pieces of corrugated metal foil  
[NASA-CASE-GSC-11368-1] c 09 N73-32108
- MCCAMPBELL, W. M.**  
Electric arc welding Patent  
[NASA-CASE-XMF-00392] c 15 N70-34814  
Weld control system using thermocouple wire Patent  
[NASA-CASE-MFS-06074] c 15 N71-20393  
RC rate generator for slow speed measurement Patent  
[NASA-CASE-XMF-02966] c 10 N71-24863  
A dc motor speed control system Patent  
[NASA-CASE-MFS-14610] c 09 N71-28886
- MCCANDLESS, B., II**  
Connection system  
[NASA-CASE-MSC-20319-1] c 37 N85-21649
- MCCANDLESS, L. C.**  
Method of making reinforced composite structure  
[NASA-CASE-LEW-12619-1] c 24 N77-19171
- MCCANN, D. H.**  
Phototransistor  
[NASA-CASE-MFS-20407] c 09 N73-19235  
Time delay and integration detectors using charge transfer devices  
[NASA-CASE-GSC-12324-1] c 33 N81-33403
- MCCANN, R. J.**  
Device for handling heavy loads  
[NASA-CASE-XNP-04969] c 11 N69-27466
- MCCANN, TIMOTHY**  
Alkali metal for ultraviolet band-pass filter  
[NASA-CASE-NPO-18433-1-CU] c 74 N92-34241
- MCCARTHY, D. M.**  
Automatic level control circuit  
[NASA-CASE-KSC-11170-1] c 33 N83-36356
- MCCARTY, J. L.**  
Lunar penetrometer Patent  
[NASA-CASE-XLA-00934] c 14 N71-22765
- MCCAUL, P. F.**  
Sidereal frequency generator Patent  
[NASA-CASE-XGS-02610] c 14 N71-23174
- MCCHESENEY, J. F., JR.**  
High voltage distributor  
[NASA-CASE-GSC-11849-1] c 33 N76-16332
- MCCHESENEY, J. R.**  
Modulator for tone and binary signals  
[NASA-CASE-GSC-11743-1] c 32 N75-24981
- MCCLEESE, D. J.**  
Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c 32 N80-24510
- MCCLENAHAN, J. O.**  
High speed shutter  
[NASA-CASE-ARC-10516-1] c 70 N74-21300  
Photomultiplier circuit including means for rapidly reducing the sensitivity thereof  
[NASA-CASE-ARC-10593-1] c 33 N74-27682
- MCCLUNEY, DONALD SCOTT**  
O-ring gasket test fixture  
[NASA-CASE-MFS-28376-1] c 14 N91-21175
- MCCLUNEY, W. R.**  
The 2 deg/90 deg laboratory scattering photometer  
[NASA-CASE-GSC-12088-1] c 74 N78-13874
- MCCLUNG, C. E.**  
Antenna grout replacement system  
[NASA-CASE-NPO-15202-1] c 27 N83-34043
- MCCLURE, J. C.**  
Preparation of monotectic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
[NASA-CASE-MFS-23816-1] c 26 N80-23419
- MCCLURE, S. R.**  
Method and apparatus for holding two separate metal pieces together for welding  
[NASA-CASE-GSC-12318-1] c 37 N80-23655
- MCCONAUGHEY, R. T.**  
Star scanner  
[NASA-CASE-GSC-11569-1] c 89 N74-30886
- MCCONNELL, J. C.**  
Method of plating copper on aluminum Patent  
[NASA-CASE-XLA-08966-1] c 17 N71-25903
- MCCONNELL, ROBERT L.**  
Driven shielding capacitive proximity sensor  
[NASA-CASE-GSC-13377-1] c 63 N93-14701
- MCCORMACK, W.**  
Single action separation mechanism Patent  
[NASA-CASE-XLA-00188] c 15 N71-22874
- MCCORMICK, C. T., JR.**  
Automatic signal range selector for metering devices Patent  
[NASA-CASE-XMS-06497] c 14 N71-26244
- MCCRAW, D. L.**  
Emergency escape system Patent  
[NASA-CASE-MSC-12086-1] c 05 N71-12345
- MCCREA, F. E.**  
Indexing microwave switch Patent  
[NASA-CASE-XNP-06507] c 09 N71-23548  
Support assembly for cryogenically coolable low-noise choke waveguide  
[NASA-CASE-NPO-14253-1] c 32 N80-32605
- MCCREARY, R. A.**  
Parallel motion suspension device Patent  
[NASA-CASE-XNP-01567] c 15 N70-41310
- MCCREIGHT, L. R.**  
Electrophoretic sample insertion  
[NASA-CASE-MFS-21395-1] c 25 N74-26948  
Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c 34 N74-27744
- MCCUSKER, T. J.**  
Foldable solar concentrator Patent  
[NASA-CASE-XLA-04622] c 03 N70-41580
- MCDANELS, D. L.**  
Reinforced metallic composites Patent  
[NASA-CASE-XLE-02428] c 17 N70-33288  
Method of making fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-00231] c 17 N70-38198  
Reinforced metallic composites Patent  
[NASA-CASE-XLE-00228] c 17 N70-38490

- MCDARIS, R. A.**  
Emergency escape system Patent  
[NASA-CASE-XKS-07814] c 15 N71-27067
- MCDONALD, L. S.**  
Specific wavelength colorimeter  
[NASA-CASE-MSC-14081-1] c 35 N74-27860
- MCDONALD, JAMES B.**  
Pre-integrated truss space station and method of assembly  
[NASA-CASE-MSC-22015-1] c 18 N93-20042
- MCDONALD, D. K.**  
Synchronous counter Patent  
[NASA-CASE-XGS-02440] c 08 N71-19432
- MCDONALD, F. R.**  
Laser coolant and ultraviolet filter  
[NASA-CASE-MFS-20180] c 16 N72-12440
- MCDONALD, G. E.**  
Nuclear fuel elements  
[NASA-CASE-XLE-00209] c 22 N73-32528  
Selective coating for solar panels  
[NASA-CASE-LEW-12159-1] c 44 N78-19599  
Method for depositing an oxide coating  
[NASA-CASE-LEW-13131-1] c 44 N83-10494  
Method of forming oxide coatings  
[NASA-CASE-LEW-13132-1] c 27 N83-29388
- MCDONALD, R. T.**  
Gas low pressure low flow rate metering system Patent  
[NASA-CASE-FRC-10022] c 12 N71-26546  
Respiration monitor  
[NASA-CASE-FRC-10012] c 14 N72-17329
- MCDONALD, A. R.**  
Force-balanced, throttle valve Patent  
[NASA-CASE-NPO-10808] c 15 N71-27432  
Quick disconnect coupling  
[NASA-CASE-NPO-11202] c 15 N72-25450  
Rotary actuator  
[NASA-CASE-NPO-10680] c 31 N73-14855  
Disconnect unit  
[NASA-CASE-NPO-11330] c 33 N73-26958  
Zero torque gear head wrench  
[NASA-CASE-NPO-13059-1] c 37 N76-20480  
Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c 37 N81-17432  
Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c 37 N81-25370  
Solar energy modulator  
[NASA-CASE-NPO-15388-1] c 44 N84-28203
- MCDONALD, E. A.**  
Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c 24 N75-30260
- MCFADIN, L. W.**  
Platinum resistance thermometer circuit  
[NASA-CASE-MSC-12327-1] c 35 N77-27368
- MCGANNON, W. J.**  
Ophthalmic method and apparatus  
[NASA-CASE-LEW-11669-1] c 05 N73-27062  
Ophthalmic liquifaction pump  
[NASA-CASE-LEW-12051-1] c 52 N75-33640  
Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12723-1] c 52 N80-18690
- MCGEE, WILLIAM F.**  
Gas arc constriction for plasma arc welding  
[NASA-CASE-MFS-28844-1] c 37 N93-31292
- MCGEEHEE, J. R.**  
Frangible tube energy dissipation Patent  
[NASA-CASE-XLA-00754] c 15 N70-34850  
Omnidirectional multiple impact landing system Patent  
[NASA-CASE-XLA-09881] c 31 N71-16085
- MCGINNESS, H. D.**  
Suspension system for a wheel rolling on a flat track  
[NASA-CASE-NPO-14395-1] c 37 N82-21587
- MCGOUGH, J. T.**  
Emergency escape system Patent  
[NASA-CASE-XKS-07814] c 15 N71-27067
- MCGUCKIN, BRENDAN T.**  
Tunable CW diode-pumped Tm,Ho:YLiF<sub>4</sub> laser operating at or near room temperature  
[NASA-CASE-NPO-18611-1-CU] c 36 N93-30415
- MCHAFFIE, D. J.**  
Extensible cable support Patent  
[NASA-CASE-XMF-07587] c 15 N71-18701
- MCHATTON, A. D.**  
Canister closing device Patent  
[NASA-CASE-XLA-01446] c 15 N71-21528  
Traveling sealer for contoured table  
[NASA-CASE-XLA-01494] c 15 N71-24164  
Amplifying ribbon extensometer  
[NASA-CASE-LAR-11825-1] c 35 N77-22449  
Nozzle extraction process and handmeter for measuring handle  
[NASA-CASE-LAR-12147-1] c 31 N79-11246
- MCHEENRY, R. J.**  
Method for forming pyrrone molding powders and products of said method  
[NASA-CASE-LAR-10423-1] c 23 N82-29358
- MCHEENRY, T. F.**  
Miniature carbon dioxide sensor and methods  
[NASA-CASE-MSC-13332-1] c 14 N72-21408
- MCINTOSH, D. P.**  
Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c 07 N78-18067
- MCINTIRE, VAUGHN W., JR.**  
Altitude compensating ablative stiffening band for rocket motor nozzles  
[NASA-CASE-MFS-28728-1] c 20 N93-28950
- MCINTOSH, M. J.**  
Process for the leaching of AP from propellant  
[NASA-CASE-NPO-14109-1] c 28 N80-23471
- MCKANNAN, EUGENE C.**  
Solidification processing of alloys using an applied electric field  
[NASA-CASE-MFS-26083-1-CU] c 26 N90-26940
- MCKAY, R. A.**  
Combustor  
[NASA-CASE-NPO-13958-1] c 25 N79-11151
- MCKECHNIE, TIMOTHY N.**  
Method of fabricating a rocket engine combustion chamber  
[NASA-CASE-MFS-28569-1] c 27 N93-30565
- MCKEE, C. W.**  
Fluid control apparatus and method  
[NASA-CASE-LAR-11110-1] c 34 N75-26282
- MCKENNA, J. F., JR.**  
Fault tolerant clock apparatus utilizing a controlled minority of clock elements  
[NASA-CASE-MSC-12531-1] c 35 N75-30504
- MCKENNA, R. T.**  
Automatic character skew and spacing checking network  
[NASA-CASE-GSC-11925-1] c 33 N76-18353
- MCKENZIE, R. L.**  
Diatom infrared gasdynamic laser  
[NASA-CASE-ARC-10370-1] c 36 N75-31426
- MCKEOWN, D.**  
Method for attaching a fused-quartz mirror to a conductive metal substrate  
[NASA-CASE-MFS-23405-1] c 26 N77-29260
- MCKEVITT, F. X.**  
Swirling flow nozzle Patent  
[NASA-CASE-XNP-03692] c 28 N71-24321
- MCKINNEY, R. L.**  
Self-calibrating displacement transducer Patent  
[NASA-CASE-XLA-00781] c 09 N71-22999
- MCKINNIS, DARIN N.**  
Fastening apparatus having shape memory alloy actuator  
[NASA-CASE-MSC-21935-1] c 37 N93-13423
- MCKINNON, R. A.**  
External liquid-spray cooling of turbine blades Patent  
[NASA-CASE-XLE-00037] c 28 N70-33372
- MCLAIN, J. H.**  
Air bearing Patent  
[NASA-CASE-XMF-01887] c 15 N71-10617
- MCLAUCHLAN, J. M.**  
Horizon sensor with a plurality of fixedly positioned radiation compensated radiation sensitive detectors Patent  
[NASA-CASE-XNP-06957] c 14 N71-21088  
Light position locating system Patent  
[NASA-CASE-XNP-01059] c 23 N71-21821  
Optical fiber coupling method and apparatus  
[NASA-CASE-NPO-15464-1] c 74 N85-29749  
Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629
- MCLEAN, F. E.**  
Supersonic aircraft Patent  
[NASA-CASE-XLA-04451] c 02 N71-12243
- MCLEAN, WILLIAM**  
EMU helmet mounted display  
[NASA-CASE-MSC-21460-1] c 54 N91-13879
- MCLEOD, KATHLEEN A.**  
Whiskerless Schottky diode  
[NASA-CASE-GSC-13063-2-CU] c 33 N92-16197
- MCLYMAN, C. W. T.**  
Inverter oscillator with voltage feedback  
[NASA-CASE-NPO-10760] c 09 N72-25254  
Banded transformer cores  
[NASA-CASE-NPO-11966-1] c 33 N74-17928
- MCLYMAN, W. T.**  
Phase substitution of spare converter for a failed one of parallel phase staggered converters  
[NASA-CASE-NPO-13812-1] c 33 N77-30365  
Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c 33 N81-19393
- Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c 33 N81-33404  
Low power consumption current transducer  
[NASA-CASE-NPO-16888-1-CU] c 33 N89-29681  
Improved high power/high frequency inductor  
[NASA-CASE-NPO-17830-1-CU] c 33 N91-14539
- MCNAMEN, JOHN P.**  
Docking mechanism for spacecraft  
[NASA-CASE-MSC-21386-1] c 18 N90-20126
- MCMASER, L. R.**  
Meteoroid detector  
[NASA-CASE-LAR-10483-1] c 14 N73-32327
- MCNEAR, M. F.**  
Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c 25 N75-26043
- MCNUTT, W. C.**  
Dual latching solenoid valve Patent  
[NASA-CASE-XMS-05890] c 09 N71-23191
- MCRONALD, A. D.**  
Thin film gauge  
[NASA-CASE-NPO-10617-1] c 35 N74-22095
- MCSMITH, D. D.**  
Tubing and cable cutting tool  
[NASA-CASE-LAR-12786-1] c 37 N84-28085
- MCSMITH, DWIGHT D.**  
Variable response load limiting device  
[NASA-CASE-LAR-12801-1] c 37 N88-23982
- MCSTAY, J. J.**  
Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c 33 N79-18193
- MCWILLIAMS, I. G.**  
Compact spectroradiometer  
[NASA-CASE-HQN-10683] c 14 N71-34389  
Two color horizon sensor  
[NASA-CASE-ERC-10174] c 14 N72-25409
- MCWITHEY, R. R.**  
Metal matrix composite structural panel construction  
[NASA-CASE-LAR-12807-1] c 24 N84-11214
- MCWITHEY, ROBERT R.**  
Combined load test apparatus for flat panels  
[NASA-CASE-LAR-14698-1] c 39 N92-30028
- MEAD, D. C.**  
Variable frequency oscillator with temperature compensation Patent  
[NASA-CASE-XNP-03916] c 09 N71-28810
- MEADOR, MARY ANN**  
Ladder polymers for use as high temperature stable resins or coatings  
[NASA-CASE-LEW-14203-1] c 27 N91-15402
- MEADOR, T. G., JR.**  
Light shield and cooling apparatus  
[NASA-CASE-LAR-10089-1] c 34 N74-23066
- MEALY, G. E.**  
Electrostatic thruster with improved insulators Patent  
[NASA-CASE-XLE-01902] c 28 N71-10574  
High voltage divider system Patent  
[NASA-CASE-XLE-02008] c 09 N71-21583
- MEDCALF, W. A.**  
Gas filter mounting structure  
[NASA-CASE-MSC-12297] c 14 N72-23457
- MEEHAN, RICHARD T.**  
Portable dynamic fundus instrument  
[NASA-CASE-MSC-21675-1] c 52 N92-28755
- MEEHAN, THOMAS K.**  
Multipath noise reduction spread spectrum signals  
[NASA-CASE-NPO-18970-1-CU] c 32 N93-28126
- MEINEL, A. B.**  
Compensation for primary reflector wavefront error  
[NASA-CASE-NPO-16869-1CU] c 74 N86-33138
- MEINEL, M. P.**  
Compensation for primary reflector wavefront error  
[NASA-CASE-NPO-16869-1CU] c 74 N86-33138
- MEINTEL, A. J., JR.**  
Combined optical attitude and altitude indicating instrument Patent  
[NASA-CASE-XLA-01907] c 14 N71-23268
- MEISENHOLDER, G. W.**  
Photosensitive device to detect bearing deviation Patent  
[NASA-CASE-XNP-00438] c 21 N70-35089  
Roll attitude star sensor system Patent  
[NASA-CASE-XNP-01307] c 21 N70-41856
- MEISSINGER, H. F.**  
Method of and device for determining the characteristics and flux distribution of micrometeorites  
[NASA-CASE-NPO-12127-1] c 91 N74-13130
- MELAMED, L.**  
Angular velocity and acceleration measuring apparatus  
[NASA-CASE-ERC-10292] c 14 N72-25410
- MELFI, L. T., JR.**  
Gas analyzer for bi-gaseous mixtures Patent  
[NASA-CASE-XLA-01131] c 14 N71-10774

- Ionization vacuum gauge with all but the end of the ion collector shielded Patent  
[NASA-CASE-XLA-07424] c 14 N71-18482
- MELLARS, B.**  
Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c 32 N77-28346
- MELTON, PATRICK B.**  
Cantilever clamp fitting  
[NASA-CASE-MFS-28328-1] c 37 N91-13731
- MELUGIN, J. F.**  
Technique for recovery of voice data from heat damaged magnetic tape  
[NASA-CASE-MSC-14219-1] c 32 N74-27612
- MELVILLE, R. D. S.**  
Stark-effect modulation of CO<sub>2</sub> laser with NH<sub>2</sub>D  
[NASA-CASE-NPO-11945-1] c 36 N76-18427
- MENEFEE, E. O.**  
Three-axis controller Patent  
[NASA-CASE-XAC-01404] c 05 N70-41581  
Proportional controller Patent  
[NASA-CASE-XAC-03392] c 03 N70-41954
- MENGES, M. J.**  
Precipitation detector Patent  
[NASA-CASE-XLA-02619] c 10 N71-26334  
Dielectric molding apparatus Patent  
[NASA-CASE-LAR-10121-1] c 15 N71-26721
- MENICHELLI, V. J.**  
Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c 28 N74-27425  
Electroexplosive device  
[NASA-CASE-NPO-13858-1] c 28 N79-11231
- MENTZER, C. A.**  
Horn antenna having V-shaped corrugated slots  
[NASA-CASE-LAR-11112-1] c 32 N76-15330
- MENZIES, R. T.**  
Monitoring atmospheric pollutants with a heterodyne radiometer transmitter-receiver  
[NASA-CASE-NPO-11919-1] c 35 N74-11284  
Fluorescence detector for monitoring atmospheric pollutants  
[NASA-CASE-NPO-13231-1] c 45 N75-27585  
Spectrophone stabilized laser with line center offset frequency control  
[NASA-CASE-NPO-15516-1] c 36 N84-22943  
Digital control of diode laser for atmospheric spectroscopy  
[NASA-CASE-NPO-16000-1] c 36 N85-29264
- MENZIES, ROBERT T.**  
Tunable CW diode-pumped Tm,Ho:YLF<sub>4</sub> laser operating at or near room temperature  
[NASA-CASE-NPO-18611-1-CU] c 36 N93-30415
- MERCER, CAROLYN R.**  
Phase-stepping fiber-optic projected fringe system for surface topography measurements  
[NASA-CASE-LEW-14996-1] c 74 N93-11058
- MERHAV, S. J.**  
Autonomous navigation system  
[NASA-CASE-ARC-11257-1] c 04 N81-21047
- MERLEN, M. M.**  
Horizon sensor with a plurality of fixedly positioned radiation compensated radiation sensitive detectors Patent  
[NASA-CASE-XNP-06957] c 14 N71-21088
- MERRBAUM, S.**  
Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c 52 N81-20703
- MERRICK, V. K.**  
Stabilization of gravity oriented satellites Patent  
[NASA-CASE-XAC-01591] c 31 N71-17729
- MERRILL, J. T., IV**  
Apparatus for applying simulator g-forces to an arm of an aircraft simulator pilot  
[NASA-CASE-LAR-10550-1] c 09 N74-30597
- MESCHTER, PETER**  
Elevated temperature aluminum alloys  
[NASA-CASE-LAR-13632-1] c 26 N87-29650
- MESSINEO, S. V.**  
Apparatus for positioning modular components on a vertical or overhead surface  
[NASA-CASE-LAR-11465-1] c 37 N76-21554
- MESSNER, A.**  
System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c 33 N75-19519
- MESZAROS, G.**  
Recovery of radiation damaged solar cells through thermal annealing  
[NASA-CASE-XGS-04047-2] c 03 N72-11062
- METCALFE, A. G.**  
Silicide coatings for refractory metals Patent  
[NASA-CASE-XLE-10910] c 18 N71-29040
- METZGER, A. E.**  
Dual purpose optical instrument capable of simultaneously acting as spectrometer and diffractometer  
[NASA-CASE-XNP-05231] c 14 N73-28491
- METZLER, A. J.**  
Black-body furnace Patent  
[NASA-CASE-XLE-01399] c 33 N71-15625
- MEYER, A. J., JR.**  
Modification and improvements to cooled blades Patent  
[NASA-CASE-XLE-00092] c 15 N70-33264  
Aerial capsule emergency separation device Patent  
[NASA-CASE-XLA-00115] c 03 N70-33343  
Space capsule Patent  
[NASA-CASE-XLA-00149] c 31 N70-37938  
Vehicle parachute and equipment jettison system Patent  
[NASA-CASE-XLA-00195] c 02 N70-38009  
Ablation structures Patent  
[NASA-CASE-XMS-01816] c 33 N71-15623  
Space capsule Patent  
[NASA-CASE-XLA-01332] c 31 N71-15664
- MEYER, J. A.**  
Altitude sensing device  
[NASA-CASE-XMS-01994-1] c 14 N72-17326
- MEYER, J. F.**  
Time-division multiplexer Patent  
[NASA-CASE-XNP-00431] c 09 N70-38998
- MEYER, K. A.**  
High-temperature, high-pressure spherical segment valve Patent  
[NASA-CASE-XAC-00074] c 15 N70-34817
- MEYER, T. N.**  
Method of producing silicon  
[NASA-CASE-NPO-14382-1] c 31 N80-18231
- MEYERS, J. F.**  
Auto covariance computer  
[NASA-CASE-LAR-12968-1] c 60 N86-21154
- MEYERS, JAMES F.**  
Frequency domain laser velocimeter signal processor  
[NASA-CASE-LAR-13552-1-CU] c 33 N89-14385
- MEYN, ERWIN H.**  
Post clamp  
[NASA-CASE-LEW-14862-1] c 37 N91-14617
- MICAL, F. J.**  
Process for preparation of large-particle-size monodisperse latexes  
[NASA-CASE-MFS-25000-1] c 25 N81-19242
- MICHAEL, J. E.**  
Connector - Electrical  
[NASA-CASE-XLA-01288] c 09 N69-21470  
Missile stage separation indicator and stage initiator Patent  
[NASA-CASE-XLA-00791] c 03 N70-39930
- MICHAUD, R. B.**  
Urine collection device  
[NASA-CASE-MSC-16433-1] c 52 N81-24711  
Urine collection apparatus  
[NASA-CASE-MSC-18381-1] c 52 N81-28740
- MICHEL, R. E.**  
Convoluting device for forming convolutions and the like Patent  
[NASA-CASE-XNP-05297] c 15 N71-23811
- MICKA, E. Z.**  
Cross correlation anomaly detection system  
[NASA-CASE-NPO-13283] c 38 N78-17395  
Automatic visual inspection system for microelectronics  
[NASA-CASE-NPO-13282] c 38 N78-17396
- MICKELSEN, W. R.**  
High-vacuum condenser tank for ion rocket tests Patent  
[NASA-CASE-XLE-00168] c 11 N70-33278
- MIDDLETON, DAVID B.**  
Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13734-1-CU] c 09 N90-20096  
Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13854-1-CU] c 04 N91-31120
- MIDDLETON, J. H.**  
Technique for extending the frequency range of digital dividers  
[NASA-CASE-LAR-10730-1] c 33 N74-10223
- MIDDLETON, O.**  
Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c 44 N79-24431
- MIDDLETON, R. L.**  
Cryogenic thermal insulation Patent  
[NASA-CASE-XMF-05046] c 33 N71-28892
- MIDDLETON, W. D.**  
Supersonic aircraft Patent  
[NASA-CASE-XLA-04451] c 02 N71-12243
- MIERTSCHIN, J. L.**  
Radio frequency filter device  
[NASA-CASE-XLA-02609] c 09 N72-25256
- MIKROYANNIDIS, J. A.**  
Fire-resistant phosphorus containing polyimides and copolyimides  
[NASA-CASE-ARC-11522-2] c 27 N85-34280
- Polymer of phosphonylmethyl-2,4- and -2,6-diamino benzene and polyfunctional monomer  
[NASA-CASE-ARC-11506-2] c 23 N86-32525  
Fire resistant polyamide based on 1-(diorganooxyphosphonyl)methyl-2,4- and -2,6-diamino benzene  
[NASA-CASE-ARC-11512-2] c 27 N86-32568
- MIKROYANNIDIS, JOHN A.**  
Fire and heat resistant laminating resins based on maleimido and citraconimido substituted 1-2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-1] c 27 N87-23751  
Fire and heat resistant laminating resins based on maleimido and citraconimido substituted 1-(diorganooxyphosphonyl) methyl -2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-3] c 27 N87-24564  
The 1-(diorganooxy phosphonyl) methyl-2,4- and -2,6-diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-2] c 23 N87-28605  
Fire and heat resistant laminating resin based on maleimido and citraconimido substituted 1-(diorganooxyphosphonyl-methyl)-2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-2] c 27 N89-16042  
The 1-(diorganooxyphosphonyl-methyl)-2,4- and -2,6-diamino benzenes  
[NASA-CASE-ARC-11425-4] c 23 N90-20133  
Some 1-(diorganooxyphosphonyl)methyl-2,4- and -2,6-dinitro-benzenes  
[NASA-CASE-ARC-11425-3] c 23 N90-23475
- MIKSZAN, D. P.**  
Frequency shift keying apparatus Patent  
[NASA-CASE-XGS-01537] c 07 N71-23405
- MIKULAS, M. M., JR.**  
Composite sandwich lattice structure  
[NASA-CASE-LAR-11898-1] c 24 N78-10214  
Method of making a composite sandwich lattice structure  
[NASA-CASE-LAR-11898-2] c 24 N78-17149  
Sequentially deployable maneuverable tetrahedral beam  
[NASA-CASE-LAR-13098-1] c 31 N86-19479  
Deployable M-braced truss structure  
[NASA-CASE-LAR-13081-1] c 37 N86-32737
- MIKULAS, M., JR.**  
Synchronously deployable truss structure  
[NASA-CASE-LAR-13117-1] c 37 N86-25789
- MIKULAS, MARTIN M., JR.**  
Deployable geodesic truss structure  
[NASA-CASE-LAR-13113-1] c 31 N87-25492  
Mobile remote manipulator vehicle system  
[NASA-CASE-LAR-13393-1] c 54 N87-29118  
Space spider crane  
[NASA-CASE-LAR-13411-1-SB] c 18 N88-23828  
Mechanical end joint system for connecting structural column elements  
[NASA-CASE-LAR-14465-1] c 37 N91-14614  
Counter-balanced, multiple cable construction crane  
[NASA-CASE-LAR-14565-1-CU] c 37 N92-34212
- MILAM, M. BRUCE**  
Helix translation device  
[NASA-CASE-GSC-13141-1] c 37 N92-23548
- MILAM, MALCOLM B.**  
J-hook latching device  
[NASA-CASE-GSC-13200-1] c 37 N92-21500
- MILAM, MALCOLM BRUCE**  
Coupling device with improved thermal interface  
[NASA-CASE-GSC-13251-1] c 37 N92-29120  
Connection space reduction mechanism  
[NASA-CASE-GSC-13220-1] c 37 N92-29140
- MILDICE, J. W.**  
Light radiation direction indicator with a baffle of two parallel grids  
[NASA-CASE-XNP-03930] c 14 N69-24331
- MILES, P. A.**  
Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c 36 N75-15028
- MILES, R. T.**  
Oceanic wave measurement system  
[NASA-CASE-MFS-23862-1] c 48 N80-18667
- MILKULLA, V.**  
Method for making a hot wire anemometer and product thereof  
[NASA-CASE-ARC-10900-1] c 35 N77-24454
- MILLEN, E. W.**  
Aircraft lifter  
[NASA-CASE-LAR-12518-1] c 06 N86-27280
- MILLER, A. J.**  
Binary to binary coded decimal converter  
[NASA-CASE-GSC-12044-1] c 60 N78-17691
- MILLER, ANDRE E.**  
Thermally isolated deployable shield for spacecraft  
[NASA-CASE-MFS-28524-1] c 18 N91-25167
- MILLER, B. A.**  
Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c 05 N79-24976

- MILLER, C. D.**  
Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-15429-1] c 18 N84-22609  
Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-25429-1] c 18 N86-20469
- MILLER, C. E.**  
Densitometer Patent  
[NASA-CASE-XLE-00688] c 14 N70-41330
- MILLER, C. G.**  
Dispensing targets for ion beam particle generators  
[NASA-CASE-NPO-13112-1] c 73 N74-26767  
Sampler of gas borne particles  
[NASA-CASE-NPO-13396-1] c 35 N76-18401  
Indicator providing continuous indication of the presence of a specific pollutant in air  
[NASA-CASE-NPO-13474-1] c 45 N76-21742  
Cryostat system for temperatures on the order of 2 deg K or less  
[NASA-CASE-NPO-13459-1] c 31 N77-10229  
Compact, high intensity arc lamp with internal magnetic field producing means  
[NASA-CASE-NPO-11510-1] c 33 N77-21315  
Depressurization of arc lamps  
[NASA-CASE-NPO-10790-1] c 33 N77-21316  
Arc control in compact arc lamps  
[NASA-CASE-NPO-10870-1] c 33 N77-22386  
Low to high temperature energy conversion system  
[NASA-CASE-NPO-13510-1] c 44 N77-32581  
Three-dimensional tracking solar energy concentrator and method for making same  
[NASA-CASE-NPO-13736-1] c 44 N77-32583  
Portable linear-focused solar thermal energy collecting system  
[NASA-CASE-NPO-13734-1] c 44 N78-10554  
Purging means and method for Xenon arc lamps  
[NASA-CASE-NPO-11978] c 31 N78-17238  
Low cost solar energy collection system  
[NASA-CASE-NPO-13579-1] c 44 N78-17460  
Solar pond  
[NASA-CASE-NPO-13581-2] c 44 N78-31525  
Primary reflector for solar energy collection systems  
[NASA-CASE-NPO-13579-4] c 44 N79-14529  
Primary reflector for solar energy collection systems and method of making same  
[NASA-CASE-NPO-13579-3] c 44 N79-24432  
Solar energy collection system  
[NASA-CASE-NPO-13579-2] c 44 N79-24433  
Multiple anode arc lamp system  
[NASA-CASE-NPO-10857-1] c 33 N80-14330  
Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c 43 N81-26509  
Sphere forming method and apparatus  
[NASA-CASE-NPO-15070-1] c 31 N83-35176
- MILLER, CHRISTOPHER R.**  
Passive zero-gravity leg restraint  
[NASA-CASE-ARC-11882-1-CU] c 54 N93-14713
- MILLER, D. P.**  
Controllers Patent  
[NASA-CASE-XMS-07487] c 15 N71-23255
- MILLER, E.**  
Synchronized voltage contrast display analysis system  
[NASA-CASE-NPO-14567-1] c 33 N83-18996
- MILLER, E. L.**  
Electronic system for high power load control  
[NASA-CASE-NPO-15358-1] c 33 N83-27126
- MILLER, H. B.**  
Compensating radiometer  
[NASA-CASE-XLA-04556] c 14 N69-27484  
Heat sensing instrument Patent  
[NASA-CASE-XLA-01551] c 14 N71-22989  
Spherical measurement device  
[NASA-CASE-XLA-06683] c 14 N72-28436
- MILLER, IRVIN**  
Isotope exchange in oxide-containing catalyst  
[NASA-CASE-LAR-13542-2-SB] c 25 N90-20154  
Process for making a noble metal on tin oxide catalyst  
[NASA-CASE-LAR-13741-1-SB] c 25 N90-20180  
Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-1-SB] c 25 N90-23517  
Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-2-SB] c 25 N91-21270
- MILLER, J. A., JR.**  
Method of forming difunctional polyisobutylene  
[NASA-CASE-NPO-10893] c 27 N73-22710
- MILLER, J. C.**  
Apparatus for detecting the amount of material in a resonant cavity container Patent  
[NASA-CASE-XNP-02500] c 18 N71-27397
- MILLER, J. E.**  
Satellite interlace synchronization system  
[NASA-CASE-GSC-10390-1] c 07 N72-11149
- MILLER, J. G.**  
Ultrasonic calibration device  
[NASA-CASE-LAR-11435-1] c 35 N76-15432
- MILLER, J. L.**  
Boring bar drive mechanism Patent  
[NASA-CASE-XLA-03661] c 15 N71-33518
- MILLER, JAMES B.**  
Antenna surface contour control system  
[NASA-CASE-LAR-13798-1] c 32 N89-25363  
Linear mass actuator  
[NASA-CASE-LAR-14352-1] c 37 N92-34173
- MILLER, P. C.**  
Low temperature aluminum alloy Patent  
[NASA-CASE-XMF-02786] c 17 N71-20743
- MILLER, R. A.**  
Corrosion resistant thermal barrier coating  
[NASA-CASE-LEW-13088-1] c 26 N81-25188  
Ceramic coatings on smooth surfaces  
[NASA-CASE-LEW-15164-1] c 27 N91-25298  
Oxidation resistant overlay coatings for low expansion substrates  
[NASA-CASE-LEW-15154-1] c 27 N93-19332  
Plasma sprayed ceramic thermal barrier coating for NiAl-based intermetallic alloys  
[NASA-CASE-LEW-15535-1] c 26 N93-31294  
Oxidation resistant overlay coatings for low expansion substrates  
[NASA-CASE-LEW-15154-2] c 27 N93-31300
- MILLER, ROBERT A.**  
Metallic seal for thermal barrier coating systems  
[NASA-CASE-LEW-15020-1] c 27 N91-15412  
Method of applying a thermal barrier coating system to a substrate  
[NASA-CASE-LEW-15020-2] c 24 N93-14706
- MILLER, TERESA Y.**  
Hollow fiber clinostat for simulating microgravity in cell culture  
[NASA-CASE-MFS-28370-1] c 35 N92-31790  
Protein crystal growth tray assembly  
[NASA-CASE-MFS-28507-1] c 76 N92-34171
- MILLER, W. E.**  
Photocapacitive image converter  
[NASA-CASE-LAR-12513-1] c 44 N82-32841
- MILLER, WILLIAM E.**  
Thermal remote anemometer system  
[NASA-CASE-LAR-13508-1] c 35 N92-21710  
Method of remotely characterizing thermal properties of a sample  
[NASA-CASE-LAR-13508-3-CU] c 09 N93-11057
- MILLER, WILLIAM T., JR.**  
Calibration apparatus for recess mounted pressure transducers  
[NASA-CASE-LAR-14724-1] c 35 N92-30030
- MILLER, WILSON N.**  
Hermetically sealable package for hybrid solid-state electronic devices and the like  
[NASA-CASE-MSC-20181-1] c 33 N88-23941
- MILLIGAN, G. C.**  
Digital memory sense amplifying means Patent  
[NASA-CASE-XNP-01012] c 08 N71-28925
- MILLIKEN, D. B.**  
Film feed camera having a detent means Patent  
[NASA-CASE-LAR-10686] c 14 N71-28935
- MILLIKEN, J. F.**  
Linear differential pressure sensor Patent  
[NASA-CASE-XMF-01974] c 14 N71-22752
- MILLS, M. K.**  
Tracking antenna system Patent  
[NASA-CASE-GSC-10553-1] c 07 N71-19854  
Antenna array at focal plane of reflector with coupling network for beam switching Patent  
[NASA-CASE-GSC-10220-1] c 07 N71-27233
- MILLS, R. C., SR.**  
Method of repairing hidden leaks in tubes  
[NASA-CASE-MFS-19796-1] c 37 N86-32736
- MILLS, S. M.**  
Transient-compensated SCR inverter  
[NASA-CASE-XLA-08507] c 09 N69-39984  
Apparatus for microbiological sampling  
[NASA-CASE-LAR-11069-1] c 35 N75-12272  
Automatic inoculating apparatus  
[NASA-CASE-LAR-11074-1] c 51 N75-13502  
Automatic microbial transfer device  
[NASA-CASE-LAR-11354-1] c 35 N75-27330  
Measurement of gas production of microorganisms  
[NASA-CASE-LAR-11326-1] c 35 N75-33368  
Automated single-slide staining device  
[NASA-CASE-LAR-11649-1] c 51 N77-27677
- MILLY, J. J.**  
Satellite despin device Patent  
[NASA-CASE-XMF-08523] c 31 N71-20396
- MILLY, PETER F.**  
Welding wire pressure sensor assembly  
[NASA-CASE-MFS-26216-1] c 37 N93-28951
- MIN, NAMKUNG**  
Magneto acoustic emission apparatus for testing materials for embrittlement  
[NASA-CASE-LAR-13817-1] c 26 N90-21170
- MINA, CESAR**  
Airborne tracking sunphotometer apparatus and system  
[NASA-CASE-ARC-11622-1] c 44 N88-14492
- MINDERMAN, PETER A.**  
Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-2] c 28 N91-14495
- MINEO, BETH**  
Rapid quantification of an internal property  
[NASA-CASE-LAR-13689-1-NP] c 35 N87-23941
- MINEO, BETH A.**  
Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-1-NP] c 52 N90-21519  
Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-2] c 52 N92-11621
- MING, DOUGLAS W.**  
Slow-release fertilizer  
[NASA-CASE-MSC-21953-1-NP] c 37 N93-17271  
Active synthetic soil  
[NASA-CASE-MSC-21954-1-NP] c 51 N93-19054
- MINKIN, H. L.**  
Liquid flow sight assembly Patent  
[NASA-CASE-XLE-02998] c 14 N70-42074
- MINOTT, P. O.**  
Retrodirective optical system  
[NASA-CASE-XGS-04480] c 16 N69-27491  
Retrodirective modulator Patent  
[NASA-CASE-GSC-10062] c 14 N71-15605  
Multiprism collimator  
[NASA-CASE-GSC-12608-1] c 74 N83-10900  
Interferometric angle monitor  
[NASA-CASE-GSC-12614-1] c 74 N83-32577  
High speed multi focal plane optical system  
[NASA-CASE-GSC-12683-1] c 74 N83-36898  
Dual aperture multispectral Schmidt objective  
[NASA-CASE-GSC-12756-1] c 74 N84-23248
- MINTER, E. J.**  
Method of peening and portable peening gun  
[NASA-CASE-MFS-23047-1] c 37 N76-18454
- MINTON, F. R.**  
Window defect planar mapping technique  
[NASA-CASE-MSC-19442-1] c 74 N77-10899
- MINTON, U. O.**  
Window defect planar mapping technique  
[NASA-CASE-MSC-19442-1] c 74 N77-10899
- MIRTICH, M. J.**  
Modification of the electrical and optical properties of polymers  
[NASA-CASE-LEW-13027-1] c 27 N80-24437  
Surface texturing of fluoropolymers  
[NASA-CASE-LEW-13028-1] c 27 N82-33521  
Deposition of diamondlike carbon films  
[NASA-CASE-LEW-14080-1] c 31 N85-20153  
Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-1] c 27 N86-19458  
Apparatus for producing oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-2] c 27 N86-32569
- MIRTICH, M. J., JR.**  
Hydrogen hollow cathode ion source  
[NASA-CASE-LEW-12940-1] c 72 N80-33186
- MIRTICH, MICHAEL J.**  
Heat exchanger for electrothermal devices  
[NASA-CASE-LEW-14037-1] c 20 N87-16875  
Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N87-23736
- MISERENTINO, R.**  
Displacement probes with self-contained exciting medium  
[NASA-CASE-LAR-11690-1] c 35 N80-14371
- MITCHELL, D. K.**  
Borescope with variable angle scope  
[NASA-CASE-MFS-15162] c 14 N72-32452
- MITCHELL, F. R.**  
Attitude control for spacecraft Patent  
[NASA-CASE-XNP-00294] c 21 N70-36938
- MITCHELL, G. A.**  
Airflow control system for supersonic inlets  
[NASA-CASE-LEW-11188-1] c 02 N74-20646
- MITCHELL, N. M.**  
Method and apparatus for detection and location of microleaks Patent  
[NASA-CASE-XMF-02307] c 14 N71-10779
- MITCHELL, V. M.**  
Digital cardiachometer system Patent  
[NASA-CASE-XMS-02399] c 05 N71-22896
- MITCHUM, L. L., JR.**  
Collapsible loop antenna for space vehicle Patent  
[NASA-CASE-XMF-00437] c 07 N70-40202
- MIXSON, J. S.**  
Ring wing tension vehicle Patent  
[NASA-CASE-XLA-04901] c 31 N71-24315

- MOACANIN, J.**  
lonene membrane separator  
[NASA-CASE-NPO-11091] c 18 N72-22567  
Method of making hollow elastomeric bodies  
[NASA-CASE-NPO-13535-1] c 37 N76-31524  
Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NPO-14657-1] c 74 N81-17887  
Broadband optical radiation detector  
[US-PATENT-4,262,198] c 74 N83-19597
- MOCKOVCIK, JOHN, JR.**  
Sun shield  
[NASA-CASE-MSC-20162-1] c 37 N87-17036
- MOECKEL, W. E.**  
Electro-thermal rocket Patent  
[NASA-CASE-XLE-00267] c 28 N70-33356
- MOEDE, L. W.**  
Wide range analog-to-digital converter with a variable gain amplifier  
[NASA-CASE-NPO-11018] c 08 N72-21200  
Digital control and information system  
[NASA-CASE-NPO-11016] c 08 N72-31226
- MOEN, W. K.**  
Self-cycling fluid heater  
[NASA-CASE-MSC-15567-1] c 33 N73-16918
- MOFFITT, F. L.**  
Image magnification adapter for cameras Patent  
[NASA-CASE-XMF-03844-1] c 14 N71-26474
- MOGAVERO, L. N.**  
System and method for tracking a signal source  
[NASA-CASE-HQN-10880-1] c 17 N78-17140
- MOLDOVAN, DAN**  
Parallel inferencing method and apparatus for rule-based expert systems  
[NASA-CASE-NPO-18004-1-CU] c 60 N93-29504
- MONAGHAN, R. C.**  
Inflatable device for installing strain gage bridges  
[NASA-CASE-FRC-11068-1] c 35 N84-12443
- MONDT, J. F.**  
Nuclear thermionic converter  
[NASA-CASE-NPO-13121-1] c 73 N77-18891
- MONFORD, L. G., JR.**  
Radiometric temperature reference Patent  
[NASA-CASE-MSC-13276-1] c 14 N71-27058  
Multifunction audio digitizer  
[NASA-CASE-MSC-13855-1] c 35 N74-17885  
Digital communication system  
[NASA-CASE-MSC-13912-1] c 32 N74-30524  
Binary concatenated coding system  
[NASA-CASE-MSC-14082-1] c 60 N76-23850
- MONFORD, LEO G.**  
Improved docking alignment system  
[NASA-CASE-MSC-21372-1] c 35 N89-12842
- MONFORD, LEO G., JR.**  
Method and apparatus for releasably connecting first and second objects  
[NASA-CASE-MSC-21517-1] c 31 N92-16161  
End effector with astronaut foot restraint  
[NASA-CASE-MSC-21721-1] c 54 N92-16559  
Payload retention device  
[NASA-CASE-MSC-21906-1] c 37 N92-28727  
Electromagnetic attachment mechanism  
[NASA-CASE-MSC-21463-1] c 37 N92-33018
- MONSON, D. J.**  
Dual-beam skin friction interferometer  
[NASA-CASE-ARC-11354-1] c 74 N83-21949
- MONTEITH, J. H.**  
Flow velocity and directional instrument  
[NASA-CASE-LAR-10855-1] c 14 N73-13415
- MONTEITH, L. K.**  
Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c 35 N76-22509
- MONTGOMERY, L. C.**  
Process for preparing sterile solid propellants Patent  
[NASA-CASE-XNP-01749] c 27 N70-41897  
Processing for producing a sterilized instrument Patent  
[NASA-CASE-XNP-09763] c 14 N71-20461
- MONTGOMERY, L. D.**  
Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c 35 N76-24525
- MONTGOMERY, RAYMOND C.**  
Real-time dynamic holographic image storage device  
[NASA-CASE-LAR-13989-1] c 35 N91-13694
- MONTOYA, L. C.**  
System for use in conducting wake investigation for a wing in flight  
[NASA-CASE-FRC-11024-1] c 02 N80-28300  
Skin friction measuring device for aircraft  
[NASA-CASE-FRC-11029-1] c 06 N81-17057
- MOODY, D. L., JR.**  
Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c 35 N76-24525
- MOONEY, V.**  
Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c 52 N79-26772
- MOOPENN, ALEXANDER W.**  
Hybrid analog-digital associative neural network  
[NASA-CASE-NPO-17058-1-CU] c 62 N87-25803  
Electronic neural network for solving traveling salesman and similar global optimization problems  
[NASA-CASE-NPO-17807-2-CU] c 63 N92-29955
- MOORE, C. D.**  
Waveform simulator Patent  
[NASA-CASE-NPO-10251] c 10 N71-27365
- MOORE, DENNIS R.**  
Fatigue testing a plurality of test specimens and method  
[NASA-CASE-MFS-28118-1] c 39 N87-25601
- MOORE, H. D.**  
Reversible ring counter employing cascaded single SCR stages Patent  
[NASA-CASE-XGS-01473] c 09 N71-10673
- MOORE, JERRY H.**  
Radial spline assembly for antifriction bearings  
[NASA-CASE-MFS-28629-1] c 37 N93-17084  
Radial spline assembly for antifriction bearings  
[NASA-CASE-MFS-28629-1] c 37 N93-26001
- MOORE, R. C.**  
Open loop digital frequency multiplier  
[NASA-CASE-MSC-12709-1] c 33 N77-24375
- MOORE, R. L.**  
Trigonometric vehicle guidance assembly which aligns the three perpendicular axes of two three-axes systems Patent  
[NASA-CASE-XMF-00684] c 21 N71-21688  
Rotary actuator  
[NASA-CASE-NPO-10680] c 31 N73-14855
- MOORE, T. C.**  
Strain gage calibration  
[NASA-CASE-LAR-12743-1] c 35 N84-28019
- MOORE, T. J.**  
Welding blades to rotors  
[NASA-CASE-LEW-10533-1] c 15 N73-28515  
Enhanced diffusion welding  
[NASA-CASE-LEW-11388-1] c 15 N73-32358  
Production of hollow components for rolling element bearings by diffusion welding  
[NASA-CASE-LEW-11026-1] c 15 N73-33383  
Apparatus for welding blades to rotors  
[NASA-CASE-LEW-10533-2] c 37 N74-11300  
Diffusion welding in air  
[NASA-CASE-LEW-11387-1] c 37 N74-18128
- MOORE, THOMAS C.**  
Crossflow vorticity sensor  
[NASA-CASE-LAR-13436-1-CU] c 02 N88-23759  
Circumferential pressure probe  
[NASA-CASE-LAR-13775-1] c 35 N90-23706
- MOORE, THOMAS C., SR.**  
Flush mounting of thin film sensors  
[NASA-CASE-LAR-14446-1] c 31 N92-33020  
Compensated high temperature strain gage  
[NASA-CASE-LAR-14776-1] c 35 N93-12205
- MOORE, W. A.**  
Journal bearings  
[NASA-CASE-LEW-11076-1] c 37 N74-21061  
Journal Bearings  
[NASA-CASE-LEW-11076-2] c 37 N74-32921  
Lubricated journal bearing  
[NASA-CASE-LEW-11076-3] c 37 N75-30562  
Fluid journal bearings  
[NASA-CASE-LEW-11076-4] c 37 N76-15461
- MORALES, SERGIO**  
Local area network with fault-checking, priorities, and redundant backup  
[NASA-CASE-NPO-16949-1-CU] c 62 N90-19776
- MORANDO, J. A.**  
Hydraulic transformer Patent  
[NASA-CASE-MFS-20830] c 15 N71-30028
- MORDECAI, T. T.**  
Method of recording a gas flow pattern Patent  
[NASA-CASE-XMF-01779] c 12 N71-20815
- MORECROFT, J. H.**  
Incremental motion drive system Patent  
[NASA-CASE-XNP-08897] c 15 N71-17694
- MORELLI, F. A.**  
Process for preparing sterile solid propellants Patent  
[NASA-CASE-XNP-01749] c 27 N70-41897  
Processing for producing a sterilized instrument Patent  
[NASA-CASE-XNP-09763] c 14 N71-20461
- MOREMAN, O. S., III**  
Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c 37 N77-32500  
Bearing seat usable in a gas turbine engine  
[NASA-CASE-LEW-12477-1] c 37 N77-32501
- MORGAN, C. J.**  
Workpiece positioning vise  
[NASA-CASE-GSC-12762-1] c 37 N84-28083
- MORGAN, GENE E.**  
Internal wire guide for GTAW welding  
[NASA-CASE-MFS-29489-1] c 31 N90-23586  
Electrode carrying wire for GTAW welding  
[NASA-CASE-MFS-29491-1] c 31 N90-26168
- MORGAN, I. T., JR.**  
Translatory shock absorber for attitude sensors  
[NASA-CASE-MFS-22905-1] c 19 N76-22284
- MORGAN, J. E.**  
Condition sensor system and method  
[NASA-CASE-MSC-14805-1] c 54 N78-32720
- MORGAN, L. E.**  
Serial data correlator/code translator  
[NASA-CASE-KSC-11025-1] c 32 N83-13323
- MORGAN, W. C.**  
Thin-walled pressure vessel Patent  
[NASA-CASE-XLE-04677] c 15 N71-10577
- MORISSETTE, S.**  
Junction range finder  
[NASA-CASE-KSC-10108] c 14 N73-25461
- MORRELL, G.**  
Method for continuous variation of propellant flow and thrust in propulsive devices Patent  
[NASA-CASE-XLE-00177] c 28 N70-40367
- MORRIS, B. G.**  
Cooled spool piston compressor  
[NASA-CASE-MSC-22020-1] c 37 N93-19331
- MORRIS, BRIAN G.**  
Tank gauging apparatus and method  
[NASA-CASE-MSC-21059-2] c 35 N91-15511  
Tank gauging apparatus and method  
[NASA-CASE-MSC-21059-3] c 35 N91-21495  
Method for providing real-time control of a gaseous propellant rocket propulsion system  
[NASA-CASE-MSC-21542-1] c 20 N92-15122  
Check valve with poppet damping mechanism  
[NASA-CASE-MSC-21903-1] c 37 N92-30101  
Check valve with poppet dashpot/frictional damping mechanism  
[NASA-CASE-MSC-21950-1] c 37 N92-34242  
Magnetically operated check valve  
[NASA-CASE-MSC-22046-1] c 37 N93-28501
- MORRIS, D. E.**  
Silphenylenesiloxane polymers having in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20979] c 06 N72-25151  
Polymerizable disilanols having in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20979-2] c 06 N73-32030
- MORRIS, J. F.**  
Probes having ring and primary sensor at same potential to prevent collection of stray wall currents in ionized gases  
[NASA-CASE-XLE-00690] c 25 N69-39884  
Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c 35 N77-32454  
Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c 35 N79-14346  
High thermal power density heat transfer  
[NASA-CASE-LEW-12950-1] c 34 N82-11399  
Heat pipes containing alkali metal working fluid  
[NASA-CASE-LEW-12253-1] c 74 N83-19596  
Thermionic energy converters  
[NASA-CASE-LEW-12443-1] c 44 N83-32175  
High thermal power density heat transfer apparatus providing electrical isolation at high temperature using heat pipes  
[NASA-CASE-LEW-12950-2] c 34 N85-29179
- MORRIS, J. R.**  
Difference circuit Patent  
[NASA-CASE-XNP-08274] c 10 N71-13537
- MORRIS, P. W.**  
Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c 43 N80-14423
- MORRIS, THOMAS F.**  
Fatigue testing a plurality of test specimens and method  
[NASA-CASE-MFS-28118-1] c 39 N87-25601
- MORRIS, TIMOTHY B.**  
Welding wire pressure sensor assembly  
[NASA-CASE-MFS-26216-1] c 37 N93-28951
- MORRISSETTE, E. L.**  
Powder fed sheared dispersal particle generator  
[NASA-CASE-LAR-12785-1] c 37 N84-16561
- MORRISON, A. D.**  
Low defect, high purity crystalline layers grown by selective deposition  
[NASA-CASE-NPO-15813-1] c 76 N85-30922
- MORRISON, ANDREW D.**  
Method for growing low defect, high purity crystalline layers utilizing lateral overgrowth of a patterned mask  
[NASA-CASE-NPO-15813-2] c 76 N87-15882  
Total immersion crystal growth  
[NASA-CASE-NPO-15800-2] c 76 N87-23286



- Liquid encapsulated crystal growth  
[NASA-CASE-NPO-16808-1-CU] c 76 N87-25868
- Multi-element spherical shell generation  
[NASA-CASE-NPO-17203-1-CU] c 34 N90-23700
- Ribbon growing method and apparatus  
[NASA-CASE-NPO-16306-1-CU] c 76 N91-15898
- Adjustable steam producing flexible orifice independent of fluid pressure  
[NASA-CASE-NPO-17625-1-CU] c 34 N92-21724
- MORRISON, DENNIS R.**  
Spiral vane bioreactor  
[NASA-CASE-MSC-21361-1] c 51 N91-21701
- MORRISON, H. D.**  
Anti-fog composition  
[NASA-CASE-MSC-13530-2] c 23 N75-14834
- MORSE, C. P.**  
Method and device for cooling Patent  
[NASA-CASE-HQN-00938] c 33 N71-29053
- MORSE, H. ANDREW**  
Swashplate control system  
[NASA-CASE-ARC-11633-1] c 08 N87-23631
- MORTENSEN, L. O.**  
Impact monitoring apparatus  
[NASA-CASE-MSC-15626-1] c 14 N72-25411
- MOSER, B. G.**  
Zeta potential flowmeter Patent  
[NASA-CASE-XNP-06509] c 14 N71-23226
- Method for controlling vapor content of a gas  
[NASA-CASE-NPO-10633] c 03 N72-28025
- Polymeric compositions and their method of manufacture  
[NASA-CASE-NPO-10424-1] c 27 N81-24258
- MOSER, J. C.**  
Electronic checkout system for space vehicles Patent  
[NASA-CASE-XKS-08012-2] c 31 N71-15566
- MOSIER, B.**  
Pressed disc type sensing electrodes with ion-screening means Patent  
[NASA-CASE-XMS-04212-1] c 05 N71-12346
- Plated electrodes Patent  
[NASA-CASE-XMS-04213-1] c 09 N71-26002
- Method of making a perspiration resistant biopotential electrode  
[NASA-CASE-MSC-90153-2] c 05 N72-25120
- MOSIER, J. R.**  
Decontamination of petroleum products Patent  
[NASA-CASE-XNP-03835] c 06 N71-23499
- MOSKOVITZ, CARY A.**  
Rotatable non-circular forebody flow controller  
[NASA-CASE-LAR-14212-1-CU] c 05 N91-31140
- MOSSOLANI, D. L.**  
Rotary leveling base platform  
[NASA-CASE-ARC-10981-1] c 37 N78-27425
- MOUNTVALA, A. J.**  
Lightweight refractory insulation and method of preparing the same Patent  
[NASA-CASE-XMF-05279] c 18 N71-16124
- MOYA, ISRAEL A.**  
Flexible robotic arm  
[NASA-CASE-GSC-13161-1] c 37 N92-33634
- MOYER, X. W.**  
Redundant actuating mechanism Patent  
[NASA-CASE-XGS-08718] c 15 N71-24600
- Delayed simultaneous release mechanism  
[NASA-CASE-GSC-10814-1] c 03 N73-20039
- MOYERS, C. V.**  
System for sterilizing objects  
[NASA-CASE-KSC-11085-1] c 54 N81-24724
- MOYNIHAN, P. I.**  
Fluidized bed coal combustion reactor  
[NASA-CASE-NPO-14273-1] c 25 N82-11144
- MOYNIHAN, PHILIP I.**  
Sample levitation and melt in microgravity  
[NASA-CASE-NPO-17022-1-CU] c 29 N87-25489
- MROZ, T. S.**  
Direct heating surface combustor  
[NASA-CASE-LEW-11877-1] c 34 N78-27357
- MUEHTER, P. P.**  
Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c 54 N75-27761
- MUELLER, R. I.**  
Method for forming a solar array strip  
[NASA-CASE-NPO-13652-3] c 44 N80-14474
- MUELLER, R. L.**  
Solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-1] c 44 N79-17314
- Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c 44 N79-24431
- MUELLER, W. A.**  
Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c 27 N77-30236
- Dialysis system  
[NASA-CASE-NPO-14101-1] c 52 N80-14687
- Sewage sludge additive  
[NASA-CASE-NPO-13877-1] c 45 N82-11634
- Elastomer coated filler and composites thereof comprising at least 60% by weight of a hydrated filler and an elastomer containing an acid substituent  
[NASA-CASE-NPO-14857-1] c 27 N83-19900
- MUGLER, S. W.**  
Precipitation detector Patent  
[NASA-CASE-XLA-02619] c 10 N71-26334
- MULHERN, J. E., JR.**  
Recorder using selective noise filter  
[NASA-CASE-ERC-10112] c 07 N72-21119
- MULLEN, D. L.**  
Matched thermistors for microwave power meters Patent  
[NASA-CASE-NPO-10348] c 10 N71-12554
- Broadband microwave waveguide window Patent  
[NASA-CASE-XNP-08880] c 09 N71-24808
- MULLEN, L. O.**  
Electrical insulating layer process  
[NASA-CASE-LEW-10489-1] c 15 N72-25447
- MULLEN, P. G.**  
Multicomputer communication system  
[NASA-CASE-NPO-15433-1] c 32 N85-21428
- MULLER, K.**  
Electric arc light source having undercut recessed anode  
[NASA-CASE-ARC-10266-1] c 33 N75-29318
- MULLER, R. M.**  
Method and apparatus for measuring web material wound on a reel  
[NASA-CASE-GSC-11902-1] c 38 N77-17495
- MULLER, RONALD M.**  
Disk memory device  
[NASA-CASE-GSC-13196-1] c 60 N92-29132
- MULLIKEN, R. F.**  
Method of repairing discontinuity in fiberglass structures  
[NASA-CASE-LAR-10416-1] c 24 N74-30001
- MUMOLA, P. B.**  
Laser head for simultaneous optical pumping of several dye lasers  
[NASA-CASE-LAR-11341-1] c 36 N75-19655
- MUNFORD, J. A.**  
Laser measuring system for incremental assemblies  
[NASA-CASE-GSC-12321-1] c 36 N82-16396
- MUNOZ, R. M.**  
High efficiency multivibrator Patent  
[NASA-CASE-XAC-00942] c 10 N71-16042
- Nonlinear analog-to-digital converter Patent  
[NASA-CASE-XAC-04031] c 08 N71-18594
- Demodulation system Patent  
[NASA-CASE-XAC-04030] c 10 N71-19472
- Phase quadrature-plural channel data transmission system Patent  
[NASA-CASE-XAC-06302] c 08 N71-19763
- Continuous Fourier transform method and apparatus  
[NASA-CASE-ARC-10466-1] c 60 N75-13539
- MUNSON, R. E.**  
Turnstile slot antenna  
[NASA-CASE-GSC-11428-1] c 32 N74-20864
- MURACA, R. F.**  
Apparatus for testing polymeric materials Patent  
[NASA-CASE-XNP-09699] c 06 N71-24607
- Procedure and apparatus for determination of water in nitrogen tetroxide  
[NASA-CASE-NPO-10234] c 06 N72-17094
- MURCH, R. M.**  
Metal containing polymers from cyclic tetrameric phenylphosphonitrimides Patent  
[NASA-CASE-HQN-10364] c 06 N71-27363
- MURPHY, A. J.**  
Optically actuated two position mechanical mover  
[NASA-CASE-NPO-13105-1] c 37 N74-21060
- MURPHY, D. W.**  
Frangible link  
[NASA-CASE-MSC-11849-1] c 15 N72-22488
- Pressure limiting propellant actuating system  
[NASA-CASE-MSC-18179-1] c 20 N80-18097
- MURPHY, F. L.**  
Bimetallic power controlled actuator  
[NASA-CASE-XNP-09776] c 09 N69-39929
- MURPHY, J. P.**  
All sky pointing attitude control system  
[NASA-CASE-ARC-10716-1] c 35 N77-20399
- High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c 15 N82-24272
- MURPHY, KENT A.**  
An interferometer having fused optical fibers, and apparatus and method using the interferometer  
[NASA-CASE-LAR-14640-1-CU] c 74 N93-17052
- MURPHY, W. J.**  
Barium release system  
[NASA-CASE-LAR-10670-1] c 06 N73-30097
- Rocket having barium release system to create ion clouds in the upper atmosphere  
[NASA-CASE-LAR-10670-2] c 15 N74-27360
- MURRI, DANIEL G.**  
Actuated forebody strakes  
[NASA-CASE-LAR-13983-1] c 05 N90-23390
- MURTY, M. V. R. K.**  
Concave grating spectrometer Patent  
[NASA-CASE-XGS-01036] c 14 N70-40003
- MUSICK, R. O.**  
Two-axis controller Patent  
[NASA-CASE-XFR-04104] c 03 N70-42073
- MUSSETT, E. W.**  
Device for separating occupant from an ejection seat Patent  
[NASA-CASE-XMS-04625] c 05 N71-20718
- MYERS, D. A.**  
Portable environmental control system Patent  
[NASA-CASE-XMS-09632-1] c 05 N71-11203
- MYERS, I. T.**  
Regulated high efficiency, lightweight capacitor-diode multiplier dc to dc converter  
[NASA-CASE-LEW-12791-1] c 33 N78-32341
- MYERS, W. N.**  
Duct coupling for single-handed operation Patent  
[NASA-CASE-MFS-20395] c 15 N71-24903
- Mechanical thermal motor  
[NASA-CASE-MFS-23062-1] c 37 N77-12402
- Spherical bearing  
[NASA-CASE-MFS-23447-1] c 37 N79-11404
- Amplified wind turbine apparatus  
[NASA-CASE-MFS-23830-1] c 44 N82-24639
- Resilient seal ring assembly with spring means applying force to wedge member  
[NASA-CASE-MFS-25678-1] c 37 N84-11497
- MYERS, W. NEILL**  
Orbital maneuvering end effectors  
[NASA-CASE-MFS-28161-1] c 37 N87-18817
- Releasable clamping apparatus  
[NASA-CASE-MFS-28192-1] c 37 N90-17154
- MYERS, WILLIAM N.**  
Tube coupling device  
[NASA-CASE-MFS-25964-2] c 37 N87-22977
- MYERS, WILLIAM NEILL**  
Turntable mechanism  
[NASA-CASE-MFS-28522-1] c 37 N93-31313
- NAESETH, R. L.**  
Aeroflexible structures  
[NASA-CASE-XLA-06095] c 01 N69-39981
- NAGANO, S.**  
Overload protection system for power inverter  
[NASA-CASE-NPO-13872-1] c 33 N78-10377
- Module failure isolation circuit for paralleled inverters  
[NASA-CASE-NPO-14000-1] c 33 N79-24254
- Circuit for automatic load sharing in parallel converter modules  
[NASA-CASE-NPO-14056-1] c 33 N79-24257
- Base drive for paralleled inverter systems  
[NASA-CASE-NPO-14163-1] c 33 N81-14220
- Redundant operation of counter modules  
[NASA-CASE-NPO-14162-1] c 60 N81-15706
- Low current linearization of magnetic amplifier for dc transducer  
[NASA-CASE-NPO-14617-1] c 33 N81-24338
- NAGASUBRAMANIAN, GANESAN**  
Copper chloride cathode for a secondary battery  
[NASA-CASE-NPO-17640-1-CU] c 33 N91-14538
- Silicon containing electroconductive polymers and structures made therefrom  
[NASA-CASE-NPO-17826-1-CU] c 27 N92-16121
- Secondary Li battery incorporating 12-Crown-4 ether  
[NASA-CASE-NPO-17922-1-CU] c 33 N92-28753
- NAGLE, W. J.**  
Multi-cell battery protection system  
[NASA-CASE-LEW-12039-1] c 44 N78-14625
- Toroidal cell and battery  
[NASA-CASE-LEW-12918-1] c 44 N81-24521
- Additive for zinc electrodes  
[NASA-CASE-LEW-13286-1] c 33 N84-14422
- NAGY, K.**  
Shuttle-launch triangular space station  
[NASA-CASE-MSC-20676-1] c 18 N86-24729
- NAGY, KORNEL**  
Preloaded brake disc  
[NASA-CASE-MSC-21132-1] c 37 N88-29181
- Preloaded latching device  
[NASA-CASE-MSC-21730-1] c 37 N93-13417
- Pre-integrated truss space station and method of assembly  
[NASA-CASE-MSC-22015-1] c 18 N93-20042
- Energy dissipator  
[NASA-CASE-MSC-21555-1] c 37 N93-23075
- NAIDITCH, S.**  
Method of producing crystalline materials  
[NASA-CASE-NPO-10440] c 15 N72-21466

- NAIL, WILLIAM L.**  
Predictive sensor method and apparatus  
[NASA-CASE-SSC-00006-1] c 35 N91-13691
- NAKADA, M. P.**  
Time of flight mass spectrometer with feedback means from the detector to the low source and a specific counter Patent  
[NASA-CASE-XNP-01056] c 14 N71-23041
- NAKAMURA, H. H.**  
Lightweight refractory insulation and method of preparing the same Patent  
[NASA-CASE-XMF-05279] c 18 N71-16124
- NAKANISHI, S.**  
Ion thruster cathode Patent Application  
[NASA-CASE-LEW-10814-1] c 28 N70-35422  
Plasma device feed system Patent  
[NASA-CASE-XLE-02902] c 25 N71-21694  
Ion thruster accelerator system Patent  
[NASA-CASE-LEW-10106-1] c 28 N71-26642  
Propellant feed isolator Patent  
[NASA-CASE-LEW-10210-1] c 28 N71-26781  
Single grid accelerator for an ion thruster  
[NASA-CASE-XLE-10453-2] c 28 N73-27699
- NAKANISHI, SHIGEO**  
Precision tunable resonant microwave cavity  
[NASA-CASE-LEW-13935-1] c 33 N87-21234
- NAKICH, R. B.**  
Apparatus for scanning the surface of a cylindrical body  
[NASA-CASE-NPO-11861-1] c 36 N74-20009  
Digital servo control of random sound test excitation  
[NASA-CASE-NPO-11623-1] c 71 N74-31148
- NAMKUNG, MIN**  
Method and apparatus for using magneto-acoustic remanence to determine embrittlement  
[NASA-CASE-LAR-13817-5] c 39 N92-28757  
Magnetic remanence method and apparatus to test materials for embrittlement  
[NASA-CASE-LAR-13817-4] c 39 N92-29101  
Magneto acoustic emission method for testing materials for embrittlement  
[NASA-CASE-LAR-13817-2] c 39 N92-29155  
Method of characterizing residual stress in ferromagnetic materials using a pulse histogram of acoustic emission signals  
[NASA-CASE-LAR-14239-1] c 26 N93-14705  
High speed thin plate fatigue crack monitor  
[NASA-CASE-LAR-14816-1-SB] c 39 N93-19329
- NANCE, H. M.**  
A dc motor speed control system Patent  
[NASA-CASE-MFS-14610] c 09 N71-28886
- NAPLES, J. F.**  
Method for forming plastic materials Patent  
[NASA-CASE-XMS-05516] c 15 N71-17803
- NARASIMHAN, K. Y.**  
System for detecting substructure microfractures and method therefore  
[NASA-CASE-NPO-14192-1] c 39 N80-10507  
System for plotting subsoil structure and method therefor  
[NASA-CASE-NPO-14191-1] c 31 N80-32584
- NARVAEZ, PABLO**  
Precision measurement of magnetic characteristics of an article with nullification of external magnetic fields  
[NASA-CASE-NPO-18187-1-CU] c 70 N92-29130
- NASH, D. O.**  
Sound-suppressing structure with thermal relief  
[NASA-CASE-LEW-12658-1] c 71 N79-14871
- NASON, G. H.**  
Flexible blade antenna Patent  
[NASA-CASE-MSC-12101] c 09 N71-18720
- NASUTI, A. J.**  
Test fixture for pellet-like electrical elements  
[NASA-CASE-XNP-06032] c 09 N69-21926  
Support structure for irradiated elements Patent  
[NASA-CASE-XNP-06031] c 15 N71-15606
- NATHAL, MICHAEL V.**  
Method and apparatus for gripping test specimens  
[NASA-CASE-LEW-15345-1] c 37 N93-12327  
An apparatus for gripping test specimens  
[NASA-CASE-LEW-15345-2] c 37 N93-28127
- NATHAN, R.**  
System for plotting subsoil structure and method therefor  
[NASA-CASE-NPO-14191-1] c 31 N80-32584
- NAUMANN, E. C.**  
Fatigue testing device Patent  
[NASA-CASE-XLA-02131] c 32 N70-42003  
Automatic fatigue test temperature programmer Patent  
[NASA-CASE-XLA-02059] c 33 N71-24276  
Arbitrarily shaped model survey system Patent  
[NASA-CASE-LAR-10098] c 32 N71-26681  
Function generator for synthesizing complex vibration mode patterns  
[NASA-CASE-LAR-10310-1] c 10 N73-20253
- NAUMANN, R. J.**  
Liquid aerosol dispenser  
[NASA-CASE-MFS-20829] c 12 N72-21310  
Carbon monoxide monitor  
[NASA-CASE-MFS-22060-1] c 35 N75-29380  
Containerless high purity pulling process and apparatus for glass fiber  
[NASA-CASE-MFS-25905-2] c 31 N86-21718
- NAUMANN, ROBERT J.**  
Space ultra-vacuum facility and method of operation  
[NASA-CASE-MFS-28139-1] c 29 N87-18679  
Quasi-containerless glass formation method and apparatus  
[NASA-CASE-MFS-28090-1] c 27 N87-21111  
Method and apparatus for growing crystals  
[NASA-CASE-MFS-28137-1] c 76 N88-24544  
Liquid encapsulated float zone process and apparatus  
[NASA-CASE-MFS-28144-1] c 76 N88-24545  
Hanging drop crystal growth apparatus  
[NASA-CASE-MFS-26061-1] c 76 N91-16815
- NEAL, P. F.**  
Emergency escape system Patent  
[NASA-CASE-XKS-07814] c 15 N71-27067
- NEALY, J. E.**  
Combustion detector  
[NASA-CASE-LAR-10739-1] c 14 N73-16484
- NELSON, B.**  
Deflective rod switch with elastic support and sealing means Patent  
[NASA-CASE-XNP-09808] c 09 N71-12518
- NELSON, B. W.**  
Optical machine tool alignment indicator Patent  
[NASA-CASE-XAC-09489-1] c 15 N71-26673
- NELSON, C. A.**  
Flipflop interrogator and bi-polar current driver Patent  
[NASA-CASE-XGS-03058] c 10 N71-19547
- NELSON, C. H.**  
Ablation sensor  
[NASA-CASE-XLA-01781] c 14 N69-39975  
Reentry communication by material addition Patent  
[NASA-CASE-XLA-01552] c 07 N71-11284
- NELSON, C. W.**  
X-ray determination of parts alignment  
[NASA-CASE-MSC-20418-1] c 74 N86-20126
- NELSON, D. E.**  
Convoluting device for forming convolutions and the like Patent  
[NASA-CASE-XNP-05297] c 15 N71-23811
- NELSON, E. P.**  
Safety-type locking pin  
[NASA-CASE-MFS-18495] c 15 N72-11385
- NELSON, H. H.**  
Telemetry word forming unit  
[NASA-CASE-XNP-09225] c 09 N69-24333
- NELSON, M. D.**  
Optical fiber coupling method and apparatus  
[NASA-CASE-NPO-15464-1] c 74 N85-29749
- NELSON, W. J.**  
Slosh alleviator Patent  
[NASA-CASE-XLA-05749] c 15 N71-19569
- NERAD, B. A.**  
Glass heating panels and method for preparing the same from architectural reflective glass  
[NASA-CASE-NPO-15753-1] c 27 N84-33589
- NERHEIM, N. M.**  
Inert gas metallic vapor laser  
[NASA-CASE-NPO-13449-1] c 36 N75-32441
- NERHEIM, NOBLE M.**  
Closed loop fiber optic rotation sensor  
[NASA-CASE-NPO-16558-1-CU] c 74 N87-23259
- NERREN, BILLY H.**  
Sample holder support for microscopes  
[NASA-CASE-MFS-28420-1] c 37 N91-21545
- NESMITH, M. F.**  
Self-locking telescoping manipulator arm  
[NASA-CASE-MFS-25906-1] c 37 N86-20789
- NESMITH, MALCOLM F.**  
Self indexing latch system  
[NASA-CASE-MFS-25956-1] c 37 N87-21333
- NEUGEBAUER, M.**  
Ion mass spectrometer  
[NASA-CASE-NPO-15423-1] c 35 N84-28016
- NEWBY, D. T.**  
Hole cutter  
[NASA-CASE-MFS-22649-1] c 37 N75-25186
- NEWCOMB, A. L., JR.**  
Electromagnetic mirror drive system  
[NASA-CASE-XLA-03724] c 14 N69-27461  
Ac power amplifier Patent Application  
[NASA-CASE-LAR-10218-1] c 09 N70-34559  
Variable duration pulse integrator Patent  
[NASA-CASE-XLA-01219] c 10 N71-23084  
Variable width pulse integrator Patent  
[NASA-CASE-XLA-03356] c 10 N71-23315  
Attitude sensor  
[NASA-CASE-LAR-10586-1] c 19 N74-15089
- NEWCOMB, J. F.**  
Null device for hand controller Patent  
[NASA-CASE-XLA-01808] c 15 N71-20740
- NEWCOMB, W. L.**  
Quick release separation mechanism Patent  
[NASA-CASE-XLA-01441] c 15 N70-41679
- NEWCOMBE, C. A.**  
Method for making a heat insulating and ablative structure  
[NASA-CASE-XMS-01108] c 15 N69-24322
- NEWMAN, D. F.**  
Test stand system for vacuum chambers  
[NASA-CASE-MFS-21362] c 11 N73-20267
- NEWMAN, J. B.**  
Catalyst bed removing tool Patent  
[NASA-CASE-XFR-00811] c 15 N70-36901
- NEWMAN, J. M.**  
New polymers of perfluorobutadiene and method of manufacture Patent application  
[NASA-CASE-NPO-10863] c 06 N70-11251  
Polymers of perfluorobutadiene and method of manufacture  
[NASA-CASE-NPO-10863-2] c 06 N72-25152
- NG, DANIEL**  
Multiwavelength pyrometer for gray and non-gray surfaces in the presence of interfering radiation  
[NASA-CASE-LEW-15250-1] c 35 N93-17060
- NGO, KIM CHI T.**  
Vacuum-isolation vessel and method for measurement of thermal noise in microphones  
[NASA-CASE-LAR-14567-1-CU] c 33 N92-33021
- NGUYEN, TIEN M.**  
Phase ambiguity resolution for offset QPSK modulation systems  
[NASA-CASE-NPO-17853-1-CU] c 32 N91-25318
- NIBLEY, D. A.**  
Method for detecting coliform organisms  
[NASA-CASE-ARC-11322-1] c 51 N83-28849
- NICHOLS, F. W.**  
Method and apparatus for fabricating improved solar cell modules  
[NASA-CASE-NPO-14416-1] c 44 N81-14389
- NICHOLS, G. B.**  
Apparatus for controlling the velocity of an electromechanical drive for interferometers and the like Patent  
[NASA-CASE-XGS-03532] c 14 N71-17627  
Apparatus for phase stability determination Patent  
[NASA-CASE-XGS-01118] c 10 N71-23662
- NICHOLS, G. H.**  
Aircraft canopy lock  
[NASA-CASE-FRC-11065-1] c 05 N83-19737
- NICHOLS, J. J.**  
Force measuring instrument Patent  
[NASA-CASE-XMF-00456] c 14 N70-34705
- NICHOLS, M. R.**  
Nacelle afterbody for jet engines Patent  
[NASA-CASE-XLA-10450] c 28 N71-21493  
Dual cycle aircraft turbine engine  
[NASA-CASE-LAR-11310-1] c 07 N77-28118
- NICKLAS, J. C.**  
Attitude control for spacecraft Patent  
[NASA-CASE-XNP-02982] c 31 N70-41855  
Solar vane actuator Patent  
[NASA-CASE-XNP-05535] c 14 N71-23040
- NICOL, W. S.**  
Vapor deposition apparatus  
[NASA-CASE-HQN-10462] c 25 N75-29192
- NIEDRA, J. M.**  
Pulse coupling circuit  
[NASA-CASE-LEW-10433-1] c 09 N72-22197
- NIEDZWIECKI, R. W.**  
Swirl can primary combustor  
[NASA-CASE-LEW-11326-1] c 23 N73-30665  
Controlled separation combustor  
[NASA-CASE-LEW-11593-1] c 20 N76-14190
- NIEH, KAI-WEI**  
Fabrication of nanometer single crystal metallic CoSi<sub>2</sub> structures on Si  
[NASA-CASE-NPO-17736-2-CU] c 24 N92-18561
- NIELSON, T. L.**  
Technique of elbow bending small jacketed transfer lines Patent  
[NASA-CASE-XNP-10475] c 15 N71-24679
- NIER, A. O.**  
Mass spectrometer with magnetic pole pieces providing the magnetic fields for both the magnetic sector and an ion-type vacuum pump  
[NASA-CASE-NPO-13663-1] c 35 N77-14406
- NIESSEN, F. R.**  
Filtering technique based on high-frequency plant modeling for high-gain control  
[NASA-CASE-LAR-12215-1] c 08 N79-23097

## NIR, Z.

- Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-1] c 24 N86-19380
- Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-2] c 27 N86-27451

## NISEN, D. B.

- Containerless high temperature calorimeter apparatus  
[NASA-CASE-MFS-23923-1] c 35 N81-19426
- Method and apparatus for supercooling and solidifying substances  
[NASA-CASE-MFS-25242-1] c 35 N83-29650

## NISHIOKA, K.

- Method for detecting coliform organisms  
[NASA-CASE-ARC-11322-1] c 51 N83-28849

## NISSIM, E.

- Suppression of flutter  
[NASA-CASE-LAR-10682-1] c 02 N73-26004

## NISWANDER, J. K.

- Memory-based frame synchronizer  
[NASA-CASE-GSC-12430-1] c 60 N82-16747
- Memory-based parallel data output controller  
[NASA-CASE-GSC-12447-2] c 60 N84-28491

## NITTA, H.

- High-temperature, high-pressure spherical segment valve Patent  
[NASA-CASE-XAC-00074] c 15 N70-34817

## NIXON, D. L.

- Parabolic reflector horn feed with spillover correction Patent  
[NASA-CASE-XNP-00540] c 09 N70-35382
- Indexing microwave switch Patent  
[NASA-CASE-XNP-06507] c 09 N71-23548
- Rotary vane attenuator wherein rotor has orthogonally disposed resistive and dielectric cards  
[NASA-CASE-NPO-11418-1] c 14 N73-13420

## NIXON, ROBERT H.

- Digital parallel processor array for optimum path planning  
[NASA-CASE-NPO-18727-1-CU] c 62 N93-28427

## NOBLE, R. M.

- Solenoid construction Patent  
[NASA-CASE-XNP-01951] c 09 N70-41929

## NOEVER, DAVID A.

- Method and apparatus for controlling protein crystallization  
[NASA-CASE-MFS-28688-1] c 76 N93-17043
- Process for selectively recovering algae and protozoa  
[NASA-CASE-MFS-26124-1-NPO] c 51 N93-29174

## NOLA, F. J.

- Positive dc to positive dc converter Patent  
[NASA-CASE-XMF-14301] c 09 N71-23188
- Positive dc to negative dc converter Patent  
[NASA-CASE-XMF-08217] c 03 N71-23239
- Transistor servo system including a unique differential amplifier circuit Patent  
[NASA-CASE-XMF-05195] c 10 N71-24861
- Brushless direct current tachometer Patent  
[NASA-CASE-MFS-20385] c 09 N71-24904
- Redundant speed control for brushless Hall effect motor  
[NASA-CASE-MFS-20207-1] c 09 N73-32107
- Induction motor control system with voltage controlled oscillator circuit  
[NASA-CASE-MFS-21465-1] c 10 N73-32145
- Variable frequency inverter for ac induction motors with torque, speed and braking control  
[NASA-CASE-MFS-22088-1] c 33 N75-15874
- Tachometer  
[NASA-CASE-MFS-23175-1] c 35 N77-30436
- Power factor control system for AC induction motors  
[NASA-CASE-MFS-23280-1] c 33 N78-10376
- Three phase power factor controller  
[NASA-CASE-MFS-25535-1] c 33 N81-12330
- Electrical power generating system  
[NASA-CASE-MFS-24368-3] c 33 N81-22280
- Power factor control system for ac induction motors  
[NASA-CASE-MFS-23988-1] c 33 N81-27395
- Motor power factor controller with a reduced voltage starter  
[NASA-CASE-MFS-25586-1] c 33 N82-11360
- Electrical power generating system  
[NASA-CASE-MFS-25302-1] c 33 N83-28319
- Triac failure detector  
[NASA-CASE-MFS-25607-1] c 33 N83-34190
- Control system for an induction motor with energy recovery  
[NASA-CASE-MFS-25477-1] c 33 N84-14424
- Pulsed thyristor trigger control circuit  
[NASA-CASE-MFS-25616-1] c 33 N84-16455
- Three phase power factor controller  
[NASA-CASE-MFS-25535-2] c 33 N84-22885
- Motor power control circuit for ac induction motors  
[NASA-CASE-MFS-25323-1] c 33 N84-22886

- Phase detector for three-phase power factor controller  
[NASA-CASE-MFS-25854-1] c 33 N84-27975
- Coupling an induction motor type generator to ac power lines  
[NASA-CASE-MFS-25302-2] c 33 N84-33660
- Three-phase power factor controller with induced EMF sensing  
[NASA-CASE-MFS-25852-1] c 33 N84-33661
- Solar powered actuator with continuously variable auxiliary power control  
[NASA-CASE-MFS-25637-1] c 44 N85-21769
- NOLA, FRANK J.**  
Four quadrant control circuit for a brushless three-phase dc motor  
[NASA-CASE-MFS-28080-1] c 33 N87-21233
- Bidirectional control system for energy flow in solar powered flywheel  
[NASA-CASE-MFS-25978-1] c 44 N87-21410
- NOONAN, K. W.**  
Family of airfoil shapes for rotating blades  
[NASA-CASE-LAR-12843-1] c 02 N84-11136
- NOONAN, KEVIN W.**  
High lift, low pitching moment airfoils  
[NASA-CASE-LAR-13215-1] c 02 N89-14224
- NORD, D. S.**  
Method of joining aluminum to stainless steel Patent  
[NASA-CASE-MFS-07369] c 15 N71-20443
- NORDEN, B. N.**  
Hybrid holographic system using reflected and transmitted object beams simultaneously Patent  
[NASA-CASE-MFS-20074] c 16 N71-15565
- Holographic thin film analyzer  
[NASA-CASE-MFS-20823-1] c 16 N73-30476
- NOREEN, S. J.**  
Spherical shield Patent  
[NASA-CASE-XNP-01855] c 15 N71-28937
- NORGREN, C. T.**  
Colloid propulsion method and apparatus Patent  
[NASA-CASE-XLE-00817] c 28 N70-33265
- Gas turbine combustor Patent  
[NASA-CASE-LEW-10286-1] c 28 N71-28915
- NORIKANE, LYNNE**  
Data volume reduction for imaging radar polarimetry  
[NASA-CASE-NPO-17184-1-CU] c 32 N88-26541
- NORK, C. L.**  
Sight switch using an infrared source and sensor Patent  
[NASA-CASE-XMF-03934] c 09 N71-22985
- NORMAN, R. M.**  
Vibration isolation system using compression springs  
[NASA-CASE-NPO-11012] c 15 N72-11391
- Expandable support means  
[NASA-CASE-NPO-11059] c 15 N72-17454
- Zero torque gear head wrench  
[NASA-CASE-NPO-13059-1] c 37 N76-20480
- NORRIS, D. D.**  
Particle analyzing method and apparatus  
[NASA-CASE-NPO-15292-1] c 35 N83-27184
- NORTON, R. H.**  
Thruster maintenance system Patent  
[NASA-CASE-MFS-20325] c 28 N71-27095
- Self-recording portable soil penetrometer  
[NASA-CASE-MFS-20774] c 14 N73-19420
- Interferometer  
[NASA-CASE-NPO-14448-1] c 74 N81-29963
- NORTON, WILLIAM E.**  
Rotationally actuated prosthetic helping hand  
[NASA-CASE-MFS-28426-1] c 54 N91-32795
- Prosthetic helping hand  
[NASA-CASE-MFS-28430-1] c 54 N92-24044
- Bar-holding prosthetic limb  
[NASA-CASE-MFS-28481-1] c 54 N93-14870
- NORWOOD, J. JR.**  
Magnetically controlled plasma accelerator Patent  
[NASA-CASE-XLA-00327] c 25 N71-29184
- NOSSEN, E. J.**  
Frequency measurement by coincidence detection with standard frequency  
[NASA-CASE-MSC-14649-1] c 33 N76-16331
- NOUHI, AKBAR**  
Preparation of dilute magnetic semiconductor films by metalorganic chemical vapor deposition  
[NASA-CASE-NPO-17399-1-CU] c 76 N89-14120
- NOVOTNY, J. E.**  
Ultraportable calibrated light source  
[NASA-CASE-MSC-12293-1] c 14 N72-27411
- NUSBAUM, W. J.**  
Apparatus for absorbing and measuring power Patent  
[NASA-CASE-XLE-00720] c 14 N70-40201
- NYBERG, KAREN L.**  
Robot friendly probe and socket assembly  
[NASA-CASE-MSC-22028-1] c 37 N93-22007

## O

## OAKLEY, E. C.

- RF-source resistance meters  
[NASA-CASE-NPO-11291-1] c 14 N73-30388

## OBARA, CLIFFORD J.

- Geometries for roughness shapes in laminar flow  
[NASA-CASE-LAR-13255-1] c 02 N87-16793
- Off-surface infrared flow visualization  
[NASA-CASE-LAR-14568-1] c 74 N93-22037

## OBERSCHMIDT, M.

- Flow test device  
[NASA-CASE-XMS-04917] c 14 N69-24257

## OBLER, H. D.

- Air conditioning system and component therefore distributing air flow from opposite directions  
[NASA-CASE-GSC-11445-1] c 31 N74-27902
- Apparatus for supplying conditioned air at a substantially constant temperature and humidity  
[NASA-CASE-GSC-12191-1] c 31 N80-32583
- Variable speed drive  
[NASA-CASE-GSC-12643-1] c 37 N83-26078

## OBRAN, J. P.

- Process for the preparation of polycarbonylphosphazenes  
[NASA-CASE-ARC-11176-1] c 27 N81-27271

## OBRIEN, D. E., III

- Technique for recovery of voice data from heat damaged magnetic tape  
[NASA-CASE-MSC-14219-1] c 32 N74-27612

## OBRIEN, J. P.

- Carboranylcyctriphosphazenes and their polymers  
[NASA-CASE-ARC-11176-1] c 27 N82-18389

## O'CONNOR, B. J.

- Failure detection and control means for improved drift performance of a gimbaled platform system  
[NASA-CASE-MFS-23551-1] c 04 N76-26175

## O'CONNOR, DENNIS

- AMTEC vapor-vapor series connected cells  
[NASA-CASE-NPO-18667-1-CU] c 33 N93-19330

## O'CONNOR, E. W.

- Condensate removal device for heat exchanger  
[NASA-CASE-MSC-14143-1] c 77 N75-20139

## O'CONNOR, J. W.

- Fastener stretcher  
[NASA-CASE-GSC-11149-1] c 15 N73-30457

## ODELL, H. G.

- Dual latching solenoid valve Patent  
[NASA-CASE-XMS-05890] c 09 N71-23191

## ODONNELL, P. M.

- Corrosion resistant beryllium Patent  
[NASA-CASE-LEW-10327] c 17 N71-33408

## ODONNELL, T. J.

- Spherically-shaped rocket motor Patent  
[NASA-CASE-XHQ-01897] c 28 N70-35381

## OERTEL, G. K.

- Fast opening diaphragm Patent  
[NASA-CASE-XLA-03660] c 15 N71-21060

- Measurement of time differences between luminous events Patent  
[NASA-CASE-XLA-01987] c 23 N71-23976

## OFARRELL, H. W.

- Solar cell module assembly jig  
[NASA-CASE-XGS-00829-1] c 44 N79-19447

## OFFIK, W. G.

- Emergency escape system Patent  
[NASA-CASE-XKS-02342] c 05 N71-11199

## OGDEN, H. F.

- Aerodynamic measuring device Patent  
[NASA-CASE-XLA-00481] c 14 N70-36824

- Check valve assembly for a probe Patent  
[NASA-CASE-XLA-00128] c 15 N70-37925

## OGDEN, H. R.

- Low temperature aluminum alloy Patent  
[NASA-CASE-XMF-02786] c 17 N71-20743

## OGLE, J. S.

- Whole body measurement systems  
[NASA-CASE-MSC-13972-1] c 52 N74-10975

## OHLSON, J. E.

- System for interference signal nulling by polarization adjustment  
[NASA-CASE-NPO-13140-1] c 32 N75-24982

- Conical scan tracking system employing a large antenna  
[NASA-CASE-NPO-14009-1] c 32 N79-13214

## OHM, TIMOTHY R.

- A method for surmounting an obstacle by a robot vehicle  
[NASA-CASE-NPO-18764-1-CU] c 37 N93-17272

## OKANE, J. H.

- Pressure suit tie-down mechanism Patent  
[NASA-CASE-XMS-00784] c 05 N71-12335

## OKANE, JAMES H.

- Hatch cover  
[NASA-CASE-MSC-21356-1] c 18 N90-19278

- OKEAN, H. C.**  
High-O bandpass resonators utilizing bandstop resonator pairs  
[NASA-CASE-GSC-10990-1] c 09 N73-26195
- OKEEFE, W. J.**  
Head-up attitude display  
[NASA-CASE-ERC-10392] c 21 N73-14692
- OKELLY, K. P.**  
Method of fluxless brazing and diffusion bonding of aluminum containing components  
[NASA-CASE-MSC-14435-1] c 37 N76-18455
- OKUNOLA, O.**  
GaAs Schottky barrier photo-responsive device and method of fabrication  
[NASA-CASE-GSC-12816-1] c 76 N86-20150
- OLCOTT, J. W.**  
Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c 05 N75-12930
- OLDRIEVE, R. E.**  
Reinforced metallic composites Patent  
[NASA-CASE-XLE-02428] c 17 N70-33288  
Method of making fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-00231] c 17 N70-38198  
Tantalum modified ferritic iron base alloys  
[NASA-CASE-LEW-12095-1] c 26 N78-18182
- OLIVER, CHARLES E.**  
Cylindrical surface profile and diameter measuring tool and method  
[NASA-CASE-MFS-28287-1] c 35 N88-23959
- OLIVER, G. D.**  
Scanning nozzle plating system  
[NASA-CASE-NPO-11758-1] c 31 N74-23065
- OLIVER, MICHAEL T.**  
Multiple layer dielectrics, hot film sensors, and methods of producing same  
[NASA-CASE-LAR-14591-1] c 35 N93-19493
- OLIVER, R. E.**  
Multiple reflection conical microwave antenna  
[NASA-CASE-NPO-11661] c 07 N73-14130
- OLIVER, R. L.**  
Apparatus for applying cover slides  
[NASA-CASE-NPO-10575] c 03 N72-25019
- OLLENDORF, S.**  
Structural heat pipe  
[NASA-CASE-GSC-11619-1] c 34 N75-12222  
Thermal control canister  
[NASA-CASE-GSC-12253-1] c 34 N79-31523
- OLLING, E. H.**  
Radial module space station Patent  
[NASA-CASE-XMS-01906] c 31 N70-41373
- OLSASKY, M. J.**  
Laser camera and diffusion filter therefore Patent  
[NASA-CASE-NPO-10417] c 16 N71-33410
- OLSEN, W. A., JR.**  
Reduced gravity liquid configuration simulator  
[NASA-CASE-XLE-02624] c 12 N69-39988  
Hot wire liquid level detector for cryogenic fluids Patent  
[NASA-CASE-XLE-00454] c 23 N71-17802
- OLSON, W. T.**  
Inlet deflector for jet engines Patent  
[NASA-CASE-XLE-00388] c 28 N70-34788
- OLTMANS, D. A.**  
Matched thermistors for microwave power meters Patent  
[NASA-CASE-NPO-10348] c 10 N71-12554
- ONEAL, JAMES E.**  
Elevated temperature aluminum alloys  
[NASA-CASE-LAR-13632-1] c 26 N87-29650
- ONEIL, R. L.**  
Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c 35 N76-22509
- ONEILL, R. W.**  
Monostable multivibrator with complementary NOR gates Patent  
[NASA-CASE-MSC-13492-1] c 10 N71-28860  
Peak holding circuit for extremely narrow pulses  
[NASA-CASE-MSC-14129-1] c 33 N75-18479
- ONG, T. P.**  
Diamond composite films for protective coatings on metals and method of formation  
[NASA-CASE-NPO-18501-1-CU] c 27 N93-28426
- ONSTOTT, JOSEPH W.**  
High temperature insulation barrier composite  
[NASA-CASE-MFS-29241-1] c 24 N90-23480
- ORAN, W. A.**  
Method and apparatus for shaping and enhancing acoustical levitation forces  
[NASA-CASE-MFS-25050-1] c 71 N81-15767  
Gas levitator having fixed levitation node for containerless processing  
[NASA-CASE-MFS-25509-1] c 35 N83-24828
- OREILLY, W. J.**  
Portable environmental control system Patent  
[NASA-CASE-XMS-09632-1] c 05 N71-11203
- OREM, V. C.**  
Fastener stretcher  
[NASA-CASE-GSC-11149-1] c 15 N73-30457
- ORIENT, OTTO J.**  
Generation of intense negative ion beams  
[NASA-CASE-NPO-16061-1-CU] c 72 N87-21660  
Variable energy, high flux, ground-state atomic oxygen source  
[NASA-CASE-NPO-16640-1-CU] c 72 N87-21661  
Surface modification using low energy ground state ion beams  
[NASA-CASE-NPO-17498-1-CU] c 72 N91-14813
- ORILLION, A. G.**  
Personal propulsion unit Patent  
[NASA-CASE-MFS-20130] c 28 N71-27585
- ORLIK, F. W.**  
Pressure seal Patent  
[NASA-CASE-NPO-10796] c 15 N71-27068
- ORLOFF, K. L.**  
Combined dual scatter, local oscillator laser Doppler velocimeter  
[NASA-CASE-ARC-10642-1] c 36 N76-14447  
Rhomboid prism pair for rotating the plane of parallel light beams  
[NASA-CASE-ARC-11311-1] c 74 N83-13978
- ORMISTON, R. A.**  
Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c 05 N77-17029
- ORNER, J. W.**  
Method and apparatus for detecting gross leaks Patent  
[NASA-CASE-ERC-10033] c 14 N71-26672
- OROURKE, T. E., JR.**  
Sealing member and combination thereof and method of producing said sealing member Patent  
[NASA-CASE-XMS-01625] c 15 N71-23022
- ORTH, N. W.**  
Process for producing dispersion strengthened nickel with aluminum Patent  
[NASA-CASE-XLE-06969] c 17 N71-24142  
Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-1] c 24 N81-17170  
Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c 24 N81-26179
- OSBORNE, ERIC P.**  
Laser optical disk position encoder with active heads  
[NASA-CASE-GSC-13175-1] c 74 N92-29133
- OSHER, J. V.**  
Miniature muscle displacement transducer  
[NASA-CASE-NPO-13519-1] c 33 N76-19338
- OSMUNDSON, J.**  
Dually mode locked Nd:YAG laser  
[NASA-CASE-GSC-11746-1] c 36 N75-19654
- OSTROFF, A. J.**  
Star image motion compensator  
[NASA-CASE-LAR-10523-1] c 14 N72-22444
- OSTROFF, J.**  
Rotary actuator  
[NASA-CASE-NPO-10244] c 15 N72-26371
- OSULLIVAN, W. J., JR.**  
Method and apparatus for shock protection Patent  
[NASA-CASE-XLA-00482] c 15 N70-36409  
Self supporting space vehicle Patent  
[NASA-CASE-XLA-00117] c 31 N71-17680  
Thermal control wall panel Patent  
[NASA-CASE-XLA-01243] c 33 N71-22792  
Thermal control panel Patent  
[NASA-CASE-XLA-07728] c 33 N71-22890
- OTHMAN, T. E.**  
Safety-type locking pin  
[NASA-CASE-MFS-18495] c 15 N72-11385
- OTOSHI, T. Y.**  
Rotary vane attenuator wherein rotor has orthogonally disposed resistive and dielectric cards  
[NASA-CASE-NPO-11418-1] c 14 N73-13420
- OTOUSA, JOSEPH E.**  
Metal etching composition  
[NASA-CASE-MFS-29576-1] c 25 N92-25399
- OTTENBRITE, RAPHAEL M.**  
Bis(4-(3,4-dimethylenepyrrolidyl)-phenyl) methane  
[NASA-CASE-LAR-13965-1-CU] c 23 N90-21118  
Bis (4-(3,4-dimethylene-pyrrolidyl)-phenyl) methane  
[NASA-CASE-LAR-13965-2-CU] c 23 N91-14418  
Polyimide from bis(n-isoprenyl)s of aryl diamides  
[NASA-CASE-LAR-14330-2-CU] c 27 N93-22033
- OTTO, G. H.**  
Synthesis of superconducting compounds by explosive compaction of powders  
[NASA-CASE-MFS-20861-1] c 18 N73-32437
- OUTLAW, R. A.**  
In situ transfer standard for ultrahigh vacuum gage calibration  
[NASA-CASE-LAR-10862-1] c 35 N74-15092
- Precision manipulator heating and cooling apparatus for use in UHV systems with sample transfer capability  
[NASA-CASE-LAR-13040-1] c 37 N85-29286
- OUTLAW, RONALD A.**  
Converting a CO<sub>2</sub> atmosphere to a high-purity O<sub>2</sub> supply  
[NASA-CASE-LAR-14398-1] c 25 N92-30098
- OVERHAUSER, ALBERT W.**  
Alternating gradient photodetector  
[NASA-CASE-NPO-17235-1-CU] c 35 N90-21358
- OWEN, JAMES W.**  
Low temperature storage container for transporting perishables to space station  
[NASA-CASE-MFS-28248-1] c 31 N88-24817  
Capillary heat transport and fluid management device  
[NASA-CASE-MFS-28217-1] c 34 N89-14392  
Spacecraft component heater control system  
[NASA-CASE-MFS-28327-1] c 18 N89-28556
- OWEN, R. B.**  
Collimated beam manifold with the number of output beams variable at a given output angle  
[NASA-CASE-MFS-25312-1] c 74 N83-17305  
Dual laser optical system and method for studying fluid flow  
[NASA-CASE-MFS-25315-1] c 36 N83-29680  
Double window viewing chamber assembly  
[NASA-CASE-MFS-28057-1] c 09 N87-14355
- OWEN, ROBERT B.**  
Laser schlieren crystal monitor  
[NASA-CASE-MFS-28060-1] c 76 N87-25862
- OWENS, GREGG R.**  
Hybrid bearings for turbopumps and the like  
[NASA-CASE-MFS-28491-1] c 37 N93-28326
- OWENS, L. J.**  
Magnetic electrical connectors for biomedical percutaneous implants  
[NASA-CASE-KSC-11030-1] c 52 N77-25772  
Rotational joint assembly for the prosthetic leg  
[NASA-CASE-KSC-11004-1] c 54 N77-30749  
Ocean thermal plant  
[NASA-CASE-KSC-11034-1] c 44 N78-32542  
Illumination control apparatus for compensating solar light  
[NASA-CASE-KSC-11010-1] c 74 N79-12890  
Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c 52 N79-26772
- OWENS, LESTER J.**  
Personnel emergency carrier vehicle  
[NASA-CASE-KSC-11282-1] c 85 N87-21755
- OZAWA, T.**  
Portable reflectance spectrometer  
[NASA-CASE-NPO-13556-1] c 35 N84-33766

## P

- PACALA, T. J.**  
Charge transfer reaction laser with preionization means  
[NASA-CASE-NPO-13945-1] c 36 N78-27402  
Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c 33 N82-24418
- PACALA, THOMAS J.**  
Multiplex electric discharge gas laser system  
[NASA-CASE-NPO-16433-1] c 36 N87-23961  
Magnetically switched power supply system for lasers  
[NASA-CASE-NPO-16402-2] c 33 N88-24862
- PACE, G. D., JR.**  
Sun direction detection system  
[NASA-CASE-NPO-13722-1] c 74 N77-22951
- PACIOREK, K. J. L.**  
Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-1] c 27 N78-32256  
Compound oxidized styrylphosphine  
[NASA-CASE-MSC-14903-2] c 27 N80-10358  
Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-3] c 27 N80-24438  
Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c 23 N82-28353
- PACKARD, D. T.**  
Brushless DC motor control system responsive to control signals generated by a computer or the like  
[NASA-CASE-NPO-16420-1] c 33 N86-20681
- PACKARD, R. D.**  
Semiconductor surface protection material  
[NASA-CASE-ERC-10339-1] c 18 N73-30532
- PACKER, P. N.**  
Adjustable securing base  
[NASA-CASE-MSC-19666-1] c 37 N78-17383  
Variable contour securing system  
[NASA-CASE-MSC-16270-1] c 37 N78-27423
- PADILLA, D.**  
Method and apparatus for fluffing, separating, and cleaning fibers  
[NASA-CASE-LAR-11224-1] c 37 N76-18456

- PAGE, N. A.**  
Optical system  
[NASA-CASE-NPO-15801-1] c 74 N85-23396
- PAGEL, L. L.**  
Cooling system for high speed aircraft  
[NASA-CASE-LAR-12406-1] c 05 N81-26114
- PAIK, S. F.**  
Parametric microwave noise generator Patent  
[NASA-CASE-XER-11019] c 09 N71-23598
- PAIK, W. W.**  
Apparatus for recovering matter adhered to a host surface  
[NASA-CASE-NPO-11213] c 15 N73-20514
- PAINTER, J. H.**  
Anti-multipath digital signal detector  
[NASA-CASE-LAR-11827-1] c 32 N77-10392
- PALANDATI, C. F., JR.**  
Prevention of pressure build-up in electrochemical cells  
Patent  
[NASA-CASE-XGS-01419] c 03 N70-41864
- PAIMER, E. I.**  
Apparatus for testing a pressure responsive instrument  
Patent  
[NASA-CASE-XMF-04134] c 14 N71-23755
- PALSINGH, S.**  
Anti-gravity device  
[NASA-CASE-MFS-22758-1] c 70 N75-26789
- PALUMBO, DANIEL L.**  
Fault-tolerant fiber optic backplane  
[NASA-CASE-LAR-14785-1] c 74 N93-19052
- PAN, F. M.**  
A dc-coupled noninverting one-shot Patent  
[NASA-CASE-XNP-09450] c 10 N71-18723
- PAOLINI, J. J.**  
Full flow with shut off and selective drainage control valve Patent application  
[NASA-CASE-ERC-10208] c 15 N70-10867
- PAPELL, S. S.**  
Low viscosity magnetic fluid obtained by the colloidal suspension of magnetic particles Patent  
[NASA-CASE-XLE-01512] c 12 N70-40124  
Liquid storage tank venting device for zero gravity environment Patent  
[NASA-CASE-XLE-01449] c 15 N70-41646  
Capacitor and method of making same Patent  
[NASA-CASE-LEW-10364-1] c 09 N71-13522  
Fluid dispensing apparatus and method Patent  
[NASA-CASE-XLE-01182] c 27 N71-15635  
Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c 34 N83-27144  
Vortex generating flow passage design for increased film cooling effectiveness  
[NASA-CASE-LEW-14039-1] c 34 N85-33433
- PAQUETTE, E. G.**  
Sonic levitation apparatus  
[NASA-CASE-MFS-25828-1] c 71 N84-28568
- PARDOE, C. T.**  
Telemetry synchronizer  
[NASA-CASE-GSC-11868-1] c 17 N76-22245
- PARESCE, F.**  
Resistive anode image converter  
[NASA-CASE-HQN-10876-1] c 33 N76-27473
- PARISH, R. C.**  
Shuttle-launch triangular space station  
[NASA-CASE-MSC-20676-1] c 18 N86-24729
- PARK, J. J.**  
Method of making tubes Patent  
[NASA-CASE-XGS-04175] c 15 N71-18579
- PARKER, D. L.**  
Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction  
[NASA-CASE-MFS-23315-1] c 76 N78-24950
- PARKER, G. L.**  
Elimination of frequency shift in a multiplex communication system Patent  
[NASA-CASE-XNP-01306] c 07 N71-20814  
High speed phase detector Patent  
[NASA-CASE-XNP-01306-2] c 09 N71-24596  
Optical binocular scanning apparatus  
[NASA-CASE-NPO-11002] c 14 N72-22441  
Hydraulic drain means for servo-systems  
[NASA-CASE-NPO-10316-1] c 37 N77-22479
- PARKER, J. A.**  
Intumescent paints Patent  
[NASA-CASE-ARC-10099-1] c 18 N71-15469  
Modified polyurethane foams for fuel-fire Patent  
[NASA-CASE-ARC-10098-1] c 06 N71-24739  
Intumescent composition, foamed product prepared therewith, and process for making same  
[NASA-CASE-ARC-10304-1] c 18 N73-26572  
Flexible fire retardant polyisocyanate modified neoprene foam  
[NASA-CASE-ARC-10180-1] c 27 N74-12814  
Chromato-fluorographic drug detector  
[NASA-CASE-ARC-10633-1] c 25 N74-26947
- Intumescent composition, foamed product prepared therewith and process for making same  
[NASA-CASE-ARC-10304-2] c 27 N74-27037  
Fiber modified polyurethane foam for ballistic protection  
[NASA-CASE-ARC-10714-1] c 27 N76-15310  
Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c 27 N76-16230  
Honeycomb-laminate composite structure  
[NASA-CASE-ARC-10913-1] c 24 N78-15180  
Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-2] c 24 N78-27184  
Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c 24 N79-16915  
Phosphorus-containing bisimide resins  
[NASA-CASE-ARC-11321-1] c 27 N81-27272  
Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c 27 N83-31854  
Elastomer-modified phosphorus-containing imide resins  
[NASA-CASE-ARC-11400-1] c 27 N84-14322  
Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-3] c 27 N84-22745  
Metal phthalocyanine polymers  
[NASA-CASE-ARC-11405-1] c 27 N84-27884  
Fire blocking systems for aircraft seat cushions  
[NASA-CASE-ARC-11423-1] c 03 N84-33394  
Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-2] c 27 N85-21347  
Phthalocyanine polymers  
[NASA-CASE-ARC-11413-1] c 27 N85-21348  
Metal (2,4,4',4'',4''') phthalocyanine tetraamines as curing agents for epoxy resins  
[NASA-CASE-ARC-11424-1] c 27 N85-34281  
Maleimido substituted aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-1] c 23 N86-19376  
Metal phthalocyanine intermediates for the preparation of polymers  
[NASA-CASE-ARC-11405-2] c 27 N86-19455  
Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
[NASA-CASE-ARC-11429-1-CU] c 27 N86-20560  
High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1SB] c 24 N86-21590  
Laminate comprising fibers embedded in cured amine terminated bis-imide  
[NASA-CASE-ARC-11421-3] c 24 N86-25416  
Light weight fire resistant graphite composites  
[US-PATENT-4,598,007] c 24 N86-28131  
Amine terminated bisaspartimide polymer  
[NASA-CASE-ARC-11421-2] c 27 N86-31726
- PARKER, JOHN A.**  
Process for curing bismaleimide resins  
[NASA-CASE-ARC-11429-4CU] c 27 N87-15304  
Vinyl stilbazoles  
[NASA-CASE-ARC-11429-3CU] c 27 N87-16908  
Fire and heat resistant laminating resins based on maleimido substituted aromatic cyclotriphosphazene polymer  
[NASA-CASE-ARC-11428-2] c 27 N87-16909  
Process for preparing phthalocyanine polymer from imide containing bisphthalonitrile  
[NASA-CASE-ARC-11511-2] c 27 N87-21112  
Structural panels  
[NASA-CASE-ARC-11429-2-CU] c 27 N87-22845  
Aminophenoxycyclotriphosphazene cured epoxy resins and the composites, laminates, adhesives and structures thereof  
[NASA-CASE-ARC-11548-1] c 27 N87-25469  
Aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-3] c 23 N88-24692
- PARKER, L. C.**  
Safe-arm initiator Patent  
[NASA-CASE-LAR-10372] c 09 N71-18599  
Inflight IFR procedures simulator  
[NASA-CASE-KSC-11218-1] c 09 N85-19990
- PARKER, O. J.**  
Despin weight release Patent  
[NASA-CASE-XLA-00679] c 15 N70-38601  
Spacecraft separation system for spinning vehicles and/or payloads Patent  
[NASA-CASE-XLA-02132] c 31 N71-10582  
Flared tube strainer  
[NASA-CASE-XLA-05056] c 15 N72-11389
- PARKER, R. J.**  
Method of improving the reliability of a rolling element system Patent  
[NASA-CASE-XLE-02999] c 15 N71-16052  
Low mass rolling element for bearings  
[NASA-CASE-LEW-11087-1] c 15 N73-30458  
Method of making rolling element bearings  
[NASA-CASE-LEW-11087-2] c 37 N74-15128
- Hollow rolling element bearings  
[NASA-CASE-LEW-11087-3] c 37 N74-21064
- PARKS, GARY S.**  
Miniature modular microwave end-to-end receiver  
[NASA-CASE-NPO-18713-1-CU] c 32 N93-29087
- PARMA, GEORGE F.**  
Gripping device  
[NASA-CASE-MSC-21365-1] c 37 N90-20408  
Robot-friendly connector  
[NASA-CASE-MSC-21864-1] c 37 N92-23544  
Robot-friendly connector  
[NASA-CASE-MSC-21864-1] c 37 N93-20117
- PARMAR, DEVENDRA S.**  
Shear sensitive monomer-polymer laminate structure and method of using same  
[NASA-CASE-LAR-14654-1-CU] c 39 N93-29613
- PARMLEY, R. T.**  
Aerodynamic protection for space flight vehicles  
Patent  
[NASA-CASE-XNP-02507] c 31 N71-17679
- PARR, R. A.**  
Preparation of monotectic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
[NASA-CASE-MFS-23816-1] c 26 N80-23419
- PARR, RICHARD A.**  
Gradient tempering process  
[NASA-CASE-MFS-28496-1] c 26 N92-34239
- PARRA, G. T.**  
Angle detector  
[NASA-CASE-ARC-11036-1] c 35 N78-32395  
Electronic scanning pressure measuring system and transducer package  
[NASA-CASE-ARC-11361-1] c 35 N84-22934
- PARROTT, TONY**  
Consecutive plate acoustic suppressor apparatus and methods  
[NASA-CASE-LEW-15430-1] c 71 N93-17051
- PARSONS, W. E.**  
Electronic checkout system for space vehicles Patent  
[NASA-CASE-KKS-08012-2] c 31 N71-15566  
Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c 52 N77-14738
- PARTHASARATHY, S. P.**  
System and method for obtaining wide screen Schlieren photographs  
[NASA-CASE-NPO-14174-1] c 74 N79-20856  
System for detecting substructure microfractures and method therefore  
[NASA-CASE-NPO-14192-1] c 39 N80-10507  
System for plotting subsoil structure and method therefor  
[NASA-CASE-NPO-14191-1] c 31 N80-32584  
Carbon granule probe microphone for leak detection  
[NASA-CASE-NPO-16027-1] c 35 N85-21597
- PARTSCH, V. M.**  
Purge device for thrust engines Patent  
[NASA-CASE-XMS-04826] c 28 N71-28849
- PASCIUTTI, E. R.**  
Protection for energy conversion systems  
[NASA-CASE-XGS-04808] c 03 N69-25146  
Inverter with means for base current shaping for sweeping charge carriers from base region Patent  
[NASA-CASE-XGS-06226] c 10 N71-25950  
A dc to ac to dc converter having transistor synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c 09 N72-25253
- PASIERB, E. F.**  
GaAs solar detector using manganese as a doping agent  
Patent  
[NASA-CASE-XNP-01328] c 26 N71-18064
- PASSMAN, H. M.**  
Heat conductive resiliently compressible structure for space electronics package modules Patent  
[NASA-CASE-MSC-12389] c 33 N71-29052
- PATE, W. E.**  
Color perception tester  
[NASA-CASE-KSC-10278] c 05 N72-16015
- PATEL, B. C.**  
Method and technique for installing light-weight, fragile, high-temperature fiber insulation  
[NASA-CASE-MSC-16934-3] c 24 N84-16262
- PATER, R. H.**  
High temperature resistant polyimide from tetra ester, diamine, diester and N-arynadimide  
[NASA-CASE-LEW-13864-1] c 27 N86-19457
- PATER, RUTH H.**  
A tough performance simultaneous semi-interpenetrating polymer network  
[NASA-CASE-LAR-14339-1] c 27 N90-26955  
Semi-interpenetrating polymer network for tougher and more microcracking resistant high temperature polymers  
[NASA-CASE-LAR-13925-1] c 27 N92-21711  
Tough, high performance, addition-type thermoplastic polymers  
[NASA-CASE-LAR-14346-1] c 27 N92-22044

- Semi-interpenetrating polymer network for tougher and more microcracking resistant high temperature polymers  
[NASA-CASE-LAR-13925-2] c 27 N93-11059
- A tough high performance composite matrix  
[NASA-CASE-LAR-14338-1] c 24 N93-13416
- Low toxicity high temperature PMR polyimide  
[NASA-CASE-LAR-14639-1] c 27 N93-14709
- PATON, W. J.**  
Flammability test chamber Patent  
[NASA-CASE-KSC-10126] c 11 N71-24985
- PATTEE, H. E.**  
Attaching of strain gages to substrates  
[NASA-CASE-FRC-10093-1] c 35 N80-20560
- PATTEN, C. W.**  
Method and apparatus for attaching physiological monitoring electrodes Patent  
[NASA-CASE-XFR-07658-1] c 05 N71-26293
- PATTERSON, J. C., JR.**  
Wingtip vortex dissipator for aircraft  
[NASA-CASE-LAR-11645-1] c 02 N77-10001
- Wingtip vortex propeller  
[NASA-CASE-LAR-13019-1] c 07 N85-35194
- PATTERSON, JAMES C.**  
Underwing compression vortex attenuation device  
[NASA-CASE-LAR-14744-1] c 02 N93-19053
- PATTERSON, JAMES C., JR.**  
Compression pylon  
[NASA-CASE-LAR-13777-1] c 05 N90-20078
- Wingtip vortex turbine  
[NASA-CASE-LAR-14116-1] c 05 N91-14345
- PATTERSON, W. J.**  
Synthesis of siloxane-containing epoxy polymers Patent  
[NASA-CASE-MFS-13994-1] c 06 N71-11240
- Siloxane containing epoxide compounds  
[NASA-CASE-MFS-13994-2] c 06 N72-25148
- Silphenylenesiloxane polymers having in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20979] c 06 N72-25151
- Polymerizable disilanols having in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20979-2] c 06 N73-32030
- PAULI, F. A.**  
Attitude controls for VTOL aircraft Patent  
[NASA-CASE-XAC-08972] c 02 N71-20570
- PAULKOVICH, J.**  
Apparatus for measuring current flow Patent  
[NASA-CASE-XGS-02439] c 14 N71-19431
- Coulometer and third electrode battery charging circuit Patent  
[NASA-CASE-GSC-10487-1] c 03 N71-24719
- Buck/boost regulator  
[NASA-CASE-GSC-12360-1] c 33 N81-19392
- Non-contacting power transfer device  
[NASA-CASE-GSC-12595-1] c 33 N82-24422
- PAULL, S.**  
Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00458] c 09 N70-38604
- Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00131] c 09 N70-38995
- PAVLICS, F.**  
Resilient wheel Patent  
[NASA-CASE-MFS-13929] c 15 N71-27091
- PAWLICK, E. V.**  
Plasma device feed system Patent  
[NASA-CASE-XLE-02902] c 25 N71-21694
- Ion thruster with a combination keeper electrode and electron baffle  
[NASA-CASE-NPO-11880] c 28 N73-24783
- Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c 37 N81-25371
- PAWLOWSKI, J. F.**  
Method and apparatus for receiving and tracking phase modulated signals  
[NASA-CASE-MSC-16170-2] c 32 N84-27952
- PAXSON, DANIEL E.**  
System and method for cancelling expansion waves in a wave rotor  
[NASA-CASE-LEW-15218-1] c 34 N93-11172
- PEARSON, A. O.**  
Measurement of gas production of microorganisms  
[NASA-CASE-LAR-11326-1] c 35 N75-33368
- PEASE, R. E.**  
Longwall shearer tracking system  
[NASA-CASE-MFS-25717-1] c 35 N84-33768
- PECHMAN, A.**  
Two-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-1] c 27 N76-22377
- Three-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-2] c 27 N76-23426
- PECK, S. R.**  
Voltage feed through apparatus having reduced partial discharge  
[NASA-CASE-GSC-12347-1] c 33 N80-18286
- PECKHAM, RICHARD J.**  
Altitude compensating ablative stiffening band for rocket motor nozzles  
[NASA-CASE-MFS-28728-1] c 20 N93-28950
- PECKHAM, V. A., JR.**  
Sample collecting impact bit Patent  
[NASA-CASE-XNP-01412] c 15 N70-42034
- PEDERSON, C. W.**  
Low distortion automatic phase control circuit  
[NASA-CASE-MFS-21671-1] c 33 N74-22885
- PEELGREN, M. L.**  
Shell side liquid metal boiler  
[NASA-CASE-NPO-10831] c 33 N72-20915
- PEER, C. R.**  
Connector strips-positive, negative and T tabs  
[NASA-CASE-XGS-01395] c 03 N69-21539
- PEGDEN, C. D.**  
Multiple in-line docking capability for rotating space stations  
[NASA-CASE-MFS-20855-1] c 15 N77-10112
- PELCHAT, G. M.**  
Adaptive polarization separation  
[NASA-CASE-LAR-12196-1] c 33 N81-26358
- PELISCHEK, T. E.**  
Foldable self-erecting joint  
[NASA-CASE-MSC-20635-1] c 18 N87-14373
- PELISCHEK, TIMOTHY E.**  
Pre-integrated truss space station and method of assembly  
[NASA-CASE-MSC-22015-1] c 18 N93-20042
- PELLERIN, C. J., JR.**  
Two axis fluxgate magnetometer Patent  
[NASA-CASE-GSC-10441-1] c 14 N71-27325
- PENKO, PAUL F.**  
Heat exchanger for electrothermal devices  
[NASA-CASE-LEW-14037-1] c 20 N87-16875
- PENN, B. G.**  
Process for producing tris s(n-methylamino) methylsilane  
[NASA-CASE-MFS-25721-1] c 25 N85-21280
- PENN, BENJAMIN G.**  
Method for machining holes in composite materials  
[NASA-CASE-MFS-28044-1] c 31 N87-25491
- PENNINGTON, JACK E.**  
Space spider crane  
[NASA-CASE-LAR-13411-1-SB] c 18 N88-23828
- PENQUE, N. J.**  
Varactor high level mixer  
[NASA-CASE-XGS-02171] c 09 N69-24324
- PEOPLES, J. A.**  
Multiway vortex valve system Patent  
[NASA-CASE-XMF-04709] c 15 N71-15609
- PEREZ, RAUL M.**  
Method for non-destructive estimation of waveguide directional coupler dimensions  
[NASA-CASE-NPO-18454-1-CU] c 33 N92-17865
- Method for non-destructive estimation of waveguide directional coupler dimensions  
[NASA-CASE-NPO-18454-1-CU] c 33 N93-18285
- PERKINS, G. S.**  
Detent servomotor Patent  
[NASA-CASE-XNP-06936] c 15 N71-24695
- Ball screw linear actuator  
[NASA-CASE-NPO-11222] c 15 N72-25456
- Sun tracking solar energy collector  
[NASA-CASE-NPO-13921-1] c 44 N79-14526
- Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c 37 N81-25371
- PERKINS, GERALD S.**  
Low noise lead screw positioner  
[NASA-CASE-NPO-15617-1] c 35 N87-21304
- PERKINS, H.**  
System for imposing directional stability on a rocket-propelled vehicle  
[NASA-CASE-MFS-21311-1] c 20 N76-21275
- PERKINS, P. J., JR.**  
Cryogenic insulation system Patent  
[NASA-CASE-XLE-04222] c 23 N71-22881
- Insulation system Patent  
[NASA-CASE-XLE-02647] c 18 N71-23658
- PERLMAN, M.**  
Linear three-tap feedback shift register Patent  
[NASA-CASE-NPO-10351] c 08 N71-12503
- Binary sequence detector Patent  
[NASA-CASE-XNP-05415] c 08 N71-12505
- Digital function generator  
[NASA-CASE-NPO-11104] c 08 N72-22165
- Feedback shift register with states decomposed into cycles of equal length  
[NASA-CASE-NPO-11082] c 08 N72-22167
- Pseudonoise sequence generators with three tap linear feedback shift registers  
[NASA-CASE-NPO-11406] c 08 N73-12175
- A m-ary linear feedback shift register with binary logic  
[NASA-CASE-NPO-11868] c 10 N73-20254
- System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c 33 N75-19519
- Nonlinear nonsingular feedback shift registers  
[NASA-CASE-NPO-13451-1] c 33 N76-14373
- PERLMAN, MARVIN**  
Asymmetric soft-error resistant memory  
[NASA-CASE-NPO-17394-1-CU] c 60 N91-31810
- Mappings between codewords of two distinct (N,K) Reed-Solomon codes over GF(2 sup J)  
[NASA-CASE-NPO-18771-1-CU] c 61 N93-11664
- PERLMUTTER, M.**  
Device for directionally controlling electromagnetic radiation Patent  
[NASA-CASE-XLE-01716] c 09 N70-40234
- PERRY, C. L.**  
Metabolic analyzer  
[NASA-CASE-MFS-21415-1] c 52 N74-20728
- PERRY, G. D.**  
Zero gravity apparatus Patent  
[NASA-CASE-XMF-06515] c 14 N71-23227
- PERRY, J. C.**  
System for a displaying at a remote station data generated at a central station and for powering the remote station from the central station  
[NASA-CASE-GSC-12411-1] c 33 N81-14221
- PERRY, JOSEPH W.**  
All-optical photochromic spatial light modulators based on photoinduced electron transfer in rigid matrices  
[NASA-CASE-NPO-17612-1-CU] c 74 N92-16808
- PERRY, RONNIE B.**  
Performance of blasting caps  
[NASA-CASE-LAR-13832-1] c 28 N93-18274
- PERRY, W. E.**  
Optical conversion method  
[NASA-CASE-MSC-12618-1] c 74 N78-17865
- PERSON, J. K.**  
Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c 44 N79-24431
- PERSON, LEE H.**  
Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13734-1-CU] c 09 N90-20096
- PERSON, LEE H., JR.**  
Method and system for monitoring and displaying engine performance parameters  
[NASA-CASE-LAR-14049-1] c 07 N89-23466
- Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13854-1-CU] c 04 N91-31120
- PESEK, C. T.**  
Clamping assembly for inertial components Patent  
[NASA-CASE-XMS-02184] c 15 N71-20813
- Circuit board package with wedge shaped covers  
[NASA-CASE-MFS-21919-1] c 10 N73-25243
- PESMAN, G. J.**  
Shock absorbing support and restraint means Patent  
[NASA-CASE-XMS-01240] c 05 N70-35152
- PETERS, D. A.**  
Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c 05 N77-17029
- PETERS, H. E.**  
Atomic standard with variable storage volume  
[NASA-CASE-GSC-11895-1] c 35 N76-15436
- PETERS, L., JR.**  
Horn antenna having V-shaped corrugated slots  
[NASA-CASE-LAR-11112-1] c 32 N76-15330
- PETERS, P. N.**  
Germanium coated microbridge and method  
[NASA-CASE-MFS-23274-1] c 33 N78-13320
- PETERS, PALMER N.**  
Planar thin film SQUID with integral flux concentrator  
[NASA-CASE-MFS-28282-1] c 76 N88-29602
- PETERS, R. L.**  
CRT blanking and brightness control circuit  
[NASA-CASE-KSC-10647-1] c 10 N72-31273
- PETERS, R. W.**  
Two component bearing Patent  
[NASA-CASE-XLA-00013] c 15 N71-29136
- PETERSEN, G. R.**  
Thermochemical generation of hydrogen  
[NASA-CASE-NPO-15015-1] c 25 N82-28368
- Enhancement of in vitro guayule propagation  
[NASA-CASE-NPO-15213-1] c 51 N83-17045
- PETERSEN, H. L.**  
Four phase logic systems  
[NASA-CASE-MSC-14240-1] c 33 N75-14957
- PETERSEN, H. W.**  
Adjustable mount for a trihedral mirror Patent  
[NASA-CASE-XNP-08907] c 23 N71-29123
- PETERSON, E. W.**  
Canopus detector including automotive gain control of photomultiplier tube Patent  
[NASA-CASE-XNP-03914] c 21 N71-10771
- PETERSON, N. C.**  
Ultraviolet atomic emission detector  
[NASA-CASE-HQN-10756-1] c 14 N72-25428



# PETERSON, N. E., JR.

- PETERSON, N. E., JR.**  
Shrink-fit gas valve Patent  
[NASA-CASE-XGS-00587] c 15 N70-35087
- PETERSON, P. D.**  
Portable environmental control system Patent  
[NASA-CASE-XMS-09632-1] c 05 N71-11203
- PETERSON, S. A.**  
Reusable captive blind fastener  
[NASA-CASE-MSC-18742-1] c 37 N82-26673
- PETERSON, S. T.**  
Meteoroid detector  
[NASA-CASE-LAR-10483-1] c 14 N73-32327
- PETERSON, V. S.**  
Flow angle sensor and read out system Patent  
[NASA-CASE-XLE-04503] c 14 N71-24864  
Solid state remote circuit selector switch  
[NASA-CASE-LEW-10387] c 09 N72-22201  
Low level signal limiter  
[NASA-CASE-XLE-04791] c 32 N74-22096  
Fine particulate capture device  
[NASA-CASE-LEW-11583-1] c 35 N79-17192
- PETERSON, W. A.**  
Folded traveling wave maser structure Patent  
[NASA-CASE-XNP-05219] c 16 N71-15550  
Superconducting magnet Patent  
[NASA-CASE-XNP-06503] c 23 N71-29049
- PETERSON, W. D.**  
Automatic frequency discriminators and control for a phase-lock loop providing frequency preset capabilities Patent  
[NASA-CASE-XMF-08665] c 10 N71-19467
- PETERSON, WAYNE L.**  
Assured crew return vehicle  
[NASA-CASE-MSC-21536-1] c 18 N92-21999
- PETERSSEN, H. E.**  
Medical subject monitoring systems  
[NASA-CASE-MSC-14180-1] c 52 N76-14757
- PETRASEK, D. W.**  
Reinforced metallic composites Patent  
[NASA-CASE-XLE-02428] c 17 N70-33288  
Method of making fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-00231] c 17 N70-38198  
Reinforced metallic composites Patent  
[NASA-CASE-XLE-00228] c 17 N70-38490  
Method of making fiber composites  
[NASA-CASE-LEW-10424-2-2] c 18 N72-25539
- PETRICK, E. N.**  
Variable thrust ion engine utilizing thermally decomposable solid-fuel Patent  
[NASA-CASE-XMF-00923] c 28 N70-36802
- PETRICK, S. W.**  
Radiative cooler  
[NASA-CASE-NPO-15465-1] c 34 N84-22903
- PETRICK, S. WALTER**  
Cryogenic regenerator including saran-carbon heat conduction matrix  
[NASA-CASE-NPO-17291-1-CU] c 34 N88-23946  
Flexible thermal apparatus for mounting of thermoelectric cooler  
[NASA-CASE-NPO-17806-1-CU] c 31 N91-27385  
Multicomponent gas sorption Joule-Thomson refrigeration  
[NASA-CASE-NPO-17569-1-CU] c 31 N92-15203
- PETRO, ANDREW J.**  
Orbital debris sweeper and method  
[NASA-CASE-MSC-21534-1] c 18 N91-21222  
Space station trash removal system  
[NASA-CASE-MSC-21723-1] c 18 N92-30315
- PETYNIA, W. W.**  
Space and atmospheric reentry vehicle Patent  
[NASA-CASE-XGS-00260] c 31 N70-37924  
Space vehicle system  
[NASA-CASE-MSC-12561-1] c 18 N76-17185
- PEYRAN, RICHARD J.**  
Swashplate control system  
[NASA-CASE-ARC-11633-1] c 08 N87-23631
- PEYTON, J.**  
Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c 32 N77-28346
- PEZDIRTZ, G. F.**  
Method and apparatus for shock protection Patent  
[NASA-CASE-XLA-00482] c 15 N70-36409  
Imidazopyrrolone/imide copolymers Patent  
[NASA-CASE-XLA-08802] c 06 N71-11238  
Dosimeter for high levels of absorbed radiation Patent  
[NASA-CASE-XLA-03645] c 14 N71-20430  
Solid state thermal control polymer coating Patent  
[NASA-CASE-XLA-01745] c 33 N71-28903
- PFAFF, H.**  
Swivel support for gas bearings Patent  
[NASA-CASE-XMF-07808] c 15 N71-23812

- PFIFFNER, H. J.**  
Bootstrap unloader Patent  
[NASA-CASE-XNP-09768] c 09 N71-12516
- PFIFFNER, HAROLD J.**  
Processing circuit with asymmetry corrector and convolutional encoder for digital data  
[NASA-CASE-MSC-20187-1] c 33 N87-25531
- PFLEGER, R. O.**  
Spherical shield Patent  
[NASA-CASE-XNP-01855] c 15 N71-28937
- PFLUGER, H. L.**  
Process of treating cellulosic membrane and alkaline with membrane separator  
[NASA-CASE-GSC-10019-1] c 44 N82-24641  
Separator for alkaline batteries and method of making same  
[NASA-CASE-GSC-10350-1] c 44 N82-24642  
Separator for alkaline electric cells and method of making  
[NASA-CASE-GSC-10017-1] c 44 N82-24643  
Separator for alkaline electric batteries and method of making  
[NASA-CASE-GSC-10018-1] c 44 N82-24644  
Alkaline electrochemical cells and method of making  
[NASA-CASE-GSC-10349-1] c 44 N82-24645  
Aqueous alkali metal hydroxide insoluble cellulose ether membrane  
[NASA-CASE-XGS-05584-1] c 25 N82-29370
- PHILIPS, A. E.**  
Helicopter anti-torque system using strakes  
[NASA-CASE-LAR-13233-1] c 05 N84-33400
- PHILIPP, W. H.**  
Selective nickel deposition  
[NASA-CASE-LEW-10965-1] c 15 N72-25452  
Production of pure metals  
[NASA-CASE-LEW-10906-1] c 25 N74-30502  
Process for making anhydrous metal halides  
[NASA-CASE-LEW-11860-1] c 37 N76-18458  
In situ self cross-linking of polyvinyl alcohol battery separators  
[NASA-CASE-LEW-12972-1] c 44 N79-25481  
In-situ cross linking of polyvinyl alcohol  
[NASA-CASE-LEW-13135-2] c 27 N81-24257  
Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13101-2] c 23 N81-29160  
Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c 33 N85-29144
- PHILIPP, WARREN H.**  
Method of making contamination-free ceramic bodies  
[NASA-CASE-LEW-14984-1] c 27 N92-16122  
Guanidine based vehicle/binders for use with oxides, metals, and ceramics  
[NASA-CASE-LEW-15314-1] c 27 N92-23461  
Guanidine based vehicle/binders for use with oxides, metals, and ceramics  
[NASA-CASE-LEW-15314-2] c 27 N93-28423  
Ion exchange polymers and method for making  
[NASA-CASE-LEW-15576-1] c 27 N93-31316
- PHILIPS, A. R.**  
Technique of duplicating fragile core  
[NASA-CASE-XLA-07829] c 15 N72-16329
- PHILIPS, ALBERT R.**  
Pressure rig for repetitive casting  
[NASA-CASE-LAR-14050-1] c 31 N90-21216
- PHILIPP, W. H.**  
Method of cross-linking polyvinyl alcohol and other water soluble resins  
[NASA-CASE-LEW-13103-1] c 27 N80-32516
- PHILLIPS, B. L. S.**  
File card marker Patent  
[NASA-CASE-XLA-02705] c 08 N71-15908
- PHILLIPS, E. C., JR.**  
Method of forming a wick for a heat pipe  
[NASA-CASE-NPO-13391-1] c 34 N76-27515
- PHILLIPS, W. H.**  
Variable-geometry winged reentry vehicle Patent  
[NASA-CASE-XLA-00241] c 31 N70-37986  
Station keeping of a gravity gradient stabilized satellite Patent  
[NASA-CASE-XLA-03132] c 31 N71-22969  
Rim inertial measuring system  
[NASA-CASE-LAR-12052-1] c 18 N81-29152  
Solar powered aircraft  
[NASA-CASE-LAR-12615-1] c 05 N84-12154
- PHILLIPS, W. M.**  
Shell side liquid metal boiler  
[NASA-CASE-NPO-10831] c 33 N72-20915  
Cermet composition and method of fabrication  
[NASA-CASE-NPO-13120-1] c 27 N76-15311  
High temperature oxidation resistant cermet compositions  
[NASA-CASE-NPO-13666-1] c 27 N77-13217

# PERSONAL AUTHOR INDEX

- Nuclear thermionic converter  
[NASA-CASE-NPO-13121-1] c 73 N77-18891  
High temperature resistant cermet and ceramic compositions  
[NASA-CASE-NPO-13690-1] c 27 N78-19302  
High temperature resistant cermet and ceramic compositions  
[NASA-CASE-NPO-13690-2] c 27 N79-14213  
Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c 37 N81-25371
- PHILLIPS, W. MORRIS**  
Flexible heating head for induction heating apparatus and method  
[NASA-CASE-LAR-14679-2] c 32 N92-31150  
Flexible heating head for induction heating apparatus and method  
[NASA-CASE-LAR-14418-1] c 32 N92-31257
- PHILLIPS, WILLIAM M., JR.**  
Heating head for induction heating apparatus  
[NASA-CASE-LAR-14429-1] c 33 N93-29173
- PHILIEGER, G. A., JR.**  
Separation simulator Patent  
[NASA-CASE-XKS-04631] c 10 N71-23663  
Internal work light Patent  
[NASA-CASE-XKS-05932] c 09 N71-26767  
Universal environment package with sectional component housing  
[NASA-CASE-KSC-10031] c 15 N72-22486  
Pressurized lighting system  
[NASA-CASE-KSC-10644] c 09 N72-27227
- PIASECKI, L. R.**  
Apparatus and method for control of a solid fueled rocket vehicle Patent  
[NASA-CASE-XNP-00217] c 28 N70-38181
- PICCIOLLO, G. L.**  
Flavin coenzyme assay  
[NASA-CASE-GSC-10565-1] c 06 N72-25149  
Method of detecting and counting bacteria in body fluids  
[NASA-CASE-GSC-11092-2] c 04 N73-27052  
Automatic instrument for chemical processing to detect microorganism in biological samples by measuring light reactions  
[NASA-CASE-GSC-11169-2] c 05 N73-32011  
Method of detecting and counting bacteria  
[NASA-CASE-GSC-11917-2] c 51 N76-29891  
Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c 51 N77-22794  
Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c 52 N79-14750  
Rapid, quantitative determination of bacteria in water  
[NASA-CASE-GSC-12158-1] c 51 N83-27569
- PICHAICHANARONG, P.**  
Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NPO-15767-1] c 23 N84-16255
- PICKETT, HERBERT M.**  
Method and means for generation of tunable laser sidebands in the far-infrared region  
[NASA-CASE-NPO-16497-1-CU] c 36 N87-25567
- PIERCE, R. M.**  
Propellant grain for rocket motors Patent  
[NASA-CASE-XGS-03556] c 27 N70-35534
- PIERSON, DUANE L.**  
Kinetic tetrazolium microtiter assay  
[NASA-CASE-MSC-21979-1] c 51 N93-17049
- PIKE, JAMES F.**  
Substantially oxygen-free contact tube  
[NASA-CASE-LAR-14169-1] c 37 N92-17677
- PINCKNEY, K. R.**  
System for monitoring the presence of neutrals in a stream of ions Patent  
[NASA-CASE-XNP-02592] c 24 N71-20518
- PINCKNEY, S. Z.**  
Static pressure probe  
[NASA-CASE-LAR-11552-1] c 35 N76-14429
- PINCUS, B. R.**  
Scanning aspect sensor employing an apertured disc and a commutator  
[NASA-CASE-XGS-08266] c 14 N69-27432
- PING, T.**  
Two-axis, self-nulling skin friction balance  
[NASA-CASE-LAR-13294-1] c 35 N86-32696
- PING, TCHENG**  
Miniature remote dead weight calibrator  
[NASA-CASE-LAR-13564-1] c 35 N87-25558  
Skin friction balance  
[NASA-CASE-LAR-13710-1] c 35 N90-17117
- PINKEL, I. I.**  
Reduced gravity liquid configuration simulator  
[NASA-CASE-XLE-02624] c 12 N69-39988
- PINSON, G. T.**  
Guide for a typewriter  
[NASA-CASE-MFS-15218-1] c 37 N77-19457

- PIPPEN, D. L.**  
High voltage pulse generator Patent  
[NASA-CASE-MSC-12178-1] c 09 N71-13518
- PITELLI, E. E.**  
Transverse piezoresistance and pinch effect electromechanical transducers Patent  
[NASA-CASE-ERC-10088] c 26 N71-25490
- PITTS, D. E.**  
Method for manufacturing mirrors in zero gravity environment  
[NASA-CASE-MSC-12611-1] c 12 N76-15189
- PITTS, F. L.**  
Electronic strain-level counter  
[NASA-CASE-LAR-10756-1] c 32 N73-26910
- PITTS, W. C.**  
Two force component measuring device Patent  
[NASA-CASE-XAC-04886-1] c 14 N71-20439
- PITTS, WILLIAM C.**  
Composite flexible blanket insulation  
[NASA-CASE-ARC-11907-1-NP] c 24 N91-31236
- PIVIOTTO, T. J.**  
Inert gas metallic vapor laser  
[NASA-CASE-NPO-13449-1] c 36 N75-32441  
High power metallic halide laser  
[NASA-CASE-NPO-14782-1] c 36 N82-28616  
Method and apparatus for convection control of metallic halide vapor density in a metallic halide laser  
[NASA-CASE-NPO-15021-1] c 36 N83-10417
- PIZZECK, D. E.**  
Connector  
[NASA-CASE-LAR-11709-1] c 37 N76-27567
- PLAKAS, C. J.**  
Firefly pump-metering system  
[NASA-CASE-GSC-10218-1] c 15 N72-21465
- PLAMONDON, J. A., JR.**  
Conically shaped cavity radiometer with a dual purpose cone winding Patent  
[NASA-CASE-XNP-09701] c 14 N71-26475
- PLAMOWSKI, S. C.**  
Traversing probe Patent  
[NASA-CASE-XFR-02007] c 12 N71-24692
- PLATT, P. K.**  
Cryogenic connector for vacuum use Patent  
[NASA-CASE-XGS-02441] c 15 N70-41629
- PLAZEK, D. J.**  
Instrument for measuring torsional creep and recovery Patent  
[NASA-CASE-XLE-01481] c 14 N71-10781
- PLEASANTS, J. E.**  
Inflatable support structure Patent  
[NASA-CASE-XLA-01731] c 32 N71-21045  
Vortex breach high pressure gas generator  
[NASA-CASE-LAR-10549-1] c 31 N73-13898
- PLETOVICH, ELIZABETH B.**  
Porous plug for reducing orifice induced pressure error in airfoils  
[NASA-CASE-LAR-13569-1] c 35 N89-12841
- PLITT, K. F.**  
Spacecraft battery seals  
[NASA-CASE-XGS-03864] c 15 N69-24320
- PLOUGH, ALAN**  
EMU helmet mounted display  
[NASA-CASE-MSC-21460-1] c 54 N91-13879
- PODGORSKI, T. J.**  
Method of forming shrink-fit compression seal  
[NASA-CASE-LAR-11563-1] c 37 N77-23482
- POESCHEL, R. L.**  
Ion thruster  
[NASA-CASE-LEW-10770-1] c 28 N72-22770
- POGORZELSKI, F. S.**  
Apparatus for welding sheet material  
[NASA-CASE-XMS-01330] c 37 N75-27376
- POHL, H. O.**  
Two-step rocket engine bipropellant valve Patent  
[NASA-CASE-XMS-04890-1] c 15 N70-22192
- POHL, J. G.**  
Three-dimensional tracking solar energy concentrator and method for making same  
[NASA-CASE-NPO-13736-1] c 44 N77-32583  
Portable linear-focused solar thermal energy collecting system  
[NASA-CASE-NPO-13734-1] c 44 N78-10554
- POHM, A. V.**  
Magnetometer with a miniature transducer and automatic scanning  
[NASA-CASE-LAR-11617-2] c 35 N78-32397
- POI, SHARON**  
Generation of animation sequences of three dimensional models  
[NASA-CASE-MSC-21379-1-SB] c 61 N90-27340
- POHAMUS, E. C.**  
Variable sweep wing configuration Patent  
[NASA-CASE-XLA-00230] c 02 N70-33255  
Variable sweep aircraft wing Patent  
[NASA-CASE-XLA-00350] c 02 N70-38011
- Variable sweep aircraft Patent  
[NASA-CASE-XLA-03659] c 02 N71-11041
- POLHEMUS, J. T.**  
Condition sensor system and method  
[NASA-CASE-MSC-14805-1] c 54 N78-32720  
Pulse transducer with artifact signal attenuator  
[NASA-CASE-FRC-11012-1] c 52 N80-23969
- POLITES, MICHAEL E.**  
Rotating-unbalanced-mass devices and methods for scanning balloon-borne-experiments, free-flying spacecraft, and space shuttle/space station attached experiments  
[NASA-CASE-MFS-28425-1] c 35 N92-33010
- POLLACK, I.**  
Etching of aluminum for bonding Patent  
[NASA-CASE-XMF-02303] c 17 N71-23828  
Dye penetrant for surfaces subsequently contacted by liquid oxygen Patent  
[NASA-CASE-XMF-02221] c 18 N71-27170
- POLLACK, J. L.**  
High powered arc electrodes  
[NASA-CASE-LEW-11162-1] c 33 N74-12913
- POLLARD, R. A.**  
Rescue litter flotation assembly Patent  
[NASA-CASE-XMS-04170] c 05 N71-22748
- POLLOCK, G. E.**  
Gas chromatograph injection system  
[NASA-CASE-ARC-10344-2] c 35 N75-26334
- POLSTORFF, W. K.**  
Simulator method and apparatus for practicing the mating of an observer-controlled object with a target  
[NASA-CASE-MFS-23052-2] c 74 N79-13855
- POLSTORFF, WALTER**  
Electrostatically suspended rotor for angular encoder  
[NASA-CASE-MFS-28294-1] c 31 N91-14508
- POMPLUM, A. R.**  
Sonic levitation apparatus  
[NASA-CASE-MFS-25828-1] c 71 N84-28568
- POOL, S. L.**  
Medical subject monitoring systems  
[NASA-CASE-MSC-14180-1] c 52 N76-14757
- POOLE, B. D., JR.**  
Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c 35 N83-21311
- POORMAN, R. M.**  
Exothermic furnace module  
[NASA-CASE-MFS-25707-1] c 35 N82-26631  
Low gravity exothermic heating/cooling apparatus  
[NASA-CASE-MSC-25707-1] c 35 N85-29214
- POORMAN, RICHARD M.**  
High temperature electric arc furnace and method  
[NASA-CASE-MFS-28281-1] c 09 N90-23415  
Arc/gas electrode  
[NASA-CASE-MFS-29766-1] c 33 N92-33030
- POPE, A. M.**  
Zero gravity separator Patent  
[NASA-CASE-XLE-00586] c 15 N71-15968
- POPE, ALAN T.**  
Method of encouraging attention by correlating video game difficulty with attention level  
[NASA-CASE-LAR-15022-1] c 53 N93-28128
- POPE, J. M.**  
Miniature ingestible telemeter devices to measure deep-body temperature  
[NASA-CASE-ARC-10583-1] c 52 N76-29894
- POPE, W. L.**  
Low gravity phase separator  
[NASA-CASE-MSC-14773-1] c 35 N78-12390
- POPICK, H.**  
Laser apparatus for removing material from rotating objects Patent  
[NASA-CASE-MFS-11279] c 16 N71-20400
- POPINSKI, Z.**  
Automotive absorption air conditioner utilizing solar and motor waste heat  
[NASA-CASE-NPO-15183-1] c 44 N82-26776
- POPMA, D. C.**  
Recovery of potable water from human wastes in below-G conditions Patent  
[NASA-CASE-XLA-03213] c 05 N71-11207
- PORADEK, J. C.**  
Process for conditioning tanned sharkskin and articles made therefrom Patent  
[NASA-CASE-XMS-09691-1] c 18 N71-15545  
Simultaneous treatment of SO<sub>2</sub> containing stack gases and waste water  
[NASA-CASE-MSC-16258-1] c 45 N79-12584
- PORTER, A. C.**  
Insulation bonding test system  
[NASA-CASE-MFS-25862-1] c 27 N85-20126
- PORTER, CHRISTOPHER C.**  
Core design for use with precision composite reflectors  
[NASA-CASE-NPO-17858-1-CU] c 24 N93-14700
- PORTER, E. E.**  
Spray coating apparatus having a rotatable workpiece holder  
[NASA-CASE-ARC-11110-1] c 37 N82-24492
- PORTER, R. N.**  
Liquid rocket system Patent  
[NASA-CASE-XNP-00610] c 28 N70-36910  
Zero gravity starting means for liquid propellant motors Patent  
[NASA-CASE-XNP-01390] c 28 N70-41275  
Force-balanced, throttle valve Patent  
[NASA-CASE-NPO-10808] c 15 N71-27432
- PORTER, W. A.**  
Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction  
[NASA-CASE-MFS-23315-1] c 76 N78-24950
- PORTNOY, W. A.**  
Insulated electrocardiographic electrodes  
[NASA-CASE-MSC-14339-1] c 05 N75-24716
- PORTWOOD, J. N.**  
Insulation bonding test system  
[NASA-CASE-MFS-25862-1] c 27 N85-20126
- POSCHENRIEDER, W. P.**  
Analytical photoionization mass spectrometer with an argon gas filter between the light source and monochromator Patent  
[NASA-CASE-LAR-10180-1] c 06 N71-13461
- POSEY, D. L.**  
Static pressure orifice system testing method and apparatus  
[NASA-CASE-LAR-12269-1] c 35 N80-18358
- POSHKUS, A. C.**  
Synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c 23 N82-16174  
Synthesis of 2,4,8,10-tetroxaspiro5,5undecane  
[NASA-CASE-ARC-11243-2] c 23 N85-33187
- POSNER, E. C.**  
Phase-locked loop with sideband rejecting properties Patent  
[NASA-CASE-XNP-02723] c 07 N70-41680  
Data compressor Patent  
[NASA-CASE-XNP-04067] c 08 N71-22707  
Apparatus for deriving synchronizing pulses from pulses in a single channel PCM communications system  
[NASA-CASE-NPO-11302-1] c 07 N73-13149  
Method and apparatus for a single channel digital communications system  
[NASA-CASE-NPO-11302-2] c 32 N74-10132
- POST, R. E.**  
Method of making a light weight battery plaque  
[NASA-CASE-LEW-13349-1] c 26 N84-22734
- POSTMA, R. W.**  
Thrust measurement  
[NASA-CASE-XMS-05731] c 35 N75-29382
- POTEATE, W. B.**  
Multiparameter vision testing apparatus  
[NASA-CASE-MSC-13601-2] c 54 N75-27759
- POTTER, A. E., JR.**  
Multispectral imaging system  
[NASA-CASE-MSC-12404-1] c 23 N73-13661
- POTTER, L. R.**  
Thermocouple installation  
[NASA-CASE-NPO-13540-1] c 35 N77-14409
- POTTER, N. H.**  
Method and apparatus for battery charge control Patent  
[NASA-CASE-XGS-05432] c 03 N71-19438
- POTTER, P. D.**  
Cassegrainian antenna subreflector flange for suppressing ground noise Patent  
[NASA-CASE-XNP-00683] c 09 N70-35425  
Dual mode horn antenna Patent  
[NASA-CASE-XNP-01057] c 07 N71-15907  
Dichroic plate  
[NASA-CASE-NPO-13506-1] c 35 N76-15435
- POUCHOT, W. D.**  
Self-adjusting multisegment, deployable, natural circulation radiator Patent  
[NASA-CASE-XHQ-03673] c 33 N71-29046
- POULSEN, P. D.**  
Longwall shearer tracking system  
[NASA-CASE-MFS-25717-1] c 35 N84-33768
- POVINELLI, L. A.**  
Burning rate control of solid propellants Patent  
[NASA-CASE-XLE-03494] c 27 N71-21819
- POWELL, C. A., JR.**  
Instrument for measuring the dynamic behavior of liquids Patent  
[NASA-CASE-XLA-05541] c 12 N71-26387
- POWELL, J. A.**  
Process for fabricating SiC semiconductor devices  
[NASA-CASE-LEW-12094-1] c 76 N76-25049
- POWELL, J. ANTHONY**  
Process for the controlled growth of single-crystal films of silicon carbide polytypes on silicon carbide wafers  
[NASA-CASE-LEW-15222-1] c 76 N91-26966

- Process for the homoepitaxial growth of single-crystal silicon carbide films on silicon carbide wafers  
[NASA-CASE-LEW-15223-1] c 76 N91-26967
- Process for the controlled growth of single-crystal films of silicon carbide polytypes on silicon carbide wafers  
[NASA-CASE-LEW-15222-3] c 76 N93-17413
- POWELL, J. D.**  
Iodine generator for reclaimed water purification  
[NASA-CASE-MSC-14632-1] c 54 N78-14784
- POWELL, W. B.**  
Thermocouple installation  
[NASA-CASE-NPO-13540-1] c 35 N77-14409
- POWELL, W. E., JR.**  
Target acquisition antenna  
[NASA-CASE-GSC-10064-1] c 10 N72-22235
- POWER, CHRISTOPHER A.**  
Method of fabricating a rocket engine combustion chamber  
[NASA-CASE-MFS-28569-1] c 27 N93-30565
- POWER, J. L.**  
Ion beam thruster shield  
[NASA-CASE-LEW-12082-1] c 20 N77-10148
- POWERS, E. I.**  
Thermal control system for a spacecraft modular housing  
[NASA-CASE-GSC-11018-1] c 31 N73-30829
- POZSONY, E. R.**  
Apparatus and method for skin packaging articles  
[NASA-CASE-MFS-20855] c 15 N73-27405
- PRABHAKARAN, RAMAMURTHY**  
Method of continuously determining crack length  
[NASA-CASE-LAR-14480-1-CU] c 39 N93-29612
- PRASTHOFER, W. P.**  
Controlled overspray spray nozzle  
[NASA-CASE-MFS-25139-1] c 34 N82-13376  
Cryogenic insulation strength and bond tester  
[NASA-CASE-MFS-25910-1] c 39 N86-20841
- PRATT, J. R.**  
Poly(carbonate-mide) polymer  
[NASA-CASE-LAR-13292-1] c 27 N86-24841
- PRATT, J. RICHARD**  
Novel polyimide compositions based on 4,4': isophthaloyldipthalic anhydride (IDPA)  
[NASA-CASE-LAR-14194-1] c 24 N90-15148  
Aromatic polyimides containing a dimethylsilane-linked dianhydride  
[NASA-CASE-LAR-14198-1] c 27 N90-26956  
Processable polyimide adhesive and matrix composite resin  
[NASA-CASE-LAR-14101-1] c 27 N91-15403  
Polyimide processing additives  
[NASA-CASE-LAR-13669-1] c 27 N92-29157  
Polyimides prepared from 3,5-diamino benzo trifluoride  
[NASA-CASE-LAR-14206-1] c 27 N93-29083  
Diphenylmethane-containing dianhydride and polyimides prepared therefrom  
[NASA-CASE-LAR-14487-1] c 27 N93-29085
- PRELIASCO, R. J.**  
Joint for deployable structures  
[NASA-CASE-NPO-16038-1] c 37 N86-19605
- PRESCOTT, R.**  
High resistance and raised modulus carbon fibers  
[NASA-TM-76884] c 24 N85-25436
- PRESCOTT, W. A.**  
Liquid-gas separation system Patent  
[NASA-CASE-XMS-01624] c 15 N70-40062
- PRESLEY, L. L.**  
Measurement of plasma temperature and density using radiation absorption  
[NASA-CASE-ARC-10598-1] c 75 N74-30156
- PRESTON, G. M.**  
Electronic checkout system for space vehicles Patent  
[NASA-CASE-XKS-08012-2] c 31 N71-15566
- PRESTON, G. W.**  
Satellite communication system Patent  
[NASA-CASE-XNP-02389] c 07 N71-28900
- PRICE, A. G.**  
Attitude sensor  
[NASA-CASE-LAR-10586-1] c 19 N74-15089
- PRICE, H. W.**  
Gravity gradient attitude control system Patent  
[NASA-CASE-GSC-10555-1] c 21 N71-27324
- PRICE, P.**  
Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c 34 N74-27730
- PRICE, S. B.**  
Surface roughness detector Patent  
[NASA-CASE-XLA-00203] c 14 N70-34161
- PRIDE, J. D., JR.**  
Remote controlled tubular disconnect Patent  
[NASA-CASE-XLA-01396] c 03 N71-12259
- PRIEBE, G. W.**  
Relief container  
[NASA-CASE-XMS-06761] c 05 N69-23192
- PRIMAS, LORI E.**  
Power supply conditioning circuit  
[NASA-CASE-NPO-17233-1-CU] c 33 N88-29095  
Fiber optic frequency transfer link  
[NASA-CASE-NPO-17703-1-CU] c 74 N91-27957
- PRIOLETTI, J. A.**  
Inductive liquid level detection system Patent  
[NASA-CASE-XLE-01609] c 14 N71-10500
- PRITCHARD, E. B.**  
Orbital and entry tracking accessory for globes  
[NASA-CASE-LAR-10626-1] c 19 N74-21015
- PRITCHARD, H. O.**  
Reduction of nitric oxide emissions from a combustor  
[NASA-CASE-ARC-10814-2] c 07 N80-26298
- PROCH, G. E.**  
Digital transmitter for data bus communications system  
[NASA-CASE-MSC-14558-1] c 32 N75-21486  
Low distortion receiver for bi-level baseband PCM waveforms  
[NASA-CASE-MSC-14557-1] c 32 N76-16249
- PROEMSEY, J. H.**  
Method for making a heat insulating and ablative structure  
[NASA-CASE-XMS-01108] c 15 N69-24322
- PROFFIT, R. L.**  
Hydrogen fire detection system with logic circuit to analyze the spectrum of temporal variations of the optical spectrum  
[NASA-CASE-MFS-13130] c 10 N72-17173
- PROGAR, D. J.**  
Process for applying black coating to metals Patent  
[NASA-CASE-XLA-06199] c 15 N71-24875  
Polyimide adhesives  
[NASA-CASE-LAR-11397-1] c 27 N75-29263  
Polyimide adhesives  
[NASA-CASE-LAR-12181-1] c 27 N78-17205  
Hot melt recharge system  
[NASA-CASE-LAR-12881-1] c 27 N84-14323  
Hot melt adhesive attachment pad  
[NASA-CASE-LAR-12894-1] c 27 N85-20125
- PROGAR, DONALD J.**  
Copolyimide with a combination of flexibilizing groups  
[NASA-CASE-LAR-13821-1] c 27 N90-16950  
Processable polyimide adhesive and matrix composite resin  
[NASA-CASE-LAR-14101-1] c 27 N91-15403  
Polyimide molding powder, coating, adhesive, and matrix resin  
[NASA-CASE-LAR-14163-1] c 27 N92-33014
- PROK, G. M.**  
Apparatus for making a metal slurry product Patent  
[NASA-CASE-XLE-00010] c 15 N70-33382
- PROKOPIUS, P. R.**  
Flow measuring apparatus  
[NASA-CASE-LEW-12078-1] c 35 N75-30503
- PROSSER, WILLIAM H.**  
System for determining the angle of impact of an object on a structure  
[NASA-CASE-LAR-14817-1] c 35 N93-17041  
System for determining the angle of impact of an object on a structure  
[NASA-CASE-LAR-14817-1] c 35 N93-20569  
Methods of determining loads and fiber orientations in anisotropic non-crystalline materials using energy flux deviation  
[NASA-CASE-LAR-14399-1] c 39 N93-26102
- PRUETT, B. J.**  
Apparatus for testing a pressure responsive instrument Patent  
[NASA-CASE-XMF-04134] c 14 N71-23755
- PRUETT, E. C.**  
Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c 18 N83-29303
- PRYOR, D. E.**  
Inflatable transpiration cooled nozzle  
[NASA-CASE-MFS-20619] c 28 N72-11708
- PRYOR, P. P., JR.**  
Computerized system for translating a torch head  
[NASA-CASE-MFS-23620-1] c 37 N79-10421
- PRZYBYSEWSKI, J. S.**  
Method and apparatus for sputtering utilizing an aperture electrode and a pulsed substrate bias  
[NASA-CASE-LEW-10920-1] c 17 N73-24569  
Joining lead wires to thin platinum alloy films  
[NASA-CASE-LEW-13934-1] c 35 N83-35338
- PSALTIS, D.**  
Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629
- PSALTIS, DEMETRI**  
GaAs-based optoelectronic neurons  
[NASA-CASE-NPO-18497-1-CU] c 63 N92-24245  
GaAs-based optoelectronic neurons  
[NASA-CASE-NPO-18497-1-CU] c 63 N93-24599
- PSARRAS, T.**  
Perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c 25 N81-14016
- PUCCINELLI, A. A.**  
Three-axis controller Patent  
[NASA-CASE-XAC-01404] c 05 N70-41581  
Transfer valve Patent  
[NASA-CASE-XAC-01158] c 15 N71-23051
- PUCILLO, G. L.**  
Integrated thermoelectric generator/space antenna combination  
[NASA-CASE-XER-09521] c 09 N72-12136
- PULLING, R. C.**  
Space suit  
[NASA-CASE-MSC-12609-1] c 05 N73-32012
- PURCELL, T. H., JR.**  
Electric storage battery  
[NASA-CASE-NPO-11021] c 03 N72-20032
- PURGOLD, G. C.**  
Automated syringe sampler  
[NASA-CASE-LAR-12308-1] c 35 N81-29407
- PURVES, LLOYD R.**  
Robot serviced space facility  
[NASA-CASE-GSC-13408-1] c 18 N92-24244
- PUSEY, MARC L.**  
X ray sensitive area detection device  
[NASA-CASE-MFS-28232-1] c 74 N91-14835  
Drop deployment system for crystal growth apparatus  
[NASA-CASE-MFS-28422-1] c 29 N91-17250
- PUSTER, R. L.**  
A system for controlling the oxygen content of a gas produced by combustion  
[NASA-CASE-LAR-13257-1] c 25 N84-32447
- PUSTER, RICHARD L.**  
Method and device for determining heats of combustion of gaseous hydrocarbons  
[NASA-CASE-LAR-13528-1] c 25 N88-29002  
Device for quickly sensing the amount of O<sub>2</sub> in a combustion product gas  
[NASA-CASE-LAR-13816-1] c 35 N90-22025  
Improved method and apparatus for Mach number change in wind tunnel  
[NASA-CASE-LAR-13548-1] c 09 N91-28175
- PUTCHA, LAKSHMI**  
Intranasal scopolamine preparation and method  
[NASA-CASE-MSC-21858-1] c 52 N92-11628
- PUTNAM, D. F.**  
Electrolytic cell structure  
[NASA-CASE-LAR-11042-1] c 33 N75-27252
- PUTTERMAN, SETH**  
Acoustic positioning and orientation prediction  
[NASA-CASE-NPO-17511-1-CU] c 71 N91-14807

## Q

- QADER, S. A.**  
Solar heated fluidized bed gasification system  
[NASA-CASE-NPO-15071-1] c 44 N82-16475  
Solar heated oil shale pyrolysis process  
[NASA-CASE-NPO-16392-1] c 25 N86-25428
- QUATINETZ, M.**  
Method for producing fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-03925] c 18 N71-22894  
Gas purged dry box glove Patent  
[NASA-CASE-XLE-02531] c 05 N71-23080  
Process for producing dispersion strengthened nickel with aluminum Patent  
[NASA-CASE-XLE-06969] c 17 N71-24142  
Method of producing refractory composites containing tantalum carbide, hafnium carbide, and hafnium boride Patent  
[NASA-CASE-XLE-03940] c 18 N71-26153  
Refractory metal base alloy composites  
[NASA-CASE-XLE-03940-2] c 17 N72-28536
- QUATTRONE, P. D.**  
Exposure system for animals Patent  
[NASA-CASE-XAC-05333] c 11 N71-22875
- QUINN, R. B.**  
Maser for frequencies in the 7-20 GHz range  
[NASA-CASE-NPO-11437] c 16 N72-28521  
Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c 36 N80-18372  
Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c 36 N83-35350

## R

- Reynolds, R. K.**  
Hydrogen-fueled engine  
[NASA-CASE-NPO-13763-1] c 44 N78-33526

- RADNOFSKY, M. I.**  
Life raft Patent  
[NASA-CASE-XMS-00863] c 05 N70-34857  
Shock absorbing support and restraint means Patent  
[NASA-CASE-XMS-01240] c 05 N70-35152  
Life preserver Patent  
[NASA-CASE-XMS-00864] c 05 N70-36493  
Inflatable radar reflector unit Patent  
[NASA-CASE-XMS-00893] c 07 N70-40063  
Life raft stabilizer  
[NASA-CASE-MS-12393-1] c 02 N73-26006
- RAGGIO, C. W., JR.**  
Steerable solid propellant rocket motor Patent  
[NASA-CASE-XNP-00234] c 28 N70-38645
- RAHIM, WADI**  
Phase discriminating capacitive array sensor system  
[NASA-CASE-GSC-13460-1] c 33 N93-26104
- RAINEY, R. W.**  
High speed flight vehicle control Patent  
[NASA-CASE-XLA-08967] c 02 N71-27088
- RAINWATER, L. L.**  
Collapsible antenna boom and transmission line Patent  
[NASA-CASE-MFS-20068] c 07 N71-27191
- RAJ, SAI V.**  
High temperature creep and oxidation resistant chromium silicide matrix alloy containing molybdenum  
[NASA-CASE-LEW-15697-1] c 26 N93-29172
- RAMEY, R. L.**  
Depositing semiconductor films utilizing a thermal gradient  
[NASA-CASE-XKS-04614] c 15 N69-21460  
Active microwave irises and windows  
[NASA-CASE-LAR-10513-1] c 07 N72-25170  
Thin film microwave iris  
[NASA-CASE-LAR-10511-1] c 09 N72-29172
- RAMME, F. B.**  
Flexible conductive disc electrode Patent  
[NASA-CASE-FRC-10029] c 09 N71-24618  
Method of removing insulated material from insulated wires  
[NASA-CASE-FRC-10038] c 15 N72-20444  
Method of making dry electrodes  
[NASA-CASE-FRC-10029-2] c 05 N72-25121
- RAMOHALLI, K. N. R.**  
Silicone containing solid propellant  
[NASA-CASE-NPO-14477-1] c 28 N80-28536
- RAMSEY, JOHN K.**  
Post clamp  
[NASA-CASE-LEW-14862-1] c 37 N91-14617
- RAND, J. L.**  
Thin film strain transducer  
[NASA-CASE-WLP-10055-1] c 35 N84-28015  
Thin film strain transducer  
[NASA-CASE-WLP-10055-2] c 35 N85-21598
- RANDALL, J. C.**  
Attitude control for spacecraft Patent  
[NASA-CASE-XNP-02982] c 31 N70-41855
- RANDLE, R. J., JR.**  
Visual accommodation trainer-tester  
[NASA-CASE-ARC-11426-1] c 09 N84-12193
- RANDLE, ROBERT J.**  
Visual accommodation trainer-tester  
[NASA-CASE-ARC-11426-2] c 52 N89-16256
- RANEY, J. P.**  
Buoyant anti-slosh system Patent  
[NASA-CASE-XLA-04605] c 32 N71-16106
- RANSFORD, GARY A.**  
Digital data registration and differencing compression system  
[NASA-CASE-SSC-00010-1] c 82 N91-23976  
Digital data registration and differencing compression system  
[NASA-CASE-SSC-00010-2] c 82 N92-23550
- RANSONE, PHILIP O.**  
Reusable high-temperature heat pipes and heat pipe panels  
[NASA-CASE-LAR-13761-1] c 34 N90-20323  
Lightweight piston architecture  
[NASA-CASE-LAR-13926-1] c 37 N90-22042
- RAO, D. M.**  
Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c 02 N81-14968  
Leading edge flap system for aircraft control augmentation  
[NASA-CASE-LAR-12787-2] c 08 N85-19985
- RAPOSA, F. L.**  
Parasitic suppressing circuit  
[NASA-CASE-ERC-10403-1] c 10 N73-26228  
Transformer regulated self-stabilizing chopper  
[NASA-CASE-XGS-09186] c 33 N78-17295
- RAPOZA, E. J.**  
Reversible current control apparatus Patent  
[NASA-CASE-XLA-09371] c 10 N71-18724
- RASMUSSEN, H. P.**  
Transparent switchboard  
[NASA-CASE-MS-13746-1] c 10 N73-32143
- RASMUSSEN, ROBERT D.**  
Distributed computing system with dual independent communications paths between computers and employing split tokens  
[NASA-CASE-NPO-17185-1-CU] c 62 N91-14772
- RASQUIN, J. R.**  
Angular measurement system Patent  
[NASA-CASE-XMF-00447] c 14 N70-33179  
Electro-optical alignment control system Patent  
[NASA-CASE-XMF-00908] c 14 N70-40238  
Laser coolant and ultraviolet filter  
[NASA-CASE-MFS-20180] c 16 N72-12440  
Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332] c 05 N72-20097  
Apparatus for making diamonds  
[NASA-CASE-MFS-20698] c 15 N72-20446  
High temperature furnace for melting materials in space  
[NASA-CASE-MFS-20710] c 11 N72-23215  
Process for making diamonds  
[NASA-CASE-MFS-20698-2] c 15 N73-19457  
Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332-2] c 05 N73-25125  
Digital computing cardiometer  
[NASA-CASE-MFS-20284-1] c 52 N74-12778
- RASSWEILER, G. G.**  
Adaptive polarization separation  
[NASA-CASE-LAR-12196-1] c 33 N81-26358
- RATAJCZAK, A. F.**  
Solar cell shingle  
[NASA-CASE-LEW-12587-1] c 44 N77-31601
- RATCLIFF, L. P.**  
Latch mechanism  
[NASA-CASE-MS-12549-1] c 37 N74-27903
- RATHZ, T. J.**  
Method and apparatus for supercooling and solidifying substances  
[NASA-CASE-MFS-25242-1] c 35 N83-29650
- RAVAS, R. J.**  
Transistor drive regulator Patent  
[NASA-CASE-LEW-10233] c 10 N71-27126
- RAVENHALL, R.**  
Platform for a swing root turbomachinery blade  
[NASA-CASE-LEW-12312-1] c 07 N77-32148  
Impact absorbing blade mounts for variable pitch blades  
[NASA-CASE-LEW-12313-1] c 37 N78-10468
- RAVINDRAM, M.**  
Fluidized bed desulfurization  
[NASA-CASE-NPO-15924-1] c 25 N85-35253
- RAWLIN, V. K.**  
Ring-cusp ion thruster with shell anode  
[NASA-CASE-LEW-13881-1] c 20 N85-21256
- RAWSON, J.**  
Display research collision warning system  
[NASA-CASE-HQN-10703] c 21 N73-13643
- RAY, W. L.**  
Remote fire stack igniter  
[NASA-CASE-MFS-21675-1] c 25 N74-33378
- RAYBORN, G. H.**  
Low energy electron magnetometer using a monoenergetic electron beam  
[NASA-CASE-LAR-12706-1] c 35 N84-12444
- RAYLE, W. D.**  
Electric propulsion engine test chamber Patent  
[NASA-CASE-XLE-00252] c 11 N70-34844
- READ, F. G.**  
Backpack carrier Patent  
[NASA-CASE-LAR-10056] c 05 N71-12351
- READ, W. S.**  
Silent emergency alarm system for schools and the like  
[NASA-CASE-NPO-11307-1] c 10 N73-30205  
Tool for use in lifting pin supported objects  
[NASA-CASE-NPO-13157-1] c 37 N74-32918
- READER, A. F.**  
Method and apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917] c 15 N71-15597  
Apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917-2] c 15 N71-24836
- READER, P. D.**  
Ion thruster cathode  
[NASA-CASE-XLE-07087] c 06 N69-39889  
Electrostatic ion engine having a permanent magnetic circuit Patent  
[NASA-CASE-XLE-01124] c 28 N71-14043  
Electrostatic ion rocket engine Patent  
[NASA-CASE-XLE-02066] c 28 N71-15661
- REAM, L. W.**  
Diesel engine catalytic combustor system  
[NASA-CASE-LEW-12995-1] c 37 N84-33808
- REASONER, DAVID L.**  
Ion generator and ion application system  
[NASA-CASE-MFS-28122-1] c 72 N88-24253
- REAY, WILLIAM G.**  
Flow rate logging seepage meter  
[NASA-CASE-LAR-14835-1] c 35 N93-19328
- RECHTER, H. L.**  
Lightweight refractory insulation and method of preparing the same Patent  
[NASA-CASE-XMF-05279] c 18 N71-16124
- REDA, DANIEL C.**  
Active thermal isolation for temperature responsive sensors  
[NASA-CASE-LAR-14612-1] c 34 N92-29954
- REDDING, A. H.**  
Self-adjusting multisegment, deployable, natural circulation radiator Patent  
[NASA-CASE-XHQ-03673] c 33 N71-29046
- REDDING, DAVID C.**  
Feedback controlled optics with wavefront compensation  
[NASA-CASE-NPO-18194-1-CU] c 74 N91-32924
- REDDY, RAKASI M.**  
Low pressure process for continuous fiber reinforced polyamic acid resin matrix composite laminates  
[NASA-CASE-LAR-14954-1] c 24 N92-34214
- REDMON, J. W.**  
Air bearing assembly for curved surfaces  
[NASA-CASE-MFS-20423] c 15 N72-11388  
Impacting device for testing insulation  
[NASA-CASE-MFS-25862-2] c 37 N84-33807  
Insulation bonding test system  
[NASA-CASE-MFS-25862-1] c 27 N85-20126
- REDMON, JOHN W., JR.**  
Thermally isolated deployable shield for spacecraft  
[NASA-CASE-MFS-28524-1] c 18 N91-25167
- REDMON, JOHN W., SR.**  
Cylindrical surface profile and diameter measuring tool and method  
[NASA-CASE-MFS-28287-1] c 35 N88-23959
- REECE, GARLAND D.**  
Water cooled static pressure probe  
[NASA-CASE-LAR-14340-1-CU] c 35 N92-21586
- REECE, O. Y.**  
Low temperature flexure fatigue cryostat Patent  
[NASA-CASE-XMF-02964] c 14 N71-17659  
Horizontal cryostat for fatigue testing Patent  
[NASA-CASE-XMF-10968] c 14 N71-24234  
Synthesis of superconducting compounds by explosive compaction of powders  
[NASA-CASE-MFS-20861-1] c 18 N73-32437
- REED, A. E.**  
High power-high voltage waterload Patent  
[NASA-CASE-XNP-05381] c 09 N71-20842
- REED, IRVING S.**  
Method for Viterbi decoding of large constraint length convolutional codes  
[NASA-CASE-NPO-17310-1-CU] c 17 N88-28946  
VLSI single-chip (255,223) Reed-Solomon encoder with interleaver  
[NASA-CASE-NPO-17280-1-CU] c 17 N90-21061  
VLSI binary updown counter  
[NASA-CASE-NPO-17205-1-CU] c 60 N90-21525
- REED, J. H., JR.**  
Instrument for use in performing a controlled Valsalva maneuver Patent  
[NASA-CASE-XMS-01615] c 05 N70-41329
- REED, JASON C.**  
Hydrodynamic skin-friction reduction  
[NASA-CASE-LAR-14078-1-CU] c 34 N90-27071  
Polymer/riblet combination for hydrodynamic skin friction reduction  
[NASA-CASE-LAR-14271-1-CU] c 27 N91-13558
- REED, L.**  
Method of forming ceramic to metal seal Patent  
[NASA-CASE-XNP-01263-2] c 15 N71-26312
- REED, R. D.**  
Method for observing the features characterizing the surface of a land mass  
[NASA-CASE-FRC-11013-1] c 43 N81-17499  
Sun sensing guidance system for high altitude aircraft  
[NASA-CASE-FRC-11052-1] c 04 N82-23231
- REED, W. H., III**  
Test unit free-flight suspension system Patent  
[NASA-CASE-XLA-00939] c 11 N71-15926  
Viscous-pendulum-damper Patent  
[NASA-CASE-XLA-02079] c 12 N71-16894  
Viscous pendulum damper Patent  
[NASA-CASE-LAR-10274-1] c 14 N71-17626  
Suspended mass impact damper Patent  
[NASA-CASE-LAR-10193-1] c 15 N71-27146  
Decoupler pylon: wing/store flutter suppressor  
[NASA-CASE-LAR-12468-1] c 08 N82-32373
- REED, WILMER H.**  
Airfoil flutter model suspension system  
[NASA-CASE-LAR-13522-1-SB] c 09 N87-25334

**REED, WILMER H., III**

Torsional suspension system for testing space structures  
[NASA-CASE-LAR-14149-1-SB] c 14 N91-21176

**REEDER, JAMES R.**

Delamination test apparatus and method  
[NASA-CASE-LAR-13985-1] c 24 N91-14430

**REESE, P. B.**

Pressure limiting propellant actuating system  
[NASA-CASE-MSC-18179-1] c 20 N80-18097

**REGNIER, W. W.**

Passive propellant system  
[NASA-CASE-MFS-23642-2] c 20 N78-27176  
Passive propellant system  
[NASA-CASE-MFS-23642-1] c 20 N80-10278

**REHAGE, J. R.**

Pulse counting circuit which simultaneously indicates the occurrence of the nth pulse Patent  
[NASA-CASE-XMF-00906] c 09 N70-41655

**REIBER, J. H. C.**

Contour detector and data acquisition system for the left ventricular outline  
[NASA-CASE-ARC-10985-1] c 52 N79-10724

**REICHMAN, B.**

Photoelectrochemical cells including chalcogenophosphate photoelectrodes  
[NASA-CASE-LAR-12958-1] c 44 N84-23019  
Method for determining the point of zero zeta potential of semiconductor  
[NASA-CASE-LAR-12893-1] c 76 N85-30923

**REID, ALAN J.**

Induction-type metal detector with increased scanning area capability  
[NASA-CASE-KSC-11386-1] c 35 N90-22023

**REID, H. J. E., JR.**

Dynamic precession damper for spin stabilized vehicles Patent  
[NASA-CASE-XLA-01989] c 21 N70-34295  
Attitude orientation of spin-stabilized space vehicles Patent  
[NASA-CASE-XLA-00281] c 21 N70-36943

**REID, H., JR.**

Pulse width inverter Patent  
[NASA-CASE-MFS-10068] c 10 N71-25139  
Induction motor control system with voltage controlled oscillator circuit  
[NASA-CASE-MFS-21465-1] c 10 N73-32145  
Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c 43 N80-14423  
Coal-shale interface detector  
[NASA-CASE-MFS-23720-1] c 43 N80-23711

**REID, M. A.**

Zirconium carbide as an electrocatalyst for the chromous-chromic redox couple  
[NASA-CASE-LEW-13246-1] c 44 N83-27344  
Method of making a light weight battery plaque  
[NASA-CASE-LEW-13349-1] c 26 N84-22734  
Chromium electrodes for REDOX cells  
[NASA-CASE-LEW-13653-1] c 44 N84-28205

**REID, M. S.**

Conical scan tracking system employing a large antenna  
[NASA-CASE-NPO-14009-1] c 32 N79-13214

**REID, R.**

Spacecraft docking and alignment system  
[NASA-CASE-MSC-12559-1] c 18 N76-14186

**REID, W. J.**

Digital frequency discriminator Patent  
[NASA-CASE-MFS-14322] c 08 N71-18692

**REILLY, N. B.**

Satellite personal communications system  
[NASA-CASE-NPO-14480-1] c 32 N80-20448

**REILLY, T. H.**

Medical diagnosis system and method with multispectral imaging  
[NASA-CASE-NPO-14402-1] c 52 N81-27783

**REILLY, W. W.**

Elastomer coated filler and composites thereof comprising at least 60% by weight of a hydrated filler and an elastomer containing an acid substituent  
[NASA-CASE-NPO-14857-1] c 27 N83-19900

**REINHARDT, G.**

Gas purged dry box glove Patent  
[NASA-CASE-XLE-02531] c 05 N71-23080

**REINHARDT, V.**

Temperature averaging thermal probe  
[NASA-CASE-GSC-12795-1] c 35 N86-19580

**REINHARDT, V. S.**

Time domain phase measuring apparatus  
[NASA-CASE-GSC-12228-1] c 33 N79-10338  
External bulb variable volume maser  
[NASA-CASE-GSC-12334-1] c 36 N79-14362  
High stability amplifier  
[NASA-CASE-GSC-12646-1] c 33 N83-34191  
High stability buffered phase comparator  
[NASA-CASE-GSC-12645-1] c 33 N84-16454

**REINHOLD, H. W.**

Circuit breaker utilizing magnetic latching relays Patent  
[NASA-CASE-MSC-11277] c 09 N71-29008

**REINISCH, R. F.**

Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c 27 N74-21156  
Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c 27 N76-32315

**REINITZ, K.**

Extended area semiconductor radiation detectors and a novel readout arrangement Patent  
[NASA-CASE-XGS-03230] c 14 N71-23401

**REISS, D. A.**

Method and apparatus for shaping and enhancing acoustical levitation forces  
[NASA-CASE-MFS-25050-1] c 71 N81-15767

**REISS, DONALD A.**

Crystal growth in a microgravity environment  
[NASA-CASE-MFS-28473-1] c 76 N93-14707

**REIMBAUM, A.**

Method of using photovoltaic cell using poly-N-vinylcarbazole complex Patent  
[NASA-CASE-NPO-10373] c 03 N71-18698  
Dicyanooctylene polymers Patent  
[NASA-CASE-XNP-03250] c 06 N71-23500  
Heat detection and compositions and devices therefor  
[NASA-CASE-NPO-10764-1] c 14 N73-14428  
Preparation of alkali metal dispersions  
[NASA-CASE-XNP-08876] c 17 N73-28573  
Heat detection and compositions and devices therefor  
[NASA-CASE-NPO-10764-2] c 35 N75-25122  
Durable antistatic coating for polymethylmethacrylate  
[NASA-CASE-NPO-13867-1] c 27 N78-14164  
Nuclear alkylated pyridine aldehyde polymers and conductive compositions thereof  
[NASA-CASE-NPO-10557] c 27 N78-17214  
Pressure transducer  
[NASA-CASE-NPO-11150] c 35 N78-17359  
Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c 27 N81-14076  
Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c 27 N81-15104  
Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
[NASA-CASE-NPO-13530-1] c 25 N81-17187  
Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c 25 N81-19244  
Photoelectrochemical electrodes  
[NASA-CASE-NPO-15458-1] c 25 N84-12262

**REMPEL, R. C.**

Optically pumped resonance magnetometer for determining vectorial components in a spatial coordinate system Patent  
[NASA-CASE-XGS-04879] c 14 N71-20428

**REMPFER, P. S.**

Aircraft control system  
[NASA-CASE-ERC-10439] c 02 N73-19004

**RENNELS, DAVID A.**

Self-checking on-line testable static RAM  
[NASA-CASE-NPO-17939-1-CU] c 60 N93-22032

**RENNER, W.**

Bacteria detection instrument and method  
[NASA-CASE-GSC-11533-1] c 14 N73-13435

**RENNIE, P. A.**

Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c 52 N79-12694

**RESWICK, J. B.**

Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c 52 N79-26772

**REYNOLDS, G. H.**

Stabilized lanthanum sulphur compounds  
[NASA-CASE-NPO-16135-1] c 25 N83-24572

**REYNOLDS, H. I.**

Edge coating of flat wires  
[NASA-CASE-XMF-05757-1] c 31 N79-21227

**REYNOLDS, J. M.**

Device and method for determining X ray reflection efficiency of optical surfaces  
[NASA-CASE-MFS-20243] c 23 N73-13662

**REYNOLDS, JOHN M.**

Ion generator and ion application system  
[NASA-CASE-MFS-28122-1] c 72 N88-24253

**REYNOLDS, W. E.**

Circuit breaker utilizing magnetic latching relays Patent  
[NASA-CASE-MSC-11277] c 09 N71-29008

**RHEIN, R. A.**

Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same  
[NASA-CASE-NPO-13137-1] c 27 N80-32514  
Prepolymer dianhydrides  
[NASA-CASE-NPO-13899-1] c 27 N80-32515

**RHIM, W. K.**

Closed loop electrostatic levitation system  
[NASA-CASE-NPO-15553-1] c 33 N85-29142

**RHO, J. H.**

Automated fluid chemical analyzer Patent  
[NASA-CASE-XNP-09451] c 06 N71-26754

**RHODES, C. M.**

Method for retarding dye fading during archival storage of developed color photographic film  
[NASA-CASE-MFS-23250-1] c 35 N82-11432

**RHODES, D. B.**

Optical scanner  
[NASA-CASE-LAR-11711-1] c 74 N78-17866  
Scanning afocal laser velocimeter projection lens system  
[NASA-CASE-LAR-12328-1] c 36 N82-32712

**RHODES, DAVID B.**

Synchronous strobe apparatus for flow visualization  
[NASA-CASE-LAR-14556-1] c 36 N91-25392  
Schlieren system for visualizing the flow within a pipe of circular cross-section  
[NASA-CASE-LAR-13944-1] c 35 N92-11336

**RHODES, L. L.**

Latching mechanism Patent  
[NASA-CASE-MSC-15474-1] c 15 N71-26162

**RHODES, M. D.**

Composite sandwich lattice structure  
[NASA-CASE-LAR-11898-1] c 24 N78-10214  
Method of making a composite sandwich lattice structure  
[NASA-CASE-LAR-11898-2] c 24 N78-17149  
Deployable M-braced truss structure  
[NASA-CASE-LAR-13081-1] c 37 N86-32737

**RHODES, MARVIN D.**

Deployable geodesic truss structure  
[NASA-CASE-LAR-13113-1] c 31 N87-25492  
Preloaded space structural coupling joints  
[NASA-CASE-LAR-13489-1] c 18 N87-27713  
Clevis joint for deployable space structures  
[NASA-CASE-LAR-13898-1] c 37 N91-15544  
Synchronously deployable double fold beam and planar truss structure  
[NASA-CASE-LAR-13490-1] c 18 N91-27199

**RHODES, P. H.**

Electrophoresis device  
[NASA-CASE-MFS-25426-1] c 25 N83-10126  
Static continuous electrophoresis device  
[NASA-CASE-MFS-25306-1] c 25 N83-13187

**RHODES, PERCY**

Drop deployment system for crystal growth apparatus  
[NASA-CASE-MFS-28422-1] c 29 N91-17250

**RHODES, PERCY H.**

Moving wall, continuous flow electrophoresis apparatus  
[NASA-CASE-MFS-28142-1] c 25 N88-23845  
Hollow fiber clinostat for simulating microgravity in cell culture  
[NASA-CASE-MFS-28370-1] c 35 N92-31790

**RIAZ, M.**

Constant frequency output two stage induction machine systems Patent  
[NASA-CASE-ERC-10065] c 09 N71-27364

**RIBARICH, J. J.**

Guidance and maneuver analyzer Patent  
[NASA-CASE-XNP-09572] c 14 N71-15621

**RICCITELLO, S. R.**

Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c 27 N78-31232

**RICCITELLO, S. R.**

Modified polyurethane foams for fuel-fire Patent  
[NASA-CASE-ARC-10098-1] c 06 N71-24739  
Intumescent composition, foamed product prepared therewith, and process for making same  
[NASA-CASE-ARC-10304-1] c 18 N73-26572  
Flexible fire retardant polyisocyanate modified neoprene foam  
[NASA-CASE-ARC-10180-1] c 27 N74-12814  
Intumescent composition, foamed product prepared therewith and process for making same  
[NASA-CASE-ARC-10304-2] c 27 N74-27037  
Intumescent coatings containing 4,4'-dinitrosulfanilide  
[NASA-CASE-ARC-11042-1] c 24 N78-14096  
Intumescent-ablator coatings using endothermic fillers  
[NASA-CASE-ARC-11043-1] c 24 N78-27180  
Ambient cure polyimide foams  
[NASA-CASE-ARC-11170-1] c 27 N79-11215  
Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c 15 N79-26100  
Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides  
[NASA-CASE-ARC-11107-1] c 25 N80-16116

**RICCITELLO, SALVATORE**

Boron-carbon-silicon polymers and ceramic and a process for the production thereof  
[NASA-CASE-ARC-11891-2-SB] c 27 N92-34160

- RICCITIELLO, SALVATORE R.**  
Preparation of B-trichloroborazine  
[NASA-CASE-ARC-11643-1-SB] c 23 N87-23698  
Ceramic honeycomb structures and the method thereof  
[NASA-CASE-ARC-11652-1] c 27 N87-23737  
Ceramic-ceramic shell tile thermal protection system and method thereof  
[NASA-CASE-ARC-11641-1] c 24 N88-18628  
Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-1-SB] c 27 N88-29040  
Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-2-SB] c 27 N90-21177
- RICE, EDWARD J.**  
Jet mixer noise suppressor using acoustic feedback  
[NASA-CASE-LEW-15170-1] c 71 N93-28953
- RICE, R. F.**  
Data compression system  
[NASA-CASE-NPO-11243] c 07 N72-20154  
Space communication system for compressed data with a concatenated Reed-Solomon-Viterbi coding channel  
[NASA-CASE-NPO-13545-1] c 32 N77-12240
- RICE, R. R.**  
Cryogenic storage system Patent  
[NASA-CASE-XMS-04390] c 31 N70-41871
- RICE, R. W.**  
Extrusion can  
[NASA-CASE-NPO-10812] c 15 N73-13464
- RICE, S. H.**  
Method of treating the surface of a glass member  
[NASA-CASE-GSC-12110-1] c 27 N77-32308  
Method of forming a sharp edge on an optical device  
[NASA-CASE-GSC-12348-1] c 74 N80-24149  
Method for milling and drilling glass  
[NASA-CASE-GSC-12636-1] c 31 N83-27058
- RICE, W. J.**  
Indicated mean-effective pressure instrument  
[NASA-CASE-LEW-12661-1] c 35 N79-14345  
Real time pressure signal system for a rotary engine  
[NASA-CASE-LEW-13622-1] c 07 N84-22559
- RICH, E. JR.**  
Bacterial contamination monitor  
[NASA-CASE-GSC-10879-1] c 14 N72-25413  
Protein sterilization method of firefly luciferase using reduced pressure and molecular sieves  
[NASA-CASE-GSC-10225-1] c 06 N73-27086
- RICHARD, C. E.**  
Low cycle fatigue testing machine  
[NASA-CASE-LAR-10270-1] c 32 N72-25877
- RICHARD, H. L.**  
Multispectral linear array multiband selection device  
[NASA-CASE-GSC-12911-1] c 74 N86-29650
- RICHARD, R. R.**  
Angular accelerometer Patent  
[NASA-CASE-XMS-05936] c 14 N70-41682
- RICHARDS, R. R.**  
Method for detecting pollutants  
[NASA-CASE-LAR-11405-1] c 45 N76-31714
- RICHARDS, W. E.**  
Method and apparatus for optical modulating a light signal Patent  
[NASA-CASE-GSC-10216-1] c 23 N71-26722
- RICHARDSON, J. I.**  
Tubing and cable cutting tool  
[NASA-CASE-LAR-12786-1] c 37 N84-28085
- RICHARDSON, JOHN R.**  
Photorefractor ocular screening system  
[NASA-CASE-MFS-26011-1-SB] c 52 N87-24874
- RICHARDSON, R. W.**  
Method for measuring cutaneous sensory perception  
[NASA-CASE-MSC-13609-1] c 05 N72-25122
- RICHLEY, E. A.**  
Rocket engine Patent  
[NASA-CASE-XLE-00342] c 28 N70-37980
- RICHMOND, J. C.**  
Ellipsoidal mirror reflectometer including means for averaging the radiation reflected from the sample Patent  
[NASA-CASE-XGS-05291] c 23 N71-16341
- RICHTER, C. G.**  
Formed metal ribbon wrap Patent  
[NASA-CASE-XLE-00164] c 15 N70-36411
- RICHTER, H. L.**  
Reversible motion drive system Patent  
[NASA-CASE-NPO-10173] c 15 N71-24696
- RICHTER, I. A.**  
Dual digital video switcher  
[NASA-CASE-KSC-10782-1] c 33 N75-30431
- RICHTER, R.**  
Solid electrolyte cell  
[NASA-CASE-NPO-15269-1] c 44 N82-29710
- RICKETTS, R. H.**  
Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12458-1] c 44 N83-21503
- Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12720-1] c 44 N83-21504
- RIEBE, J. M.**  
Landing arrangement for aerial vehicles Patent  
[NASA-CASE-XLA-00142] c 02 N70-33286  
Jet aircraft configuration Patent  
[NASA-CASE-XLA-00087] c 02 N70-33332  
Landing arrangement for aerial vehicle Patent  
[NASA-CASE-XLA-00806] c 02 N70-34858  
Landing arrangement for aerospace vehicle Patent  
[NASA-CASE-XLA-00805] c 31 N70-38010  
Control system for rocket vehicles Patent  
[NASA-CASE-XLA-01163] c 21 N71-15582
- RIEBLING, R. W.**  
Force-balanced, throttle valve Patent  
[NASA-CASE-NPO-10808] c 15 N71-27432  
Bipropellant injector  
[NASA-CASE-XNP-09461] c 28 N72-23809
- RIED, ROBERT C.**  
Assured crew return vehicle  
[NASA-CASE-MSC-21536-1] c 18 N92-21999
- RIEKER, L. L.**  
Polyvinyl alcohol cross-linked with two aldehydes  
[NASA-CASE-LEW-13504-1] c 25 N83-13188
- RIGGS, K. E.**  
Diffuser/ejector system for a very high vacuum environment  
[NASA-CASE-MFS-25791-1] c 09 N84-27749
- RILEY, J. F.**  
Compact solar still Patent  
[NASA-CASE-XMS-04533] c 15 N71-23086
- RILEY, T. J.**  
Nickel-base alloy Patent  
[NASA-CASE-XLE-00283] c 17 N70-36616
- RINARD, G. A.**  
Tumbler system to provide random motion  
[NASA-CASE-XGS-02437] c 15 N69-21472
- RINDNER, W.**  
Voltage tunable Gunn-type microwave generator Patent  
[NASA-CASE-XER-07894] c 09 N71-18721  
Transverse piezoresistance and pinch effect electromechanical transducers Patent  
[NASA-CASE-ERC-10088] c 26 N71-25490  
Pressure sensitive transducers Patent  
[NASA-CASE-ERC-10087] c 14 N71-27334  
Gunn-type solid state devices  
[NASA-CASE-XER-07895] c 26 N72-25679  
Electricity measurement devices employing liquid crystalline materials  
[NASA-CASE-ERC-10275] c 26 N72-25680  
Semiconductor transducer device  
[NASA-CASE-ERC-10087-2] c 14 N72-31446
- RINEHART, D.**  
Space suit  
[NASA-CASE-MSC-12609-1] c 05 N73-32012
- RINGELMAN, J. F.**  
Regulated power supply Patent  
[NASA-CASE-XMS-01991] c 09 N71-21449
- RIPPY, R. R.**  
Linear phase demodulator including a phase locked loop with auxiliary feedback loop  
[NASA-CASE-GSC-12018-1] c 33 N77-14334
- RITCHIE, D. G.**  
Soil particles separator, collector and viewer Patent  
[NASA-CASE-XNP-09770] c 15 N71-20440  
Material handling device Patent  
[NASA-CASE-XNP-09770-3] c 11 N71-27036  
Screen particle separator  
[NASA-CASE-XNP-09770-2] c 15 N72-22483
- RITCHIE, D. W.**  
Solar battery with interconnecting means for plural cells Patent  
[NASA-CASE-XNP-06506] c 03 N71-11050
- RITCHIE, R. S.**  
Slide release mechanism  
[NASA-CASE-MSC-20080-1] c 37 N85-30334
- RITCHIE, V. S.**  
Aerodynamic measuring device Patent  
[NASA-CASE-XLA-00481] c 14 N70-36824  
Check valve assembly for a probe Patent  
[NASA-CASE-XLA-00128] c 15 N70-37925
- RITTER, D. L.**  
Foldable construction block  
[NASA-CASE-MSC-12233-2] c 32 N73-13921
- RIVERS, JOHN V.**  
Pre-integrated truss space station and method of assembly  
[NASA-CASE-MSC-22015-1] c 18 N93-20042
- RLOFF, K. L.**  
Dual wavelength scanning Doppler velocimeter  
[NASA-CASE-ARC-10637-1] c 35 N75-16783
- ROACH, J. E.**  
Casting propellant in rocket engine  
[NASA-CASE-LAR-11995-1] c 28 N77-10213
- ROBBINS, H. J.**  
Attitude control system for sounding rockets Patent  
[NASA-CASE-XGS-01654] c 31 N71-24750
- ROBBINS, WILLIAM E.**  
High temperature fiber optic microphone having a pressure-sensing reflective membrane under tensile stress  
[NASA-CASE-LAR-14402-1-CU] c 74 N92-33017  
Fiber optic microphone having a pressure sensing reflective membrane and a voltage source for calibration purpose  
[NASA-CASE-LAR-14402-2-CU] c 71 N93-24602
- ROBELEN, D. B.**  
Deploy/release system  
[NASA-CASE-LAR-11575-1] c 02 N76-16014
- ROBERTS, ANDREW C.**  
Wind tunnel balance  
[NASA-CASE-ARC-11877-1-SB] c 09 N91-14357
- ROBERTS, D. E.**  
Apparatus for testing wiring harness by vibration generating means  
[NASA-CASE-MSC-15158-1] c 14 N72-17325
- ROBERTS, D. L.**  
Laser apparatus for removing material from rotating objects Patent  
[NASA-CASE-MFS-11279] c 16 N71-20400
- ROBERTS, E. J.**  
Cryogenic feedthrough  
[NASA-CASE-LAR-10031] c 15 N72-22484
- ROBERTS, M. L.**  
Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c 44 N79-11469  
Aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-3] c 44 N80-16452
- ROBERTS, PAUL W.**  
Dual strain gage balance system for measuring light loads  
[NASA-CASE-LAR-14419-1] c 35 N92-10185
- ROBERTS, V. W.**  
Silent emergency alarm system for schools and the like  
[NASA-CASE-NPO-11307-1] c 10 N73-30205
- ROBERTSON, A. J.**  
Aircraft control system  
[NASA-CASE-ERC-10439] c 02 N73-19004
- ROBERTSON, GLEN A.**  
Piezoelectrostatic generator  
[NASA-CASE-MFS-28298-1] c 76 N91-14872  
Electromagnetic Meissner effect launcher  
[NASA-CASE-MFS-28323-1] c 14 N92-15081  
Induction boiler  
[NASA-CASE-MFS-28634-1] c 37 N92-24055  
Bladder operated robotic joint  
[NASA-CASE-MFS-28682-1] c 27 N92-29831  
Fluid separator  
[NASA-CASE-MFS-28658-1] c 34 N93-17039
- ROBERTSON, J. B.**  
High field CdS detector for infrared radiation  
[NASA-CASE-LAR-11027-1] c 35 N74-18088  
Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c 35 N82-31659  
Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-2] c 33 N83-24763
- ROBERTSON, JAMES B.**  
Flat-panel, full-color, electroluminescent display  
[NASA-CASE-LAR-13407-1] c 33 N87-28831  
Enhanced single layer multi-color or luminescent display with coactivators  
[NASA-CASE-LAR-14181-1] c 76 N91-21911  
Single layer multi-color luminescent display  
[NASA-CASE-LAR-13616-1] c 74 N91-31950  
Single layer multi-color luminescent display and method of making  
[NASA-CASE-LAR-13616-3] c 74 N92-29158  
A method of making a single layer multi-color luminescent display  
[NASA-CASE-LAR-14811-1] c 33 N92-30389  
A method of making a single layer multi-color luminescent display  
[NASA-CASE-LAR-14811-1] c 33 N93-20119
- ROBERTSON, K. B.**  
Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c 18 N83-29303
- ROBERTSON, W. L.**  
Two-axis controller Patent  
[NASA-CASE-XFR-04104] c 03 N70-42073
- ROBEY, JUDITH L.**  
Acoustic convective system  
[NASA-CASE-NPO-17278-1-CU] c 31 N90-21215
- ROBILLARD, G.**  
Apparatus and method for control of a solid fueled rocket vehicle Patent  
[NASA-CASE-XNP-00217] c 28 N70-38181



- ROBINS, A. W.**  
Supersonic aircraft Patent  
[NASA-CASE-XLA-04451] c 02 N71-12243
- ROBINSON, DEBORAH L.**  
Electro-optic resonant phase modulator  
[NASA-CASE-NPO-18702-1-CU] c 74 N92-23551
- ROBINSON, G. P.**  
Heat flux sensor assembly  
[NASA-CASE-XMS-05909-1] c 14 N69-27459
- ROBINSON, M.**  
Solid state chemical source for ammonia beam maser Patent  
[NASA-CASE-XGS-01504] c 16 N70-41578
- ROBINSON, M. B.**  
Method and apparatus for supercooling and solidifying substances  
[NASA-CASE-MFS-25242-1] c 35 N83-29650
- ROBINSON, MICHAEL B.**  
Apparatus and method for quiescent containerless processing of high temperature metals and alloys in low gravity  
[NASA-CASE-MFS-28087-1] c 35 N87-23944
- ROBINSON, P. A., JR.**  
FET charge sensor and voltage probe  
[NASA-CASE-NPO-16045-1] c 76 N87-13313
- ROBINSON, R. K.**  
Fuselage structure using advanced technology fiber reinforced composites  
[NASA-CASE-LAR-11688-1] c 24 N82-26384
- ROBINSON, ROBERT L.**  
Four-terminal electrical testing device  
[NASA-CASE-MSC-21166-1] c 35 N87-25555
- ROBINSON, W. J., JR.**  
Microwave power transmission system wherein level of transmitted power is controlled by reflections from receiver  
[NASA-CASE-MFS-21470-1] c 44 N74-19870
- ROBSON, P. N.**  
Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility  
[NASA-CASE-HQN-10069] c 33 N75-27251
- ROCHOW, S. E.**  
Hydroxy terminated perfluoro ethers Patent  
[NASA-CASE-NPO-10768] c 06 N71-27254  
Perfluoro polyether acyl fluorides  
[NASA-CASE-NPO-10765] c 06 N72-20121  
Polyurethane resins from hydroxy terminated perfluoro ethers  
[NASA-CASE-NPO-10768-2] c 06 N72-27144  
Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-2] c 06 N72-27151  
Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-1] c 06 N73-33076
- RODNER, W. H.**  
Solar cell mounting Patent  
[NASA-CASE-XNP-00826] c 03 N71-20895
- RODRIGUEZ, G. E.**  
Buck/boost regulator  
[NASA-CASE-GSC-12360-1] c 33 N81-19392
- RODRIGUEZ, GUILLERMO**  
High level language-based robotic control system  
[NASA-CASE-NPO-17918-2-CU] c 63 N92-17895  
Controlling flexible robot arms using a high speed dynamics process  
[NASA-CASE-NPO-18499-1-CU] c 37 N92-24042  
Controlling under-actuated robot arms using a high speed dynamics process  
[NASA-CASE-NPO-18498-1-CU] c 37 N92-24043
- RODRIGUEZ, DAGOBERT**  
Closed-loop motor control using high-speed fiber optics  
[NASA-CASE-MSC-21806-1] c 74 N92-17863
- ROE, FRED D., JR.**  
Reconfigurable work station for a video display unit and keyboard  
[NASA-CASE-MFS-26009-1-SB] c 54 N88-24163
- ROEBELEN, GEORGE J., JR.**  
High effectiveness contour matching contact heat exchanger  
[NASA-CASE-MSC-20840-1] c 34 N88-29132
- ROEDER, E. R.**  
Brazing alloy binder  
[NASA-CASE-XMF-05868] c 26 N75-27125  
Brazing alloy composition  
[NASA-CASE-XMF-06053] c 26 N75-27126  
Brazing alloy  
[NASA-CASE-XNP-03878] c 26 N75-27127
- ROESKE, P. W.**  
Inductive liquid level detection system Patent  
[NASA-CASE-XLE-01609] c 14 N71-10500
- ROGALLO, F. M.**  
Aeroflexible structures  
[NASA-CASE-XLA-06095] c 01 N69-39981  
Jet aircraft configuration Patent  
[NASA-CASE-XLA-00087] c 02 N70-33332
- Control for flexible parawing Patent  
[NASA-CASE-XLA-06958] c 02 N71-11038
- ROGALLO, V. L.**  
Propeller blade loading control Patent  
[NASA-CASE-XAC-00139] c 02 N70-34856  
Null-type vacuum microbalance Patent  
[NASA-CASE-XAC-00472] c 15 N70-40180  
Thermo-protective device for balances Patent  
[NASA-CASE-XAC-00648] c 14 N70-40400  
Force transducer Patent  
[NASA-CASE-XAC-01101] c 14 N70-41957
- ROGERS, F. O.**  
Synthesis of zinc titanate pigment and coatings containing the same  
[NASA-CASE-MFS-13532] c 18 N72-17532
- ROGERS, J. R.**  
Pneumatic load compensating or controlling system  
[NASA-CASE-ARC-10907-1] c 37 N75-32465  
Smoke generator  
[NASA-CASE-ARC-10905-1] c 37 N77-13418
- ROGOWSKI, R. S.**  
Method for detecting pollutants  
[NASA-CASE-LAR-11405-1] c 45 N76-31714  
Thermoluminescent aerosol analysis  
[NASA-CASE-LAR-12046-1] c 25 N78-15210
- ROGOWSKI, ROBERT S.**  
Radio Frequency (RF) strain monitor  
[NASA-CASE-LAR-13705-1] c 39 N88-25011  
Optical fiber sensor having an active core  
[NASA-CASE-LAR-14607-1-SB] c 74 N92-30029  
Optical fiber strain sensor with improved linearity  
[NASA-CASE-LAR-14857-1-SB] c 74 N93-19374  
Discrete optical fiber strain sensor  
[NASA-CASE-LAR-14810-1-SB] c 35 N93-19492  
Transversely polarized source cladding for an optical fiber  
[NASA-CASE-LAR-14652-1-SB] c 74 N93-22039
- ROHATGI, N. K.**  
Coal desulfurization by aqueous chlorination  
[NASA-CASE-NPO-14902-1] c 25 N82-29371  
Hydrodesulfurization of chlorinated coal  
[NASA-CASE-NPO-15304-1] c 25 N83-31743
- ROLF, E.**  
Laser Doppler system for measuring three dimensional vector velocity Patent  
[NASA-CASE-MFS-20386] c 21 N71-19212
- ROLIK, G. P.**  
Solar cell panels with light transmitting plate  
[NASA-CASE-NPO-10747] c 03 N72-22042
- ROLLER, R. F.**  
Demodulator for carrier transducers  
[NASA-CASE-NUC-10107-1] c 33 N74-17930
- ROLLINS, FRED P.**  
Self-contained, single-use hose and tubing cleaning module  
[NASA-CASE-MSC-20857-1] c 37 N87-17035
- ROLLINS, G. N.**  
System for calibrating pressure transducer  
[NASA-CASE-LAR-10910-1] c 35 N74-13132
- ROLLINS, J. R.**  
Externally supported internally stabilized flexible duct joint  
[NASA-CASE-MFS-19194-1] c 37 N76-14460
- ROM, F. E.**  
Gas core nuclear reactor Patent  
[NASA-CASE-LEW-10250-1] c 22 N71-28759
- ROMAN, J. A.**  
Biomedical electrode arrangement Patent  
[NASA-CASE-XFR-10856] c 05 N71-11189  
Method and apparatus for attaching physiological monitoring electrodes Patent  
[NASA-CASE-XFR-07658-1] c 05 N71-26293  
Gas low pressure low flow rate metering system Patent  
[NASA-CASE-FRC-10022] c 12 N71-26546  
Respiration monitor  
[NASA-CASE-FRC-10012] c 14 N72-17329
- ROMAN, R. F.**  
Hydrogen hollow cathode ion source  
[NASA-CASE-LEW-12940-1] c 72 N80-33196  
Ring-cusp ion thruster with shell anode  
[NASA-CASE-LEW-13881-1] c 20 N85-21256  
Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587
- ROMANCZYK, K. C.**  
Fringe counter for interferometers Patent  
[NASA-CASE-LAR-10204] c 14 N71-27215
- ROMANOFKY, ROBERT R.**  
Universal nondestructive mm-wave integrated circuit test fixture  
[NASA-CASE-LEW-14746-1] c 33 N91-14552  
Monolithic mm-wave phase shifter using optically activated superconducting switches  
[NASA-CASE-LEW-14878-1] c 74 N92-28571
- ROMMEL, M. A.**  
Hydrogen leak detection device Patent  
[NASA-CASE-MFS-11537] c 14 N71-20442
- ROMVARY, E., JR.**  
Intermittent type silica gel adsorption refrigerator Patent  
[NASA-CASE-XNP-00920] c 15 N71-15906
- RONEY, B. W.**  
Evacuation valve  
[NASA-CASE-LAR-10061-1] c 15 N72-31483
- ROOT, G. L.**  
Valve seat  
[NASA-CASE-NPO-10606] c 15 N72-25451
- RORVIG, MARK E.**  
General method of pattern classification using the two-domain theory  
[NASA-CASE-MSC-21737-1] c 61 N91-13911  
General method of pattern classification using the two-domain theory  
[NASA-CASE-MSC-21737-1] c 61 N93-18282  
Method and apparatus for filtering visual documents  
[NASA-CASE-MSC-22093-1] c 82 N93-22017
- ROSALES, L. A.**  
Control valve and co-axial variable injector Patent  
[NASA-CASE-XNP-09702] c 15 N71-17654  
Multiple orifice throttle valve Patent  
[NASA-CASE-XNP-09698] c 15 N71-18580
- ROSE, S. D.**  
Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c 43 N79-31706
- ROSEN, H. A.**  
Varactor high level mixer  
[NASA-CASE-XGS-02171] c 09 N69-24324  
Apparatus for changing the orientation and velocity of a spinning body traversing a path Patent  
[NASA-CASE-HQN-00936] c 31 N71-29050
- ROSEN, L.**  
Focused image holography with extended sources Patent  
[NASA-CASE-ERC-10019] c 16 N71-15551  
Recording and reconstructing focused image holograms Patent  
[NASA-CASE-ERC-10017] c 16 N71-15567  
Method and means for recording and reconstructing holograms without use of a reference beam Patent  
[NASA-CASE-ERC-10020] c 16 N71-26154
- ROSENBAUM, B. J.**  
Flow test device  
[NASA-CASE-XMS-04917] c 14 N69-24257
- ROSENBLUM, L.**  
Split welding chamber Patent  
[NASA-CASE-LEW-11531] c 15 N71-14932  
Analytical test apparatus and method for determining oxide content of alkali metal Patent  
[NASA-CASE-XLE-01997] c 06 N71-23527
- ROSENGREN, L. G.**  
Method and apparatus for background signal reduction in opto-acoustic absorption measurement  
[NASA-CASE-NPO-13683-1] c 35 N77-14411
- ROSIER, W. R.**  
Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c 33 N80-26599
- ROSIN, A. D.**  
Zero gravity separator Patent  
[NASA-CASE-XLE-00586] c 15 N71-15968
- ROSIN, S.**  
Wide angle long eye relief eyepiece Patent  
[NASA-CASE-XMS-06056-1] c 23 N71-24857  
Ritchey-Chretien Telescope  
[NASA-CASE-GSC-11487-1] c 14 N73-30393
- ROSINSKI, W. K.**  
Adjustable force probe  
[NASA-CASE-MFS-20760] c 14 N72-33377
- ROSITANO, S. A.**  
Visual examination apparatus  
[NASA-CASE-ARC-10329-1] c 05 N73-26072  
Visual examination apparatus  
[US-PATENT-RE-28,921] c 52 N76-30793
- ROSS, B.**  
Increased voltage photovoltaic cell  
[NASA-CASE-NPO-16155-1] c 44 N85-30475
- ROSS, BRIAN P.**  
Assured crew return vehicle  
[NASA-CASE-MSC-21536-1] c 18 N92-21999
- ROSS, HOLLY M.**  
Stall departure resistance enhancer  
[NASA-CASE-LAR-14221-1] c 06 N93-19023
- ROSS, L. O.**  
Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c 27 N79-22300
- ROSS, WALTER L.**  
A digitally controlled system for effecting and presenting a selected electrical resistance  
[NASA-CASE-MFS-29149-1] c 33 N90-19492

## ROSSER, R. W.

- Polyimide foam for the thermal insulation and fire protection  
[NASA-CASE-ARC-10464-1] c 27 N74-12812
- Fiber modified polyurethane foam for ballistic protection  
[NASA-CASE-ARC-10714-1] c 27 N76-15310
- Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c 27 N79-22300
- Perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c 25 N81-14016
- Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c 27 N81-17259
- The 1,2,4-oxadiazole elastomers  
[NASA-CASE-ARC-11253-1] c 27 N81-17262
- Bifunctional monomers having terminal oxime and cyano or amidine groups  
[NASA-CASE-ARC-11253-3] c 27 N81-24256
- The 1,1,1-triaryl-2,2,2-trifluoroethanes and process for their synthesis  
[NASA-CASE-ARC-11097-1] c 25 N82-24312
- Preparation of crosslinked 1,2,4-oxadiazole polymer  
[NASA-CASE-ARC-11253-2] c 27 N82-24338
- Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c 23 N82-28353
- High performance channel injection sealant invention abstract  
[NASA-CASE-ARC-14408-1] c 27 N82-33523
- Fluoroether modified epoxy composites  
[NASA-CASE-ARC-11418-1] c 24 N84-11213
- Process for preparing perfluorotriazine elastomers and precursors thereof  
[NASA-CASE-ARC-11402-1] c 27 N84-22744
- Perfluoro (imidoylamidine) diamidines  
[NASA-CASE-ARC-11402-3] c 23 N86-21582
- ROSSI, B. B.**  
X-ray reflection collimator adapted to focus X-radiation directly on a detector Patent  
[NASA-CASE-XHQ-04106] c 14 N70-40240
- ROSSOW, V. J.**  
Apparatus for measuring conductivity and velocity of plasma utilizing a plurality of sensing coils positioned in the plasma Patent  
[NASA-CASE-XAC-05695] c 25 N71-16073
- ROTH, H.**  
Voltage tunable Gunn-type microwave generator Patent  
[NASA-CASE-XER-07894] c 09 N71-18721
- Gunn-type solid state devices  
[NASA-CASE-XER-07895] c 26 N72-25679
- ROTMAN, A.**  
Supporting and protecting device Patent  
[NASA-CASE-XMF-00580] c 11 N70-35383
- ROUDEBUSH, W. H.**  
Gas turbine combustor Patent  
[NASA-CASE-LEW-10286-1] c 28 N71-28915
- ROUGE, C. J.**  
Ceramic coatings on smooth surfaces  
[NASA-CASE-LEW-15164-1] c 27 N91-25298
- Oxidation resistant overlay coatings for low expansion substrates  
[NASA-CASE-LEW-15154-1] c 27 N93-19332
- Oxidation resistant overlay coatings for low expansion substrates  
[NASA-CASE-LEW-15154-2] c 27 N93-31300
- ROUGE, CARL J.**  
Oxidation resistant coating for titanium alloys and titanium alloy matrix composites  
[NASA-CASE-LEW-15155-1] c 27 N92-29090
- ROUGHTON, N. A.**  
Method and apparatus for vibration analysis utilizing the Mossbauer effect  
[NASA-CASE-XMF-05882] c 35 N75-27329
- ROUSEY, W. J.**  
System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c 33 N75-19519
- ROUTH, D. E.**  
Multilevel metallization method for fabricating a metal oxide semiconductor device  
[NASA-CASE-MFS-23541-1] c 76 N79-14906
- Method of construction of a multi-cell solar array  
[NASA-CASE-MFS-23540-1] c 44 N79-26475
- Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-15670-1] c 33 N82-33634
- Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-256704-1] c 33 N84-22884
- ROUZER, L. E.**  
Segmented superconducting magnet for a broadband traveling wave maser Patent  
[NASA-CASE-XGS-10518] c 16 N71-28554

## ROWE, H. E.

- Dually mode locked Nd:YAG laser  
[NASA-CASE-GSC-11746-1] c 36 N75-19654
- ROWGOWSKI, ROBERT S.**  
Optical fiber fluorosensor  
[NASA-CASE-LAR-14525-1-CU] c 74 N93-22008
- ROWLAND, C. W.**  
Apparatus for ejection of an instrument cover  
[NASA-CASE-XMF-04132] c 15 N69-27502
- Laser communication system for controlling several functions at a location remote to the laser  
[NASA-CASE-LAR-10311-1] c 16 N73-16536
- ROWLETTE, J. J.**  
State-of-charge coulometer  
[NASA-CASE-NPO-15759-1] c 35 N85-21596
- ROWLEY, P. D.**  
Measurement of plasma temperature and density using radiation absorption  
[NASA-CASE-ARC-10598-1] c 75 N74-30156
- ROY, N. L.**  
Cosmic dust analyzer  
[NASA-CASE-MSC-13802-2] c 35 N76-15431
- Particle parameter analyzing system  
[NASA-CASE-XLE-06094] c 33 N78-17293
- Apparatus for handling micron size range particulate material  
[NASA-CASE-NPO-10151] c 37 N78-17386
- ROY, U.**  
Synthesis of superconducting compounds by explosive compaction of powders  
[NASA-CASE-MFS-20861-1] c 18 N73-32437
- ROYSTER, D. M.**  
Metal matrix composite structural panel construction  
[NASA-CASE-LAR-12807-1] c 24 N84-11214
- Curved cap corrugated sheet  
[NASA-CASE-LAR-12884-1] c 18 N84-33450
- ROYSTON, JAMES D.**  
Superconducting bearings with levitation control configurations  
[NASA-CASE-GSC-13346-1] c 37 N92-29099
- ROZAS, P.**  
Doppler radar having phase modulation of both transmitted and reflected return signals  
[NASA-CASE-MSC-18675-1] c 32 N84-22820
- RUBERT, K. F.**  
Method of obtaining permanent record of surface flow phenomena Patent  
[NASA-CASE-XLA-01353] c 14 N70-41366
- Quick release connector Patent  
[NASA-CASE-XLA-01141] c 15 N71-13789
- RUBIN, B.**  
Process for the preparation of brushite crystals  
[NASA-CASE-ERC-10338] c 04 N72-33072
- RUBIN, D. C.**  
Electricity measurement devices employing liquid crystalline materials  
[NASA-CASE-ERC-10275] c 26 N72-25680
- RUBIN, I.**  
Hexagon solar power panel  
[NASA-CASE-NPO-12148-1] c 44 N78-27515
- RUCKER, MICHELLE A.**  
High-pressure promoted combustion chamber  
[NASA-CASE-MSC-21470-1] c 09 N91-21157
- Ablative shielding for hypervelocity projectiles  
[NASA-CASE-MSC-21884-1] c 27 N93-29088
- RUDDOCK, K. A.**  
Optically pumped resonance magnetometer for determining vectoral components in a spatial coordinate system Patent  
[NASA-CASE-XGS-04879] c 14 N71-20428
- RUDERMAN, I. W.**  
Metabolic rate meter and method  
[NASA-CASE-MSC-12239-1] c 52 N79-21750
- RUDMANN, A. A.**  
Coupling device for moving vehicles  
[NASA-CASE-GSC-12322-1] c 37 N80-14398
- Device for coupling a first vehicle to a second vehicle  
[NASA-CASE-GSC-12429-1] c 37 N81-14320
- RUDNICK, I.**  
Acoustic driving of rotor  
[NASA-CASE-NPO-14005-1] c 71 N79-20827
- RUDNICK, JOSEPH**  
Acoustic positioning and orientation prediction  
[NASA-CASE-NPO-17511-1-CU] c 71 N91-14807
- RUEHR, W. C.**  
Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c 07 N81-14999
- RUHNKE, L. H.**  
Determining distance to lightning strokes from a single station  
[NASA-CASE-KSC-10698] c 07 N73-20175
- Rocket borne instrument to measure electric fields inside electrified clouds  
[NASA-CASE-KSC-10730-1] c 14 N73-32318

## RUITBERG, A. P.

- High voltage isolation transformer  
[NASA-CASE-GSC-12817-1] c 33 N85-29146
- High voltage power supply  
[NASA-CASE-GSC-12818-1] c 33 N85-29147
- RUIZ, STEVE C.**  
Robot-friendly connector  
[NASA-CASE-MSC-21864-1] c 37 N92-23544
- Robot-friendly connector  
[NASA-CASE-MSC-21864-1] c 37 N93-20117
- RUIZ, STEVE L.**  
Quick-connect fasteners for assembling devices in space  
[NASA-CASE-MSC-21648-1] c 37 N92-24051
- RUIZ, W. V.**  
Precision heat forming of tetrafluoroethylene tubing  
[NASA-CASE-MSC-18430-1] c 37 N82-24491
- RUMBLE, C. V.**  
Means for accommodating large overstrain in lead wires  
[NASA-CASE-LAR-10168-1] c 33 N74-22865
- RUMMEL, J. A.**  
Metabolic analyzer  
[NASA-CASE-MFS-21415-1] c 52 N74-20728
- RUMMLER, D. R.**  
Automatic force measuring system Patent  
[NASA-CASE-XLA-02605] c 14 N71-10773
- Low mass truss structure  
[NASA-CASE-LAR-10546-1] c 11 N72-25287
- RUNDELL, D. J.**  
Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c 07 N78-18067
- RUOFF, C. F.**  
Memory metal actuator  
[NASA-CASE-NPO-15960-1] c 37 N86-19604
- RUOFF, C. F., JR.**  
Retinally stabilized differential resolution television display  
[NASA-CASE-NPO-15432-1] c 32 N85-29117
- RUOFF, CARL F.**  
Multi-fingered robotic hand  
[NASA-CASE-NPO-15959-2] c 37 N91-14616
- RUPE, J. H.**  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-1] c 37 N76-16446
- System for minimizing internal combustion engine pollution emission  
[NASA-CASE-NPO-13402-1] c 37 N76-18457
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c 44 N76-29700
- RUPNIK, D. R.**  
Switching circuit Patent  
[NASA-CASE-XNP-06505] c 10 N71-24799
- RUPP, C. C.**  
Attitude control system  
[NASA-CASE-MFS-22787-1] c 15 N77-10113
- Tetherline system for orbiting satellites  
[NASA-CASE-MFS-23564-1] c 15 N78-25119
- RUPPE, E. P.**  
Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c 26 N80-28492
- RUSSELL, C. H.**  
Analog to digital converter tester Patent  
[NASA-CASE-XLA-06713] c 14 N71-28991
- RUSSELL, G. R.**  
Inert gas metallic vapor laser  
[NASA-CASE-NPO-13449-1] c 36 N75-32441
- Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c 36 N77-26477
- RUSSELL, J. M., III**  
Event recorder Patent  
[NASA-CASE-XLA-01832] c 14 N71-21006
- Ablation sensor Patent  
[NASA-CASE-XLA-01791] c 14 N71-22991
- RUSSELL, JIM K.**  
Range and range rate system  
[NASA-CASE-MSC-20867-1] c 36 N88-24958
- RUSSELL, L. D.**  
High intensity radiant energy pulse source having means for opening shutter when light flux has reached a desired level  
[NASA-CASE-ARC-10178-1] c 09 N72-17152
- Thermoelectric radiometer utilizing polymer film  
[NASA-CASE-ARC-10138-1] c 14 N72-24477
- RUSSELL, PHILIP B.**  
Airborne tracking sunphotometer apparatus and system  
[NASA-CASE-ARC-11622-1] c 44 N88-14492
- RUSSELL, W. E.**  
Method and apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917] c 15 N71-15597
- Apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917-2] c 15 N71-24836

# RUST, R.

- RUST, R.**  
Solenoid construction Patent  
[NASA-CASE-XNP-01951] c 09 N70-41929
- RUTLEDGE, C. W.**  
Digital control of diode laser for atmospheric spectroscopy  
[NASA-CASE-NPO-16000-1] c 36 N85-29264
- RUTLEDGE, S. K.**  
Method and apparatus for producing a thermal atomic oxygen beam  
[NASA-CASE-LEW-15614-1] c 72 N93-19026
- RUTLEDGE, SHARON K.**  
Ion beam sputter etching  
[NASA-CASE-LEW-13899-1] c 31 N87-21160  
Atomic oxygen protective coating with resistance to undercutting at defect sites  
[NASA-CASE-LEW-15306-1] c 27 N93-20566  
Method for retarding oxidation of an organic substrate  
[NASA-CASE-LEW-15306-2] c 27 N93-28425
- RYAN, C. R.**  
Quadrature demodulation  
[NASA-CASE-GSC-12137-1] c 33 N78-32338
- RYAN, E. W.**  
Thrust reverser for a long duct fan engine  
[NASA-CASE-LEW-13199-1] c 07 N82-26293
- RYAN, G. G.**  
Tanker orbit transfer vehicle and method  
[NASA-CASE-MSC-20543-1] c 18 N84-22610
- RYAN, MARGARET A.**  
AMTEC vapor-vapor series connected cells  
[NASA-CASE-NPO-18667-1-CU] c 33 N93-19330
- RYASON, P. R.**  
Solar photolysis of water  
[NASA-CASE-NPO-13675-1] c 44 N77-32580  
Solar photolysis of water  
[NASA-CASE-NPO-14126-1] c 44 N79-11470  
Continuous coal processing method  
[NASA-CASE-NPO-13758-2] c 31 N81-15154
- RYBICKI, DANIEL J.**  
Gas arc constriction for plasma arc welding  
[NASA-CASE-MFS-28844-1] c 37 N93-31292
- RYBICKI, G. C.**  
Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267

# S

- SABAROFF, S.**  
Broadband frequency discriminator Patent  
[NASA-CASE-NPO-10096] c 07 N71-24583  
Systems and methods for determining radio frequency interference  
[NASA-CASE-GSC-12150-1] c 32 N79-11265
- SABELMAN, E. E.**  
Pump for delivering heated fluids  
[NASA-CASE-NPO-11417] c 15 N73-24513  
Ferrofluidic solenoid  
[NASA-CASE-NPO-11738-1] c 09 N73-30185
- SABOL, A. P.**  
Crossed-field MHD plasma generator/ accelerator Patent  
[NASA-CASE-XLA-03374] c 25 N71-15562  
Self-repeating plasma generator having communicating annular and linear arc discharge passages Patent  
[NASA-CASE-XLA-03103] c 25 N71-21693  
Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10612-1] c 12 N73-28144  
Heat exchanger system and method  
[NASA-CASE-LAR-10799-2] c 34 N76-17317  
Solar hydrogen generator  
[NASA-CASE-LAR-11361-1] c 44 N77-22607
- SACHSE, GLEN W.**  
Non-mechanical optical path switching and its application to dual beam spectroscopy including gas filter correlation radiometry  
[NASA-CASE-LAR-14588-1-CU] c 74 N92-29117
- SACKS, B. H.**  
Magnetically actuated tuning method for Gunn oscillators  
[NASA-CASE-NPO-12106] c 09 N73-15235
- SADHUKHAN, P.**  
Process for preparing higher oxides of the alkali and alkaline earth metals  
[NASA-CASE-ARC-10992-1] c 26 N78-32229
- SADR, RAMIN**  
Digital carrier demodulator employing components working beyond normal limits  
[NASA-CASE-NPO-17628-1-CU] c 32 N92-21712
- SAFFREN, M. M.**  
Material suspension within an acoustically excited resonant chamber  
[NASA-CASE-NPO-13263-1] c 12 N75-24774
- Heat operated cryogenic electrical generator  
[NASA-CASE-NPO-13303-1] c 20 N75-24837  
Doped Josephson tunneling junction for use in a sensitive IR detector  
[NASA-CASE-NPO-13348-1] c 33 N75-31332  
Magnetometer using superconducting rotating body  
[NASA-CASE-NPO-13388-1] c 35 N76-16390  
Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback  
[NASA-CASE-NPO-13346-1] c 36 N76-29575  
Apparatus for photon excited catalysis  
[NASA-CASE-NPO-13566-1] c 25 N77-32255  
Closed loop electrostatic levitation system  
[NASA-CASE-NPO-15553-1] c 33 N85-29142
- SAHINKAYA, Y.**  
Optimal control system for an electric motor driven vehicle  
[NASA-CASE-NPO-11210] c 11 N72-20244
- SAINSBURY-CARTER, J. B.**  
Bonded joint and method  
[NASA-CASE-LAR-10900-1] c 37 N74-23064
- SAINTCLAIR, ANNE K.**  
Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14162-1] c 27 N90-15259
- SAINTCLAIR, T. L.**  
Polyimide adhesives  
[NASA-CASE-LAR-11397-1] c 27 N75-29263
- SAINTCLAIR, TERRY L.**  
Novel polyimide compositions based on 4,4'-isophthaloyldipthalic anhydride (IDPA)  
[NASA-CASE-LAR-14194-1] c 24 N90-15148
- SAKELLARIS, P. C.**  
Automatic fluid dispenser  
[NASA-CASE-ARC-10820-1] c 35 N78-19466
- SALAMA, A. M.**  
Method of mitigating titanium impurities effects in p-type silicon material for solar cells  
[NASA-CASE-NPO-14635-1] c 44 N80-24741  
Efficiency of silicon solar cells containing chromium  
[NASA-CASE-NPO-15179-1] c 44 N82-26777
- SALAZAR, GEORGE A.**  
Adaptive data acquisition multiplexing system and method  
[NASA-CASE-MSC-21170-1] c 17 N91-14371  
Reconfigurable fuzzy cell  
[NASA-CASE-MSC-21613-1] c 61 N92-10331
- SALEMME, C. T.**  
Impact absorbing blade mounts for variable pitch blades  
[NASA-CASE-LEW-12313-1] c 37 N78-10468
- SALIK, JOSHUA**  
Ion-beam nitriding of steels  
[NASA-CASE-LEW-14104-2] c 26 N88-14179
- SALISBURY, D. P.**  
High performance channel injection sealant invention abstract  
[NASA-CASE-ARC-14408-1] c 27 N82-33523
- SALISBURY, J. K., JR.**  
Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c 37 N79-28551
- SALISBURY, KENNETH, JR.**  
Multi-fingered robotic hand  
[NASA-CASE-NPO-15959-2] c 37 N91-14616
- SALMIRS, S.**  
Radiation direction detector including means for compensating for photocell aging Patent  
[NASA-CASE-XLA-00183] c 14 N70-40239  
Spacecraft separation system for spinning vehicles and/or payloads Patent  
[NASA-CASE-XLA-02132] c 31 N71-10582
- SALOMON, P. M.**  
Programmable scan/read circuitry for charge coupled device imaging detectors  
[NASA-CASE-NPO-15345-1] c 74 N84-23247
- SALTER, W. E.**  
Pseudo-noise test set for communication system evaluation  
[NASA-CASE-MFS-22671-1] c 35 N75-21582  
Method of and means for testing a tape record/playback system  
[NASA-CASE-MFS-22671-2] c 35 N77-17426
- SALTZMAN, E. J.**  
Traversing probe Patent  
[NASA-CASE-XFR-02007] c 12 N71-24692  
Low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c 85 N82-33288
- SALVINSKI, R. J.**  
Electrohydrodynamic control valve Patent  
[NASA-CASE-NPO-10416] c 12 N71-27332  
Ultrasonically bonded valve assembly  
[NASA-CASE-NPO-13360-1] c 37 N75-25185
- SAMFIELD, E.**  
Inflatable tether Patent  
[NASA-CASE-XMS-10993] c 15 N71-28936

# PERSONAL AUTHOR INDEX

- SAMONSKI, F. H., JR.**  
Liquid-gas separator for zero gravity environment Patent  
[NASA-CASE-XMS-01492] c 05 N70-41297
- SAMPSELL, JEFFREY B.**  
Programmable remapper for image processing  
[NASA-CASE-MSC-21350-1] c 60 N92-16563
- SAMS, CLARENCE F.**  
High aspect reactor vessel and method of use  
[NASA-CASE-MSC-21662-1] c 51 N92-34232
- SAMSON, J. A. R.**  
Analytical photoionization mass spectrometer with an argon gas filter between the light source and monochromator Patent  
[NASA-CASE-LAR-10180-1] c 06 N71-13461
- SAMSON, R.**  
Sealed cabinetry Patent  
[NASA-CASE-MSC-12168-1] c 09 N71-18600
- SAN MIGUEL, A.**  
Means and method of measuring viscoelastic strain Patent  
[NASA-CASE-XNP-01153] c 32 N71-17645  
Miniature stress transducer Patent  
[NASA-CASE-XNP-02983] c 14 N71-21091
- SANDBORN, V. A.**  
Particle beam measurement apparatus using beam kinetic energy to change the heat sensitive resistance of the detection probe Patent  
[NASA-CASE-XLE-00243] c 14 N70-38602  
Apparatus for increasing ion engine beam density Patent  
[NASA-CASE-XLE-00519] c 28 N70-41576
- SANDER, R. C.**  
Transient video signal recording with expanded playback Patent  
[NASA-CASE-ARC-10003-1] c 09 N71-25866
- SANDERS, B. W.**  
Airflow control system for supersonic inlets  
[NASA-CASE-LEW-11188-1] c 02 N74-20646
- SANDERS, FRED G.**  
Bi-stem gripping apparatus  
[NASA-CASE-MFS-28185-1] c 37 N88-23979
- SANDERS, W. A.**  
Sintering silicon nitride  
[NASA-CASE-LEW-15489-1] c 27 N93-17062
- SANDFORD, M. C.**  
Solar cell angular position transducer  
[NASA-CASE-LAR-11999-1] c 44 N80-18552
- SANDROCK, G. D.**  
High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-02991] c 17 N71-16025  
High temperature ferromagnetic cobalt-base alloy Patent  
[NASA-CASE-XLE-03629] c 17 N71-23248  
Cobalt-base alloy  
[NASA-CASE-LEW-10436-1] c 17 N73-32415
- SANDSTROM, D. B.**  
Fabrication of single crystal film semiconductor devices  
[NASA-CASE-ERC-10222] c 09 N72-22199
- SANG, Q. TRAN**  
Vapor fragrances  
[NASA-CASE-LAR-13680-1] c 35 N87-25561
- SANTARPIA, D.**  
Dually mode locked Nd:YAG laser  
[NASA-CASE-GSC-11746-1] c 36 N75-19654
- SARBOLOUKI, M. N.**  
Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c 39 N81-25400
- SARGISSON, D. F.**  
Gas turbine engine with convertible accessories  
[NASA-CASE-LEW-12390-1] c 07 N78-17056  
Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-2] c 07 N78-18066  
Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-3] c 07 N79-14096
- SATER, B. L.**  
Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c 37 N81-19455
- SAUER, L. S.**  
Hybrid lubrication system and bearing Patent  
[NASA-CASE-XNP-01641] c 15 N71-22997
- SAUER, R. L.**  
Automatic biowaste sampling  
[NASA-CASE-MSC-14640-1] c 54 N76-14804
- SAUER, RICHARD L.**  
Biofilm monitoring coupon system and method of use  
[NASA-CASE-MSC-21585-1] c 51 N91-31755  
Regenerable biocide delivery unit  
[NASA-CASE-MSC-21763-1-SB] c 51 N93-18351
- SAUER, T. H.**  
Parallel-plate viscometer with double diaphragm suspension  
[NASA-CASE-NPO-11387] c 14 N73-14429

- SAUERS, D. G.**  
Measuring device. Patent  
[NASA-CASE-XMS-01546] c 14 N70-40233  
Lightweight electrically-powered flexible thermal laminate  
[NASA-CASE-MSC-12662-1] c 33 N79-12331
- SAUNDERS, A. A., JR.**  
Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c 07 N80-18039  
Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c 07 N81-19116
- SAUNDERS, A. R.**  
A technique for breaking ice in the path of a ship  
[NASA-CASE-LAR-10815-1] c 16 N72-22520
- SAUNDERS, J. M.**  
Insulation bonding test system  
[NASA-CASE-MFS-25862-1] c 27 N85-20126
- SAUNDERS, N. T.**  
Method of producing porous tungsten ionizers for ion rocket engines. Patent  
[NASA-CASE-XLE-00455] c 28 N70-38197
- SAUTER, R. J.**  
Foot pedal operated fluid type exercising device  
[NASA-CASE-MSC-11561-1] c 05 N73-32014
- SAVAKIS, ANDREAS E.**  
Frequency domain laser velocimeter signal processor  
[NASA-CASE-LAR-13552-1-CU] c 33 N89-14385
- SAWKO, P. M.**  
Polymeric vehicles as carriers for sulfonic acid salt of nitrosubstituted aromatic amines  
[NASA-CASE-ARC-10325] c 06 N72-25147  
Intumescent paint containing nitrile rubber  
[NASA-CASE-ARC-10196-1] c 18 N73-13562  
Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c 27 N76-16230  
Intumescent coatings containing 4,4'-dinitrosulfanilide  
[NASA-CASE-ARC-11042-1] c 24 N78-14096  
Intumescent-ablator coatings using endothermic fillers  
[NASA-CASE-ARC-11043-1] c 24 N78-27180  
Ambient cure polyimide foams  
[NASA-CASE-ARC-11170-1] c 27 N79-11215  
Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c 15 N79-26100  
Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides  
[NASA-CASE-ARC-11107-1] c 25 N80-16116  
Structural wood panels with improved fire resistance  
[NASA-CASE-ARC-11174-1] c 24 N81-13999
- SAWKO, PAUL M.**  
Composite flexible blanket insulation  
[NASA-CASE-ARC-11907-1-NP] c 24 N91-31236
- SAWYER, C. D.**  
Control for nuclear thermionic power source  
[NASA-CASE-NPO-13114-2] c 73 N78-28913
- SAWYER, D. E.**  
Semiconductor-ferroelectric memory device  
[NASA-CASE-ERC-10307] c 08 N72-21198  
Fabrication of single crystal film semiconductor devices  
[NASA-CASE-ERC-10222] c 09 N72-22199
- SAWYER, J. T.**  
Leak detector  
[NASA-CASE-MFS-21761-1] c 35 N75-15931
- SAWYER, R. V.**  
Electrical servo actuator bracket  
[NASA-CASE-FRC-11044-1] c 37 N81-33483  
Computer circuit card puller  
[NASA-CASE-FRC-11042-1] c 60 N82-24839
- SAXELBY, ROBERT M.**  
Method of fabricating a rocket engine combustion chamber  
[NASA-CASE-MFS-28569-1] c 27 N93-30565
- SAYAH, HOSHYAR R.**  
Integrated circuit reliability testing  
[NASA-CASE-NPO-17393-1-CU] c 33 N89-29679
- SCAPICCHIO, A. J.**  
Apparatus and method for separating a semiconductor wafer. Patent  
[NASA-CASE-ERC-10138] c 26 N71-14354
- SCARPELLI, AUGUST R.**  
Precision tunable resonant microwave cavity  
[NASA-CASE-LEW-13935-1] c 33 N87-21234  
Apparatus for checking threaded hole perpendicularity  
[NASA-CASE-LEW-15444-1] c 35 N93-14840
- SCHACH, M.**  
Apparatus for controlling the temperature of balloon-borne equipment  
[NASA-CASE-GSC-11620-1] c 34 N74-23039
- SCHACHT, W. F.**  
Water cooled contactor for anode in carbon arc mechanism  
[NASA-CASE-XMS-03700] c 15 N69-24266
- SCHACHTER, M. M.**  
Apparatus for producing three-dimensional recordings of fluorescence spectra. Patent  
[NASA-CASE-XGS-01231] c 14 N70-41676
- SCHAEFER, D. H.**  
Binary magnetic memory device. Patent  
[NASA-CASE-XGS-00174] c 08 N70-34743  
Logarithmic converter. Patent  
[NASA-CASE-XLA-00471] c 08 N70-34778  
Full binary adder. Patent  
[NASA-CASE-XGS-00689] c 08 N70-34787  
Ripple add and ripple subtract binary counters. Patent  
[NASA-CASE-XGS-04766] c 08 N71-18602  
Computing apparatus. Patent  
[NASA-CASE-XGS-04765] c 08 N71-18693  
Signal detection and tracking apparatus. Patent  
[NASA-CASE-XGS-03502] c 10 N71-20852  
Two-dimensional radiant energy array computers and computing devices  
[NASA-CASE-GSC-11839-1] c 60 N77-14751  
Memory device for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-2] c 60 N78-10709
- SCHAEFER, G. J.**  
Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c 32 N81-27341
- SCHAEER, G. R.**  
Method of making porous conductive supports for electrodes  
[NASA-CASE-GSC-11367-1] c 44 N74-19692
- SCHAEFFER, G. L.**  
Multivibrator circuit with means to prevent false triggering from supply voltage fluctuations. Patent  
[NASA-CASE-ARC-10137-1] c 09 N71-28468
- SCHAEFFERT, J. C.**  
Ultra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit. Patent  
[NASA-CASE-XGS-00381] c 09 N70-34819
- SCHALLER, N. C.**  
Apparatus for vibrational testing of articles  
[NASA-CASE-GSC-11302-1] c 14 N73-13416
- SCHANSMAN, R. R.**  
Photoelectric detection system  
[NASA-CASE-MFS-23776-1] c 33 N82-28545
- SCHAPPERT, G. T.**  
Method and apparatus for wavelength tuning of liquid lasers  
[NASA-CASE-ERC-10187] c 16 N69-31343
- SCHAU, R. B.**  
Thermobulb mount. Patent  
[NASA-CASE-NPO-10158] c 33 N71-16356
- SCHIEBE, H.**  
Metering gun for dispensing precisely measured charges of fluid  
[NASA-CASE-MFS-21163-1] c 54 N74-17853
- SCHIEIN, MICHAEL E.**  
Surface tension confined liquid cryogen cooler  
[NASA-CASE-GSC-13112-1] c 31 N89-29578
- SCHELL, J. T.**  
Cryogenic thermal insulation. Patent  
[NASA-CASE-XMF-05046] c 33 N71-28892
- SCHEMBER, HELENE**  
Krypton based adsorption type cryogenic refrigerator  
[NASA-CASE-NPO-17334-1-CU] c 31 N88-23917
- SCHER, M. P.**  
Spacecraft attitude control method and apparatus  
[NASA-CASE-HQN-10439] c 21 N72-21624
- SCHER, S. H.**  
Hot air balloon deceleration and recovery system. Patent  
[NASA-CASE-XLA-06824-2] c 02 N71-11037
- SCHIER, J. ALAN**  
Torque sensor having a spoked sensor element support structure  
[NASA-CASE-NPO-17461-1-CU] c 35 N91-17350  
Fluid-loop reaction system  
[NASA-CASE-NPO-17204-1-CU] c 34 N91-25380
- SCHIFFNER, G.**  
Power supply for carbon dioxide lasers  
[NASA-CASE-GSC-11222-1] c 16 N73-32391
- SCHILLER, J. G.**  
Method and device for the detection of phenol and related compounds  
[NASA-CASE-LEW-12513-1] c 25 N79-22235
- SCHILLING, CHRISTOPHER H.**  
Method and apparatus for producing microshells  
[NASA-CASE-NPO-16635-1-CU] c 31 N91-32240
- SCHIMMEL, MORRIS L.**  
Ignitability test method and apparatus  
[NASA-CASE-LAR-13996-1-SB] c 25 N90-15161  
Ignitability test method and apparatus  
[NASA-CASE-LAR-14454-1] c 25 N91-32196  
Performance of blasting caps  
[NASA-CASE-LAR-13832-1] c 28 N93-18274
- SCHINDLER, R. A.**  
Interferometer direction sensor. Patent  
[NASA-CASE-NPO-10320] c 14 N71-17655  
Interferometer servo system. Patent  
[NASA-CASE-NPO-10300] c 14 N71-17662  
Single reflector interference spectrometer and drive system therefor  
[NASA-CASE-NPO-11932-1] c 35 N74-23040  
Interferometer mirror tilt correcting system  
[NASA-CASE-NPO-13687-1] c 35 N78-18391  
Over-under double-pass interferometer  
[NASA-CASE-NPO-13999-1] c 35 N78-18395  
Apparatus for providing a servo drive signal in a high-speed stepping interferometer  
[NASA-CASE-NPO-13569-2] c 35 N79-14348  
Velocity servo for continuous scan Fourier interference spectrometer  
[NASA-CASE-NPO-14093-1] c 35 N80-20563  
Interferometer  
[NASA-CASE-NPO-14448-1] c 74 N81-29963
- SCHLESINGER, F. W.**  
Optical alignment system. Patent  
[NASA-CASE-NXP-02029] c 14 N70-41955
- SCHLESING, J. A.**  
Shuttle-launch triangular space station  
[NASA-CASE-MSC-20676-1] c 18 N86-24729
- SCHLESING, JOHN A.**  
Docking mechanism for spacecraft  
[NASA-CASE-MSC-21386-1] c 18 N90-20126  
Smart tunnel: Docking mechanism  
[NASA-CASE-MSC-21360-1] c 18 N91-14374
- SCHLOSS, A. L.**  
Solid state switch  
[NASA-CASE-NXP-09228] c 09 N69-27500
- SCHMIDT, DEBORAH D.**  
High temperature electric arc furnace and method  
[NASA-CASE-MFS-28281-1] c 09 N90-23415  
Solidification processing of alloys using an applied electric field  
[NASA-CASE-MFS-26083-1-CU] c 26 N90-26940
- SCHMIDT, DEBORAH DIANE**  
Directional solidification of superalloys  
[NASA-CASE-MFS-28314-1] c 26 N91-14462
- SCHMIDT, E. E.**  
Caterpillar micro positioner  
[NASA-CASE-GSC-10780-1] c 14 N72-16283
- SCHMIDT, H. W.**  
Conical valve plug. Patent  
[NASA-CASE-XLE-00715] c 15 N70-34859  
Fluid coupling. Patent  
[NASA-CASE-XLE-00397] c 15 N70-36492
- SCHMIDT, K. C.**  
Radiation and particle detector and amplifier  
[NASA-CASE-NPO-12128-1] c 14 N73-32317
- SCHMIDT, L. F.**  
Photosensitive device to detect bearing deviation. Patent  
[NASA-CASE-XNP-00438] c 21 N70-35089  
Light sensor  
[NASA-CASE-NPO-11311] c 14 N72-25414  
Sun direction detection system  
[NASA-CASE-NPO-13722-1] c 74 N77-22951
- SCHMIDT, R.**  
Reactance control system. Patent  
[NASA-CASE-XMF-01598] c 21 N71-15583
- SCHMIDT, R. F.**  
Monopulse system with an electronic scanner  
[NASA-CASE-XGS-05582] c 07 N69-27460  
Electronic scanning of 2-channel monopulse patterns. Patent  
[NASA-CASE-GSC-10299-1] c 09 N71-24804  
Dish antenna having switchable beamwidth  
[NASA-CASE-GSC-11760-1] c 33 N75-19516  
Single frequency, two feed dish antenna having switchable beamwidth  
[NASA-CASE-GSC-11968-1] c 32 N76-15329  
Variable beamwidth antenna  
[NASA-CASE-GSC-11862-1] c 32 N76-18295  
Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c 33 N76-27472  
Focal axis resolver for offset reflector antennas  
[NASA-CASE-GSC-12630-1] c 33 N83-36355
- SCHMIDT, SUSAN B.**  
High performance forward swept wing aircraft  
[NASA-CASE-ARC-11636-1] c 05 N88-28914
- SCHMIDT, W. G.**  
Ammonium perchlorate composite propellant containing an organic transitional metal chelate catalytic additive. Patent  
[NASA-CASE-LAR-10173-1] c 27 N71-14090
- SCHMITIGAL, WESLEY P.**  
Core design for use with precision composite reflectors  
[NASA-CASE-NPO-17858-1-CU] c 24 N93-14700

- SCHMITT, A. L.**  
Sun angle calculator  
[NASA-CASE-MSC-12617-1] c 35 N76-29552
- SCHMITZ, B. W.**  
Trajectory-correction propulsion system Patent  
[NASA-CASE-XNP-01104] c 28 N70-39931
- SCHMITZ, F. H.**  
Acoustically swept rotor  
[NASA-CASE-ARC-11106-1] c 05 N80-14107
- SCHNEIDER, R. T.**  
Non-equilibrium radiation nuclear reactor  
[NASA-CASE-HQN-10841-1] c 73 N78-19920  
Safety flywheel  
[NASA-CASE-HQN-10888-1] c 44 N79-14527
- SCHNEIDER, STEVEN J.**  
Zero-G phase detector and separator  
[NASA-CASE-LEW-14844-1] c 35 N90-22024  
Method of injecting fluid propellants into a rocket combustion chamber  
[NASA-CASE-LEW-14846-2] c 20 N91-26200  
Extended temperature range rocket injector  
[NASA-CASE-LEW-14846-1] c 20 N92-10054
- SCHNEIDER, W. C.**  
Auger attachment method for insulation  
[NASA-CASE-MSC-12615-1] c 37 N76-19437  
Shuttle-launch triangular space station  
[NASA-CASE-MSC-20676-1] c 18 N86-24729
- SCHNEIDER, WILLIAM C.**  
Mobile remote manipulator system for a tetrahedral truss  
[NASA-CASE-MSC-20985-1] c 18 N88-26398  
Preloaded brake disc  
[NASA-CASE-MSC-21132-1] c 37 N88-29181  
Double swivel toggle release  
[NASA-CASE-MSC-21436-1] c 37 N90-21390  
Load limiting energy absorbing lightweight debris catcher  
[NASA-CASE-MSC-21562-1] c 16 N92-16007
- SCHNITZER, E.**  
Inflatable honeycomb Patent  
[NASA-CASE-XLA-00204] c 32 N70-36536  
Manned space station Patent  
[NASA-CASE-XLA-00258] c 31 N70-38676  
Method of making inflatable honeycomb Patent  
[NASA-CASE-XLA-03492] c 15 N71-22713
- SCHNOPPER, H. W.**  
Dual purpose optical instrument capable of simultaneously acting as spectrometer and diffractometer  
[NASA-CASE-XNP-05231] c 14 N73-28491
- SCHOEN, A. H.**  
Honeycomb panels formed of minimal surface periodic tubule layers  
[NASA-CASE-ERC-10364] c 18 N72-25540  
Honeycomb core structures of minimal surface tubule sections  
[NASA-CASE-ERC-10363] c 18 N72-25541  
Expandable space frames  
[NASA-CASE-ERC-10365-1] c 31 N73-32749
- SCHOLL, J. A.**  
Method of forming shapes from planar sheets of thermosetting materials  
[NASA-CASE-NPO-11036] c 15 N72-24522
- SCHOMBURG, C.**  
Densification of porous refractory substrates  
[NASA-CASE-MSC-18737-1] c 24 N83-13171  
High temperature silicon carbide impregnated insulating fabrics  
[NASA-CASE-MSC-18832-1] c 27 N83-18908
- SCHORUM, S. W.**  
High speed binary to decimal conversion system Patent  
[NASA-CASE-XGS-01230] c 08 N71-19544
- SCHOTT, TIMOTHY D.**  
Method of attaching strain gauges to various materials  
[NASA-CASE-LAR-13797-1] c 35 N88-30108
- SCHRADER, J. H.**  
Multiple input radio receiver Patent  
[NASA-CASE-XLA-00901] c 07 N71-10775  
Cooperative Doppler radar system Patent  
[NASA-CASE-LAR-10403] c 21 N71-11766  
Apparatus for aiding a pilot in avoiding a midair collision between aircraft  
[NASA-CASE-LAR-10717-1] c 21 N73-30641
- SCHREDER, K. D.**  
Broadband stable power multiplier Patent  
[NASA-CASE-XNP-10854] c 10 N71-26331
- SCHROEDER, J. E.**  
Absorbable-susceptor joining of ceramic surfaces  
[NASA-CASE-NPO-15640-1] c 27 N84-22748
- SCHRYER, DAVID R.**  
Isotope exchange in oxide-containing catalyst  
[NASA-CASE-LAR-13542-2-SB] c 25 N90-20154  
Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-1-SB] c 25 N90-23517
- Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-2-SB] c 25 N91-21270
- SCHUBERT, F. H.**  
Iodine generator for reclaimed water purification  
[NASA-CASE-MSC-14632-1] c 54 N78-14784
- SCHUBERT, FRANZ H.**  
Static feed water electrolysis subsystem development  
[NASA-CASE-MSC-21577-1-SB] c 25 N91-23271  
Water electrolysis  
[NASA-CASE-MSC-21572-1-SB] c 25 N92-28756
- SCHUBERT, W. W.**  
Enhancement of in vitro guayule propagation  
[NASA-CASE-NPO-15213-1] c 51 N83-17045
- SCHUERER, P. H.**  
Sprayable low density ablator and application process  
[NASA-CASE-MFS-23506-1] c 24 N78-24290  
Cryogenic insulation strength and bond tester  
[NASA-CASE-MFS-25910-1] c 39 N86-20841
- SCHULLER, F. T.**  
Journal bearings  
[NASA-CASE-LEW-11076-1] c 37 N74-21061  
Journal Bearings  
[NASA-CASE-LEW-11076-2] c 37 N74-32921  
Lubricated journal bearing  
[NASA-CASE-LEW-11076-3] c 37 N75-30562  
Fluid journal bearings  
[NASA-CASE-LEW-11076-4] c 37 N76-15461
- SCHULTZ, D. F.**  
Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c 37 N84-22958
- SCHULTZ, DONALD F.**  
Steam cooled rich-burn combustor liner  
[NASA-CASE-LEW-13609-1] c 25 N90-11824
- SCHUMACHER, L. L.**  
Wide angle sun sensor  
[NASA-CASE-NPO-13327-1] c 35 N75-23910
- SCHUMACHER, LARRY L.**  
Remote object configuration/orientation determination  
[NASA-CASE-NPO-17436-1-CU] c 35 N91-15512
- SCHUSTER, D. M.**  
Antenna beam-shaping apparatus Patent  
[NASA-CASE-XNP-00611] c 09 N70-35219  
Parabolic reflector horn feed with spillover correction Patent  
[NASA-CASE-XNP-00540] c 09 N70-35382  
Insertion loss measuring apparatus having transformer means connected across a pair of bolometers Patent  
[NASA-CASE-XNP-01193] c 10 N71-16057
- SCHUSTER, GREGORY L.**  
Method for remotely powering a device such as a lunar rover  
[NASA-CASE-LAR-14789-1] c 37 N92-30388
- SCHUSTER, M. A.**  
Solid state television camera system Patent  
[NASA-CASE-XMF-06092] c 07 N71-24612
- SCHUTT, J. B.**  
Alkali-metal silicate protective coating  
[NASA-CASE-XGS-04119] c 18 N69-39979  
Fire resistant coating composition Patent  
[NASA-CASE-GSC-10072] c 18 N71-14014  
Method for etching copper Patent  
[NASA-CASE-XGS-06306] c 17 N71-16044  
Alkali metal silicate protective coating Patent  
[NASA-CASE-XGS-04799] c 18 N71-24183  
Phototropic composition of matter  
[NASA-CASE-XGS-03736] c 14 N72-22443  
Potassium silicate zinc coatings  
[NASA-CASE-GSC-10361-1] c 18 N72-23581  
Ultraviolet light reflective coating  
[NASA-CASE-GSC-11786-1] c 24 N76-24363  
Remote sensing of vegetation and soil using microwave ellipsometry  
[NASA-CASE-GSC-11976-1] c 43 N78-10529  
Alkali-metal silicate binders and methods of manufacture  
[NASA-CASE-GSC-12303-1] c 24 N79-31347  
Diffusely reflecting paints including polytetrafluoroethylene and method of manufacture  
[NASA-CASE-GSC-12883-1] c 27 N85-29044
- SCHUTZENHOFER, L. A.**  
Apparatus for reducing aerodynamic noise in a wind tunnel  
[NASA-CASE-MFS-23099-1] c 09 N76-23273
- SCHWAB, W. B.**  
Closed loop spray cooling apparatus  
[NASA-CASE-LEW-11981-1] c 31 N78-17237  
Closed loop spray cooling apparatus  
[NASA-CASE-LEW-11981-2] c 34 N79-20336
- SCHWARTZ, I. R.**  
Abating exhaust noises in jet engines  
[NASA-CASE-ARC-10712-1] c 07 N74-33218
- SCHWARZ, F. C.**  
Saturation current protection apparatus for saturable core transformers Patent  
[NASA-CASE-ERC-10075] c 09 N71-24800
- Unsaturating saturable core transformer Patent  
[NASA-CASE-ERC-10125] c 09 N71-24893
- Saturation current protection apparatus for saturable core transformers  
[NASA-CASE-ERC-10075-2] c 09 N72-22196  
Load-insensitive electrical device  
[NASA-CASE-XER-11046] c 09 N72-22203  
Analog Signal to Discrete Time Interval Converter (ASDTIC)  
[NASA-CASE-ERC-10048] c 09 N72-25251  
Controllable load insensitive power converters  
[NASA-CASE-ERC-10268] c 09 N72-25252  
Load insensitive electrical device  
[NASA-CASE-XER-11046-2] c 33 N74-22864
- SCHWARZ, RAY P.**  
Rotating bio-reactor cell culture apparatus  
[NASA-CASE-MSC-21293-1] c 51 N91-21700  
Horizontally rotated cell culture system with a coaxial tubular oxygenator  
[NASA-CASE-MSC-21294-1] c 51 N91-30667  
Three-dimensional cell to tissue assembly process  
[NASA-CASE-MSC-21559-1] c 51 N92-34231  
High aspect reactor vessel and method of use  
[NASA-CASE-MSC-21662-1] c 51 N92-34232  
Method for culturing mammalian cells in a perfused bioreactor  
[NASA-CASE-MSC-21293-2] c 51 N93-10109  
Method for culturing mammalian cells in a horizontally rotated bioreactor  
[NASA-CASE-MSC-21294-2] c 51 N93-10110
- SCHWEMMER, GEARY K.**  
Doppler shift compensation system for laser transmitters and receivers  
[NASA-CASE-GSC-13194-1] c 36 N93-18287
- SCHWINGHAMER, R. J.**  
Angular measurement system Patent  
[NASA-CASE-XMF-00447] c 14 N70-33179  
Space vehicle electrical system Patent  
[NASA-CASE-XMF-00517] c 03 N70-34157  
Electrical discharge apparatus for forming Patent  
[NASA-CASE-XMF-00375] c 15 N70-34249  
Electro-optical alignment control system Patent  
[NASA-CASE-XMF-00908] c 14 N70-40238  
Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114] c 15 N71-17650  
Magnetomotive metal working device Patent  
[NASA-CASE-XMF-03793] c 15 N71-24833  
Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-3] c 15 N71-24865  
Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-2] c 15 N71-26148
- SCHWUTTKKE, G. H.**  
Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c 76 N79-23798  
Method of increasing minority carrier lifetime in silicon web or the like  
[NASA-CASE-NPO-15530-1] c 76 N83-35888
- SCHWUTTKKE, URSULA M.**  
Parallel inferring method and apparatus for rule-based expert systems  
[NASA-CASE-NPO-18004-1-CU] c 60 N93-29504
- SCIACCA, T. P.**  
Device for measuring electron-beam intensities and for subjecting materials to electron irradiation in an electron microscope  
[NASA-CASE-XGS-01725] c 14 N69-39982
- SCOGGINS, J. R.**  
Meteorological balloon Patent  
[NASA-CASE-XMF-04163] c 02 N71-23007
- SCOPELIANOS, A. G.**  
Process for the preparation of polycarbonylphosphazenes  
[NASA-CASE-ARC-11176-2] c 27 N81-27271  
Carboranylchlorotriphosphazenes and their polymers  
[NASA-CASE-ARC-11176-1] c 27 N82-18389  
Carboranymethylene-substituted phosphazenes and polymers thereof  
[NASA-CASE-ARC-11370-1] c 27 N84-22750
- SCOTT, C. E.**  
Magnifying scratch gage force transducer  
[NASA-CASE-LAR-10496-1] c 14 N72-22437
- SCOTT, C. N.**  
Inflatable transpiration cooled nozzle  
[NASA-CASE-MFS-20619] c 28 N72-11708
- SCOTT, D. R.**  
Solar tracking system  
[NASA-CASE-MFS-23999-1] c 44 N81-24520  
Electrical self-aligning connector  
[NASA-CASE-MFS-25211-2] c 33 N84-14423
- SCOTT, R. F.**  
Burrowing apparatus  
[NASA-CASE-XNP-07169] c 15 N73-32362

- SCOTT, R. R.**  
Solar cell including second surface mirrors Patent  
[NASA-CASE-NPO-10109] c 03 N71-11049
- SCOTT, ROBERT O.**  
Method of controlling a resin curing process  
[NASA-CASE-MSC-21169-1] c 27 N89-29539
- SCOTT, S. G.**  
Nonmagnetic thermal motor for a magnetometer  
[NASA-CASE-XAR-03786] c 09 N69-21313
- SCOTT, W. L.**  
Tactile sensing means for prosthetic limbs  
[NASA-CASE-MFS-16570-1] c 05 N73-32013
- SCOTTI, STEPHEN J.**  
Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-1] c 34 N92-28752  
Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-2] c 34 N92-30024
- SCOW, J.**  
Multiple circuit switch apparatus with improved pivot actuator structure Patent  
[NASA-CASE-XAC-03777] c 10 N71-15909
- SCROOP, F. R.**  
Relief container  
[NASA-CASE-XMS-06761] c 05 N69-23192
- SCUDDER, L. R.**  
Application of semiconductor diffusants to solar cells by screen printing  
[NASA-CASE-LW-12775-1] c 44 N79-11468
- SCULLY, P. T.**  
Collapsible reflector Patent  
[NASA-CASE-XMS-03454] c 09 N71-20658
- SEA, R. G.**  
Junction range finder  
[NASA-CASE-KSC-10108] c 14 N73-25461
- SEABAUGH, A. C.**  
Controlled in situ etch-back  
[NASA-CASE-NPO-15625-1] c 76 N83-20789
- SEAMAN, C. H.**  
Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c 32 N80-24510
- SEATON, A. F.**  
Phase multiplying electronic scanning system Patent  
[NASA-CASE-NPO-10302] c 10 N71-26142  
Virtual wall slot circularly polarized planar array antenna  
[NASA-CASE-NPO-10301] c 07 N72-11148  
Conical reflector antenna  
[NASA-CASE-NPO-10303] c 07 N72-22127
- SEATON, S. L.**  
Electrostatic plasma modulator for space vehicle re-entry communication Patent  
[NASA-CASE-XLA-01400] c 07 N70-41331  
Means for communicating through a layer of ionized gases Patent  
[NASA-CASE-XLA-01127] c 07 N70-41372  
Method for measuring the characteristics of a gas Patent  
[NASA-CASE-XLA-03375] c 16 N71-24074  
Laser calibrator Patent  
[NASA-CASE-XLA-03410] c 16 N71-25914
- SEAY, B. P., JR.**  
Burst synchronization detection system Patent  
[NASA-CASE-XMS-05605-1] c 10 N71-19468
- SEBACHER, D. I.**  
Solar hydrogen generator  
[NASA-CASE-LAR-11361-1] c 44 N77-22607
- SECKEL, E.**  
Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c 05 N75-12930
- SECRETAN, L.**  
Rotary bead dropper and selector for testing micrometeorite detectors Patent  
[NASA-CASE-XGS-03304] c 09 N71-22988
- SEEGMILLER, H. L. B.**  
Inertia diaphragm pressure transducer Patent  
[NASA-CASE-XAC-02981] c 14 N71-21072
- SEEGMILLER, HENRY L. B.**  
Liquid seeding atomizer  
[NASA-CASE-ARC-11631-1] c 34 N87-21255
- SEIDEL, B. L.**  
Antenna feed system for receiving circular polarization and transmitting linear polarization  
[NASA-CASE-NPO-14362-1] c 32 N80-16261
- SEIDEL, GERHARD E.**  
Control surface actuator  
[NASA-CASE-LAR-12852-1] c 05 N89-11738
- SEIDENBERG, B.**  
Method and apparatus for determining the contents of contained gas samples  
[NASA-CASE-GSC-10903-1] c 14 N73-12444  
Low outgassing polydimethylsiloxane material and preparation thereof  
[NASA-CASE-GSC-11358-1] c 06 N73-26100
- SEIDENBERG, BENJAMIN**  
Polymeric heat pipe wick  
[NASA-CASE-GSC-13019-1] c 34 N88-29133  
Ceramic heat pipe wick  
[NASA-CASE-GSC-13199-1] c 27 N90-23541
- SEILER, E. E.**  
Method for leakage testing of tanks Patent  
[NASA-CASE-XMF-02392] c 32 N71-24285
- SEITZ, T. E.**  
Heat activated cell with alkali anode and alkali salt electrolyte Patent  
[NASA-CASE-LEW-11358] c 03 N71-26084
- SEITZINGER, V. F.**  
Unfired-ceramic flame-resistant insulation and method of making the same Patent  
[NASA-CASE-XMF-01030] c 18 N70-41583  
Ceramic insulation for radiant heating environments and method of preparing the same Patent  
[NASA-CASE-MFS-14253] c 33 N71-24858
- SELCUK, M. K.**  
Solar energy collection system  
[NASA-CASE-NPO-13810-1] c 44 N77-32582  
Non-tracking solar energy collector system  
[NASA-CASE-NPO-13813-1] c 44 N78-31526  
Non-tracking solar energy collector system  
[NASA-CASE-NPO-13817-1] c 44 N79-11471  
Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c 44 N81-17518  
Solar concentrator protective system  
[NASA-CASE-NPO-15662-1] c 44 N84-28204
- SELLEN, J. M., JR.**  
Apparatus for field strength measurement of a space vehicle Patent  
[NASA-CASE-XLE-00820] c 14 N71-16014  
Apparatus for measuring electric field strength on the surface of a model vehicle Patent  
[NASA-CASE-XLE-02038] c 09 N71-16086
- SELLERS, F. J.**  
Control means for a gas turbine engine  
[NASA-CASE-LEW-14586-1] c 07 N83-31603
- SENNOTT, J. W.**  
Navigation system and method  
[NASA-CASE-GSC-12508-1] c 04 N84-22546
- SENSENY, R. M.**  
Fire extinguishing apparatus having a slidable mass for a penetrator nozzle  
[NASA-CASE-KSC-11064-1] c 31 N81-14137
- SERAFINI, T. T.**  
Preparation of polyimides from mixtures of monomeric diamines and esters of polycarboxylic acids  
[NASA-CASE-LEW-11325-1] c 06 N73-27980  
Curing agent for polyepoxides and epoxy resins and composites cured therewith  
[NASA-CASE-LEW-13226-1] c 27 N81-17260  
Composition and method for making polyimide resin-reinforced fabric  
[NASA-CASE-LEW-12933-1] c 27 N81-19296  
Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-2] c 27 N83-29392
- SERAJI, HOMAYOUN**  
Robust high-performance control for robotic manipulators  
[NASA-CASE-NPO-17785-1-CU] c 37 N89-28846  
Method and apparatus for configuration control of redundant robots  
[NASA-CASE-NPO-17801-1-CU] c 37 N91-21544  
Configuration control of seven-degree-of-freedom arms  
[NASA-CASE-NPO-18607-1-CU] c 37 N92-23553  
Obstacle avoidance for redundant robots using configuration control  
[NASA-CASE-NPO-17852-1-CU] c 63 N92-33019  
New kinematic functions for redundancy resolution using configuration control  
[NASA-CASE-NPO-18608-1-CU] c 63 N93-17275
- SETZER, D.**  
Self-charging metering and dispensing device for fluids  
[NASA-CASE-MSC-20275-1] c 35 N85-21595
- SEWARD, H. H.**  
Compact spectroradiometer  
[NASA-CASE-HQN-10683] c 14 N71-34389  
Two color horizon sensor  
[NASA-CASE-ERC-10174] c 14 N72-25409
- SEYFFERT, M. B.**  
Controlled glass bead peening Patent  
[NASA-CASE-XLA-07390] c 15 N71-18616
- SEY, J. W.**  
Dynamic Doppler simulator Patent  
[NASA-CASE-XMS-05454-1] c 07 N71-12391
- SHACK, R. V.**  
Optical system  
[NASA-CASE-NPO-15801-1] c 74 N85-23396
- SHADY, D. L.**  
Device for tensioning test specimens within an hermetically sealed chamber  
[NASA-CASE-MFS-23281-1] c 35 N77-22450
- SHAEFER, D. H.**  
Analog to digital converter for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-3] c 60 N77-32731
- SHAFER, J. I.**  
Solid propellant rocket motor nozzle  
[NASA-CASE-NPO-11458] c 28 N72-23810  
Solid propellant rocket motor  
[NASA-CASE-NPO-11559] c 28 N73-24784  
Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c 28 N74-33209  
Solid propellant motor  
[NASA-CASE-NPO-11458A] c 20 N78-32179
- SHAFER, STEVE**  
Polymer-coated surfaces to control surface zeta potential  
[NASA-CASE-MFS-26050-1] c 27 N92-25397
- SHAEFFER, C. V.**  
Active RC networks  
[NASA-CASE-ARC-10042-2] c 10 N72-11256  
Multiloop RC active filter apparatus having low parameter sensitivity with low amplifier gain  
[NASA-CASE-NPO-10192] c 09 N72-21245
- SHAH, BIREN N.**  
Real-time edge-enhanced optical correlator  
[NASA-CASE-NPO-18521-1-CU] c 74 N93-14404
- SHAI, C. M.**  
Alkali-metal silicate protective coating  
[NASA-CASE-XGS-04119] c 18 N69-39979  
Alkali metal silicate protective coating Patent  
[NASA-CASE-XGS-04799] c 18 N71-24183
- SHAI, M. C.**  
Electrically conductive thermal control coatings  
[NASA-CASE-GSC-12207-1] c 24 N79-14156  
Diffusely reflecting paints including polytetrafluoroethylene and method of manufacture  
[NASA-CASE-GSC-12883-1] c 27 N85-29044
- SHAKKOTAI, PARTHASARATHY**  
Acoustic device and method for measuring gas densities  
[NASA-CASE-NPO-18155-1-CU] c 71 N93-13421
- SHALHOUB, I. M.**  
The 1,2,4-oxadiazole elastomers  
[NASA-CASE-ARC-11253-1] c 27 N81-17262  
Bifunctional monomers having terminal oxime and cyano or amide groups  
[NASA-CASE-ARC-11253-3] c 27 N81-24256  
Preparation of crosslinked 1,2,4-oxadiazole polymer  
[NASA-CASE-ARC-11253-2] c 27 N82-24338
- SHALKAUER, MARY JO W.**  
Real-time data compression of broadcast video signals  
[NASA-CASE-LEW-14945-2] c 32 N92-10128
- SHALKAUER, KURT A.**  
Universal nondestructive mm-wave integrated circuit test fixture  
[NASA-CASE-LEW-14746-1] c 33 N91-14552
- SHALKAUER, MARY J.**  
Real-time data compression of broadcast video signals  
[NASA-CASE-LEW-14945-1] c 32 N91-13598
- SHALTENS, R. K.**  
Method and apparatus for sputtering utilizing an apertured electrode and a pulsed substrate bias  
[NASA-CASE-LEW-10920-1] c 17 N73-24569
- SHANKAR, N. K.**  
Ultrastable calibrated light source  
[NASA-CASE-MSC-12293-1] c 14 N72-27411
- SHANKS, G. C.**  
Compression test apparatus  
[NASA-CASE-MSC-18723-1] c 35 N83-21312
- SHANNON, R. L.**  
Plasma cleaning device  
[NASA-CASE-MFS-22906-1] c 75 N78-27913
- SHANNON, R. R.**  
Optical system  
[NASA-CASE-NPO-15801-1] c 74 N85-23396
- SHAPIRO, H.**  
Omni-directional anisotropic molecular trap Patent  
[NASA-CASE-XGS-00783] c 30 N71-17788  
Trap for preventing diffusion pump backstreaming  
[NASA-CASE-GSC-10518-1] c 15 N72-22489
- SHARMA, G. C.**  
Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-15670-1] c 33 N82-33634  
Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-256704-1] c 33 N84-22884



## SHARMA, M. M.

Optical crystal temperature gauge with fiber optic connections  
[NASA-CASE-MSC-18627-1] c 74 N82-30071

## SHARMA, PRAMOD K.

Regenerative Cu/La zeolite supported desulfurizing sorbents  
[NASA-CASE-NPO-17480-1-CU] c 25 N92-10073  
High temperature sorbents for oxygen  
[NASA-CASE-NPO-18409-1-CU] c 25 N93-19025

## SHARPE, M. H.

Sprayable low density ablator and application process  
[NASA-CASE-MFS-23506-1] c 24 N78-24290  
Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c 44 N79-11469  
Aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-3] c 44 N80-16452  
Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MFS-23626-1] c 24 N80-26388

## SHARPE, MAX H.

Sprayable lightweight ablative coating  
[NASA-CASE-MFS-28372-1] c 27 N92-16123

## SHATAZSKY, R.

Tape guidance system and apparatus for the provision thereof Patent  
[NASA-CASE-XNP-09453] c 08 N71-19420

## SHATTUCK, R. D.

Protection of serially connected solar cells against open circuits by the use of shunting diode Patent  
[NASA-CASE-XLE-04535] c 03 N71-23354

## SHAW, C. S.

Exhaust flow deflector  
[NASA-CASE-LAR-11570-1] c 34 N76-18364

## SHAW, D. S.

Metric half-span model support system  
[NASA-CASE-LAR-12441-1] c 09 N82-23254

## SHAW, G. C.

Process for the leaching of AP from propellant  
[NASA-CASE-NPO-14109-1] c 28 N80-23471  
Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c 28 N81-15119

## SHAW, R. C.

Device and method for frictionally testing materials for ignitability  
[NASA-CASE-MSC-20622-1] c 25 N86-19413

## SHAW, SCOTT

Method and apparatus for sensor fusion  
[NASA-CASE-MSC-21334-1] c 32 N91-25317

## SHEARER, C. H.

Stabilized lanthanum sulphur compounds  
[NASA-CASE-NPO-16135-1] c 25 N83-24572

## SHEETS, R. E.

Detector absorptivity measuring method and apparatus  
[NASA-CASE-LAR-10907-1] c 35 N76-29551

## SHEFSIEK, P. K.

Method and apparatus for distillation of liquids Patent  
[NASA-CASE-XNP-08124] c 15 N71-27184  
Method for distillation of liquids  
[NASA-CASE-XNP-08124-2] c 06 N73-13129

## SHEIBLEY, D. W.

Gels as battery separators for soluble electrode cells  
[NASA-CASE-LEW-12364-1] c 44 N77-22606  
Inorganic-organic separators for alkaline batteries  
[NASA-CASE-LEW-12649-1] c 44 N78-25530  
Formulated plastic separators for soluble electrode cells  
[NASA-CASE-LEW-12358-1] c 44 N79-17313  
In situ self cross-linking of polyvinyl alcohol battery separators  
[NASA-CASE-LEW-12972-1] c 44 N79-25481  
Method of cross-linking polyvinyl alcohol and other water soluble resins  
[NASA-CASE-LEW-13103-1] c 27 N80-32516  
In-situ cross linking of polyvinyl alcohol  
[NASA-CASE-LEW-13135-2] c 27 N81-24257  
Polyvinyl alcohol battery separator containing inert filler  
[NASA-CASE-LEW-13556-1] c 44 N81-27615  
Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13101-2] c 23 N81-29160  
Method of making formulated plastic separators for soluble electrode cells  
[NASA-CASE-LEW-12358-2] c 25 N82-21268  
Advanced inorganic separators for alkaline batteries  
[NASA-CASE-LEW-13171-1] c 44 N82-29708  
Polyvinyl alcohol cross-linked with two aldehydes  
[NASA-CASE-LEW-13504-1] c 25 N83-13188  
Advanced inorganic separators for alkaline batteries and method of making the same  
[NASA-CASE-LEW-13171-2] c 44 N83-32176

Additive for zinc electrodes  
[NASA-CASE-LEW-13286-1] c 33 N84-14422  
Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c 33 N85-29144

## SHELPUK, B.

Double-sided solar cell package  
[NASA-CASE-NPO-14199-1] c 44 N79-25482

## SHELTON, G. B.

Notch filter  
[NASA-CASE-MFS-23303-1] c 32 N77-18307  
System for the measurement of ultra-low stray light levels  
[NASA-CASE-MFS-23513-1] c 74 N79-11865

## SHELTON, J. P., JR.

Monopulse tracking system Patent  
[NASA-CASE-XGS-01155] c 10 N71-21483

## SHELTON, R. D.

Electron beam instrument for measuring electric fields Patent  
[NASA-CASE-XMF-10289] c 14 N71-23699

## SHELTON, ROBERT O.

A space-time neural network for processing both spatial and temporal data  
[NASA-CASE-MSC-21874-1] c 63 N92-30314  
Method and apparatus for preloading a joint by remotely operable means  
[NASA-CASE-MSC-21940-1] c 37 N92-30540  
Method and apparatus for filtering visual documents  
[NASA-CASE-MSC-22093-1] c 82 N93-22017  
An accelerated training method for back propagation networks  
[NASA-CASE-MSC-21625-1] c 53 N93-29610

## SHEPARD, C. E.

Electric arc apparatus Patent  
[NASA-CASE-XAC-01677] c 09 N71-20816

## SHEPARD, L. F.

Space suit  
[NASA-CASE-MSC-12609-1] c 05 N73-32012

## SHEPARD, N. F., JR.

Solar cell module  
[NASA-CASE-NPO-14467-1] c 44 N79-31753

## SHEPARD, S. K.

Peak polarity selector Patent  
[NASA-CASE-FRC-10010] c 10 N71-24862

## SHEPHERD, KEVIN P.

Sound attenuation apparatus  
[NASA-CASE-LAR-13968-1] c 71 N91-27913

## SHER, A.

Photocapacitive image converter  
[NASA-CASE-LAR-12513-1] c 44 N82-32841

## SHERBURNE, A. E.

Capacitive tank gaging apparatus being independent of liquid distribution  
[NASA-CASE-MFS-21629] c 14 N72-22442

## SHERFEY, J. M.

Bonded elastomeric seal for electrochemical cells Patent  
[NASA-CASE-XGS-02631] c 03 N71-23006

## SHERIDAN, PHILIP L.

Frangible electrochemical cell  
[NASA-CASE-XGS-10010] c 03 N72-15986

## SHERMAN, A.

Process for making sheets with parallel pores of uniform size  
[NASA-CASE-GSC-10984-1] c 37 N75-26371

## SHERWIN, E. J.

Overcenter collet space station truss fastener  
[NASA-CASE-MSC-21504-1] c 18 N91-21221

## SHERWIN, E. J.

Annular slit colloid thruster Patent  
[NASA-CASE-GSC-10709-1] c 28 N71-25213

## SHERWIN, E. J.

Stirling cycle cryogenic cooler  
[US-PATENT-4,389,849] c 44 N83-28574

## SHERWIN, E. J.

Cooling by conversion of para to ortho-hydrogen  
[NASA-CASE-GSC-12770-1] c 25 N83-29324

## SHERWIN, E. J.

Bonding thermoelectric elements to nonmagnetic refractory metal electrodes  
[NASA-CASE-XGS-04554] c 15 N69-39786

## SHETH, S.

Flame retardant spandex type polyurethanes  
[NASA-CASE-MSC-14331-2] c 27 N78-17213

## SHETH, S. G.

Process for spinning flame retardant elastomeric compositions  
[NASA-CASE-MSC-14331-3] c 27 N78-32262

## SHETH, S. G.

Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c 27 N76-24405

## SHEWMAKE, G. A.

Life raft Patent  
[NASA-CASE-XMS-00863] c 05 N70-34857

## SHEWMAKE, G. A.

Life preserver Patent  
[NASA-CASE-XMS-00864] c 05 N70-36493

Inflatable radar reflector unit Patent  
[NASA-CASE-XMS-00893] c 07 N70-40063

Rescue litter flotation assembly Patent  
[NASA-CASE-XMS-04170] c 05 N71-22748

## SHIEBER, H.

Prestressed refractory structure Patent  
[NASA-CASE-XNP-02888] c 18 N71-21068

## SHIELDS, NICHOLAS L.

Reconfigurable work station for a video display unit and keyboard  
[NASA-CASE-MFS-26009-1-SB] c 54 N88-24163

## SHIGEMOTO, F. H.

Laser fluid velocity detector Patent  
[NASA-CASE-XAC-10770-1] c 16 N71-24828

## SHIHABI, MAZEN M.

Real-time edge-enhanced optical correlator  
[NASA-CASE-NPO-18521-1-CU] c 74 N93-14404

## SHILLINGER, G. L., JR.

Spring operated accelerator and constant force spring mechanism therefor  
[NASA-CASE-ARC-10898-1] c 35 N77-18417

## SHIM, I. H.

Recorder/processor apparatus  
[NASA-CASE-GSC-11553-1] c 35 N74-15831

## SHIMA, R.

Multitarget sequential sputtering apparatus  
[NASA-CASE-NPO-13345-1] c 37 N75-19684

## SHIMADA, K.

Thermionic diode switch Patent  
[NASA-CASE-NPO-10404] c 03 N71-12255

## SHIMADA, K.

Cavity emitter for thermionic converter Patent  
[NASA-CASE-NPO-10412] c 09 N71-28421

## SHIMADA, K.

Thermal to electrical power conversion system with solid-state switches with Seebeck effect compensation  
[NASA-CASE-NPO-11388] c 03 N72-23048

## SHIMADA, K.

Electric power generation system directory from laser power  
[NASA-CASE-NPO-13308-1] c 36 N75-30524

## SHIMANSKY, R. A.

Thermostatically controlled non-tracking type solar energy concentrator  
[NASA-CASE-NPO-13497-1] c 44 N76-14602

## SHIMANSKY, R. A.

Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c 31 N81-19343

## SHIMIZU, M.

Non-invasive method and apparatus for measuring pressure within a pliable vessel  
[NASA-CASE-ARC-11264-2] c 52 N83-29991

## SHIMODA, K.

Method and apparatus for stabilizing a gaseous optical maser Patent  
[NASA-CASE-XGS-03644] c 16 N71-18614

## SHING, Y. H.

Diamond composite films for protective coatings on metals and method of formation  
[NASA-CASE-NPO-18501-1-CU] c 27 N93-28426

## SHIRA, C. S.

Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c 26 N75-29236

## SHIRE, L. I.

Direct heating surface combustor  
[NASA-CASE-LEW-11877-1] c 34 N78-27357

## SHLICHTA, P. J.

Electromigration process for the purification of molten silicon during crystal growth  
[NASA-CASE-NPO-14831-1] c 76 N82-30105

## SHLICHTA, P. J.

Method and apparatus for minimizing convection during crystal growth from solution  
[NASA-CASE-NPO-15811-1] c 76 N84-12968

## SHLICHTA, P. J.

Absorbable-susceptor joining of ceramic surfaces  
[NASA-CASE-NPO-15640-1] c 27 N84-22748

## SHLICHTA, P. J.

Glass heating panels and method for preparing the same from architectural reflective glass  
[NASA-CASE-NPO-15753-1] c 27 N84-33589

## SHLICHTA, P. J.

Method for growth of crystals by pressure reduction of supercritical or subcritical solution  
[NASA-CASE-NPO-15772-1] c 76 N85-29800

## SHLICHTA, P. J.

Method of making macrocrystalline or single crystal semiconductor material  
[NASA-CASE-NPO-15904-1] c 76 N86-28760

## SHLICHTA, PAUL J.

Ballast system for maintaining constant pressure in a glove box  
[NASA-CASE-NPO-17786-1-CU] c 35 N90-17104

## SHLOSINGER, A. P.

Heat pipe with dual working fluids  
[NASA-CASE-ARC-10198] c 34 N78-17336

## SHLOSINGER, A. P.

Multi-chamber controllable heat pipe  
[NASA-CASE-ARC-10199] c 34 N78-17337

## SHORES, P. W.

Position determination systems  
[NASA-CASE-MSC-12593-1] c 17 N76-21250

## SHORES, P. W.

Doppler radar having phase modulation of both transmitted and reflected return signals  
[NASA-CASE-MSC-18675-1] c 32 N84-22820

- SHORES, PAUL**  
Method and apparatus for measuring frequency and phase difference  
[NASA-CASE-MSC-20865-1] c 32 N87-18692
- SHORES, PAUL W.**  
Method and apparatus for measuring distance  
[NASA-CASE-MSC-20912-1] c 32 N88-26568  
Doppler radar with multiphase modulation of transmitted and reflected signal  
[NASA-CASE-MSC-18808-1] c 32 N90-20280
- SHORTTRIDGE, S. R.**  
Switching circuit employing regeneratively connected complementary transistors Patent  
[NASA-CASE-XNP-02654] c 10 N70-42032
- SHRIVER, C. B.**  
Method of making a filament-wound container Patent  
[NASA-CASE-XLE-03803-2] c 15 N71-17651  
Filament wound container Patent  
[NASA-CASE-XLE-03803] c 15 N71-23816  
Panelized high performance multilayer insulation Patent  
[NASA-CASE-MFS-14023] c 33 N71-25351
- SHRIVER, C. L.**  
Multichannel logarithmic RF level detector  
[NASA-CASE-LAR-11021-1] c 32 N76-14321
- SHRIVER, E. L.**  
Apparatus for determining the deflection of an electron beam impinging on a target Patent  
[NASA-CASE-XMF-06617] c 09 N71-24843  
Shock wave convergence apparatus  
[NASA-CASE-MFS-20890] c 14 N72-22439  
Self-energized plasma compressor  
[NASA-CASE-MFS-22145-1] c 75 N75-13625  
Two stage light gas-plasma projectile accelerator  
[NASA-CASE-MFS-22287-1] c 75 N76-14931  
Self-energized plasma compressor  
[NASA-CASE-MFS-22145-2] c 75 N76-17951  
Semiconductor projectile impact detector  
[NASA-CASE-MFS-23008-1] c 35 N78-18390
- SHROCK, C. G.**  
Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c 52 N79-14750
- SHUBE, E. E.**  
Nose cone mounted heat resistant antenna Patent  
[NASA-CASE-XMS-04312] c 07 N71-22984
- SHULER, R. L., JR.**  
Real-time garbage collection for list processing  
[NASA-CASE-MSC-20964-1] c 60 N87-14863
- SHULL, T. A.**  
Digital demodulator  
[NASA-CASE-LAR-12659-1] c 33 N82-26570
- SHULMAN, A. R.**  
Method and apparatus for eliminating coherent noise in a coherent energy imaging system without destroying spatial coherence  
[NASA-CASE-GSC-11133-1] c 23 N72-11568  
Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c 74 N77-28932
- SHUMATE, M. S.**  
Method and apparatus for aligning a laser beam projector Patent  
[NASA-CASE-NPO-11087] c 23 N71-29125  
Differential optoacoustic absorption detector  
[NASA-CASE-NPO-13759-1] c 74 N78-17867  
Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c 32 N80-24510  
Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c 25 N81-14015
- SHUMKA, A.**  
Space-charge-limited solid-state triode  
[NASA-CASE-NPO-13064-1] c 33 N79-11314  
Synchronized voltage contrast display analysis system  
[NASA-CASE-NPO-14567-1] c 33 N83-18996
- SHURE, L. I.**  
Protected isotope heat source  
[NASA-CASE-LEW-11227-1] c 73 N75-30876
- SHUTE, D. I.**  
Reference apparatus for medical ultrasonic transducer  
[NASA-CASE-ARC-10753-1] c 54 N75-27760
- SIDMAN, K. R.**  
Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c 27 N76-24405  
Flame retardant spandex type polyurethanes  
[NASA-CASE-MSC-14331-2] c 27 N78-17213  
Process for spinning flame retardant elastomeric compositions  
[NASA-CASE-MSC-14331-3] c 27 N78-32262  
Heat sealable, flame and abrasion resistant coated fabric  
[NASA-CASE-MSC-18382-1] c 27 N82-16238
- Heat sealable, flame and abrasion resistant coated fabric  
[NASA-CASE-MSC-18382-2] c 27 N84-14324  
Heat resistant protective hand covering  
[NASA-CASE-MSC-20261-2] c 54 N84-23113  
Heat resistant protective hand covering  
[NASA-CASE-MSC-20261-1] c 54 N84-28484
- SIDNEY, BARRY D.**  
Isotope exchange in oxide-containing catalyst  
[NASA-CASE-LAR-13542-2-SB] c 25 N90-20154
- SIDORAK, L. G.**  
Solar cell shingle  
[NASA-CASE-LEW-12587-1] c 44 N77-31601
- SIEBERT, C. J.**  
Flexible/rigidifiable cable assembly  
[NASA-CASE-MSC-13512-1] c 15 N72-22485
- SIEGEL, B.**  
Resonant infrasonic gauging apparatus  
[NASA-CASE-MSC-11847-1] c 14 N72-11363
- SIEGEL, C. M.**  
Epitaxial thinning process  
[NASA-CASE-NPO-15786-1] c 76 N84-35112
- SIEGMAN, A. E.**  
Laser system with an antiresonant optical ring  
[NASA-CASE-HQN-10844-1] c 36 N75-19653
- SIERADSKI, L. M.**  
Mass spectrometer with magnetic pole pieces providing the magnetic fields for both the magnetic sector and an ion-type vacuum pump  
[NASA-CASE-NPO-13663-1] c 35 N77-14406
- SIEVERS, M. W.**  
High-speed data link for moderate distances and noisy environments  
[NASA-CASE-NPO-14152-1] c 32 N80-18252
- SIEWERT, R. D.**  
Fine particulate capture device  
[NASA-CASE-LEW-11583-1] c 35 N79-17192
- SIGFRED, J.**  
Length controlled stabilized mode-lock ND:YAG laser  
[NASA-CASE-GSC-11571-1] c 36 N77-25499
- SIGNORELLI, R. A.**  
Reinforced metallic composites Patent  
[NASA-CASE-XLE-02428] c 17 N70-33288  
Method of making fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-00231] c 17 N70-38198  
Method of making fiber composites  
[NASA-CASE-LEW-10424-2-2] c 18 N72-25539
- SIGUR, W. A.**  
Method of fabricating composite structures  
[NASA-CASE-MFS-28390-1] c 24 N91-15333
- SIKORA, P. F.**  
High temperature testing apparatus Patent  
[NASA-CASE-XLE-00335] c 14 N70-35368
- SIKORRA, D. J.**  
Apparatus for overcurrent protection of a push-pull amplifier Patent  
[NASA-CASE-MSC-12033-1] c 09 N71-13531
- SILCOX, RICHARD J.**  
Method and apparatus for minimizing multiple degree of freedom vibration transmission between two regions of a structure  
[NASA-CASE-LAR-14508-1-CU] c 39 N93-13420
- SILVER, R. H.**  
Means and method of measuring viscoelastic strain Patent  
[NASA-CASE-XNP-01153] c 32 N71-17645  
Miniature stress transducer Patent  
[NASA-CASE-XNP-02983] c 14 N71-21091  
Apparatus for remote measurement of displacement of marks on a specimen undergoing a tensile test  
[NASA-CASE-NPO-10778] c 14 N72-11364  
Subminiature insertable force transducer  
[NASA-CASE-NPO-13423-1] c 33 N75-31329  
Strain gage mounting assembly  
[NASA-CASE-NPO-13170-1] c 35 N76-14430  
Miniature muscle displacement transducer  
[NASA-CASE-NPO-13519-1] c 33 N76-19338  
Myocardium wall thickness transducer and measuring method  
[NASA-CASE-NPO-13644-1] c 52 N76-29895  
Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NPO-13643-1] c 52 N76-29896
- SILVERMAN, J. R.**  
Programmable telemetry system Patent  
[NASA-CASE-GSC-10131-1] c 07 N71-24624
- SILVERTSON, W. E., JR.**  
Logical function generator  
[NASA-CASE-XLA-05099] c 09 N73-13209
- SILVESTER, JOHN A.**  
Dynamic resource allocation scheme for distributed heterogeneous computer systems  
[NASA-CASE-NPO-17197-1-CU] c 62 N91-25693
- SIMAS, V. R.**  
Optimum predetection diversity receiving system Patent  
[NASA-CASE-XGS-00740] c 07 N71-23098
- SIMCHICK, RICHARD T.**  
Apparatus and procedure to detect a liquid-solid interface during crystal growth in a bridgman furnace  
[NASA-CASE-LAR-13597-1-CU] c 25 N87-23713
- SIMMONDS, M. R.**  
Self-contained breathing apparatus  
[NASA-CASE-MSC-14733-1] c 54 N76-24900
- SIMMONDS, P. G.**  
Atmospheric sampling devices  
[NASA-CASE-NPO-11373] c 13 N72-25323  
Electrolytic gas operated actuator  
[NASA-CASE-NPO-11369] c 15 N73-13467  
Compact hydrogenator  
[NASA-CASE-NPO-11682-1] c 35 N74-15127
- SIMMONS, G. M.**  
Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c 28 N74-33209
- SIMMONS, W. H.**  
Indexed keyed connection Patent  
[NASA-CASE-XMS-02532] c 15 N70-41808
- SIMON, M. K.**  
Data-aided carrier tracking loops  
[NASA-CASE-NPO-11282] c 10 N73-16205  
Decision feedback loop for tracking a polyphase modulated carrier  
[NASA-CASE-NPO-13103-1] c 32 N74-20811  
Coherent receiver employing nonlinear coherence detection for carrier tracking  
[NASA-CASE-NPO-11921-1] c 32 N74-30523
- SIMON, MARVIN K.**  
Trellis coded modulation for transmission over fading mobile satellite channel  
[NASA-CASE-NPO-16904-2-CU] c 32 N91-14523  
Doppler-corrected differential detection system  
[NASA-CASE-NPO-16987-1-CU] c 32 N91-25316  
Multiple symbol differential detection  
[NASA-CASE-NPO-17896-1-CU] c 32 N91-27439
- SIMON, S. L.**  
Temperature reducing coating for metals subject to flame exposure Patent  
[NASA-CASE-XLE-00035] c 33 N71-29151
- SIMONTON, J. WAYNE**  
Deployable geodesic truss structure  
[NASA-CASE-LAR-13113-1] c 31 N87-25492
- SIMPKINS, L. G.**  
Television multiplexing system  
[NASA-CASE-KSC-10654-1] c 07 N73-30115
- SIMPSON, J. G.**  
Solar concentrator  
[NASA-CASE-MFS-23727-1] c 44 N80-14473
- SIMPSON, NORMAN R.**  
Procedure to prepare transparent silica gels  
[NASA-CASE-LAR-13476-1-CU] c 76 N87-29360
- SIMPSON, W. E.**  
Radiator deployment actuator Patent  
[NASA-CASE-MSC-11817-1] c 15 N71-26611
- SIMPSON, W. G.**  
Space environmental work simulator Patent  
[NASA-CASE-XMF-07488] c 11 N71-18773  
Stud-bonding gun  
[NASA-CASE-MFS-20299] c 15 N72-11392  
Mixing insert for foam dispensing apparatus  
[NASA-CASE-MFS-20607-1] c 37 N76-19436  
Sprayable low density ablator and application process  
[NASA-CASE-MFS-23506-1] c 24 N78-24290  
Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MFS-23626-1] c 24 N80-26388
- SIMPSON, WILLIAM G.**  
Sprayable lightweight ablative coating  
[NASA-CASE-MFS-28372-1] c 27 N92-16123
- SIMS, C. R.**  
Multi axes vibration fixtures  
[NASA-CASE-MFS-20242] c 14 N73-19421
- SINCLAIR, A. R.**  
Ablation sensor Patent  
[NASA-CASE-XLA-01791] c 14 N71-22991  
Laser communication system for controlling several functions at a location remote to the laser  
[NASA-CASE-LAR-10311-1] c 16 N73-16536  
Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c 35 N75-15014
- SINDERSON, RICHARD L.**  
Adaptive data acquisition multiplexing system and method  
[NASA-CASE-MSC-21170-1] c 17 N91-14371
- SINGER, FRED S.**  
Method and apparatus for determining time, direction, and composition of impacting space particles  
[NASA-CASE-LAR-13392-1-CU] c 19 N91-14412

## SINGER, S.

Nuclear alkylated pyridine aldehyde polymers and conductive compositions thereof  
[NASA-CASE-NPO-10557] c 27 N78-17214

## SINGH, J. J.

Mossbauer spectrometer radiation detector  
[NASA-CASE-LAR-11155-1] c 35 N74-15091  
Low energy electron magnetometer using a monoenergetic electron beam  
[NASA-CASE-LAR-12706-1] c 35 N84-12444  
Radionuclide counting technique for measuring wind velocity and direction  
[NASA-CASE-LAR-12971-1] c 47 N84-28292  
A system for controlling the oxygen content of a gas produced by combustion  
[NASA-CASE-LAR-13257-1] c 25 N84-32447  
Process for improving moisture resistance of epoxy resins by addition of chromium ions  
[NASA-CASE-LAR-13226-1] c 27 N85-34282  
Technique for measuring gas conversion factors  
[NASA-CASE-LAR-13220-1] c 34 N86-12547

## SINGH, JAG J.

Method and device for determining heats of combustion of gaseous hydrocarbons  
[NASA-CASE-LAR-13528-1] c 25 N88-29002  
Device for quickly sensing the amount of O<sub>2</sub> in a combustion product gas  
[NASA-CASE-LAR-13816-1] c 35 N90-22025  
Slow positron beam generator for lifetime studies  
[NASA-CASE-LAR-14250-1-SB] c 72 N91-27936  
Shear sensitive monomer-polymer laminate structure and method of using same  
[NASA-CASE-LAR-14654-1-CU] c 39 N93-29613

## SINHA, M. P.

Particle analyzing method and apparatus  
[NASA-CASE-NPO-15292-1] c 35 N83-27184

## SINSKY, MARK S.

Polynamines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-1-CU] c 27 N87-22847  
Polynamines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-2-CU] c 23 N89-12667

## SIROCKY, P. J.

Apparatus for transferring cryogenic liquids Patent  
[NASA-CASE-XLE-00345] c 15 N70-38020  
High-temperature, bellows hybrid seal  
[NASA-CASE-LEW-15570-1] c 37 N93-19027

## SIROCKY, PAUL J.

High temperature flexible seal  
[NASA-CASE-LEW-14695-1] c 37 N90-23751  
High-temperature, flexible, thermal barrier seal  
[NASA-CASE-LEW-14672-1] c 37 N91-27560  
High temperature, flexible pressure-actuated, brush seal  
[NASA-CASE-LEW-15086-1] c 37 N92-16318

## SISK, ROBERT C.

Planar thin film SQUID with integral flux concentrator  
[NASA-CASE-MFS-28282-1] c 76 N88-29602

## SIVERTSON, W. E., JR.

Adaptive compression of communication signals Patent  
[NASA-CASE-XLA-03076] c 07 N71-11266

Rate data encoder  
[NASA-CASE-LAR-10128-1] c 08 N73-20217

Method of locating persons in distress  
[NASA-CASE-LAR-11390-1] c 32 N77-21267  
Radar target for remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c 43 N80-18498

## SIVITER, J. H., JR.

Micrometeoroid penetration measuring device Patent  
[NASA-CASE-XLA-00941] c 14 N71-23240

## SIVLEY, J. B.

Phase locked phase modulator including a voltage controlled oscillator Patent  
[NASA-CASE-XNP-05382] c 10 N71-23544

## SIZEMORE, K. O.

Method and apparatus for battery charge control Patent  
[NASA-CASE-XGS-05432] c 03 N71-19438

## SLATER, R. J.

Traveling sealer for contoured table Patent  
[NASA-CASE-XLA-01494] c 15 N71-24164

## SLAYDEN, M. D.

Pulse amplitude and width detector Patent  
[NASA-CASE-XMF-06519] c 09 N71-12519  
Pulse rise time and amplitude detector Patent  
[NASA-CASE-XMF-08804] c 09 N71-24717

## SLEEMAN, W. C., JR.

Control for flexible parawing Patent  
[NASA-CASE-XLA-06958] c 02 N71-11038

## SLEMP, W. S.

Particulate and solar radiation stable coating for spacecraft  
[NASA-CASE-LAR-10805-2] c 34 N77-18382

## SLIFER, L. W., JR.

Solar cell and circuit array and process for nullifying magnetic fields Patent  
[NASA-CASE-XGS-03390] c 03 N71-23187

## SLINEY, H. E.

Bonded solid lubricant coating Patent  
[NASA-CASE-XMS-00259] c 18 N70-36400  
Method of making self lubricating fluoride-metal composite materials Patent  
[NASA-CASE-XLE-08511-2] c 18 N71-16105  
Self-lubricating fluoride metal composite materials Patent  
[NASA-CASE-XLE-08511] c 18 N71-23710  
Bearing material  
[NASA-CASE-LEW-11930-1] c 24 N76-22309  
Method of making bearing materials  
[NASA-CASE-LEW-11930-4] c 24 N79-17916  
Method of making bearing material  
[NASA-CASE-LEW-11930-3] c 24 N80-33482

## SLINEY, HAROLD E.

Carbide-fluoride-silver self-lubricating composite  
[NASA-CASE-LEW-14196-2] c 37 N87-25585  
Method of making carbide/fluoride/silver composites  
[NASA-CASE-LEW-14902-1] c 24 N91-27244

## SLOWIKOWSKI, D. F.

Digital pulse width selection circuit Patent  
[NASA-CASE-XLA-07788] c 09 N71-29139

## SMALL, J. G.

Means for visually indicating flight paths of vehicles between the Earth, Venus, and Mercury Patent  
[NASA-CASE-XNP-00708] c 14 N70-35394

## SMALL, W. J.

Orbiter/launch system  
[NASA-CASE-LAR-12250-1] c 14 N81-26161

## SMIALEK, J. L.

Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267  
Oxidation resistant overlay coatings for low expansion substrates  
[NASA-CASE-LEW-15154-1] c 27 N93-19332  
Oxidation resistant overlay coatings for low expansion substrates  
[NASA-CASE-LEW-15154-2] c 27 N93-31300

## SMIALEK, JAMES L.

Method of forming low cost, formable High T(sub c) superconducting wire  
[NASA-CASE-LEW-14676-2] c 76 N90-17454  
Low cost, formable, high T(sub c) superconducting wire  
[NASA-CASE-LEW-14676-1] c 33 N91-31529  
Oxidation resistant coating for titanium alloys and titanium alloy matrix composites  
[NASA-CASE-LEW-15155-1] c 27 N92-29090  
High temperature, oxidation resistant noble metal-Al alloy thermocouple  
[NASA-CASE-LEW-15515-1] c 35 N93-31298

## SMILOWITZ, K.

Programmable scan/read circuitry for charge coupled device imaging detectors  
[NASA-CASE-NPO-15345-1] c 74 N84-23247

## SMISER, L. W.

Method for repair of thin glass coatings  
[NASA-CASE-KSC-11097-1] c 27 N82-33520

## SMITH, A. B.

Method of forming thin window drifted silicon charged particle detector Patent  
[NASA-CASE-XLE-00808] c 24 N71-10560

## SMITH, BARRY T.

Rapid detection and quantification of features such as damage or flaws in composite and metallic structures  
[NASA-CASE-LAR-14850-1-CU] c 38 N93-17048

## SMITH, C.

Counter and shift register Patent  
[NASA-CASE-XNP-01753] c 08 N71-22897

## SMITH, D.

Brazing alloy Patent  
[NASA-CASE-XNP-03063] c 17 N71-23365

## SMITH, D. L.

Hall effect transducer  
[NASA-CASE-LAR-10620-1] c 09 N72-25255

## SMITH, DENNIS A.

Control circuitry using electronic emulation of a synchro signal for accurate control of position and rate of rotation for shafts  
[NASA-CASE-MFS-28458-1] c 33 N91-26459

## SMITH, E. B.

Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c 07 N81-14999

## SMITH, E. W.

Barium release system  
[NASA-CASE-LAR-10670-1] c 06 N73-30097  
Rocket having barium release system to create ion clouds in the upper atmosphere  
[NASA-CASE-LAR-10670-2] c 15 N74-27360

## SMITH, EARNEST C.

Cylindrical surface profile and diameter measuring tool and method  
[NASA-CASE-MFS-28287-1] c 35 N88-23959

## SMITH, G. E.

Inflatable device for installing strain gage bridges  
[NASA-CASE-FRC-11068-1] c 35 N84-12443

## SMITH, H. A.

Spherical tank gauge Patent  
[NASA-CASE-XMS-06236] c 14 N71-21007  
Emergency space-suit helmet  
[NASA-CASE-MSC-10954-1] c 54 N78-18761

## SMITH, H. E.

Digital computing cardiometer  
[NASA-CASE-MFS-20284-1] c 52 N74-12778  
Automatic weld torch guidance control system  
[NASA-CASE-MFS-25807] c 37 N83-20154  
Automated weld torch guidance control system  
[NASA-CASE-MFS-25807-2] c 37 N86-21850

## SMITH, H. J.

Variable resistance constant tension and lubrication device  
[NASA-CASE-KSC-10723-1] c 37 N75-13265

## SMITH, J. A.

Thermal insulation protection means  
[NASA-CASE-MSC-12737-1] c 24 N79-25142

## SMITH, J. G.

Satellite personal communications system  
[NASA-CASE-NPO-14480-1] c 32 N80-20448

## SMITH, J. P.

Energy management system for glider type vehicle Patent  
[NASA-CASE-XFR-00756] c 02 N71-13421

## SMITH, J. R., JR.

Balanced bellows spirometer  
[NASA-CASE-XAR-01547] c 05 N69-21473  
Temperature compensated solid state differential amplifier Patent  
[NASA-CASE-XAC-00435] c 09 N70-35440  
Transfer valve Patent  
[NASA-CASE-XAC-01158] c 15 N71-23051  
Method and apparatus for continuously monitoring blood oxygenation, blood pressure, pulse rate and the pressure pulse curve utilizing an ear oximeter as transducer Patent  
[NASA-CASE-XAC-05422] c 04 N71-23185

## SMITH, J. W.

Apparatus for damping operator induced oscillations of a controlled system  
[NASA-CASE-FRC-11041-1] c 33 N82-18493

## SMITH, JOSEPH G., JR.

Polyimide from bis(n-isoprenyl)s of aryl diamides  
[NASA-CASE-LAR-14330-2-CU] c 27 N93-22033  
Polybenzoxazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14606-1-CU] c 23 N93-23077

## SMITH, KENNETH M.

Wind tunnel balance  
[NASA-CASE-ARC-11877-1-SB] c 09 N91-14357

## SMITH, L.

Low gravity phase separator  
[NASA-CASE-MSC-14773-1] c 35 N78-12390

## SMITH, L. G.

Ionospheric battery Patent  
[NASA-CASE-XGS-01593] c 03 N70-35408

## SMITH, L. H., JR.

Reverse pitch fan with divided splitter  
[NASA-CASE-LEW-12760-1] c 07 N77-17059

## SMITH, L. S.

Polarity sensitive circuit Patent  
[NASA-CASE-XNP-00952] c 10 N71-23271

## SMITH, LARRY D.

Separation tool for multipin electrical connectors  
[NASA-CASE-NPO-18786-1-CU] c 37 N93-28131

## SMITH, M.

Silica reusable surface insulation  
[NASA-CASE-ARC-10721-1] c 27 N76-22376  
Fibrous refractory composite insulation  
[NASA-CASE-ARC-11169-1] c 24 N79-24062

Adjustable high emittance gap filler  
[NASA-CASE-ARC-11310-1] c 27 N82-24339

Spray coating apparatus having a rotatable workpiece holder  
[NASA-CASE-ARC-11110-1] c 37 N82-24492

## SMITH, MARNELL

Ceramic-ceramic shell tile thermal protection system and method thereof  
[NASA-CASE-ARC-11641-1] c 24 N88-18628  
Toughened uni-piece fibrous insulation  
[NASA-CASE-ARC-11888-1] c 24 N92-16026

## SMITH, N. J.

Calibrating pressure switch  
[NASA-CASE-XMF-04494-1] c 33 N79-33392

## SMITH, P. D.

Shuttle-launch triangular space station  
[NASA-CASE-MSC-20676-1] c 18 N86-24729

- SMITH, R. E.**  
High-temperature, high-pressure optical cell  
[NASA-CASE-MFS-26000-1] c 74 N87-14971
- SMITH, R. W.**  
Compact solar still Patent  
[NASA-CASE-XMS-04533] c 15 N71-23086
- SMITH, ROBBIE**  
Hanging drop crystal growth apparatus and method  
[NASA-CASE-MFS-28206-1-SB] c 76 N90-23242
- SMITH, RONALD C.**  
Wind tunnel balance  
[NASA-CASE-ARC-11877-1-SB] c 09 N91-14357
- SMITH, S. F.**  
Automatic oscillator frequency control system  
[NASA-CASE-GSC-12804-1] c 33 N86-20668
- SMITH, STEPHEN**  
EMU helmet mounted display  
[NASA-CASE-MSC-21460-1] c 54 N91-13879
- SMITH, STEVEN A.**  
Mechanized fluid connector and assembly tool system with ball detents  
[NASA-CASE-MSC-21434-1] c 37 N92-10197
- SMITH, T. B., III**  
Display research collision warning system  
[NASA-CASE-HQN-10703] c 21 N73-13643
- SMITH, W. O.**  
Star tracking reticles and process for the production thereof  
[NASA-CASE-GSC-11188-2] c 21 N73-19630  
Star tracking reticles  
[NASA-CASE-GSC-11188-1] c 14 N73-32320  
Formation of star tracking reticles  
[NASA-CASE-GSC-11188-3] c 74 N74-20008
- SMITH, W. R.**  
Production of high purity I-123  
[NASA-CASE-LEW-10518-1] c 24 N72-33681
- SMITH, W. W.**  
Trajectory-correction propulsion system Patent  
[NASA-CASE-XNP-01104] c 28 N70-39931
- SMITH, WILLIAM CONRAD**  
Electrostatic discharge test apparatus  
[NASA-CASE-MSC-21094-1] c 35 N88-24941
- SMITHRICK, J. J.**  
Oxygen recombination in individual pressure vessel nickel-hydrogen batteries  
[NASA-CASE-LEW-13822-1] c 44 N86-25874
- SMOOT, G. F.**  
Low gravity phase separator  
[NASA-CASE-MSC-14773-1] c 35 N78-12390
- SMYLYE, R. E.**  
Liquid-gas separator for zero gravity environment Patent  
[NASA-CASE-XMS-01492] c 05 N70-41297
- SMYLY, H. M.**  
Differential pressure control  
[NASA-CASE-MFS-14216] c 14 N73-13418  
Prosthetic urinary sphincter  
[NASA-CASE-MFS-23717-1] c 52 N81-25660  
Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-15429-1] c 18 N84-22609  
Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-25429-1] c 18 N86-20469
- SMYTH, PADHRAIC J.**  
Hidden Markov models for fault detection in dynamic systems  
[NASA-CASE-NPO-18982-1-CU] c 38 N93-30413
- SNEEDEN, R. J.**  
Gas turbine combustion apparatus Patent  
[NASA-CASE-XLE-103477-1] c 28 N71-20330
- SNODDY, L. G.**  
Insert facing tool  
[NASA-CASE-MFS-21485-1] c 37 N74-25968
- SNOHA, JOHN J.**  
Process for application of powder particles to filamentary materials  
[NASA-CASE-LAR-14231-1] c 24 N92-10070
- SNOW, EDWARD R.**  
Force reflecting hand controller  
[NASA-CASE-NPO-17851-1-CU] c 37 N93-23078
- SNYDER, J. A.**  
Injector for use in high voltage isolators for liquid feed lines  
[NASA-CASE-NPO-11377] c 15 N73-27406
- SNYDER, L. M.**  
Particle detection apparatus including a ballistic pendulum Patent  
[NASA-CASE-XMS-04201] c 14 N71-22990
- SNYDER, P. K.**  
Spinning disk calibration method and apparatus for laser Doppler velocimeter  
[NASA-CASE-ARC-11510-1] c 35 N86-32697
- SNYDER, R. S.**  
Method of crystallization  
[NASA-CASE-MFS-23001-1] c 76 N77-32919
- Electrophoresis device  
[NASA-CASE-MFS-25426-1] c 25 N83-10126
- SNYDER, ROBERT S.**  
Moving wall, continuous flow electrophoresis apparatus  
[NASA-CASE-MFS-28142-1] c 25 N88-23845  
Drop deployment system for crystal growth apparatus  
[NASA-CASE-MFS-28422-1] c 29 N91-17250  
Polymer-coated surfaces to control surface zeta potential  
[NASA-CASE-MFS-26050-1] c 27 N92-25397  
Macromolecular crystal growing system  
[NASA-CASE-MFS-26088-1-CU] c 76 N92-25398  
Hollow fiber clinostat for simulating microgravity in cell culture  
[NASA-CASE-MFS-28370-1] c 35 N92-31790
- SODD, V. J.**  
Production of high purity I-123  
[NASA-CASE-LEW-10518-1] c 24 N72-33681
- SOFFEN, G. A.**  
Automated fluid chemical analyzer Patent  
[NASA-CASE-XNP-09451] c 06 N71-26754
- SOHL, G.**  
Focussing system for an ion source having apertured electrodes Patent  
[NASA-CASE-NXP-03332] c 09 N71-10618  
Ion engine casing construction and method of making same Patent  
[NASA-CASE-XNP-06942] c 28 N71-23293
- SOINI, H. E.**  
Apparatus for measuring thermal conductivity Patent  
[NASA-CASE-XGS-01052] c 14 N71-15992
- SOKOLOWSKI, D. E.**  
Heat exchanger  
[NASA-CASE-LEW-12252-1] c 34 N79-13288
- SOLOMON, G.**  
Error correcting method and apparatus Patent  
[NASA-CASE-XNP-02748] c 08 N71-22749
- SOLTIS, D. G.**  
Method of making membranes  
[NASA-CASE-XNP-04264] c 03 N69-21337  
Additive for zinc electrodes  
[NASA-CASE-LEW-13286-1] c 33 N84-14422  
Method of making a light weight battery plaque  
[NASA-CASE-LEW-13349-1] c 26 N84-22734
- SOMOANO, R. B.**  
Durable antistatic coating for polymethylmethacrylate  
[NASA-CASE-NPO-13867-1] c 27 N78-14164
- SONNENSCHNEIN, C. M.**  
Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c 36 N75-15028  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c 35 N77-10493
- SONNENSCHNEIN, G.**  
Method for attaching a fused-quartz mirror to a conductive metal substrate  
[NASA-CASE-MFS-23405-1] c 26 N77-29260
- SORENSEN, C. E.**  
Electric arc device for heating gases Patent  
[NASA-CASE-XAC-00319] c 25 N70-41628
- SORENSEN, N. E.**  
Wind tunnel flow generation section  
[NASA-CASE-ARC-10710-1] c 09 N75-12969  
The engine air intake system  
[NASA-CASE-ARC-10761-1] c 07 N77-18154  
Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c 07 N80-32392
- SOTER, E. J.**  
Modification of one man life raft  
[NASA-CASE-LAR-10241-1] c 54 N74-14845
- SOTHERLUND, A. W., JR.**  
Single action separation mechanism Patent  
[NASA-CASE-XLA-00188] c 15 N71-22874
- SOURS, W. P.**  
Minimech self-deploying boom mechanism  
[NASA-CASE-GSC-10566-1] c 15 N72-18477
- SOVEY, J. S.**  
Modification of the electrical and optical properties of polymers  
[NASA-CASE-LEW-13027-1] c 27 N80-24437  
Hydrogen hollow cathode ion source  
[NASA-CASE-LEW-12940-1] c 72 N80-33186  
Texturing polymer surfaces by transfer casting  
[NASA-CASE-LEW-13120-1] c 27 N82-28440  
Surface texturing of fluoropolymers  
[NASA-CASE-LEW-13028-1] c 27 N82-33521  
Ion sputter textured graphite  
[NASA-CASE-LEW-12919-1] c 24 N83-10117  
Thermal barrier coating system having improved adhesion  
[NASA-CASE-LEW-1335901] c 27 N83-31855  
Ion sputter textured graphite electrode plates  
[NASA-CASE-LEW-12919-2] c 70 N84-28565  
Deposition of diamondlike carbon films  
[NASA-CASE-LEW-14080-1] c 31 N85-20153
- Ring-cusp ion thruster with shell anode  
[NASA-CASE-LEW-13881-1] c 20 N85-21256  
Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-1] c 27 N86-19458  
Apparatus for producing oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-2] c 27 N86-32569
- SOVEY, JAMES S.**  
Heat exchanger for electrothermal devices  
[NASA-CASE-LEW-14037-1] c 20 N87-16875  
Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N87-23736
- SOWA, W. W.**  
Inflatable transpiration cooled nozzle  
[NASA-CASE-MFS-20619] c 28 N72-11708
- SPADY, A. A., JR.**  
Backpack carrier Patent  
[NASA-CASE-LAR-10056] c 05 N71-12351  
Reduced gravity simulator Patent  
[NASA-CASE-XLA-01787] c 11 N71-16028
- SPAHN, CAROLL J.**  
Adaptive data acquisition multiplexing system and method  
[NASA-CASE-MSC-21170-1] c 17 N91-14371
- SPAIN, I. L.**  
Hall effect magnetometer  
[NASA-CASE-LEW-11632-2] c 35 N75-13213
- SPALVINS, T.**  
Deposition of alloy films  
[NASA-CASE-LEW-11262-1] c 27 N74-13270
- SPANG, H. A., III**  
Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c 07 N81-19115
- SPARKS, J. SCOTT**  
Production of mullite fibers  
[NASA-CASE-MFS-28431-1] c 24 N92-17870
- SPARKS, R. H.**  
Fifth wheel  
[NASA-CASE-FRC-10081-1] c 37 N77-14477
- SPAULDING, GLENN**  
A method for making biocompatible polymer articles using atomic oxygen  
[NASA-CASE-MSC-21529-1] c 27 N92-30100  
High density cell culture system  
[NASA-CASE-MSC-22060-1] c 51 N93-19037
- SPEARMAN, M. L.**  
Translating horizontal tail Patent  
[NASA-CASE-XLA-08801-1] c 02 N71-11043
- SPEISER, R. C.**  
Focussing system for an ion source having apertured electrodes Patent  
[NASA-CASE-XNP-03332] c 09 N71-10618
- SPENCER, B., JR.**  
Variable geometry manned orbital vehicle Patent  
[NASA-CASE-XLA-03691] c 31 N71-15674
- SPENCER, D. J.**  
Data compression system with a minimum time delay unit Patent  
[NASA-CASE-XNP-08832] c 08 N71-12506
- SPENCER, J. L.**  
Electronic strain-level counter  
[NASA-CASE-LAR-10756-1] c 32 N73-26910
- SPENCER, P. R.**  
Radiation direction detector including means for compensating for photocell aging Patent  
[NASA-CASE-XLA-00183] c 14 N70-40239
- SPENCER, R. L.**  
Thickness measuring and injection device Patent  
[NASA-CASE-MFS-20261] c 14 N71-27005  
Ultrasonic scanner for radial and flat panels  
[NASA-CASE-MFS-20335-1] c 35 N74-10415
- SPENCER, R. S.**  
Method of treating the surface of a glass member  
[NASA-CASE-GSC-12110-1] c 27 N77-32308  
Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c 31 N81-19343
- SPENNY, WILLIAM E.**  
Don/doff support stand for use with rear entry space suits  
[NASA-CASE-MSC-21364-1] c 54 N89-13889
- SPIER, R. A.**  
Portable milling tool Patent  
[NASA-CASE-XMF-03511] c 15 N71-22799  
Restraint system for ergometer  
[NASA-CASE-MFS-21046-1] c 14 N73-27377  
Tilting table for ergometer and for other biomedical devices  
[NASA-CASE-MFS-21010-1] c 05 N73-30078  
Vee-notching device  
[NASA-CASE-MFS-20730-1] c 39 N74-13131
- SPIES, R.**  
Observation window for a gas confining chamber  
[NASA-CASE-NPO-10890] c 11 N73-12265

## SPITZE, L. A.

- Process for the preparation of calcium superoxide  
[NASA-CASE-ARC-11053-1] c 25 N79-10162  
Use of glow discharge in fluidized beds  
[NASA-CASE-ARC-11245-1] c 28 N82-18401

## SPITZER, C. R.

- Evaporant holder  
[NASA-CASE-XLA-03105] c 15 N69-27483  
Exposure interlock for oscilloscope cameras  
[NASA-CASE-LAR-10319-1] c 14 N73-32322

## SPITZIG, W. A.

- Method of making a diffusion bonded refractory coating  
Patent  
[NASA-CASE-XLE-01604-2] c 15 N71-15610

## SPRAGUE, BENNY B.

- Quick connect coupling  
[NASA-CASE-MSC-21539-1] c 37 N91-14610

## SPRECEASE, R. P.

- Method of forming a wick for a heat pipe  
[NASA-CASE-NPO-13391-1] c 34 N76-27515

## SPRINGER, L. R.

- Digital data reformatter/deserializer  
[NASA-CASE-NPO-13676-1] c 60 N79-20751

## SPRINGETT, J. C.

- Phase-shift data transmission system having a pseudo-noise SYNC code modulated with the data in a single channel Patent  
[NASA-CASE-XNP-00911] c 08 N70-41961  
Audio system with means for reducing noise effects  
[NASA-CASE-NPO-11631] c 10 N73-12244

## SPRINGFIELD, C. L.

- Flammability test chamber Patent  
[NASA-CASE-KSC-10126] c 11 N71-24985  
Autoignition test cell Patent  
[NASA-CASE-KSC-10198] c 11 N71-28629

## SPRINKLE, D. R.

- Technique for measuring gas conversion factors  
[NASA-CASE-LAR-13220-1] c 34 N86-12547

## SPRINKLE, DANNY R.

- Method and device for determining heats of combustion of gaseous hydrocarbons  
[NASA-CASE-LAR-13528-1] c 25 N88-29002  
Two-stage gas measurement system  
[NASA-CASE-LAR-14791-1] c 35 N93-31297

## SPROSS, F. R.

- Biological isolation garment Patent  
[NASA-CASE-MSC-12206-1] c 05 N71-17599

## SPUCK, W. H., III

- Borehole geological assessment  
[NASA-CASE-NPO-14231-1] c 46 N80-10709

## SQUILLARI, W.

- System for stabilizing torque between a balloon and gondola  
[NASA-CASE-GSC-11077-1] c 02 N73-13008

## SQUYRES, H. P.

- Uniform variable light source  
[NASA-CASE-NPO-11429-1] c 74 N77-21941

## SRIDHARAN, GOVIND

- Sample positioning in microgravity  
[NASA-CASE-NPO-18448-1-CU] c 29 N92-30083  
Cascaded transformerless DC-DC voltage amplifier with optically isolated switching devices  
[NASA-CASE-NPO-17994-1-CU] c 33 N93-18278  
Sample positioning in microgravity  
[NASA-CASE-NPO-18448-1-CU] c 29 N93-24600

## SRIVASTAVA, S. K.

- Means and method for calibrating a photon detector utilizing electron-photon coincidence  
[NASA-CASE-NPO-15644-1] c 35 N84-33767

## SRIVASTAVA, SANTASH

- Apparatus and method for characterizing the transmission efficiency of a mass spectrometer  
[NASA-CASE-NPO-16989-1-CU] c 35 N91-14587

## SRIVATSAN, RAGHAVACHARI

- Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13734 -CU] c 09 N90-20096  
Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13854-1-CU] c 04 N91-31120

## ST.CLAIR, A. K.

- Crystalline polyimides  
[NASA-CASE-LAR-12099-1] c 27 N80-16158  
Aluminum ion-containing polyimide adhesives  
[NASA-CASE-LAR-12640-1] c 27 N82-11206  
Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c 25 N82-26396  
Elastomer toughened polyimide adhesives  
[NASA-CASE-LAR-12775-1] c 27 N83-28240  
Process for improving mechanical properties of epoxy resins by addition of cobalt ions  
[NASA-CASE-LAR-13230-1] c 24 N84-34571  
Elastomer toughened polyimide adhesives  
[NASA-CASE-LAR-12775-2] c 27 N85-21349

Process for improving moisture resistance of epoxy resins by addition of chromium ions

- [NASA-CASE-LAR-13226-1] c 27 N85-34282  
Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-31727

## ST.CLAIR, ANNE K.

- Tensile film clamps and mounting block for the rheovibron and autovibron viscoelastometer  
[NASA-CASE-LAR-13696-1] c 37 N90-20409  
Process for lowering the dielectric constant of polyimides using diamine acid additives  
[NASA-CASE-LAR-13902-1] c 27 N90-23546  
Aromatic polyimides containing a dimethylsilane-linked dianhydride  
[NASA-CASE-LAR-14198-1] c 27 N90-26956  
Low dielectric fluorinated poly(phenylene ether ketone) film and coating  
[NASA-CASE-LAR-13992-1-CU] c 23 N91-27220  
Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14489-1] c 37 N91-27562

A process for preparing 1,3-diamino-5-pentafluorosulfanylbenzene and polymers therefrom

- [NASA-CASE-LAR-14773-1-CU] c 27 N92-10105  
A process for preparing an assembly of an article and a polyimide which resists dimensional change, delamination, and debonding when exposed to changes in temperature

- [NASA-CASE-LAR-14538-1] c 27 N92-11201  
A process for preparing an assembly of an article and a soluble polyimide which resists dimensional change, delamination, and debonding when exposed to changes in temperature  
[NASA-CASE-LAR-14763-1] c 27 N92-12121

Polyimides prepared from 3,5-diamino benzo trifluoride

- [NASA-CASE-LAR-14206-1] c 27 N93-29083  
Diphenylmethane-containing dianhydride and polyimides prepared therefrom

- [NASA-CASE-LAR-14487-1] c 27 N93-29085  
Process to prepare 1,3-diamino-5-pentafluorosulfanylbenzene  
[NASA-CASE-LAR-14773-2-CU] c 25 N93-29506

## ST.CLAIR, T. L.

- Crystalline polyimides  
[NASA-CASE-LAR-12099-1] c 27 N80-16158  
Method for preparing addition type polyimide prepreps  
[NASA-CASE-LAR-12054-2] c 27 N81-14078  
Tackifier for addition polyimides containing monoethylphthalate  
[NASA-CASE-LAR-12642-1] c 27 N81-29229

Aluminum ion-containing polyimide adhesives

- [NASA-CASE-LAR-12640-1] c 27 N82-11206  
Elastomer toughened polyimide adhesives  
[NASA-CASE-LAR-12775-1] c 27 N83-28240

Solvent resistant thermoplastic aromatic poly(imidesulfone) and process for preparing same

- [NASA-CASE-LAR-12858-1] c 27 N83-34041  
Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups

- [NASA-CASE-LAR-12723-2] c 27 N84-22746  
Polyphenylene ethers with imide linking groups

- [NASA-CASE-LAR-12980-1] c 27 N84-22749  
Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups

- [NASA-CASE-LAR-12723-1] c 27 N85-20123  
Process for preparing solvent resistant, thermoplastic aromatic poly(imidesulfone)

- [NASA-CASE-LAR-12858-2] c 27 N85-20124  
Hot melt adhesive attachment pad

- [NASA-CASE-LAR-12894-1] c 27 N85-20125  
Elastomer toughened polyimide adhesives

- [NASA-CASE-LAR-12775-1] c 27 N85-21349  
Process for improving moisture resistance of epoxy resins by addition of chromium ions

- [NASA-CASE-LAR-13226-1] c 27 N85-34282  
Poly(carbonate-imide) polymer

- [NASA-CASE-LAR-13292-1] c 27 N86-24841  
Process for preparing highly optically transparent/colorless aromatic polyimide film

- [NASA-CASE-LAR-13351-1] c 27 N86-31727

## ST.CLAIR, TERRY L.

Aromatic polyimides containing a dimethylsilane-linked dianhydride

- [NASA-CASE-LAR-14198-1] c 27 N90-26956  
Processable polyimide adhesive and matrix composite resin

- [NASA-CASE-LAR-14101-1] c 27 N91-15403  
Preparing composite materials from matrices of processable aromatic polyimide thermoplastic blends

- [NASA-CASE-LAR-14107-1] c 24 N91-25200  
Slow positron beam generator for lifetime studies

- [NASA-CASE-LAR-14250-1-SB] c 72 N91-27936

A process for preparing 1,3-diamino-5-pentafluorosulfanylbenzene and polymers therefrom

- [NASA-CASE-LAR-14773-1-CU] c 27 N92-10105  
Processing for maximizing the level of crystallinity in linear aromatic polyimides

- [NASA-CASE-LAR-14481-1] c 25 N92-16043  
Polyimide processing additives

- [NASA-CASE-LAR-13669-1] c 27 N92-29157  
Polyimide molding powder, coating, adhesive, and matrix resin

- [NASA-CASE-LAR-14163-1] c 27 N92-33014  
High temperature polymer from maleimide-acetylene terminated monomers

- [NASA-CASE-LAR-14475-1] c 27 N93-19327  
Crosslinked polyimides prepared from N-(3-ethynylphenyl)maleimide

- [NASA-CASE-LAR-14774-1] c 27 N93-19388  
Polyimides containing the cyclobutene-3,4-dione moiety

- [NASA-CASE-LAR-14753-1] c 27 N93-25999  
Polyimides prepared from 3,5-diamino benzo trifluoride

- [NASA-CASE-LAR-14206-1] c 27 N93-29083  
Process to prepare 1,3-diamino-5-pentafluorosulfanylbenzene

- [NASA-CASE-LAR-14773-2-CU] c 25 N93-29506

## STACEY, A. B., JR.

Mechanical fastener

- [NASA-CASE-LAR-12738-2] c 37 N85-30335

## STACEY, J. M.

Method of measuring sea surface water temperature with a satellite including wideband passive synthetic-aperture multichannel receiver

- [NASA-CASE-NPO-15651-1] c 43 N85-21723

## STACK, JOHN P.

Porous plug for reducing orifice induced pressure error in airfoils

- [NASA-CASE-LAR-13569-1] c 35 N89-12841  
Method and apparatus for detecting laminar flow separation and reattachment

- [NASA-CASE-LAR-13952-1-SB] c 34 N90-19534  
Method and apparatus for detecting laminar flow separation and reattachment

- [NASA-CASE-LAR-13952-2-SB] c 34 N91-31596

## STACY, J. E.

Compensation for primary reflector wavefront error

- [NASA-CASE-NPO-16869-1CU] c 74 N86-33138

## STADLER, HENRY L.

Integrated, non-volatile, high-speed analog random access memory

- [NASA-CASE-NPO-17998-1-CU] c 60 N92-12438  
High speed magneto-resistive random access memory

- [NASA-CASE-NPO-17954-1-CU] c 60 N93-14704

## STAGNARO, MICHAEL J.

Assured crew return vehicle

- [NASA-CASE-MSC-21536-1] c 18 N92-21999

## STALEY, S. D.

Quick attach and release fluid coupling assembly

- Patent  
[NASA-CASE-XKS-01985] c 15 N71-10782

## STAINBACK, J. D.

Exposure interlock for oscilloscope cameras

- [NASA-CASE-LAR-10319-1] c 14 N73-32322

## STALEY, H. W.

Pulse amplitude and width detector Patent

- [NASA-CASE-XMF-06519] c 09 N71-12519  
Pulse rise time and amplitude detector Patent

- [NASA-CASE-XMF-08804] c 09 N71-24717

## STALEY, R. W.

Exposure system for animals Patent

- [NASA-CASE-XAC-05333] c 11 N71-22875

## STALLCOP, J. R.

Measurement of plasma temperature and density using radiation absorption

- [NASA-CASE-ARC-10598-1] c 75 N74-30156

## STALLINGS, ROBERT L., JR.

Passive venting technique for shallow cavities

- [NASA-CASE-LAR-14031-1] c 05 N90-20079  
Passive venting technique for shallow cavities

- [NASA-CASE-LAR-13875-1] c 05 N91-27156

## STALOFF, C.

Frequency shift keyed demodulator Patent

- [NASA-CASE-XGS-02889] c 07 N71-11282

## STAMPS, J. C.

Television noise reduction device

- [NASA-CASE-MSC-12607-1] c 32 N75-21485

## STANDAGE, A. E.

High resistance and raised modulus carbon fibers

- [NASA-TM-76884] c 24 N85-25436

## STANFIELD, CLARENCE E.

Pultrusion die assembly

- [NASA-CASE-LAR-13719-1] c 37 N89-12867

## STANGE, W. C.

Cyclical bi-directional rotary actuator

- [NASA-CASE-GSC-11883-1] c 37 N77-19458

- Actuator mechanism  
[NASA-CASE-GSC-11883-2] c 37 N78-31426
- STANLEY, A. G.**  
Method for analyzing radiation sensitivity of integrated circuits  
[NASA-CASE-NPO-14350-1] c 33 N80-14332
- STANLEY, JOHN E.**  
Method and apparatus for determining time, direction, and composition of impacting space particles  
[NASA-CASE-LAR-13392-1-CU] c 19 N91-14412
- STARK, K. W.**  
Endless tape cartridge Patent  
[NASA-CASE-XGS-00769] c 14 N70-41647  
Endless tape transport mechanism Patent  
[NASA-CASE-XGS-01223] c 07 N71-10609  
Annular slit colloid thurstor Patent  
[NASA-CASE-GSC-10709-1] c 28 N71-25213  
Micro-pound extended range thrust stand Patent  
[NASA-CASE-GSC-10710-1] c 28 N71-27094
- STARK, M. W.**  
Solid propellant liner Patent  
[NASA-CASE-XNP-09744] c 27 N71-16392
- STARKE, EDGAR A., JR.**  
Aluminum alloy  
[NASA-CASE-LAR-13924-1-CU] c 26 N89-28621
- STARKEY, D. J.**  
Torsional disconnect unit  
[NASA-CASE-NPO-10704] c 15 N72-20445
- STARNER, E. R.**  
Frequency measurement by coincidence detection with standard frequency  
[NASA-CASE-MSC-14649-1] c 33 N76-16331
- STATMAN, JOSEPH I.**  
Digital phase-lock loop having an estimator and predictor of error  
[NASA-CASE-NPO-17196-1-CU] c 32 N88-29076
- STATTEL, R. J.**  
Memory-based frame synchronizer  
[NASA-CASE-GSC-12430-1] c 60 N82-16747  
Memory-based parallel data output controller  
[NASA-CASE-GSC-12447-2] c 60 N84-28491
- STAUGAITIS, C. L.**  
Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N86-32550
- STCLAIR, A. K.**  
High temperature polyimide film laminates and process for preparation thereof  
[NASA-CASE-LAR-13384-1] c 27 N86-20561  
Process for preparing essentially colorless polyimide film containing phenoxy-linked diamines  
[NASA-CASE-LAR-13353-1] c 27 N86-29039
- STCLAIR, T. L.**  
Polyimide adhesives  
[NASA-CASE-LAR-12181-1] c 27 N78-17205  
Process of end-capping a polyimide system  
[NASA-CASE-LAR-13135-1] c 27 N86-19456  
High temperature polyimide film laminates and process for preparation thereof  
[NASA-CASE-LAR-13384-1] c 27 N86-20561  
Process for preparing essentially colorless polyimide film containing phenoxy-linked diamines  
[NASA-CASE-LAR-13353-1] c 27 N86-29039  
Acetylene (ethynyl) terminated polyimide siloxane and process for preparation thereof  
[NASA-CASE-LAR-13318-1] c 27 N87-14516
- STCLAIR, TERRY L.**  
Process for developing crystallinity in linear aromatic polyimides  
[NASA-CASE-LAR-13732-1] c 27 N87-25474  
Semi-2-interpenetrating networks of high temperature systems  
[NASA-CASE-LAR-13450-1] c 27 N87-28657  
Copolyimide with a combination of flexibilizing groups  
[NASA-CASE-LAR-13821-1] c 27 N90-16950
- STCLAIRE, T. L.**  
Mixed diamines for lower melting addition polyimide preparation and utilization  
[NASA-CASE-LAR-12054-1] c 27 N79-33316
- STEBBINS, F. J.**  
Shuttle-launch triangular space station  
[NASA-CASE-MSC-20676-1] c 18 N86-24729
- STECURA, S.**  
Thermal barrier coating system  
[NASA-CASE-LEW-12554-1] c 34 N78-18355  
Thermal barrier coating system  
[NASA-CASE-LEW-13324-2] c 24 N85-21266  
Thermal barrier coating system  
[NASA-CASE-LEW-14057-1] c 24 N85-35233
- STEELE, E. R.**  
Satellite aided vehicle avoidance system Patent  
[NASA-CASE-ERC-10090] c 21 N71-24948  
Satellite aided vehicle avoidance system  
[NASA-CASE-ERC-10419-1] c 03 N75-30132
- STEELE, R. K.**  
Method and apparatus for nondestructive testing of pressure vessels  
[NASA-CASE-NPO-12142-1] c 38 N76-28563
- STEENHAGEN, G.**  
Expandable support means  
[NASA-CASE-NPO-11059] c 15 N72-17454
- STEENKEN, J.**  
Relief valve  
[NASA-CASE-XMS-05894-1] c 15 N69-21924
- STEIMLE, LAWRENCE J.**  
Dynamic aperture fringe discriminator  
[NASA-CASE-NPO-18478-1-CU] c 74 N92-30084
- STEIN, B. A.**  
Hot melt adhesive attachment pad  
[NASA-CASE-LAR-12894-1] c 27 N85-20125
- STEIN, R. J.**  
Continuous detonation reaction engine Patent  
[NASA-CASE-XMF-06926] c 28 N71-22983  
Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c 43 N79-25443  
Longwall shearer tracking system  
[NASA-CASE-MFS-25717-1] c 35 N84-33768
- STEIN, S.**  
Injector-valve device Patent  
[NASA-CASE-XLE-00303] c 15 N70-36535  
Rocket engine injector Patent  
[NASA-CASE-XLE-00111] c 28 N70-38199  
Rocket engine injector Patent  
[NASA-CASE-XLE-03157] c 28 N71-24736
- STEINBERG, R.**  
Molecular beam velocity selector Patent  
[NASA-CASE-XLE-01533] c 11 N71-10777  
Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c 37 N78-13436
- STEINETZ, B. M.**  
High-temperature, bellows hybrid seal  
[NASA-CASE-LEW-15570-1] c 37 N93-19027
- STEINETZ, BRUCE M.**  
High temperature flexible seal  
[NASA-CASE-LEW-14695-1] c 37 N90-23751  
High-temperature, flexible, thermal barrier seal  
[NASA-CASE-LEW-14672-1] c 37 N91-27560  
High temperature, flexible pressure-actuated, brush seal  
[NASA-CASE-LEW-15086-1] c 37 N92-16318  
High temperature, flexible, fiber-preform seal  
[NASA-CASE-LEW-15085-1] c 37 N92-22043
- STEINMAN, JEFFREY S.**  
Synchronous parallel system for emulation and discrete event simulation  
[NASA-CASE-NPO-18414-1-CU] c 62 N92-24045
- STEINMETZ, C. P.**  
Energy limiter for hydraulic actuators Patent  
[NASA-CASE-ARC-10131-1] c 15 N71-27754
- STELBEN, J. J.**  
Recorder/processor apparatus  
[NASA-CASE-GSC-11553-1] c 35 N74-15831
- STELL, R. E.**  
In situ transfer standard for ultrahigh vacuum gage calibration  
[NASA-CASE-LAR-10862-1] c 35 N74-15092
- STELLA, A. J.**  
Electrical connector pin with wiping action  
[NASA-CASE-XMF-04238] c 09 N69-39734
- STELTS, P. D.**  
Low heat leak connector for cryogenic system  
[NASA-CASE-XLE-02367-1] c 31 N79-21225
- STELZRIED, C. T.**  
Reflectometer for receiver input impedance match measurement Patent  
[NASA-CASE-XNP-10843] c 07 N71-11267  
Multi-feed cone Cassegrain antenna Patent  
[NASA-CASE-NPO-10539] c 07 N71-11285  
Matched thermistors for microwave power meters Patent  
[NASA-CASE-NPO-10348] c 10 N71-12554  
Broadband microwave waveguide window Patent  
[NASA-CASE-XNP-08880] c 09 N71-24808  
Rotary vane attenuator wherein rotor has orthogonally disposed resistive and dielectric cards  
[NASA-CASE-NPO-11418-1] c 14 N73-13420
- STENGARD, E. O.**  
Toggle mechanism for pinching metal tubes  
[NASA-CASE-GSC-12274-1] c 37 N79-28550
- STENGEL, R. F.**  
Wind velocity probing device and method Patent  
[NASA-CASE-XLA-02081] c 20 N71-16281
- STENLUND, S. J.**  
Rotating mandrel for assembly of inflatable devices Patent  
[NASA-CASE-XLA-04143] c 15 N71-17687  
Traveling sealer for contoured table Patent  
[NASA-CASE-XLA-01494] c 15 N71-24164
- STEPHANS, J. B.**  
Low cost solar energy collection system  
[NASA-CASE-NPO-13579-1] c 44 N78-17460
- STEPHENS, D. G.**  
Flexible ring slosh damping baffle Patent  
[NASA-CASE-LAR-10317-1] c 32 N71-16103  
Instrument for measuring the dynamic behavior of liquids Patent  
[NASA-CASE-XLA-05541] c 12 N71-26387  
Active vibration isolator for flexible bodies Patent  
[NASA-CASE-LAR-10106-1] c 15 N71-27169  
Ride quality meter  
[NASA-CASE-LAR-12882-1] c 35 N84-12445
- STEPHENS, D. L.**  
Automatic closed circuit television arc guidance control Patent  
[NASA-CASE-MFS-13046] c 07 N71-19433
- STEPHENS, J. B.**  
Microbalance including crystal oscillators for measuring contaminants in a gas system Patent  
[NASA-CASE-NPO-10144] c 14 N71-17701  
Space simulator Patent  
[NASA-CASE-NPO-10141] c 11 N71-24964  
Sampler of gas borne particles  
[NASA-CASE-NPO-13396-1] c 35 N76-18401  
Wind sensor  
[NASA-CASE-NPO-13462-1] c 35 N76-24524  
Cryostat system for temperatures on the order of 2 deg K or less  
[NASA-CASE-NPO-13459-1] c 31 N77-10229  
Solar pond  
[NASA-CASE-NPO-13581-2] c 44 N78-31525  
Primary reflector for solar energy collection systems  
[NASA-CASE-NPO-13579-4] c 44 N79-14529  
Primary reflector for solar energy collection systems and method of making same  
[NASA-CASE-NPO-13579-3] c 44 N79-24432  
Solar energy collection system  
[NASA-CASE-NPO-13579-2] c 44 N79-24433  
Low cost cryostat  
[NASA-CASE-NPO-14513-1] c 35 N81-14287  
Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c 43 N81-26509  
Sphere forming method and apparatus  
[NASA-CASE-NPO-15070-1] c 31 N83-35176  
Trace water sensor  
[NASA-CASE-NPO-15722-1] c 35 N85-29212
- STEPHENS, J. R.**  
Process for making a high toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-2] c 26 N79-22271  
High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c 26 N80-32484
- STERMAN, A. P.**  
Tip cap for a rotor blade  
[NASA-CASE-LEW-13654-1] c 07 N84-22560  
Air modulation apparatus  
[NASA-CASE-LEW-13524-1] c 07 N84-33410
- STERN, N.**  
Reversible current control apparatus Patent  
[NASA-CASE-XLA-09371] c 10 N71-18724
- STERRETT, J. R.**  
Laser grating interferometer Patent  
[NASA-CASE-XLA-04295] c 16 N71-24170
- STETSON, A. R.**  
Silicide coatings for refractory metals Patent  
[NASA-CASE-XLE-10910] c 18 N71-29040
- STEUDEL, R. M.**  
Controlled caging and uncaging mechanism  
[NASA-CASE-GSC-11063-1] c 37 N77-27400
- STEVENS, M. L.**  
Surface conforming thermal/pressure seal  
[NASA-CASE-MSC-18422-1] c 37 N82-16408
- STEVENS, M. R.**  
Portable electrophoresis apparatus using minimum electrolyte  
[NASA-CASE-NPO-13274-1] c 25 N79-10163
- STEVENSON, L. E.**  
Aircraft control system  
[NASA-CASE-ERC-10439] c 02 N73-19004
- STEWART, C. H.**  
Family of frequency to amplitude converters  
[NASA-CASE-MSC-12395] c 09 N72-25257  
Apparatus for statistical time-series analysis of electrical signals  
[NASA-CASE-MSC-12428-1] c 10 N73-25240
- STEWART, D. A.**  
Adjustable high emittance gap filler  
[NASA-CASE-ARC-11310-1] c 27 N82-24339  
High temperature glass thermal control structure and coating  
[NASA-CASE-ARC-11164-1] c 44 N83-34448
- STEWART, ERIC C.**  
Airplane automatic control force trimming device for asymmetric engine failures  
[NASA-CASE-LAR-13280-1] c 08 N87-20999



# STEWART, R. B.

## STEWART, R. B.

Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10612-1] c 12 N73-28144

## STEWART, W. L.

Multistage multiple-reentry turbine Patent  
[NASA-CASE-XLE-00170] c 15 N70-36412  
Multistage multiple-reentry turbine Patent  
[NASA-CASE-XLE-00085] c 28 N70-39895  
Supercharged topping rocket propellant feed system  
[NASA-CASE-XLE-02062-1] c 20 N80-14188

## STICKLE, J. W.

Direct lift control system Patent  
[NASA-CASE-LAR-10249-1] c 02 N71-26110

## STIFFLER, J. J.

Error correcting method and apparatus Patent  
[NASA-CASE-XNP-02748] c 08 N71-22749  
Encoder/decoder system for a rapidly synchronizable binary code Patent  
[NASA-CASE-NPO-10342] c 10 N71-33407

## STIGBERG, J. D.

Signal conditioner test set  
[NASA-CASE-KSC-10750-1] c 35 N75-12270

## STINE, H. A.

Electric arc apparatus Patent  
[NASA-CASE-XAC-01677] c 09 N71-20816

## STIRN, R. J.

High voltage, high current Schottky barrier solar cell  
[NASA-CASE-NPO-13482-1] c 44 N78-13526  
Schottky barrier solar cell  
[NASA-CASE-NPO-13689-2] c 44 N81-29525  
Method of fabricating Schottky Barrier solar cell  
[NASA-CASE-NPO-13689-4] c 44 N82-28780

## STIRN, RICHARD J.

Preparation of dilute magnetic semiconductor films by metalorganic chemical vapor deposition  
[NASA-CASE-NPO-17399-1-CU] c 76 N89-14120

## STJOHN, R. H.

Walking boot assembly  
[NASA-CASE-ARC-11101-1] c 54 N78-17675

## STOAKLEY, D. M.

Process for improving mechanical properties of epoxy resins by addition of cobalt ions  
[NASA-CASE-LAR-13230-1] c 24 N84-34571  
Process for improving moisture resistance of epoxy resins by addition of chromium ions  
[NASA-CASE-LAR-13226-1] c 27 N85-34282

## STOAKLEY, DIANE M.

Tensile film clamps and mounting block for the rheovibron and autovibron viscoelastometer  
[NASA-CASE-LAR-13696-1] c 37 N90-20409  
Process for lowering the dielectric constant of polyimides using diamine acid additives  
[NASA-CASE-LAR-13902-1] c 27 N90-23546  
A process for preparing an assembly of an article and a polyimide which resists dimensional change, delamination, and debonding when exposed to changes in temperature  
[NASA-CASE-LAR-14538-1] c 27 N92-11201

A process for preparing an assembly of an article and a soluble polyimide which resists dimensional change, delamination, and debonding when exposed to changes in temperature  
[NASA-CASE-LAR-14763-1] c 27 N92-12121  
Polyimide processing additives  
[NASA-CASE-LAR-13669-1] c 27 N92-29157

## STOCKARD, R. R.

Semiconductor p-n junction stress and strain sensor  
[NASA-CASE-XLA-04980] c 09 N69-27422  
Method of making semiconductor p-n junction stress and strain sensor  
[NASA-CASE-XLA-04980-2] c 14 N72-28438

## STOCKER, P. J.

Laser extensometer  
[NASA-CASE-MFS-19259-1] c 36 N78-14380

## STOCKS, C. D.

Apparatus for measuring charged particle beam  
[NASA-CASE-MFS-25641-1] c 72 N84-28575

## STOCKTON, R. J.

Microwave switching power divider  
[NASA-CASE-GSC-12420-1] c 33 N82-16340

## STOKES, C. S.

Barium release system  
[NASA-CASE-LAR-10670-1] c 06 N73-30097  
Rocket having barium release system to create ion clouds in the upper atmosphere  
[NASA-CASE-LAR-10670-2] c 15 N74-27360

## STOKES, R. C.

Multispectral scanner optical system  
[NASA-CASE-MSC-18255-1] c 74 N80-33210

## STOLLER, F. W.

Reversible motion drive system Patent  
[NASA-CASE-NPO-10173] c 15 N71-24696

## STOLTZFUS, JOEL M.

High-pressure promoted combustion chamber  
[NASA-CASE-MSC-21470-1] c 09 N91-21157

## STONE, F. A.

Synchronous servo loop control system Patent  
[NASA-CASE-XNP-03744] c 10 N71-20448

## STONE, HENRY W.

Hazardous materials emergency response mobile robot  
[NASA-CASE-NPO-18690-1-CU] c 37 N92-34205

## STONE, L. P.

Articulated multiple couch assembly Patent  
[NASA-CASE-MSC-11253] c 05 N71-12343

## STONE, NOBIE H.

Ion generator and ion application system  
[NASA-CASE-MFS-28122-1] c 72 N88-24253

## STONE, R. W., JR.

G conditioning suit Patent  
[NASA-CASE-XLA-02898] c 05 N71-20268

## STONE, S. E.

Fluid sample collector Patent  
[NASA-CASE-XMS-06767-1] c 14 N71-20435

## STONEBURNER, J. D.

Acoustic particle separation  
[NASA-CASE-NPO-15559-1] c 71 N85-30765

## STORY, A. W.

System for indicating direction of intruder aircraft  
[NASA-CASE-ERC-10226-1] c 14 N73-16483

## STOTLER, C. L., JR.

Display system  
[NASA-CASE-ERC-10350] c 14 N73-20474

## STOTLER, C. L., JR.

Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-2] c 07 N78-18066

## STOTLER, C. L., JR.

Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-3] c 07 N79-14096

## STOUGH, H. PAUL, II

Apparatus and method for improving spin recovery on aircraft  
[NASA-CASE-LAR-14747-1] c 08 N93-20039

## STOUGH, H. PAUL, III

Stall departure resistance enhancer  
[NASA-CASE-LAR-14221-1] c 06 N93-19023

## STOUGHTON, JOHN W.

Frequency domain laser velocimeter signal processor  
[NASA-CASE-LAR-13552-1-CU] c 33 N89-14385

## STOWE, RAYMOND P.

Kinetic tetrazolium microtiter assay  
[NASA-CASE-MSC-21979-1] c 51 N93-17049

## STRAIGHT, D. M.

Rocket motor system Patent  
[NASA-CASE-XLE-00323] c 28 N70-38505

## STRAIGHT, D. M.

Gas turbine exhaust nozzle  
[NASA-CASE-LEW-11569-1] c 07 N74-15453

## STRAND, L. D.

Solid propellant rocket motor  
[NASA-CASE-NPO-11559] c 28 N73-24784

## STRAND, L. D.

Nitramine propellants  
[NASA-CASE-NPO-14103-1] c 28 N78-31255

## STRANGE, M. G.

Position sensing device employing misaligned magnetic field generating and detecting apparatus Patent  
[NASA-CASE-XGS-07514] c 23 N71-16099

Self-regulating proportionally controlled heating apparatus and technique  
[NASA-CASE-GSC-11752-1] c 77 N75-20140

## STRASS, H. K.

Motion picture camera for optical pyrometry Patent  
[NASA-CASE-XLA-00062] c 14 N70-33254

Light intensity modulator controller Patent  
[NASA-CASE-XMS-04300] c 09 N71-19479

## STREED, E. R.

Solar cell Patent  
[NASA-CASE-ARC-10050] c 03 N71-33409

## STREET, KENNETH W. JR.

Ion exchange polymers and method for making  
[NASA-CASE-LEW-15576-1] c 27 N93-31316

## STRINGHAM, R. S.

Vitro-violet process for producing flame resistant polyamides and products produced thereby  
[NASA-CASE-MSC-18074-1] c 27 N80-26446

## STROCK, W. J.

Combustor liner construction  
[NASA-CASE-LEW-14035-1] c 07 N84-24577

## STROCKY, PAUL J.

High temperature, flexible, fiber-preform seal  
[NASA-CASE-LEW-15085-1] c 37 N92-22043

## STROM, T. N.

Spiral groove seal  
[NASA-CASE-XLE-10326-2] c 15 N72-29488

## STROM, T. N.

Spiral groove seal  
[NASA-CASE-XLE-10326-4] c 37 N74-15125

## STRONG, I. J.

Stirring apparatus for plural test tubes Patent  
[NASA-CASE-XAC-06956] c 15 N71-21177

## STRONG, J. P., III

Two-dimensional radiant energy array computers and computing devices  
[NASA-CASE-GSC-11839-1] c 60 N77-14751

Analog to digital converter for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-3] c 60 N77-32731

Memory device for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-2] c 60 N78-10709

## STROUB, R. H.

Constant lift rotor for a heavier than air craft  
[NASA-CASE-ARC-11045-1] c 05 N79-17847

## STROUHAL, G.

Thermal insulation protection means  
[NASA-CASE-MSC-12737-1] c 24 N79-25142

## STROUP, E. R.

Electrochemical coulometer and method of forming same Patent  
[NASA-CASE-XGS-05434] c 03 N71-20491

## STRULL, G.

Solid state television camera system Patent  
[NASA-CASE-XMF-06092] c 07 N71-24612

## STRUTHOFF, G. L.

Dual acting slit control mechanism  
[NASA-CASE-LAR-11370-1] c 35 N80-28686

## STUART, J. L.

Automated fluid chemical analyzer Patent  
[NASA-CASE-XNP-09451] c 06 N71-26754

## STUART, J. W.

Fire resistant coating composition Patent  
[NASA-CASE-GSC-10072] c 18 N71-14014

Diffuse reflective coating  
[NASA-CASE-XMF-1214-1] c 06 N73-13128

## STUBBS, SANDY M.

Method and apparatus for cleaning rubber deposits from airport runways and roadways  
[NASA-CASE-LAR-14483-1] c 31 N93-22035

## STUCKEY, J. M.

Panelized high performance multilayer insulation Patent  
[NASA-CASE-MFS-14023] c 33 N71-25351

Cryogenic thermal insulation Patent  
[NASA-CASE-XMF-05046] c 33 N71-28892

## STUDENICK, D. K.

System for stabilizing torque between a balloon and gondola  
[NASA-CASE-GSC-11077-1] c 02 N73-13008

Fluid sampling device  
[NASA-CASE-GSC-12143-1] c 35 N77-32456

## STUDER, P. A.

Electronic beam switching commutator Patent  
[NASA-CASE-XGS-01451] c 09 N71-10677

Direct current motor with stationary armature and field Patent  
[NASA-CASE-XGS-05290] c 09 N71-25999

Helical recorder arrangement for multiple channel recording on both sides of the tape  
[NASA-CASE-GSC-10614-1] c 09 N72-11224

Electric motive machine including magnetic bearing  
[NASA-CASE-XGS-07805] c 15 N72-33476

## STUDER, P. A.

Magnetic bearing  
[NASA-CASE-GSC-11079-1] c 37 N75-18574

Magnetic bearing system  
[NASA-CASE-GSC-11978-1] c 37 N77-17464

Three phase full wave dc motor decoder  
[NASA-CASE-GSC-11824-1] c 33 N77-26386

Energy storage apparatus  
[NASA-CASE-GSC-12030-1] c 44 N78-24608

Linear magnetic motor/generator  
[NASA-CASE-GSC-12518-1] c 33 N82-24421

Non-contacting power transfer device  
[NASA-CASE-GSC-12595-1] c 33 N82-24422

Stirling cycle cryogenic cooler  
[US-PATENT-4,389,849] c 44 N83-28574

Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c 37 N83-32067

Magnetic bearing and motor  
[NASA-CASE-GSC-12726-1] c 37 N83-34323

Magnetically actuated compressor  
[NASA-CASE-GSC-12799-1] c 31 N85-21404

## STUDER, PHILIP

Helix translation device  
[NASA-CASE-GSC-13141-1] c 37 N92-23548

## STUDER, PHILIP A.

Radial and torsionally controlled magnetic bearing  
[NASA-CASE-GSC-12957-1] c 37 N87-17038

Three axis attitude control system  
[NASA-CASE-GSC-12970-1] c 08 N88-23808

Flexible robotic arm  
[NASA-CASE-GSC-13161-1] c 37 N92-33634

## STUMP, C. W.

Apparatus for measuring an aircraft's speed and height  
[NASA-CASE-LAR-12275-1] c 35 N79-18296

Film advance indicator  
[NASA-CASE-LAR-12474-1] c 35 N82-26628

## STUMP, E. C., JR.

Hydroxy terminated perfluoro ethers Patent  
[NASA-CASE-NPO-10768] c 06 N71-27254

- Perfluoro polyether acyl fluorides  
[NASA-CASE-NPO-10765] c 06 N72-20121
- Polyurethane resins from hydroxy terminated perfluoro ethers  
[NASA-CASE-NPO-10768-2] c 06 N72-27144  
[NASA-CASE-NPO-10767-2] c 06 N72-27151  
[NASA-CASE-NPO-10767-1] c 06 N73-33076
- STURGIS, A. C.**  
Multiparameter vision testing apparatus  
[NASA-CASE-MSC-13601-2] c 54 N75-27759
- STURM, R. G.**  
Self-recording portable soil penetrometer  
[NASA-CASE-MFS-20774] c 14 N73-19420
- STURMAN, J. C.**  
Pulsed differential comparator circuit Patent  
[NASA-CASE-XLE-03804] c 10 N71-19471
- STYLES, C. M.**  
Spherical solid-propellant rocket motor Patent  
[NASA-CASE-XLA-00105] c 28 N70-33331
- SUDDATH, FRED L.**  
Hanging drop crystal growth apparatus  
[NASA-CASE-MFS-26061-1] c 76 N91-16815  
Macromolecular crystal growing system  
[NASA-CASE-MFS-26088-1-CU] c 76 N92-25398
- SUDEY, J.**  
Low speed phaselock speed control system  
[NASA-CASE-GSC-11127-1] c 09 N75-24758
- SUGG, FRANK E.**  
Acoustic emission frequency discrimination  
[NASA-CASE-MSC-20467-1] c 35 N88-23966
- SUITOR, JERRY W.**  
Energy efficient continuous flow ash lockhopper  
[NASA-CASE-NPO-16985-1-CU] c 31 N91-15423
- SUKAMTO, LIN M.**  
Miniature modular microwave end-to-end receiver  
[NASA-CASE-NPO-18713-1-CU] c 32 N93-29087
- SULLIVAN, D. B.**  
Electrical insulating layer process  
[NASA-CASE-LEW-10489-1] c 15 N72-25447
- SULLIVAN, E. M.**  
Ablation article and method  
[NASA-CASE-LAR-10439-1] c 33 N73-27796
- SULLIVAN, J. L.**  
Self-contained breathing apparatus  
[NASA-CASE-MSC-14733-1] c 54 N76-24900
- SULLIVAN, T. E.**  
Waveguide mixer  
[NASA-CASE-ERC-10179] c 07 N72-20141
- SULLIVAN, THOMAS A.**  
Method for producing oxygen from lunar materials  
[NASA-CASE-MSC-21759-1] c 25 N93-29617
- SUMIDA, J. T.**  
Miniature multichannel biotelemetry system  
[NASA-CASE-NPO-13065-1] c 52 N74-26625
- SUMMERFIELD, D. G.**  
Wind tunnel model and method  
[NASA-CASE-LAR-10812-1] c 09 N74-17955
- SUMMERS, R. H.**  
Geneva mechanism  
[NASA-CASE-NPO-13281-1] c 37 N75-13266
- SUPPLEE, F. H., JR.**  
Two-axis, self-nulling skin friction balance  
[NASA-CASE-LAR-13294-1] c 35 N86-32696
- SUPPLEE, FRANK H., JR.**  
Miniature remote dead weight calibrator  
[NASA-CASE-LAR-13564-1] c 35 N87-25558  
Skin friction balance  
[NASA-CASE-LAR-13710-1] c 35 N90-17117
- SURAMPUDI, SUBBARAO**  
Overcharge and overdischarge protection of ambient temperature secondary lithium cells  
[NASA-CASE-NPO-18343-1-CU] c 33 N93-11456  
Anode for rechargeable ambient temperature lithium cells  
[NASA-CASE-NPO-18580-1-CU] c 33 N93-17278
- SUSZKO, S. F.**  
Method of examining microcircuit patterns  
[NASA-CASE-NPO-16299-1] c 33 N87-14594
- SUTLIFF, J. D.**  
Wing deployment method and apparatus Patent  
[NASA-CASE-XMS-00907] c 02 N70-41630
- SUTTON, JOHN F.**  
Synchronous demodulator  
[NASA-CASE-GSC-13179-1] c 33 N91-26438  
Differential current source  
[NASA-CASE-GSC-13280-1] c 33 N91-27479
- SVEJKOVSKY, PAUL A.**  
Thruster sealing system and apparatus  
[NASA-CASE-MSC-21899-1] c 37 N93-14702
- SWAIM, R. J.**  
One-step dual purpose joining technique  
[NASA-CASE-LAR-12595-1] c 33 N82-26571  
Induction heating gun  
[NASA-CASE-LAR-13181-1] c 31 N85-29083
- SWAIN, ROBERT J.**  
Heating head for induction heating apparatus  
[NASA-CASE-LAR-14429-1] c 33 N93-29173
- SWAIN, R. L.**  
Spherical solid-propellant rocket motor Patent  
[NASA-CASE-XLA-00105] c 28 N70-33331
- SWAN, SCOTT A.**  
Bidirectional drive and brake mechanism  
[NASA-CASE-MSC-21540-1] c 37 N91-32514
- SWANN, R. T.**  
Sandwich panel construction Patent  
[NASA-CASE-XLA-00349] c 33 N70-37979  
Dielectric molding apparatus Patent  
[NASA-CASE-LAR-10121-1] c 15 N71-26721
- SWANSON, CHARLES P.**  
Cylindrical surface profile and diameter measuring tool and method  
[NASA-CASE-MFS-28287-1] c 35 N88-23959
- SWANSON, THEODORE**  
Ceramic heat pipe wick  
[NASA-CASE-GSC-13199-1] c 27 N90-23541
- SWARTZ, P. F.**  
Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c 51 N81-14605
- SWEAT, J. C.**  
Emergency escape system Patent  
[NASA-CASE-XKS-07814] c 15 N71-27067
- SWEET, G. E.**  
Compensating radiometer  
[NASA-CASE-XLA-04556] c 14 N69-27484  
Spherical measurement device  
[NASA-CASE-XLA-06683] c 14 N72-28436
- SWETTE, L. L.**  
Electrocatalyst for oxygen reduction  
[NASA-CASE-HQN-10537-1] c 06 N72-10138
- SWINGLE, R. L.**  
Compact solar still Patent  
[NASA-CASE-XMS-04533] c 15 N71-23086
- SWIRSKY, B. D.**  
Method of fabricating an object with a thin wall having a precisely shaped slit  
[NASA-CASE-LAR-10409-1] c 31 N74-21059
- SWORDS, B. B.**  
Adjustable force probe  
[NASA-CASE-MFS-20760] c 14 N72-33377
- SYDNOR, R. L.**  
Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c 32 N78-15323  
Maser cavity servo-tuning system  
[NASA-CASE-NPO-15890-1-CU] c 33 N85-29143
- SYDNOR, RICHARD L.**  
Fiber optic frequency transfer link  
[NASA-CASE-NPO-17703-1-CU] c 74 N91-27957
- SYVERTSON, C. A.**  
Flight craft Patent  
[NASA-CASE-XAC-02058] c 02 N71-16087
- SAKALY, ZOLTAN F.**  
A universal computer control system for motors  
[NASA-CASE-NPO-17134-1-CU] c 33 N91-31528  
Synchronized computational architecture for generalized bilateral control of robot arms  
[NASA-CASE-NPO-17401-1-CU] c 63 N91-31885
- SZOFFRAN, FRANK R.**  
Method of preparing radially homogeneous mercury cadmium telluride crystals  
[NASA-CASE-MFS-25786-2] c 76 N90-20896
- SZUWALSKI, B.**  
Computer circuit card puller  
[NASA-CASE-FRC-11042-1] c 60 N82-24839
- T**
- TABACK, I.**  
Small conductive particle sensor  
[NASA-CASE-LAR-12552-1] c 35 N82-11431
- TADDEO, F. V.**  
Pulse generating circuit employing switch means on ends of delay line for alternately charging and discharging same Patent  
[NASA-CASE-XNP-00745] c 10 N71-28960
- TALBOT, M. W.**  
Protection for energy conversion systems  
[NASA-CASE-XGS-04808] c 03 N69-25146  
Inverter with means for base current shaping for sweeping charge carriers from base region Patent  
[NASA-CASE-XGS-06226] c 10 N71-25950
- TALLEY, D. H.**  
Response analyzers for sensors Patent  
[NASA-CASE-MFS-11204] c 14 N71-29134
- TANZER, HERBERT J.**  
Space vehicle thermal rejection system  
[NASA-CASE-LAR-13738-1] c 18 N87-29586
- TARPLEY, J. L.**  
Static coefficient test method and apparatus  
[NASA-CASE-GSC-11893-1] c 35 N76-31489
- TASHBAR, P. W.**  
System for depositing thin films  
[NASA-CASE-MFS-20775-1] c 31 N75-12161
- TAUB, W. M.**  
Radial module space station Patent  
[NASA-CASE-XMS-01906] c 31 N70-41373  
Space vehicle system  
[NASA-CASE-MSC-12561-1] c 18 N76-17185
- TAUSWORTHE, R. C.**  
Filter for third order phase locked loops  
[NASA-CASE-NPO-11941-1] c 10 N73-27171  
Phase conjugation method and apparatus for an active retrodirective antenna array  
[NASA-CASE-NPO-13641-1] c 32 N79-24210
- TAWEL, RAOUL**  
Nonvolatile programmable neural network synaptic array  
[NASA-CASE-NPO-18578-1-CU] c 33 N92-30086  
The adaptive neuron model: An architecture for the rapid learning of nonlinear topological transformations  
[NASA-CASE-NPO-18579-1-CU] c 63 N93-11174
- TAYLOR, A. H.**  
Daze fasteners  
[NASA-CASE-LAR-13009-1] c 37 N85-29285  
Aerospace vehicle  
[NASA-CASE-LAR-13155-1] c 05 N86-19310
- TAYLOR, ALLAN H.**  
Daze fasteners  
[NASA-CASE-LAR-13009-2] c 37 N87-22976  
Lightweight piston  
[NASA-CASE-LAR-13150-1] c 24 N87-27742  
Composite piston  
[NASA-CASE-LAR-13435-1] c 37 N88-23981  
Cryogenic insulation system  
[NASA-CASE-LAR-13506-1] c 27 N89-12741  
Lightweight piston architecture  
[NASA-CASE-LAR-13926-1] c 37 N90-22042
- TAYLOR, C. J.**  
High resolution developing of photosensitive resists Patent  
[NASA-CASE-XGS-04993] c 14 N71-17574
- TAYLOR, GERALD R.**  
Portable dynamic fundus instrument  
[NASA-CASE-MSC-21675-1] c 52 N92-28755
- TAYLOR, J. R.**  
Flow modifying device  
[NASA-CASE-LEW-13562-2] c 07 N85-35195
- TAYLOR, L. L.**  
Flexible composite membrane Patent  
[NASA-CASE-XNP-08837] c 18 N71-16210
- TAYLOR, L. T.**  
Aluminum ion-containing polyimide adhesives  
[NASA-CASE-LAR-12640-1] c 27 N82-11206  
Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c 25 N82-26396
- TAYLOR, L. V.**  
Plural position switch status and operativeness checker Patent  
[NASA-CASE-XLA-08799] c 10 N71-27272
- TAYLOR, M. S.**  
Fluoroether modified epoxy composites  
[NASA-CASE-ARC-11418-1] c 24 N84-11213
- TAYLOR, PATRICK J.**  
Multi-layer light-weight protective coating and method for application  
[NASA-CASE-LAR-14448-1] c 27 N93-11912
- TAYLOR, R. A.**  
Digital computing cardiometer  
[NASA-CASE-MFS-20284-1] c 52 N74-12778
- TAYLOR, R. C.**  
Multi axes vibration fixtures  
[NASA-CASE-MFS-20242] c 14 N73-19421
- TAYLOR, R. E.**  
Automatic acquisition system for phase-lock loop  
[NASA-CASE-XGS-04994] c 09 N69-21543  
Polarization diversity monopulse tracking receiver Patent  
[NASA-CASE-XGS-03501] c 09 N71-20864  
Electromagnetic polarization systems and methods Patent  
[NASA-CASE-GSC-10021-1] c 09 N71-24595  
Method and automated apparatus for detecting coliform organisms  
[NASA-CASE-MSC-16777-1] c 51 N80-27067  
Navigation system and method  
[NASA-CASE-GSC-12508-1] c 04 N84-22546
- TAYLOR, T. I.**  
Metabolic rate meter and method  
[NASA-CASE-MSC-12239-1] c 52 N79-21750
- TCHERNEV, D. I.**  
Variable frequency nuclear magnetic resonance spectrometer Patent  
[NASA-CASE-XNP-09830] c 14 N71-26266

## TE POEL, H. E.

Television signal scan rate conversion system Patent  
[NASA-CASE-XMS-07168] c 07 N71-11300

## TEGNELIA, C. R.

Digital second-order phase-locked loop  
[NASA-CASE-NPO-11905-1] c 33 N74-12887

## TEITELBAUM, S.

Frequency shift keyed demodulator Patent  
[NASA-CASE-XGS-02889] c 07 N71-11282

## TELFER, T. A.

Method of determining bond quality of power transistors  
attached to substrates  
[NASA-CASE-MFS-21931-1] c 37 N75-26372

## TEMPLE, H. E.

Means for growing ribbon crystals without subjecting the  
crystals to thermal shock-induced strains  
[NASA-CASE-NPO-14298-1] c 76 N80-32244

Apparatus for use in the production of ribbon-shaped  
crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c 33 N81-19389

## TENER, W. M.

Cryogenic liquid sensor  
[NASA-CASE-NPO-10619-1] c 35 N77-21393

## TENG, R. N.

Collapsible pistons  
[NASA-CASE-MSC-13789-1] c 11 N73-32152

## TENNEY, J. B., JR.

Prosthetic occlusive device for an internal  
passageway  
[NASA-CASE-MFS-25740-1] c 52 N84-11744

## TENOSO, H. J.

Water system virus detection  
[NASA-CASE-MSC-16098-1] c 51 N79-10693

## TEPPER, E. H.

Regenerable device for scrubbing breathable air of CO<sub>2</sub>  
and moisture without special heat exchanger equipment  
[NASA-CASE-MSC-14771-1] c 54 N77-32722

## TERP, L. S.

Gas compression apparatus  
[NASA-CASE-MSC-14757-1] c 35 N78-10428

## TERRAY, A.

Method of making an apertured casting  
[NASA-CASE-LEW-11169-1] c 37 N76-23570

## TERRELL, KYLE

Hydraulic lifting device  
[NASA-CASE-SSC-00008-1] c 37 N91-13733

## TERSELIC, R. A.

Split welding chamber Patent  
[NASA-CASE-LEW-11531] c 15 N71-14932

## TERVET, F. W.

Mixed polyvalent-monovalent metal coating for  
carbon-graphite fibers  
[NASA-CASE-NPO-14987-1] c 24 N83-33950

## TESINSKY, J. S.

Flexible pile thermal barrier insulator  
[NASA-CASE-MSC-19568-1] c 34 N78-25350

## TETSUKA, G. M.

Single or joint amplitude distribution analyzer Patent  
[NASA-CASE-XNP-01383] c 09 N71-10659

## THAKOOR, A. P.

Corrosion resistant coating  
[NASA-CASE-NPO-15928-1] c 26 N85-29005

## THAKOOR, ANIL P.

Electronic neural network for solving traveling salesman  
and similar global optimization problems  
[NASA-CASE-NPO-17807-2-CU] c 63 N92-29955

## THAKOOR, ANILKUMAR

Hybrid analog-digital associative neural network  
[NASA-CASE-NPO-17058-1-CU] c 62 N87-25803

## THAKOOR, ANILKUMAR P.

Method of producing high T(subc) superconducting NBN  
films  
[NASA-CASE-NPO-16681-1-CU] c 76 N88-24543

## THAKOOR, SARITA

Method of producing high T(subc) superconducting NBN  
films  
[NASA-CASE-NPO-16681-1-CU] c 76 N88-24543

## THALER, S.

Enhanced fatigue and retention in ferroelectric thin film  
memory capacitors by post-top electrode anneal  
treatment  
[NASA-CASE-NPO-18551-1-CU] c 33 N93-17277

## THALLER, L. H.

Voltage regulator Patent  
[NASA-CASE-ERC-10113] c 09 N71-27053

## THALLER, L. H.

Current dependent filter inductance  
[NASA-CASE-ERC-10139] c 09 N72-17154

## THALLER, L. H.

Combined electrolysis device and fuel cell and method  
of operation Patent  
[NASA-CASE-XLE-01645] c 03 N71-20904

## THALLER, L. H.

Electrically rechargeable REDOX flow cell  
[NASA-CASE-LEW-12220-1] c 44 N77-14581

Electrochemical cell for rebalancing REDOX flow  
system  
[NASA-CASE-LEW-13150-1] c 44 N79-26474

## THATCHER, C. S.

Precision heat forming of tetrafluoroethylene tubing  
[NASA-CASE-MSC-18430-1] c 37 N82-24491

## THEAKSTON, H. A.

Floating nut retention system  
[NASA-CASE-MSC-16938-1] c 37 N80-23653

## THEISS, M.

Gas levitator having fixed levitation node for  
containerless processing  
[NASA-CASE-MFS-25509-1] c 35 N83-24828

## THIBODAUX, J. G., JR.

Spherical solid-propellant rocket motor Patent  
[NASA-CASE-XLA-00105] c 28 N70-33331

## THIBODAUX, J. G., JR.

Mandrel for shaping solid propellant rocket fuel into a  
motor casing Patent  
[NASA-CASE-XLA-00304] c 27 N70-34783

## THIBODAUX, J. G., JR.

Method of making a solid propellant rocket motor  
Patent  
[NASA-CASE-XLA-04126] c 28 N71-26779

## THIBODAUX, J. G., JR.

Solid propellant rocket motor and method of making  
same  
[NASA-CASE-XLA-01349] c 20 N77-17143

## THIEL, A. M.

Aligning and positioning device Patent  
[NASA-CASE-XMS-04178] c 15 N71-22798

## THIELE, C.

Space simulator Patent  
[NASA-CASE-XNP-00459] c 11 N70-38675

## THIELE, C. L.

Thermal energy transformer  
[NASA-CASE-NPO-14058-1] c 44 N79-18443

## THIESSEN, DAVID L.

Dynamic aperture fringe discriminator  
[NASA-CASE-NPO-18478-1-CU] c 74 N92-30084

## THOLE, J. M.

Inflation system for balloon type satellites Patent  
[NASA-CASE-XGS-03351] c 31 N71-16081

## THOM, K.

Magnetically controlled plasma accelerator Patent  
[NASA-CASE-XLA-00327] c 25 N71-29184

## THOM, K.

Non-equilibrium radiation nuclear reactor  
[NASA-CASE-HQN-10841-1] c 73 N78-19920

## THOMAS, ANDREW S. W.

Correction-free pyrometry in radiant wall furnaces  
[NASA-CASE-NPO-18655-1-CU] c 35 N93-28322

## THOMAS, CLARK S.

Metal etching composition  
[NASA-CASE-MFS-29576-1] c 25 N92-25399

## THOMAS, D. F., JR.

Jet shoes  
[NASA-CASE-XLA-08491] c 05 N69-21380

## THOMAS, D. F., JR.

One hand backpack harness  
[NASA-CASE-LAR-10102-1] c 05 N72-23085

## THOMAS, D. F., JR.

Kinesthetic control simulator  
[NASA-CASE-LAR-10276-1] c 09 N75-15662

## THOMAS, D. F., JR.

Fluid velocity measuring device  
[NASA-CASE-LAR-11729-1] c 34 N79-12359

## THOMAS, FRANK P.

Slip joint connector  
[NASA-CASE-MFS-28659-1] c 37 N93-17080

## THOMAS, H. N.

Electronic motor control system Patent  
[NASA-CASE-XMF-01129] c 09 N70-38712

## THOMAS, N. E.

Optical communications system Patent  
[NASA-CASE-XLA-01090] c 07 N71-12389

## THOMAS, N. L.

Optical alignment device  
[NASA-CASE-ARC-10932-1] c 74 N76-22993

## THOMAS, R. D.

Thermocouple tape  
[NASA-CASE-LEW-11072-1] c 14 N73-24472

## THOMAS, R. D.

Thermocouple tape  
[NASA-CASE-LEW-11072-2] c 35 N76-15434

## THOMAS, R. D.

Multi-cell battery protection system  
[NASA-CASE-LEW-12039-1] c 44 N78-14625

## THOMAS, R. R.

Method and apparatus for eliminating luminol  
interference material  
[NASA-CASE-MSC-16260-1] c 51 N80-16714

## THOMAS, R. R.

Rapid, quantitative determination of bacteria in water  
[NASA-CASE-GSC-12158-1] c 51 N83-27569

## THOMASON, H. E.

Trigonometric vehicle guidance assembly which aligns  
the three perpendicular axes of two three-axes systems  
Patent  
[NASA-CASE-XMF-00684] c 21 N71-21688

## THOMPSON, G. D., JR.

Azimuth laying system Patent  
[NASA-CASE-XMF-01669] c 21 N71-23289

## THOMPSON, G. D., JR.

Cascaded complementary pair broadband transistor  
amplifiers Patent  
[NASA-CASE-NPO-10003] c 10 N71-26415

## THOMPSON, J. R., JR.

Inflatable transpiration cooled nozzle  
[NASA-CASE-MFS-20619] c 28 N72-11708

## THOMPSON, R. B.

Length mode piezoelectric ultrasonic transducer for  
inspection of solid objects  
[NASA-CASE-MSC-19672-1] c 38 N79-14398

## THOMPSON, R. E.

On-film optical recording of camera lens settings  
[NASA-CASE-MSC-12363-1] c 14 N73-26431

## THOMPSON, S. W.

Method of purifying metallurgical grade silicon employing  
reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c 26 N80-14229

## THOMPSON, W. W.

Inhibited solid propellant composition containing  
beryllium hydride  
[NASA-CASE-NPO-10866-1] c 28 N79-14228

## THOMSON, A. R.

Pulsed energy power system Patent  
[NASA-CASE-MSC-13112] c 03 N71-11057

## THOMSON, J. A. L.

Wind measurement system  
[NASA-CASE-MFS-23362-1] c 47 N77-10753

## THORNHILL, J. W.

Process and apparatus for growing a crystal ribbon  
[NASA-CASE-NPO-15629-1] c 76 N84-35113

## THORNTON, G. E.

Hole cutter  
[NASA-CASE-MFS-22649-1] c 37 N75-25186

## THORNTON, W. E.

Kinesimetric method and apparatus  
[NASA-CASE-MSC-18929-1] c 39 N83-20280

## THORNTON, W. E.

Method and apparatus for simulating gravitational forces  
on a living organism  
[NASA-CASE-MSC-20202-1] c 54 N84-16803

## THORNTON, W. E.

Improved method and apparatus for waste collection  
and storage  
[NASA-CASE-MSC-21025-1] c 31 N87-25495

## THORNTON, WILLIAM E.

Treadmill for space flight  
[NASA-CASE-MSC-21752-1] c 54 N92-17910

## THORNTON, WILLIAM E., JR.

Valve for waste collection and storage  
[NASA-CASE-MSC-21025-4] c 54 N91-14723

## THORNTON, WILLIAM E., JR.

Method for waste collection and storage  
[NASA-CASE-MSC-21025-2] c 54 N91-14724

## THORNTON, WILLIAM E., JR.

Method and apparatus for waste collection and  
storage  
[NASA-CASE-MSC-21025-3] c 54 N91-26747

## THORNWALL, J. C.

Regulated dc to dc converter  
[NASA-CASE-XGS-03429] c 03 N69-21330

## THORNWALL, J. C.

Pulse-type magnetic core memory element circuit with  
blocking oscillator feedback Patent  
[NASA-CASE-XGS-03303] c 08 N71-18595

## THORNWALL, J. C.

Stepping motor control circuit Patent  
[NASA-CASE-GSC-10366-1] c 10 N71-18772

## THORPE, R. S.

Reinforced structural plastics  
[NASA-CASE-LEW-10199-1] c 27 N74-23125

## THRASHER, JOSEPH S.

A process for preparing  
1,3-diamino-5-pentafluorosulfanylbenzene and polymers  
therefrom  
[NASA-CASE-LAR-14773-1-CU] c 27 N92-10105

## THRASHER, JOSEPH S.

Process to prepare  
1,3-diamino-5-pentafluorosulfanylbenzene  
[NASA-CASE-LAR-14773-2-CU] c 25 N93-29506

## THYS, P. C.

Droplet monitoring probe  
[NASA-CASE-NPO-10985] c 14 N73-20478

## TIBBITTS, W. C.

Apparatus and method for protecting a photographic  
device Patent  
[NASA-CASE-NPO-10174] c 14 N71-18465

## TICKNER, E. G.

Liquid cooled brassiere and method of diagnosing  
malignant tumors therewith  
[NASA-CASE-ARC-11007-1] c 52 N77-14736

## TIEFERMANN, M. W.

Optical torqueometer Patent  
[NASA-CASE-XLE-00503] c 14 N70-34818

## TILLER, N. G.

Device for measuring bearing preload  
[NASA-CASE-MFS-20434] c 11 N72-25288

## TILLER, NEWTON G.

Fatigue testing a plurality of test specimens and  
method  
[NASA-CASE-MFS-28118-1] c 39 N87-25601

## TIMM, J. D.

Counter Patent  
[NASA-CASE-XNP-06234] c 10 N71-27137

## TIMOR, U.

Multichannel telemetry system  
[NASA-CASE-NPO-11572] c 07 N73-16121

- Receiver with an improved phase lock loop in a multichannel telemetry system with suppressed carrier  
[NASA-CASE-NPO-11593-1] c 07 N73-28012
- TINLING, B. E.**  
Stabilization of gravity oriented satellites Patent  
[NASA-CASE-XAC-01591] c 31 N71-17729
- TISCHLER, R. F.**  
Probes having ring and primary sensor at same potential to prevent collection of stray wall currents in ionized gases  
[NASA-CASE-XLE-00690] c 25 N69-39884
- TISDALE, H. F., SR.**  
Velocity vector control system augmented with direct lift control  
[NASA-CASE-LAR-12268-1] c 08 N81-24106
- TITLE, A. M.**  
Partial polarizer filter  
[NASA-CASE-GSC-12225-1] c 74 N79-14891
- TITUS, L. E.**  
Wide power range microwave feedback controller  
[NASA-CASE-GSC-12146-1] c 33 N78-32340
- TOBIAS, R. A.**  
Thermostatic actuator  
[NASA-CASE-NPO-10637] c 15 N72-12409  
Thermal motor  
[NASA-CASE-NPO-11283] c 09 N72-25260
- TOCK, R. W.**  
Mixture separation cell Patent  
[NASA-CASE-XMS-02952] c 18 N71-20742
- TODD, H. H.**  
Method of producing refractory bodies having controlled porosity Patent  
[NASA-CASE-LEW-10393-1] c 17 N71-15468  
Shock tube powder dispersing apparatus Patent  
[NASA-CASE-XLE-04946] c 17 N71-24911
- TOFT, A. R.**  
Star tracking reticles and process for the production thereof  
[NASA-CASE-GSC-11188-2] c 21 N73-19630  
Star tracking reticles  
[NASA-CASE-GSC-11188-1] c 14 N73-32320  
Formation of star tracking reticles  
[NASA-CASE-GSC-11188-3] c 74 N74-20008
- TOLL, T. A.**  
Variable sweep wing aircraft Patent  
[NASA-CASE-XLA-00221] c 02 N70-33266
- TOLSON, B. A.**  
Cable stabilizer for open shaft cable operated elevators  
[NASA-CASE-KSC-10513] c 15 N72-25453
- TOM, H. Y.**  
Ionene membrane separator  
[NASA-CASE-NPO-11091] c 18 N72-22567
- TOMBRELLO, T. A.**  
Method and means for helium/hydrogen ratio measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c 25 N80-20334
- TOMLINSON, H. M.**  
Fuselage structure using advanced technology fiber reinforced composites  
[NASA-CASE-LAR-11688-1] c 24 N82-26384
- TOMLINSON, L. E.**  
Temperature sensitive flow regulator Patent  
[NASA-CASE-MFS-14259] c 15 N71-19213
- TONGIER, M., JR.**  
Absolute focus lock for microscopes  
[NASA-CASE-LAR-10184] c 14 N72-22445
- TOOLE, P. C.**  
High speed direct binary-to-binary coded decimal converter  
[NASA-CASE-KSC-10326] c 08 N72-21197  
High speed direct binary to binary coded decimal converter and scaler  
[NASA-CASE-KSC-10595] c 08 N73-12176  
Compact-bi-phase pulse coded modulation decoder  
[NASA-CASE-KSC-10834-1] c 33 N76-14371  
Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c 32 N79-23310  
Automatic level control circuit  
[NASA-CASE-KSC-11170-1] c 33 N83-36356
- TOOLE, PIERCE C.**  
Multi-adjustable headband  
[NASA-CASE-KSC-11322-1] c 54 N89-29953
- TOOMARIAN, NIKZAD**  
Fast temporal neural learning using teacher forcing  
[NASA-CASE-NPO-18553-1-CU] c 63 N92-30085  
Neural network training by integration of adjoint systems of equations forward in time  
[NASA-CASE-NPO-18586-1-CU] c 63 N93-17276
- TOOTS, J.**  
Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MFS-23845-1] c 33 N81-17348
- TOPITS, A., JR.**  
High impact pressure regulator Patent  
[NASA-CASE-NPO-10175] c 14 N71-18625  
Apparatus for forming drive belts  
[NASA-CASE-NPO-13205-1] c 31 N74-32917
- TORBETT, M. A.**  
Liquid immersible electrostatic ultrasonic transducer  
[NASA-CASE-LAR-12465-1] c 33 N82-26572
- TORNEY, F. L., JR.**  
Ultrahigh vacuum gauge having two collector electrodes  
[NASA-CASE-LAR-02743] c 14 N73-32324
- TOTH, L. R.**  
Belleville spring assembly with elastic guides  
[NASA-CASE-XNP-09452] c 15 N69-27504
- TOWNES, C. H.**  
Optical frequency waveguide Patent  
[NASA-CASE-HQN-10541-1] c 07 N71-26291  
Laser machining apparatus Patent  
[NASA-CASE-HQN-10541-2] c 15 N71-27135  
Optical frequency waveguide and transmission system Patent  
[NASA-CASE-HQN-10541-4] c 16 N71-27183  
Optical frequency waveguide and transmission system  
[NASA-CASE-HQN-10541-3] c 23 N72-23695
- TOWNSEND, M. R.**  
Digital telemetry system Patent  
[NASA-CASE-XGS-01812] c 07 N71-23001
- TOWNSEND, WILLIAM T.**  
Force reflecting hand controller  
[NASA-CASE-NPO-17851-1-CU] c 37 N93-23078
- TOY, M. S.**  
New polymers of perfluorobutadiene and method of manufacture Patent application  
[NASA-CASE-NPO-10863] c 06 N70-11251  
Method of polymerizing perfluorobutadiene Patent application  
[NASA-CASE-NPO-10447] c 06 N70-11252  
Reaction of fluorine with polyperfluoropolylenes  
[NASA-CASE-NPO-10862] c 06 N72-22107  
Polymers of perfluorobutadiene and method of manufacture  
[NASA-CASE-NPO-10863-2] c 06 N72-25152  
Utilization of oxygen difluoride for syntheses of fluoropolymers  
[NASA-CASE-NPO-12061-1] c 27 N76-16228  
Vitra-violet process for producing flame resistant polyamides and products produced thereby  
[NASA-CASE-MSC-16074-1] c 27 N80-26446
- TRADER, A. G.**  
Subgravity simulator Patent  
[NASA-CASE-XMS-04798] c 11 N71-21474  
Pneumatic amplifier Patent  
[NASA-CASE-MSC-12121-1] c 15 N71-27147
- TRAJMAR, SANDOR**  
Isotope separation using tuned laser and electron beam  
[NASA-CASE-NPO-16907-1-CU] c 25 N88-24732
- TRAN, SANG Q.**  
Method of forming a multiple layer dielectric and a hot film sensor therewith  
[NASA-CASE-LAR-13678-1] c 76 N90-24168  
Method of forming a multiple layer dielectric and a hot film sensor therewith  
[NASA-CASE-LAR-13678-3] c 35 N93-14714  
Process for applying a superconductive powder to a wide variety of substrates  
[NASA-CASE-LAR-14729-1-CU] c 33 N93-19051  
Multiple layer dielectrics, hot film sensors, and methods of producing same  
[NASA-CASE-LAR-14591-1] c 35 N93-19493
- TRAUGER, JOHN T.**  
Alkali metal for ultraviolet band-pass filter  
[NASA-CASE-NPO-18433-1-CU] c 74 N92-34241
- TRAVIS, E. W.**  
Satellite appendage tie down cord Patent  
[NASA-CASE-XGS-02554] c 31 N71-21064
- TRELEASE, R. B.**  
Hydraulic casting of liquid polymers Patent  
[NASA-CASE-XNP-07659] c 06 N71-22975
- TRENT, R. C.**  
Method of manufacturing semiconductor devices using refractory dielectrics  
[NASA-CASE-XER-08476-1] c 26 N72-17820
- TRENT, R. L.**  
Location identification system  
[NASA-CASE-ERC-10324] c 07 N72-25173
- TRI, TERRY O.**  
Don/doff support stand for use with rear entry space suits  
[NASA-CASE-MSC-21364-1] c 54 N89-13889
- TRIMARCHI, PAUL A.**  
Probe insertion apparatus with inflatable seal  
[NASA-CASE-LEW-14965-1] c 37 N91-13732
- TRIMBLE, CURTIS A.**  
Ultra-high temperature stability Joule-Thomson cooler with capability to accommodate pressure variations  
[NASA-CASE-NPO-18184-1-CU] c 35 N92-29156
- TRIMBLE, D. W.**  
Combinational logic for generating gate drive signals for phase control rectifiers  
[NASA-CASE-MFS-25208-1] c 33 N83-10345
- TRIMPI, R. L.**  
Combustion detector  
[NASA-CASE-LAR-10739-1] c 14 N73-16484
- TRINH, E. H.**  
System for monitoring physical characteristics of fluids  
[NASA-CASE-NPO-15400-1] c 34 N83-31993  
Acoustic system for material transport  
[NASA-CASE-NPO-15453-1] c 71 N83-32515  
Acoustic bubble removal method  
[NASA-CASE-NPO-15334-1] c 71 N83-35781
- TRINH, EUGENE H.**  
Controlled sample orientation and rotation in an acoustic levitator  
[NASA-CASE-NPO-17086-1-CU] c 35 N89-14422  
Acoustic convective system  
[NASA-CASE-NPO-17278-1-CU] c 31 N90-21215
- TRINH, TINH T.**  
Horizontally rotated cell culture system with a coaxial tubular oxygenator  
[NASA-CASE-MSC-21294-1] c 51 N91-30667  
Method for culturing mammalian cells in a horizontally rotated bioreactor  
[NASA-CASE-MSC-21294-2] c 51 N93-10110
- TRIOLO, J. J.**  
Apparatus for controlling the temperature of balloon-borne equipment  
[NASA-CASE-GSC-11620-1] c 34 N74-23039
- TRIPP, C. N.**  
Booster tank system Patent  
[NASA-CASE-MSC-12390] c 27 N71-29155
- TRISCHLER, F. D.**  
Polyurethanes of fluorine containing polycarbonates  
[NASA-CASE-MFS-10512] c 06 N73-30099  
Polyurethanes from fluoroalkyl propyleneglycol polyethers  
[NASA-CASE-MFS-10506] c 06 N73-30100  
Fluorohydroxy ethers  
[NASA-CASE-MFS-10507] c 06 N73-30101  
Highly fluorinated polymers  
[NASA-CASE-MFS-11492] c 06 N73-30102  
Fluorine containing polyurethane  
[NASA-CASE-MFS-10509] c 06 N73-30103  
Fluorine-containing polyformals  
[NASA-CASE-XMF-06900-1] c 27 N79-21191
- TROEGER, R. E.**  
Tip cap for a rotor blade  
[NASA-CASE-LEW-13654-1] c 07 N84-22560
- TROMBKA, J. I.**  
Method and apparatus for mapping the distribution of chemical elements in an extended medium  
[NASA-CASE-GSC-12808-1] c 25 N85-21279
- TROST, R. F.**  
Data compression system with a minimum time delay unit Patent  
[NASA-CASE-XNP-08832] c 08 N71-12506
- TROUT, O. F., JR.**  
Heat protection apparatus Patent  
[NASA-CASE-XLA-00892] c 33 N71-17897
- TROWBRIDGE, D. L.**  
Independent gain and bandwidth control of a traveling wave maser  
[NASA-CASE-NPO-13801-1] c 36 N78-18410  
Swept group delay measurement  
[NASA-CASE-NPO-13909-1] c 33 N78-25319
- TRUBERT, M. R.**  
Collapsible structure for an antenna reflector  
[NASA-CASE-NPO-11751] c 07 N73-24176
- TRUONG, TRIEU-KIE**  
Method for Viterbi decoding of large constraint length convolutional codes  
[NASA-CASE-NPO-17310-1-CU] c 17 N88-28946  
VLSI single-chip (255,223) Reed-Solomon encoder with interleaver  
[NASA-CASE-NPO-17280-1-CU] c 17 N90-21061  
VLSI binary updown counter  
[NASA-CASE-NPO-17205-1-CU] c 60 N90-21525  
VLSI architecture for a Reed-Solomon decoder  
[NASA-CASE-NPO-17897-1-CU] c 33 N92-33011
- TRUSCH, R. B.**  
Condensate removal device for heat exchanger  
[NASA-CASE-MSC-14143-1] c 77 N75-20139
- TRUSSELL, D. H.**  
High intensity heat and light unit Patent  
[NASA-CASE-XLA-00141] c 09 N70-33312
- TSCHIRCH, R. P.**  
Heat sealable, flame and abrasion resistant coated fabric  
[NASA-CASE-MSC-18382-1] c 27 N82-16238

## V

- Heat sealable, flame and abrasion resistant coated fabric  
[NASA-CASE-MSC-18382-2] c 27 N84-14324
- Heat resistant protective hand covering  
[NASA-CASE-MSC-20261-1] c 54 N84-28484
- TSCHIRCH, RICHARD**  
Glove attachment  
[NASA-CASE-MSC-21632-1] c 54 N92-34210
- TSCHUNKO, H. F. A.**  
Optical mirror apparatus Patent  
[NASA-CASE-ERC-10001] c 23 N71-24868  
Electromechanical control actuator system Patent  
[NASA-CASE-ERC-10022] c 15 N71-26635  
Optical system support apparatus  
[NASA-CASE-XER-07896-2] c 23 N72-22673
- TSUDA, G. I.**  
High efficiency multifrequency feed  
[NASA-CASE-GSC-11909] c 32 N74-20863
- TSUO, Y. H.**  
Photocapacitive image converter  
[NASA-CASE-LAR-12513-1] c 44 N82-32841
- TSUTSUMI, K.**  
Hydraulic drive mechanism Patent  
[NASA-CASE-XMS-03252] c 15 N71-10658
- TUBBS, E. F.**  
Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629
- TUBBS, H. E.**  
Continuous detonation reaction engine Patent  
[NASA-CASE-XMF-06926] c 28 N71-22983
- TUCKER, C. E.**  
Mobile sampler for use in acquiring samples of terrestrial atmospheric gases  
[NASA-CASE-NPO-15220-1] c 45 N83-25217
- TUCKER, DENNIS S.**  
Production of mullite fibers  
[NASA-CASE-MFS-28431-1] c 24 N92-17870
- TUCKER, E. M.**  
Coupling device  
[NASA-CASE-XMS-07846-1] c 09 N69-21927  
Space suit heat exchanger Patent  
[NASA-CASE-XMS-09571] c 05 N71-19439  
Extravehicular tunnel suit system Patent  
[NASA-CASE-MSC-12243-1] c 05 N71-24728
- TUCKER, JERRY H.**  
Printer port interface  
[NASA-CASE-LAR-13950-1] c 60 N92-30541
- TUGGLE, R. H., JR.**  
Apparatus for assembling space structure  
[NASA-CASE-MFS-23579-1] c 18 N79-11108
- TULEY, E. N.**  
Tip cap for a rotor blade  
[NASA-CASE-LEW-13654-1] c 07 N84-22560
- TULLOS, GORDON L.**  
Low dielectric fluorinated poly(phenylene ether ketone) film and coating  
[NASA-CASE-LAR-13992-1-CU] c 23 N91-27220
- TUMULTY, W. T., JR.**  
Minimech self-deploying boom mechanism  
[NASA-CASE-GSC-10566-1] c 15 N72-18477
- TUNG, Y.**  
Liquid waste feed system  
[NASA-CASE-LAR-10365-1] c 05 N72-27102
- TURK, R. R.**  
Fabrication of controlled-porosity metals Patent  
[NASA-CASE-XNP-04339] c 17 N71-29137
- TURLY, A. P.**  
Time delay and integration detectors using charge transfer devices  
[NASA-CASE-GSC-12324-1] c 33 N81-33403
- TURNAGE, J. E.**  
Flame detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c 19 N74-29410
- TURNER, G. B.**  
Driver for solar cell I-V characteristic plots  
[NASA-CASE-NPO-14096-1] c 44 N80-18551
- TURNER, J. W.**  
Measurement system  
[NASA-CASE-MFS-20658-1] c 14 N73-30386
- TURNER, JAMES ERIC**  
O-ring gasket test fixture  
[NASA-CASE-MFS-28376-1] c 14 N91-21175
- TURNER, R. C.**  
Thermocouple assembly Patent  
[NASA-CASE-XNP-01659] c 14 N71-23039
- TURNER, R. E.**  
Anemometer with braking mechanism Patent  
[NASA-CASE-XMF-05224] c 14 N71-23726  
Maxometers (peak wind speed anemometers)  
[NASA-CASE-MFS-20916] c 14 N73-25460
- TURNER, T. M.**  
Dual differential interferometer  
[NASA-CASE-LAR-12966-1] c 35 N85-30282

- TURNER, T. R.**  
Double hinged flap Patent  
[NASA-CASE-XLA-01290] c 02 N70-42016
- TUTHILL, WALLACE C.**  
High velocity gas particulate sampling system  
[NASA-CASE-MSC-21729-1] c 34 N92-16241
- TUTHILL, WALLACE C., JR.**  
Dual diaphragm tank with telltale drain  
[NASA-CASE-MSC-21703-1] c 31 N91-25305
- TUTTLE, S. A.**  
Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c 51 N77-22794
- TVEITAN, W.**  
Data compression system  
[NASA-CASE-XNP-09785] c 08 N69-21928
- TWARD, E.**  
Cycling Joule Thomson refrigerator  
[NASA-CASE-NPO-15251-1] c 31 N83-31897
- TYAGI, R. C.**  
High field CdS detector for infrared radiation  
[NASA-CASE-LAR-11027-1] c 35 N74-18088  
Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c 25 N75-26043
- TYCZ, M.**  
Apparatus for simulating optical transmission links  
[NASA-CASE-GSC-11877-1] c 74 N76-18913
- TYLER, A. L.**  
Helical recorder arrangement for multiple channel recording on both sides of the tape  
[NASA-CASE-GSC-10614-1] c 09 N72-11224  
System for stabilizing torque between a balloon and gondola  
[NASA-CASE-GSC-11077-1] c 02 N73-13008
- TYREE, V. C.**  
Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c 32 N82-12297

## U

- UBER, P. W.**  
Tape recorder Patent  
[NASA-CASE-XGS-08259] c 14 N71-23698
- ULRICH, B. R.**  
Aircraft-mounted crash-activated transmitter device  
[NASA-CASE-MFS-16609-3] c 03 N76-32140
- ULRICH, D. R.**  
Screened circuit capacitors  
[NASA-CASE-LAR-10294-1] c 26 N72-28762
- ULRICH, G. W.**  
Latching device  
[NASA-CASE-MFS-21606-1] c 37 N75-19685
- UNDERWOOD, J. H.**  
Collimator of multiple plates with axially aligned identical random arrays of apertures  
[NASA-CASE-MFS-20546-2] c 14 N73-30389  
Multiplate focusing collimator  
[NASA-CASE-MFS-20932-1] c 35 N75-19616
- UNDERWOOD, MARK L.**  
AMTEC vapor-vapor series connected cells  
[NASA-CASE-NPO-18667-1-CU] c 33 N93-19330
- UNNAM, JALAI AH**  
Oxygen diffusion barrier coating  
[NASA-CASE-LAR-13474-1-SB] c 26 N87-25455
- UPCHURCH, BILLY T.**  
Isotope exchange in oxide-containing catalyst  
[NASA-CASE-LAR-13542-2-SB] c 25 N90-20154  
Process for making a noble metal on tin oxide catalyst  
[NASA-CASE-LAR-13741-1-SB] c 25 N90-20180  
Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-1-SB] c 25 N90-23517  
Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-2-SB] c 25 N91-21270
- UPDIKE, O. L.**  
Apparatus for measuring a sorbate dispersed in a fluid stream  
[NASA-CASE-ARC-10896-1] c 35 N78-19465
- UPTON, D. T.**  
Scanner  
[NASA-CASE-GSC-12032-2] c 43 N82-13465
- URBAN, E. W.**  
Direct current transformer  
[NASA-CASE-MFS-23659-1] c 33 N79-17133
- URSERY, B. C.**  
Collapsible nozzle extension for rocket engines Patent  
[NASA-CASE-MFS-11497] c 28 N71-16224

- VADAKAN, V. V.**  
Multicomputer communication system  
[NASA-CASE-NPO-15433-1] c 32 N85-21428
- VAICAITIS, RIMAS**  
Acoustic guide for noise-transmission testing of aircraft  
[NASA-CASE-LAR-13111-1-CU] c 71 N87-21652
- VAIRO, DANIEL M.**  
Selectable towline spin chute system  
[NASA-CASE-LAR-14322-1] c 02 N91-27139
- VALENTIJN, H. P.**  
Roll-up solar array Patent  
[NASA-CASE-NPO-10188] c 03 N71-20273  
Deployable solar cell array  
[NASA-CASE-NPO-10883] c 31 N72-22874
- VALINSKY, J. P.**  
Device for monitoring a change in mass in varying gravimetric environments  
[NASA-CASE-MFS-21556-1] c 35 N74-26945
- VALLOTTON, W. C.**  
Anthropomorphic master/slave manipulator system  
[NASA-CASE-ARC-10756-1] c 54 N77-32721  
Mechanical energy storage device for hip disarticulation  
[NASA-CASE-ARC-10916-1] c 52 N78-10686
- VANALSTINE, JAMES M.**  
Controlled method of reducing electrophoretic mobility of various substances  
[NASA-CASE-MFS-26049-1-NP] c 25 N89-28603  
Polymer-coated surfaces to control surface zeta potential  
[NASA-CASE-MFS-26050-1] c 27 N92-25397  
Controlled method of reducing electrophoretic mobility of macromolecules, particles, or cells  
[NASA-CASE-MFS-26049-2-NP] c 25 N92-28728
- VANALSTYNE, E. M.**  
Spacecraft Patent  
[NASA-CASE-MSC-13047-1] c 31 N71-25434
- VANARK, WILLIAM B.**  
Airborne tracking sunphotometer apparatus and system  
[NASA-CASE-ARC-11622-1] c 44 N88-14492
- VANARNAM, D. E.**  
Pneumatic system for controlling and actuating pneumatic cyclic devices  
[NASA-CASE-XMS-04843] c 03 N69-21469
- VANATTA, L. C.**  
Circularly polarized antenna  
[NASA-CASE-ERC-10214] c 09 N72-31235
- VANAUKEN, R.**  
Reinforced polyquinoxaline gasket and method of preparing the same  
[NASA-CASE-MFS-21364-1] c 37 N74-18126
- VANBUSKIRK, PAUL D.**  
Volumetric measurement of tank volume  
[NASA-CASE-MSC-21500-1] c 35 N91-21493
- VANDEBERGHE, MARK H.**  
Robot-friendly connector  
[NASA-CASE-MSC-21864-1] c 37 N92-23544  
Robot-friendly connector  
[NASA-CASE-MSC-21864-1] c 37 N93-20117
- VANDERHOFF, J. W.**  
Process for preparation of large-particle-size monodisperse latexes  
[NASA-CASE-MFS-25000-1] c 25 N81-19242
- VANDERJET, E. K.**  
Magnetic power switch Patent  
[NASA-CASE-NPO-10242] c 09 N71-24803
- VANDERSANDE, JAN W.**  
Annealing group III-V compound doped silicon-germanium alloy for improved thermo-electric conversion efficiency  
[NASA-CASE-NPO-17259-1-CU] c 76 N90-19884
- VANGO, S. P.**  
Liquid junction and method of fabricating the same Patent Application  
[NASA-CASE-NPO-10682] c 15 N70-34699  
Flexible composite membrane Patent  
[NASA-CASE-XNP-08837] c 18 N71-16210
- VANNORMAN, JOHN D.**  
Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-1-SB] c 25 N90-23517  
Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-2-SB] c 25 N91-21270
- VANNUCCI, R. D.**  
Curing agent for polyepoxides and epoxy resins and composites cured therewith  
[NASA-CASE-LEW-13226-1] c 27 N81-17260
- VANNUCCI, RAYMOND D.**  
Vinyl capped addition polyimides  
[NASA-CASE-LEW-15027-1] c 27 N91-13566  
Addition polyimides with enhanced processability  
[NASA-CASE-LEW-15043-1] c 27 N91-32230

- Vinyl capped addition polyimides  
[NASA-CASE-LEW-15027-2] c 27 N92-24053
- VANO, A. E.**  
Quick attach mechanism Patent  
[NASA-CASE-XFR-05421] c 15 N71-22994
- VANORNUM, D. G.**  
Electric arc light source having undercut recessed anode  
[NASA-CASE-ARC-10266-1] c 33 N75-29318
- VANSCHOIACK, M. M. E.**  
High impedance measuring apparatus Patent  
[NASA-CASE-XMS-08589-1] c 09 N71-20569
- VANTUYLRUSCH, W.**  
Millimeter wave radiometer for radio astronomy Patent  
[NASA-CASE-XNP-09832] c 30 N71-23723
- VANWARREN, LLOYD**  
Encyclopedia of software components  
[NASA-CASE-NPO-18435-1-CU] c 61 N92-30543
- VANZYL, JAKOB J.**  
Data volume reduction for imaging radar polarimetry  
[NASA-CASE-NPO-17184-1-CU] c 32 N88-26541  
Method for providing a polarization filter for processing synthetic aperture radar image data  
[NASA-CASE-NPO-17904-1-CU] c 32 N91-13594
- VARGO, D. J.**  
Ophthalmic method and apparatus  
[NASA-CASE-LEW-11669-1] c 05 N73-27062
- VARMA, I. K.**  
Phosphorus-containing bisimide resins  
[NASA-CASE-ARC-11321-1] c 27 N81-27272  
Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c 27 N83-31854  
Elastomer-modified phosphorus-containing imide resins  
[NASA-CASE-ARC-11400-1] c 27 N84-14322  
Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-3] c 27 N84-22745  
Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-2] c 27 N85-21347
- VARNAVAS, KOSTA**  
Platform stair lift  
[NASA-CASE-MFS-28772-1] c 54 N93-29845
- VARS, G.**  
Seismic vibration source  
[NASA-CASE-NPO-14112-1] c 46 N79-22679
- VARY, A.**  
Triode thermionic energy converter  
[NASA-CASE-XLE-01015] c 03 N69-39898  
High temperature heat source Patent  
[NASA-CASE-XLE-00490] c 33 N70-34545  
Radiant heater having formed filaments Patent  
[NASA-CASE-XLE-00387] c 33 N70-34812  
Inductive liquid level detection system Patent  
[NASA-CASE-XLE-01609] c 14 N71-10500  
Capillary radiator Patent  
[NASA-CASE-XLE-03307] c 33 N71-14035  
Thermionic converter with current augmented by self induced magnetic field Patent  
[NASA-CASE-XLE-01903] c 22 N71-23599  
Cyclic switch Patent  
[NASA-CASE-LEW-10155-1] c 09 N71-29035
- VASILAKOS, N.**  
Coal desulfurization by aqueous chlorination  
[NASA-CASE-NPO-14902-1] c 25 N82-29371
- VASQUEZ, PETER**  
Pressure rig for repetitive casting  
[NASA-CASE-LAR-14050-1] c 31 N90-21216  
Improved ceramic slip casting technique  
[NASA-CASE-LAR-14471-1] c 27 N93-20041
- VASQUEZ, RICHARD P.**  
Passivation of high temperature superconductors  
[NASA-CASE-NPO-17949-1-CU] c 76 N92-10681  
Epitaxial heterojunctions of oxide semiconductors and metals on high temperature superconductors  
[NASA-CASE-NPO-18483-1-CU] c 76 N93-15151  
Long wavelength infrared detector  
[NASA-CASE-NPO-17543-2-CU] c 35 N93-19387
- VAUGHAN, ARTHUR H.**  
Wide field strip-imaging optical system  
[NASA-CASE-NPO-18146-1-CU] c 74 N92-17892
- VAUGHAN, G. R.**  
Phase locked phase modulator including a voltage controlled oscillator Patent  
[NASA-CASE-XNP-05382] c 10 N71-23544
- VAUGHAN, O. H.**  
Emergency lunar communications system  
[NASA-CASE-MFS-21042] c 07 N72-25171
- VAUGHAN, R. L.**  
Electrolytic cell structure  
[NASA-CASE-LAR-11042-1] c 33 N75-27252
- VAUGHAN, R. W.**  
Capillary flow weld-bonding  
[NASA-CASE-LAR-11726-1] c 37 N76-27568  
Weld-bonded titanium structures  
[NASA-CASE-LAR-11549-1] c 37 N77-11397
- VAUSE, R.**  
Acoustically swept rotor  
[NASA-CASE-ARC-11106-1] c 05 N80-14107
- VEHRENCAMP, J. E.**  
Electromagnetic radiation energy arrangement  
[NASA-CASE-WOO-00428-1] c 32 N79-19186
- VEIKINS, O.**  
Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c 34 N74-27730
- VEILLETTE, L. J.**  
Angular position and velocity sensing apparatus Patent  
[NASA-CASE-XGS-05680] c 14 N71-17585  
Bidirectional step torque filter with zero backlash characteristic Patent  
[NASA-CASE-XGS-04227] c 15 N71-21744  
Control apparatus for applying pulses of selectively predetermined duration to a sequence of loads Patent  
[NASA-CASE-XGS-04224] c 10 N71-26418  
Synchronous dc direct drive system Patent  
[NASA-CASE-GSC-10065-1] c 10 N71-27136  
Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c 37 N76-18459
- VEITCH, LISA C.**  
Guanidine based vehicle/binders for use with oxides, metals, and ceramics  
[NASA-CASE-LEW-15314-1] c 27 N92-23461  
Guanidine based vehicle/binders for use with oxides, metals, and ceramics  
[NASA-CASE-LEW-15314-2] c 27 N93-28423
- VELLEND, H.**  
Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c 51 N77-22794  
Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c 52 N79-14750
- VENEMA, STEVEN C.**  
Composite video and graphics display for multiple camera viewing system in robotics and teleoperation  
[NASA-CASE-NPO-17836-1-CU] c 32 N92-10126  
Composite video and graphics display for camera viewing systems in robotics and teleoperation  
[NASA-CASE-NPO-17836-1-CU] c 32 N93-18284
- VENKATARAMAN, SUBARAMANIAN T.**  
Terminal slider control of nonlinear robotic systems  
[NASA-CASE-NPO-18584-1-CU] c 37 N93-11177
- VENKATARAMAN, SUBRAMANIAN T.**  
Bilevel shared control for teleoperators  
[NASA-CASE-NPO-17800-1-CU] c 37 N92-22036
- VENKATESH, CHIKKABELARANGALA N.**  
Adaptive data acquisition multiplexing system and method  
[NASA-CASE-MSC-21170-1] c 17 N91-14371
- VERINDER, IRENE E.**  
Pre-integrated truss space station and method of assembly  
[NASA-CASE-MSC-22015-1] c 18 N93-20042
- VERMILLION, C. H.**  
Facsimile video remodulation network  
[NASA-CASE-GSC-10185-1] c 07 N72-12081
- VERMILLION, C. M.**  
Resistance soldering apparatus  
[NASA-CASE-GSC-10913] c 15 N72-22491
- VERNIKOS, J.**  
Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c 52 N81-14613
- VESSOT, R. F. C.**  
Atomic hydrogen maser with bulb temperature control to remove wall shift in maser output frequency  
[NASA-CASE-HQN-10654-1] c 16 N73-13489  
Tunable cavity resonator with ramp shaped supports  
[NASA-CASE-HQN-10790-1] c 36 N74-11313
- VEST, THOMAS W.**  
Prosthetic helping hand  
[NASA-CASE-MFS-28430-1] c 54 N92-24044  
Bar-holding prosthetic limb  
[NASA-CASE-MFS-28481-1] c 54 N93-14870
- VICK, A. R.**  
Method of obtaining permanent record of surface flow phenomena Patent  
[NASA-CASE-XLA-01353] c 14 N70-41366
- VICK, H. A.**  
Blood pressure measuring system for separating and separately recording dc signal and an ac signal Patent  
[NASA-CASE-XMS-06061] c 05 N71-23317
- VICKERS, E. C.**  
Flow modifying device  
[NASA-CASE-LEW-13562-2] c 07 N85-35195
- VICKERS, J. M.**  
Portable electrophoresis apparatus using minimum electrolyte  
[NASA-CASE-NPO-13274-1] c 25 N79-10163
- VICKERS, J. M. F.**  
Intermittent type silica gel adsorption refrigerator Patent  
[NASA-CASE-XNP-00920] c 15 N71-15906
- VIEMANN, W.**  
Fluorescent radiation converter  
[NASA-CASE-GSC-12528-1] c 74 N81-24900
- VIKINSALO, S. J.**  
Helmet latching and attaching ring  
[NASA-CASE-XMS-04670] c 54 N78-17678
- VIJGEN, PAUL M. H. W.**  
Serrated trailing edges for improving lift and drag characteristics of lifting surfaces  
[NASA-CASE-LAR-13870-1-CU] c 05 N92-21587
- VILLARREAL, JAMES A.**  
A space-time neural network for processing both spatial and temporal data  
[NASA-CASE-MSC-21874-1] c 63 N92-30314
- VILLARREAL, S.**  
Method and apparatus for receiving and tracking phase modulated signals  
[NASA-CASE-MSC-16170-2] c 32 N84-27952
- VILNROTTER, VICTOR A.**  
Synchronization tracking in pulse position modulation receiver  
[NASA-CASE-NPO-16256-1] c 32 N87-21207
- VINAL, A. W.**  
Redundant memory organization Patent  
[NASA-CASE-GSC-10564] c 10 N71-29135
- VINCENT, J. S.**  
Method of forming thin window drifted silicon charged particle detector Patent  
[NASA-CASE-XLE-00808] c 24 N71-10560
- VINCENT, LAURENCE J.**  
Tapered, tubular polyester fabric  
[NASA-CASE-MSC-21082-1] c 27 N87-29672
- VINE, J.**  
Magnifying image intensifier  
[NASA-CASE-GSC-12010-1] c 74 N78-18905
- VIVIAN, H. C.**  
Photosensitive device to detect bearing deviation Patent  
[NASA-CASE-XNP-00438] c 21 N70-35089  
Space vehicle attitude control Patent  
[NASA-CASE-XNP-00465] c 21 N70-35395  
Remodulator filter Patent  
[NASA-CASE-NPO-10198] c 09 N71-24806
- VLASSE, MARCUS**  
Liquid encapsulated float zone process and apparatus  
[NASA-CASE-MSC-28144-1] c 76 N88-24545
- VODICKA, V. W.**  
Magnetic recording head and method of making same Patent  
[NASA-CASE-GSC-10097-1] c 08 N71-27210
- VOECKS, GERALD E.**  
Regenerative Cu/La zeolite supported desulfurizing sorbents  
[NASA-CASE-NPO-17480-1-CU] c 25 N92-10073
- VOELLMER, GEORGE**  
Retractable tool bit having latch type catch mechanism  
[NASA-CASE-GSC-13359-1] c 37 N92-23378  
Retractable tool bit having latch type catch mechanism  
[NASA-CASE-GSC-13359-1] c 37 N93-18286
- VOELLMER, GEORGE M.**  
Robotic tool change mechanism  
[NASA-CASE-GSC-13239-1] c 37 N91-31656  
High reliability robot friendly ORU interface  
[NASA-CASE-GSC-13360-1] c 37 N92-23377  
Double-V block fingers with cruciform recess  
[NASA-CASE-GSC-13356-1] c 37 N92-24243  
Retractable tool bit having slider type catch mechanism  
[NASA-CASE-GSC-13358-1] c 37 N93-14710  
Double-V block fingers with cruciform recess  
[NASA-CASE-GSC-13356-2] c 37 N93-17625  
Split rail gripper assembly and tool driver therefor  
[NASA-CASE-GSC-13370-2] c 37 N93-18288  
Split rail gripper assembly and tool driver therefor  
[NASA-CASE-GSC-13370-1] c 37 N93-31317
- VOGELEY, A. W.**  
Cable arrangement for rigid tethering Patent  
[NASA-CASE-XLA-02332] c 32 N71-17609  
Combined optical attitude and altitude indicating instrument Patent  
[NASA-CASE-XLA-01907] c 14 N71-23268
- VOGL, O.**  
Stabilized unsaturated polyesters  
[NASA-CASE-NPO-16103-1] c 27 N85-29043
- VOLK, G. G.**  
Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c 33 N80-26599



- VOLKOFF, J. J.**  
Electro-optical scanning apparatus Patent Application  
[NASA-CASE-NPO-11106] c 14 N70-34697
- VOLPE, F. A.**  
Sun tracker with rotatable plane-parallel plate and two photocells Patent  
[NASA-CASE-XGS-01159] c 21 N71-10678  
Attitude control system Patent  
[NASA-CASE-XGS-04393] c 21 N71-14159  
Star scanner  
[NASA-CASE-GSC-11569-1] c 89 N74-30886
- VONBUN, FRIEDRICH O.**  
Nano-G research laboratory for a spacecraft  
[NASA-CASE-GSC-13197-1] c 18 N91-27201
- VONPRAGENAU, G. L.**  
Support apparatus for dynamic testing Patent  
[NASA-CASE-XMF-01772] c 11 N70-41677  
Hydraulic support for dynamic testing Patent  
[NASA-CASE-XMF-03248] c 11 N71-10604  
Space vehicle  
[NASA-CASE-MFS-22734-1] c 18 N75-19329  
Translatory shock absorber for attitude sensors  
[NASA-CASE-MFS-22905-1] c 19 N76-22284  
Attitude control system  
[NASA-CASE-MFS-22787-1] c 15 N77-10113  
Space Shuttle with rail system and aft thrust structure securing solid rocket boosters to external tank  
[NASA-CASE-MFS-25853-1] c 16 N84-27784  
Damping seal for turbomachinery  
[NASA-CASE-MFS-25842-2] c 37 N86-20788  
Low loss injector for liquid propellant rocket engines  
[NASA-CASE-MFS-25989-1] c 20 N87-14420
- VONPRAGENAU, GEORGE L.**  
Turbomachinery shaft insert  
[NASA-CASE-MFS-28345-2] c 37 N89-28842  
Turbomachinery rotor support with damping  
[NASA-CASE-MFS-28345-1] c 37 N91-14608  
Dynamic tester for rotor seals and bearings  
[NASA-CASE-MFS-28493-1] c 09 N91-25155
- VONROOS, O. H.**  
Method and apparatus for measuring minority carrier lifetimes and bulk diffusion length in P-N junction solar cells  
[NASA-CASE-NPO-14100-1] c 44 N79-12541
- VONROOS, OLDWIG**  
Method and apparatus for measuring minority carrier lifetime in a direct band-gap semiconductor  
[NASA-CASE-NPO-16337-1-CU] c 33 N87-22894
- VONTIENHAUSEN, G. F.**  
Energy absorbing device Patent  
[NASA-CASE-XMF-10040] c 15 N71-22877  
Beam connector apparatus and assembly  
[NASA-CASE-MFS-25134-1] c 31 N83-31895  
Magnetic spin reduction system for free spinning objects  
[NASA-CASE-MFS-25966-1] c 16 N86-26352
- VORHABEN, K. H.**  
System for producing chroma signals  
[NASA-CASE-MSC-14683-1] c 74 N77-18893
- VORKINK, H. G.**  
Variable frequency nuclear magnetic resonance spectrometer Patent  
[NASA-CASE-XNP-09830] c 14 N71-26266
- VORREITER, J. W.**  
Cryogenic container compound suspension strap  
[NASA-CASE-ARC-11157-1] c 37 N80-18393
- VOSS, FRED E.**  
Pressurized bellows flat contact heat exchanger interface  
[NASA-CASE-MSC-21271-1] c 34 N90-21999
- VRANAS, T.**  
Impact energy absorber Patent  
[NASA-CASE-XLA-01530] c 14 N71-23092  
High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c 35 N76-24523  
Hot foil transducer skin friction sensor  
[NASA-CASE-LAR-1232-1] c 35 N82-24470
- VRANISH, JOHN M.**  
Magnetostrictive roller drive motor  
[NASA-CASE-GSC-13369-1] c 33 N92-15331  
Roller locking brake  
[NASA-CASE-GSC-13376-1] c 37 N92-21728  
Rolling friction robot fingers  
[NASA-CASE-GSC-13261-1] c 37 N92-29138  
Driven shielding capacitive proximity sensor  
[NASA-CASE-GSC-13377-1] c 63 N93-14701  
Work attachment mechanism/work attachment fixture  
[NASA-CASE-GSC-13430-1] c 37 N93-14712  
Phase discriminating capacitive array sensor system  
[NASA-CASE-GSC-13460-1] c 33 N93-26104  
Spline screw autochanger  
[NASA-CASE-GSC-13435-1] c 37 N93-29505
- VUKELICH, E. K.**  
Method and device for detecting voids in low density material Patent  
[NASA-CASE-MFS-20044] c 14 N71-28993

- VYKUKAL, H. C.**  
Universal pilot restraint suit and body support therefor Patent  
[NASA-CASE-XAC-00405] c 05 N70-41819  
Hard space suit Patent  
[NASA-CASE-XAC-07043] c 05 N71-23161  
Locomotion and restraint aid Patent  
[NASA-CASE-ARC-10153] c 05 N71-28619  
Space suit having improved waist and torso movement  
[NASA-CASE-ARC-10275-1] c 05 N72-22092  
Anthropomorphic master/slave manipulator system  
[NASA-CASE-ARC-10756-1] c 54 N77-32721  
Walking boot assembly  
[NASA-CASE-ARC-11101-1] c 54 N78-17675  
Spacesuit mobility joints  
[NASA-CASE-ARC-11058-1] c 54 N78-31735  
Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c 54 N78-31736  
Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c 54 N78-32721  
Spacesuit mobility knee joints  
[NASA-CASE-ARC-11058-2] c 54 N79-24651  
Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c 52 N81-25662  
Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c 54 N82-26987  
Torso sizing ring construction for hard space suit  
[NASA-CASE-ARC-11616-1] c 54 N86-28618  
Elbow and knee joint for hard space suits  
[NASA-CASE-ARC-11610-1] c 54 N86-28619  
Shoulder and hip joint for hard space suits  
[NASA-CASE-ARC-11543-1] c 54 N86-28620  
Shoulder and hip joints for hard space suits and the like  
[NASA-CASE-ARC-11534-1] c 54 N86-29507
- VYKUKAL, HUBERT C.**  
Weightlessness simulation system and process  
[NASA-CASE-ARC-11646-1] c 14 N87-25344

## W

- WADE, DONALD C.**  
Pre-integrated truss space station and method of assembly  
[NASA-CASE-MSC-22015-1] c 18 N93-20042
- WADE, O. W.**  
Method and apparatus for tensile testing of metal foil  
[NASA-CASE-LAR-10208-1] c 35 N76-18400
- WADE, WILLIAM R.**  
Legislated emergency locating transmitters and emergency position indicating radio beacons  
[NASA-CASE-GSC-12892-1] c 32 N89-14374
- WAGES, C. G.**  
Ultrasonic scanning system for in-place inspection of brazed tube joints  
[NASA-CASE-MFS-20767-1] c 38 N74-15130
- WAGNER, A. P.**  
Inverter ratio failure detector  
[NASA-CASE-NPO-13160-1] c 35 N74-18090
- WAGNER, C. A.**  
Rotating raster generator  
[NASA-CASE-FRC-10071-1] c 32 N74-20813  
Smoothing filter for digital to analog conversion  
[NASA-CASE-FRC-11025-1] c 33 N82-24417
- WAGNER, H. R.**  
Collapsible loop antenna for space vehicle Patent  
[NASA-CASE-XMF-00437] c 07 N70-40202
- WAGNER, W. B.**  
Combustor liner construction  
[NASA-CASE-LEW-14035-1] c 07 N84-24577
- WAKELYN, N. T.**  
Production of high purity silicon carbide Patent  
[NASA-CASE-XLA-00158] c 26 N70-36805  
Apparatus for producing high purity silicon carbide crystals Patent  
[NASA-CASE-XLA-02057] c 26 N70-40015  
Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00284] c 15 N71-16075  
Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00302] c 15 N71-16077  
Thermal control coating Patent  
[NASA-CASE-XLA-01995] c 18 N71-23047
- WALD, D.**  
Differential temperature transducer Patent  
[NASA-CASE-XAC-00812] c 14 N71-15598
- WALKER, D. J.**  
Flame detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c 19 N74-29410

- WALKER, GILBERT H.**  
Method for remotely powering a device such as a lunar rover  
[NASA-CASE-LAR-14789-1] c 37 N92-30388
- WALKER, H. J.**  
Annular wing  
[NASA-CASE-FRC-11007-2] c 05 N82-26277
- WALKER, H. M.**  
Space environmental work simulator Patent  
[NASA-CASE-XMF-07488] c 11 N71-18773  
Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MFS-23626-1] c 24 N80-26388
- WALKER, W. L.**  
Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c 74 N77-28933  
Protective telescoping shield for solar concentrator  
[NASA-CASE-NPO-16236-1] c 44 N86-27706
- WALL, R. J.**  
Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c 52 N79-12694
- WALL, W. A.**  
Automatic weld torch guidance control system  
[NASA-CASE-MFS-25807] c 37 N83-20154  
Automated weld torch guidance control system  
[NASA-CASE-MFS-25807-2] c 37 N86-21850
- WALL, W. A., JR.**  
Apparatus for welding torch angle and seam tracking control Patent  
[NASA-CASE-XMF-03287] c 15 N71-15607  
Automatic closed circuit television arc guidance control Patent  
[NASA-CASE-MFS-13046] c 07 N71-19433  
Automatic welding speed controller Patent  
[NASA-CASE-XMF-01730] c 15 N71-23050  
Welding skate with computerized control Patent  
[NASA-CASE-XMF-07069] c 15 N71-23815  
Internal flare angle gauge Patent  
[NASA-CASE-XMF-04415] c 14 N71-24693  
Computerized system for translating a torch head  
[NASA-CASE-MFS-23620-1] c 37 N79-10421
- WALLACE, C. J.**  
Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c 27 N81-14076
- WALLACE, CHARLES C.**  
Cylindrical surface profile and diameter measuring tool and method  
[NASA-CASE-MFS-28287-1] c 35 N88-23959
- WALLACE, E. D.**  
Apparatus for tensile testing Patent  
[NASA-CASE-XKS-06250] c 14 N71-15600  
Valve seat with resilient support member Patent  
[NASA-CASE-XKS-02582] c 15 N71-21234  
Weld preparation machine Patent  
[NASA-CASE-XKS-07953] c 15 N71-26134
- WALLACE, G. R.**  
Pseudo-noise test set for communication system evaluation  
[NASA-CASE-MFS-22671-1] c 35 N75-21582  
Method of and means for testing a tape record/playback system  
[NASA-CASE-MFS-22671-2] c 35 N77-17426
- WALLINGFORD, W. M.**  
Differential phase shift keyed communication system  
[NASA-CASE-MSC-14065-1] c 32 N74-26654  
Differential phase shift keyed signal resolver  
[NASA-CASE-MSC-14066-1] c 33 N74-27705
- WALLIO, M. A.**  
Electric-arc heater Patent  
[NASA-CASE-XLA-00330] c 33 N70-34540
- WALLIS, D. E.**  
Low-frequency radio navigation system  
[NASA-CASE-NPO-15264-1] c 04 N84-27713
- WALLSOM, E.**  
Synchronously deployable truss structure  
[NASA-CASE-LAR-13117-1] c 37 N86-25789
- WALLSOM, R. E.**  
Mechanical end joint system for structural column elements  
[NASA-CASE-LAR-12482-1] c 37 N82-32732  
Self-locking mechanical center joint  
[NASA-CASE-LAR-12864-1] c 37 N85-30336
- WALLSOM, RICHARD E.**  
Mobile remote manipulator vehicle system  
[NASA-CASE-LAR-13393-1] c 54 N87-29118  
Mechanical end joint system for connecting structural column elements  
[NASA-CASE-LAR-14465-1] c 37 N91-14614
- WALSH, J. M.**  
Specific wavelength colorimeter  
[NASA-CASE-MSC-14081-1] c 35 N74-27860

- WALSH, J. V.**  
Pressure shutdown method and device for coal conversion systems  
[NASA-CASE-NPO-15100-1] c 44 N84-14583
- WALSH, MICHAEL J.**  
Combined riblet and lebu drag reduction system  
[NASA-CASE-LAR-13286-1] c 02 N88-14071
- WALSH, T. C.**  
Vibration damping system Patent  
[NASA-CASE-XMS-01620] c 23 N71-15673
- WALSH, T. J.**  
Apparatus for making a metal slurry product Patent  
[NASA-CASE-XLE-00010] c 15 N70-33382
- WALSH, T. M.**  
Interferometric rotation sensor  
[NASA-CASE-ARC-10278-1] c 14 N73-25463
- WALTER, H. U.**  
Method of crystallization  
[NASA-CASE-MFS-23001-1] c 76 N77-32919
- WALTER, RICHARD T.**  
Volumetric measurement of tank volume  
[NASA-CASE-MSC-21500-1] c 35 N91-21493
- WALTERS, R. M.**  
Telespectrograph Patent  
[NASA-CASE-XLA-03273] c 14 N71-18699
- WALTHALL, HARRY G.**  
Flow rate logging seepage meter  
[NASA-CASE-LAR-14835-1] c 35 N93-19328
- WALTON, T. S.**  
Electronic checkout system for space vehicles Patent  
[NASA-CASE-XKS-08012-2] c 31 N71-15566
- WANG, CHARLES C.**  
Long period pseudo random number sequence generator  
[NASA-CASE-NPO-17241-1-CU] c 33 N90-23636
- WANG, D. S.**  
Installing fiber insulation  
[NASA-CASE-MSC-16973-1] c 37 N81-14317
- WANG, G. Y.**  
A synchronous binary array divider  
[NASA-CASE-ERC-10180-1] c 60 N74-20836
- WANG, LIANG-GUO**  
Non-mechanical optical path switching and its application to dual beam spectroscopy including gas filter correlation radiometry  
[NASA-CASE-LAR-14588-1-CU] c 74 N92-29117
- WANG, LUI**  
System and method for a general purpose architecture for intelligent computer-aided training  
[NASA-CASE-MSC-21381-1] c 63 N91-13944  
Dynamic pattern matcher using incomplete data  
[NASA-CASE-MSC-21415-1-SB] c 61 N93-18858
- WANG, T.**  
Acoustic particle separation  
[NASA-CASE-NPO-15559-1] c 71 N85-30765
- WANG, T. G.**  
Material suspension within an acoustically excited resonant chamber  
[NASA-CASE-NPO-13263-1] c 12 N75-24774  
Heat operated cryogenic electrical generator  
[NASA-CASE-NPO-13303-1] c 20 N75-24837  
Acoustic energy shaping  
[NASA-CASE-NPO-13802-1] c 71 N78-10837  
Acoustic driving of rotor  
[NASA-CASE-NPO-14005-1] c 71 N79-20827  
Method and apparatus for producing concentric hollow spheres  
[NASA-CASE-NPO-14596-1] c 31 N81-33319  
Method and apparatus for producing gas-filled hollow spheres  
[NASA-CASE-NPO-14596-3] c 31 N83-31896  
System for monitoring physical characteristics of fluids  
[NASA-CASE-NPO-15400-1] c 34 N83-31993  
Acoustic system for material transport  
[NASA-CASE-NPO-15453-1] c 71 N83-32515  
Acoustic bubble removal method  
[NASA-CASE-NPO-15334-1] c 71 N83-35781  
Acoustic suspension system  
[NASA-CASE-NPO-15435-1] c 71 N83-36846  
Acoustic rotation control  
[NASA-CASE-NPO-15689-1] c 71 N84-23233
- WANG, TAYLOR G.**  
Method and apparatus for producing microshells  
[NASA-CASE-NPO-16635-1-CU] c 31 N91-32240
- WANG, W. S.**  
Low temperature latching solenoid  
[NASA-CASE-MSC-18106-1] c 33 N82-11357
- WANGER, R. P.**  
Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c 07 N81-19115
- WARD, D. R.**  
Automatically deploying nozzle exit cone extension Patent  
[NASA-CASE-XLE-01640] c 31 N71-15637
- WARD, J. F.**  
Variable geometry rotor system  
[NASA-CASE-LAR-10557] c 02 N72-11018
- WARD, J. O.**  
Digital automatic gain amplifier  
[NASA-CASE-KSC-11008-1] c 33 N79-22373
- WARD, RICHARD S.**  
Distributed computing system with dual independent communications paths between computers and employing split tokens  
[NASA-CASE-NPO-17185-1-CU] c 62 N91-14772
- WARD, W. D.**  
Vapor liquid separator Patent  
[NASA-CASE-XMF-04042] c 15 N71-23023
- WARKENTINE, D. K.**  
Automatic battery charger Patent  
[NASA-CASE-XNP-04758] c 03 N71-24605
- WARNECK, P.**  
Analytical photoionization mass spectrometer with an argon gas filter between the light source and monochromator Patent  
[NASA-CASE-LAR-10180-1] c 06 N71-13461
- WARREN, A. D.**  
Installing fiber insulation  
[NASA-CASE-MSC-16973-1] c 37 N81-14317
- WARREN, A. P.**  
Assembly for recovering a capsule Patent  
[NASA-CASE-XMF-00641] c 31 N70-36410  
Space capsule ejection assembly Patent  
[NASA-CASE-XMF-03169] c 31 N71-15675  
Method and apparatus for securing to a spacecraft Patent  
[NASA-CASE-MFS-11133] c 31 N71-16222
- WARREN, E. L.**  
Compliant hydrodynamic fluid journal bearing  
[NASA-CASE-LEW-13670-1] c 37 N86-19606
- WATERS, W. J.**  
Nickel-base alloy Patent  
[NASA-CASE-XLE-00283] c 17 N70-36616  
Nickel-base alloy containing Mo-W-Al-Cr-Ta-Zr-C-Nb-B Patent  
[NASA-CASE-XLE-02082] c 17 N71-16026  
Nickel base alloy  
[NASA-CASE-XLE-10874-1] c 17 N72-22535  
Method of forming superalloys  
[NASA-CASE-LEW-10805-1] c 15 N73-13465  
Method of heat treating a formed powder product material  
[NASA-CASE-LEW-10805-3] c 26 N74-10521  
Method of forming articles of manufacture from superalloy powders  
[NASA-CASE-LEW-10805-2] c 37 N74-13179  
Nickel base alloy  
[NASA-CASE-LEW-12270-1] c 26 N77-32280  
Multicolor printing plate joining  
[NASA-CASE-LEW-13598-1] c 35 N84-22930
- WATKINS, JOHN L.**  
Motion measurement of acoustically levitated object  
[NASA-CASE-NPO-18191-1-CU] c 09 N93-24601
- WATSON, J. D.**  
Tumbler system to provide random motion  
[NASA-CASE-XGS-02437] c 15 N69-21472
- WATSON, J. E.**  
High temperature spark plug Patent  
[NASA-CASE-XLE-00660] c 28 N70-39925
- WATSON, N. D.**  
Payload/burned-out motor case separation system Patent  
[NASA-CASE-XLA-05369] c 31 N71-15687
- WATSON, V. R.**  
Electric arc apparatus Patent  
[NASA-CASE-XAC-01677] c 09 N71-20816
- WATTS, D. J.**  
Optimized bolted joint  
[NASA-CASE-LAR-13250-1] c 37 N86-27630
- WAYLAND, H. J.**  
Servo-controlled intravitral microscope system  
[NASA-CASE-NPO-13214-1] c 35 N75-25123
- WEAR, J. D.**  
Rocket engine Patent  
[NASA-CASE-XLE-00342] c 28 N70-37980
- WEATHERS, G. D.**  
Pseudo-noise test set for communication system evaluation  
[NASA-CASE-MFS-22671-1] c 35 N75-21582  
Method of and means for testing a tape record/playback system  
[NASA-CASE-MFS-22671-2] c 35 N77-17426
- WEAVER, L. B.**  
Multiple in-line docking capability for rotating space stations  
[NASA-CASE-MFS-20855-1] c 15 N77-10112
- WEAVER, W. R.**  
Solar pumped laser  
[NASA-CASE-LAR-12870-1] c 36 N84-16542
- WEBB, D. D.**  
Sprayable low density ablator and application process  
[NASA-CASE-MFS-23506-1] c 24 N78-24290
- WEBB, D. L.**  
Video sync processor Patent  
[NASA-CASE-KSC-10002] c 10 N71-25865  
Electronic video editor  
[NASA-CASE-KSC-10003] c 10 N73-13235
- WEBB, J. A., JR.**  
Circuit for detecting initial systole and diastolic notch  
[NASA-CASE-LEW-11581-1] c 54 N75-13531
- WEBB, J. B.**  
Delayed simultaneous release mechanism  
[NASA-CASE-GSC-10814-1] c 03 N73-20039
- WEBB, WINSTON S.**  
Solder dross removal apparatus  
[NASA-CASE-MFS-28406-1] c 37 N91-13729
- WEBBON, B. W.**  
Tubular sublimatory evaporator heat sink  
[NASA-CASE-ARC-10912-1] c 34 N77-19353  
Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c 54 N78-31736  
Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c 54 N78-32721  
Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c 54 N82-26987
- WEBBON, BRUCE**  
Cooling apparatus and couplings therefor  
[NASA-CASE-ARC-11921-1] c 34 N92-11286
- WEBER, G. E.**  
Method of making reinforced composite structure  
[NASA-CASE-LEW-12619-1] c 24 N77-19171
- WEBER, G. J.**  
Multiple circuit protector device  
[NASA-CASE-XMS-02744] c 33 N75-27249  
Fused switch  
[NASA-CASE-XMS-01244-1] c 33 N79-33393
- WEBER, L.**  
Prevention of hydrogen embrittlement of high strength steel by hydrazine compositions  
[NASA-CASE-NPO-12122-1] c 24 N76-14203
- WEBER, R. J.**  
Venting vapor apparatus Patent  
[NASA-CASE-XLE-00288] c 15 N70-34247  
Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c 20 N74-13502
- WEBER, WILLIAM F.**  
Volumetric measurement of tank volume  
[NASA-CASE-MSC-21500-1] c 35 N91-21493
- WEBSTER, C. R.**  
Discharge cell for optogalvanic spectroscopy having orthogonal relationship between the probe laser and discharge axis  
[NASA-CASE-NPO-16271-1] c 35 N86-25753
- WEBSTER, CHARLES NEAL**  
Method of controlling a resin curing process  
[NASA-CASE-MSC-21169-1] c 27 N89-29539
- WEBSTER, CHRISTOPHER R.**  
Method and apparatus for enhancing laser absorption sensitivity  
[NASA-CASE-NPO-16567-1-CU] c 36 N87-28006
- WEBSTER, J. A.**  
Perfluoro alkylene dioxy-bis-(4-phthalic anhydrides and oxy-bis-(perfluoroalkyleneoxyphthalic anhydrides)  
[NASA-CASE-MFS-22356-1] c 23 N75-30256  
Polyimides of ether-linked aryl tetracarboxylic dianhydrides  
[NASA-CASE-MFS-22355-1] c 23 N76-15268
- WEBSTER, L. D.**  
Clutchless multiple drive source for output shaft  
[NASA-CASE-ARC-11325-1] c 37 N82-22496  
Sidelooking laser altimeter for a flight simulator  
[NASA-CASE-ARC-11312-1] c 36 N83-34304
- WEDDENDORF, BRUCE**  
Double face sealing device  
[NASA-CASE-MFS-28521-1] c 37 N91-26542  
Automatic locking orthotic knee device  
[NASA-CASE-MFS-28633-1] c 54 N92-17666  
Wheels for wheelchairs and the like  
[NASA-CASE-MFS-28632-1] c 54 N93-17042  
Portable seat lift  
[NASA-CASE-MFS-28610-1] c 54 N93-17045  
Pressure wall patch  
[NASA-CASE-MFS-28724-1] c 18 N93-17061  
Sandwiched structural panel having a bi-directional core structure  
[NASA-CASE-MFS-28796-1] c 24 N93-19022  
Platform stair lift  
[NASA-CASE-MFS-28772-1] c 54 N93-29845  
Quick connect fastener  
[NASA-CASE-MFS-28833-1] c 37 N93-29846  
Prosthetic elbow joint  
[NASA-CASE-MFS-28707-1] c 54 N93-30566

## WEEKS, JACK L.

- Arc/gas electrode  
[NASA-CASE-MFS-29766-1] c 33 N92-33030
- WEETON, J. W.**  
Reinforced metallic composites Patent  
[NASA-CASE-XLE-02428] c 17 N70-33288  
Method of making fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-00231] c 17 N70-38198  
Reinforced metallic composites Patent  
[NASA-CASE-XLE-00228] c 17 N70-38490  
Method for producing fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-03925] c 18 N71-22894  
Process for producing dispersion strengthened nickel with aluminum Patent  
[NASA-CASE-XLE-06969] c 17 N71-24142  
Method of producing refractory composites containing tantalum carbide, hafnium carbide, and hafnium boride Patent  
[NASA-CASE-XLE-03940] c 18 N71-26153  
Method of making fiber composites  
[NASA-CASE-LEW-10424-2-2] c 18 N72-25539  
Refractory metal base alloy composites  
[NASA-CASE-XLE-03940-2] c 17 N72-28536  
Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-1] c 24 N81-17170  
Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c 24 N81-26179
- WEIDENHAMER, J. H.**  
Isolation coupling arrangement for a torque measuring system  
[NASA-CASE-XLA-04897] c 15 N72-22482
- WEIDMAN, D. J.**  
High intensity heat and light unit Patent  
[NASA-CASE-XLA-00141] c 09 N70-33312
- WEIDNER, J. P.**  
Orbiter/launch system  
[NASA-CASE-LAR-12250-1] c 14 N81-26161
- WEIGAND, A. J.**  
Texturing polymer surfaces by transfer casting  
[NASA-CASE-LEW-13120-1] c 27 N82-28440
- WEINBERG, I.**  
Lithium counterdoped silicon solar cell  
[NASA-CASE-LEW-14177-1] c 44 N86-32875
- WEINBERG, IRVING**  
Thin solar cell and lightweight array  
[NASA-CASE-LEW-14959-1] c 44 N91-27614
- WEINGART, J. M.**  
Stacked solar cell arrays  
[NASA-CASE-NPO-11771] c 03 N73-20040
- WEINSTEIN, L.**  
Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c 51 N77-22794  
Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c 52 N79-14750
- WEINSTEIN, L. M.**  
Continuous laminar smoke generator  
[NASA-CASE-LAR-13014-1] c 09 N85-21178
- WEINSTEIN, LEONARD M.**  
Ice detector  
[NASA-CASE-LAR-13776-1] c 35 N88-29149  
Liquid thickness gauge  
[NASA-CASE-LAR-13826-1] c 35 N88-29150  
Hydrodynamic skin-friction reduction  
[NASA-CASE-LAR-14078-1-CU] c 34 N90-27071  
Vaporizing particle velocimeter  
[NASA-CASE-LAR-14685-1] c 02 N92-34172  
Reflection type skin friction meter  
[NASA-CASE-LAR-14520-1-SB] c 02 N93-18275
- WEINSTEIN, M.**  
Bonding thermoelectric elements to nonmagnetic refractory metal electrodes  
[NASA-CASE-XGS-04554] c 15 N69-39786  
Segmenting lead telluride-silicon germanium thermoelements Patent  
[NASA-CASE-XGS-05718] c 26 N71-16037
- WEISLOGEL, MARK W.**  
Pulse thermal energy transport/storage system  
[NASA-CASE-LEW-15235-1] c 34 N92-29125
- WEISS, FRED R.**  
Protective helmet assembly  
[NASA-CASE-MSC-21842-1] c 54 N93-17088
- WEISS, P. F.**  
Acquisition and tracking system for optical radar  
[NASA-CASE-MFS-20125] c 16 N72-13437
- WEISS, S.**  
Pretreatment method for anti-wettable materials  
[NASA-CASE-XMS-03537] c 15 N69-21471
- WEITZEL, D. F.**  
Propellant tank pressurization system Patent  
[NASA-CASE-XNP-00650] c 27 N71-28929

## WEITZEL, D. H.

- Resilience testing device Patent  
[NASA-CASE-XLA-08254] c 14 N71-26161
- WELCH, CHRISTOPHER**  
Method of remotely characterizing thermal properties of a sample  
[NASA-CASE-LAR-13508-3-CU] c 09 N93-11057
- WELCH, CHRISTOPHER S.**  
Thermal remote anemometer system  
[NASA-CASE-LAR-13508-1] c 35 N92-21710  
A quality monitor and monitoring technique employing optically stimulated electron emission  
[NASA-CASE-LAR-15063-1] c 38 N93-30414
- WELCH, W. A.**  
Gas filter mounting structure  
[NASA-CASE-MSC-12297] c 14 N72-23457
- WELLING, C. E.**  
Thermally activated foaming compositions Patent  
[NASA-CASE-LAR-10373-1] c 18 N71-26155
- WELLMAN, J. B.**  
Gas flow control device  
[NASA-CASE-NPO-11479] c 15 N73-13462
- WELLS, A. F.**  
Water system virus detection  
[NASA-CASE-MSC-16098-1] c 51 N79-10693
- WELLS, B. R.**  
Apparatus for ejection of an instrument cover  
[NASA-CASE-XMF-04132] c 15 N69-27502
- WELLS, DENNIS L.**  
Nozzle fabrication technique  
[NASA-CASE-MSC-21299-1] c 20 N88-24684  
Nozzle fabrication technique  
[NASA-CASE-MSC-21299-2] c 37 N91-32508
- WELLS, F. E.**  
Positive displacement flowmeter Patent  
[NASA-CASE-XMF-02822] c 14 N70-41994  
Remote control manipulator for zero gravity environment  
[NASA-CASE-MFS-14405] c 15 N72-28495
- WELLS, GEORGE H., JR.**  
Timing control system  
[NASA-CASE-NPO-16882-1-CU] c 33 N88-24863
- WELLS, I. D.**  
Wind and solar powered turbine  
[NASA-CASE-NPO-15496-1] c 44 N84-23018
- WELLS, W. H.**  
Rotable accurate reflector system for telescopes Patent  
[NASA-CASE-NPO-10468] c 23 N71-33229
- WELLS, W. L.**  
Electric-arc heater Patent  
[NASA-CASE-XLA-00330] c 33 N70-34540
- WEN, LIANG-CHI**  
Two stage sorption type cryogenic refrigerator including heat regeneration system  
[NASA-CASE-NPO-17630-1-CU] c 31 N89-29577
- WENDT, A. J.**  
Rotating mandrel for assembly of inflatable devices Patent  
[NASA-CASE-XLA-04143] c 15 N71-17687
- WENZEL, G. E.**  
Amplifier drift tester  
[NASA-CASE-XMS-05562-1] c 09 N69-39986
- WERNER, E. A.**  
Method and apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917] c 15 N71-15597  
Apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917-2] c 15 N71-24836
- WESSELSKI, C. J.**  
Energy absorbing structure Patent Application  
[NASA-CASE-MSC-12279-1] c 15 N70-35679  
Low onset rate energy absorber  
[NASA-CASE-MSC-12279] c 15 N72-17450  
Shuttle-launch triangular space station  
[NASA-CASE-MSC-20676-1] c 18 N86-24729
- WESSELSKI, CLARENCE J.**  
Locking hinge  
[NASA-CASE-MSC-21056-1] c 18 N88-23827  
Mobile remote manipulator system for a tetrahedral truss  
[NASA-CASE-MSC-20985-1] c 18 N88-26398  
Expandable pallet for space station interface attachments  
[NASA-CASE-MSC-21117-1] c 18 N88-28958  
Collet lock joint for space station truss  
[NASA-CASE-MSC-21207-1] c 37 N88-29180  
Preloaded brake disc  
[NASA-CASE-MSC-21132-1] c 37 N88-29181  
Expandable pallet for space station interface attachments  
[NASA-CASE-MSC-21117-2] c 18 N89-28554  
Quick-connect fasteners for assembling devices in space  
[NASA-CASE-MSC-21648-1] c 37 N92-24051

- Preloaded latching device  
[NASA-CASE-MSC-21730-1] c 37 N93-13417
- Energy dissipator  
[NASA-CASE-MSC-21555-1] c 37 N93-23075
- WEST, JAMES C.**  
Altitude compensating ablative stiffening band for rocket motor nozzles  
[NASA-CASE-MFS-28728-1] c 20 N93-28950
- WEST, PHILIP R.**  
Don/doff support stand for use with rear entry space suits  
[NASA-CASE-MSC-21364-1] c 54 N89-13889
- WEST, R. L.**  
Device for handling printed circuit cards Patent  
[NASA-CASE-MFS-20453] c 15 N71-29133
- WEST, R. W., JR.**  
Method and apparatus for making a heat insulating and ablative structure Patent  
[NASA-CASE-XMS-02009] c 33 N71-20834
- WEST, THOMAS W.**  
Rotationally actuated prosthetic helping hand  
[NASA-CASE-MFS-28426-1] c 54 N91-32795
- WESTBROOK, R. M.**  
Electrode construction Patent  
[NASA-CASE-ARC-10043-1] c 05 N71-11193
- WESTER, G. W.**  
The dc-to-dc converters employing staggered-phase power switches with two-loop control  
[NASA-CASE-NPO-13512-1] c 33 N77-10428  
Phase substitution of spare converter for a failed one of parallel phase staggered converters  
[NASA-CASE-NPO-13812-1] c 33 N77-30365
- WESTFALL, L. J.**  
Arc spray fabrication of metal matrix composite monolayer  
[NASA-CASE-LEW-13828-1] c 24 N85-30027
- WESTFALL, LEONARD J.**  
Method of making single crystal fibers  
[NASA-CASE-LEW-14921-1] c 24 N91-13502
- WESTON, K. C.**  
Heat shield Patent  
[NASA-CASE-XMS-00486] c 33 N70-33344
- WESTPHAL, J. A.**  
Method and apparatus for aligning a laser beam projector Patent  
[NASA-CASE-NPO-11087] c 23 N71-29125
- WETMORE, J. W.**  
Aircraft instrument Patent  
[NASA-CASE-XLA-00487] c 14 N70-40157
- WETZLER, D. G.**  
Thrust-isolating mounting  
[NASA-CASE-MFS-21680-1] c 18 N74-27397
- WEYLER, G. M., JR.**  
Rotatable mass for a flywheel  
[NASA-CASE-MFS-23051-1] c 37 N79-10422  
Method of manufacture of bonded fiber flywheel  
[NASA-CASE-MFS-23674-1] c 24 N81-29163
- WEZNER, F. S.**  
Collapsible reflector Patent  
[NASA-CASE-XMS-03454] c 09 N71-20658
- WHEATLEY, D. G.**  
Hermetic sealed vibration damper Patent  
[NASA-CASE-MSC-10959] c 15 N71-26243
- WHEELER, D. R.**  
Refractory coatings and method of producing the same  
[NASA-CASE-LEW-13169-1] c 26 N82-29415  
Refractory coatings  
[NASA-CASE-LEW-13169-2] c 26 N82-30371
- WHEELER, R. K.**  
Method and apparatus for stable silicon dioxide layers on silicon grown in silicon nitride ambient  
[NASA-CASE-ERC-10073-1] c 24 N74-19769
- WHEELER, S.**  
Wind tunnel microphone structure Patent  
[NASA-CASE-XNP-00250] c 11 N71-28779
- WHEELER, S. B.**  
Fluid containers and resealable septum therefor Patent  
[NASA-CASE-NPO-10123] c 15 N71-24835
- WHIFFEN, E. L.**  
Grain refinement control in TIG arc welding  
[NASA-CASE-MSC-19095-1] c 37 N75-19683
- WHIPPLE, D. W.**  
Microcircuit negative cutter  
[NASA-CASE-XLA-09843] c 15 N72-27485
- WHIPPLE, E. C., JR.**  
Method and apparatus for determining satellite orientation utilizing spatial energy sources Patent  
[NASA-CASE-XGS-00466] c 21 N70-34297
- WHIPPLE, R. D.**  
Extended moment arm anti-spin device  
[NASA-CASE-LAR-12979-1] c 05 N85-21147
- WHIPPLE, RAYMOND D.**  
Selectable towline spin chute system  
[NASA-CASE-LAR-14322-1] c 02 N91-27139

- WHISENANT, J. T.**  
Inspection gage for boss Patent  
[NASA-CASE-XMF-04966] c 14 N71-17658
- WHITACRE, H. E.**  
Quick release hook tape Patent  
[NASA-CASE-XMS-10660-1] c 15 N71-25975  
Scientific experiment flexible mount  
[NASA-CASE-MS-12372-1] c 31 N72-25842
- WHITAKER, ANN F.**  
Method and apparatus for maintaining thermal control  
in plasma conditions  
[NASA-CASE-MFS-28368-1] c 75 N90-10717
- WHITAKER, WILLIE D.**  
Space module assembly apparatus with docking  
alignment flexibility and restraint  
[NASA-CASE-MS-21211-1] c 18 N89-28553
- WHITCOMB, R. T.**  
Airfoil shape for flight at subsonic speeds  
[NASA-CASE-LAR-10585-1] c 02 N76-22154
- WHITE, A. R.**  
Scientific experiment flexible mount  
[NASA-CASE-MS-12372-1] c 31 N72-25842
- WHITE, E. C.**  
Method of making pressurized panel Patent  
[NASA-CASE-XLA-08916] c 15 N71-29018  
Pressurized panel  
[NASA-CASE-XLA-08916-2] c 14 N73-28487  
Lightweight, variable solidity knitted parachute fabric  
[NASA-CASE-LAR-10776-1] c 02 N74-10034
- WHITE, E. RICHARD**  
Over-the-wing propeller  
[NASA-CASE-LAR-13134-2] c 07 N87-16828
- WHITE, F. A.**  
Coincidence apparatus for detecting particles  
[NASA-CASE-XLA-07813] c 14 N72-17328  
Low energy electron magnetometer using a  
monoenergetic electron beam  
[NASA-CASE-LAR-12706-1] c 35 N84-12444
- WHITE, J. A.**  
Magnetically centered liquid column float Patent  
[NASA-CASE-XAC-00030] c 14 N70-34820
- WHITE, J. KEVIN**  
Welding wire pressure sensor assembly  
[NASA-CASE-MFS-26216-1] c 37 N93-28951
- WHITE, M. H.**  
Time delay and integration detectors using charge  
transfer devices  
[NASA-CASE-GSC-12324-1] c 33 N81-33403
- WHITE, P. R.**  
Solar tracking system  
[NASA-CASE-MFS-23999-1] c 44 N81-24520  
Fluid flow meter for measuring the rate of fluid flow in  
a conduit  
[NASA-CASE-MFS-28030-1] c 35 N86-25752
- WHITE, W. F.**  
Dual resonant cavity absorption cell Patent  
[NASA-CASE-LAR-10305] c 14 N71-26137  
Resonant waveguide stark cell  
[NASA-CASE-LAR-11352-1] c 33 N75-26245
- WHITE, W. L.**  
Dual towline spin-recovery device  
[NASA-CASE-LAR-13076-1] c 08 N85-35200
- WHITE, W. T.**  
Method of bonding plasticized elastomer to metal and  
articles produced thereby  
[NASA-CASE-MFS-25181-1] c 27 N82-24340  
Double window viewing chamber assembly  
[NASA-CASE-MFS-28057-1] c 09 N87-14355
- WHITE, WILLIAM T.**  
Method for machining holes in composite materials  
[NASA-CASE-MFS-28044-1] c 31 N87-25491
- WHITEHEAD, A. B.**  
Method and means for helium/hydrogen ratio  
measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c 25 N80-20334
- WHITEHEAD, C. W.**  
Apparatus for inserting and removing specimens from  
high temperature vacuum furnaces  
[NASA-CASE-LAR-10841-1] c 31 N74-27900
- WHITEHEAD, VICTOR S.**  
Polarization perception device  
[NASA-CASE-MS-21915-1] c 74 N92-30027
- WHITMORE, HENRY B.**  
Method and apparatus for waste collection and  
storage  
[NASA-CASE-MS-21025-3] c 54 N91-26747
- WHITFIELD, C. E.**  
Selective plating of etched circuits without removing  
previous plating Patent  
[NASA-CASE-XGS-03120] c 15 N71-24047
- WHITMORE, F. C.**  
Continuous magnetic flux pump  
[NASA-CASE-XNP-01187] c 15 N73-28516  
Superconductive magnetic-field-trapping device  
[NASA-CASE-XNP-01185] c 26 N73-28710
- Magnetic-flux pump  
[NASA-CASE-XNP-01188] c 15 N73-32361
- WHITMORE, HENRY**  
Improved method and apparatus for waste collection  
and storage  
[NASA-CASE-MS-21025-1] c 31 N87-25495
- WHITMORE, HENRY B.**  
Valve for waste collection and storage  
[NASA-CASE-MS-21025-4] c 54 N91-14723  
Method for waste collection and storage  
[NASA-CASE-MS-21025-2] c 54 N91-14724
- WHITT, W. D.**  
General purpose rocket furnace  
[NASA-CASE-MFS-23460-1] c 12 N79-26075  
High gradient directional solidification furnace  
[NASA-CASE-MFS-25963-1] c 35 N86-20750
- WHITTEN, D. E.**  
Dual stage check valve  
[NASA-CASE-MS-13587-1] c 15 N73-30459
- WHITTENBERGER, J. D.**  
Zirconium modified nickel-copper alloy  
[NASA-CASE-LEW-12245-1] c 26 N77-20201  
Method and apparatus for gripping uniaxial fibrous  
composite materials  
[NASA-CASE-LEW-13758-1] c 24 N84-27829
- WHYTE, WAYNE A., JR.**  
Real-time data compression of broadcast video  
signals  
[NASA-CASE-LEW-14945-1] c 32 N91-13598  
Real-time data compression of broadcast video  
signals  
[NASA-CASE-LEW-14945-2] c 32 N92-10128
- WIBERG, R. E.**  
Combustion products generating and metering device  
[NASA-CASE-GSC-11095-1] c 14 N72-10375
- WICHOREK, GREGORY R.**  
Device for measuring hole elongation in a bolted joint  
[NASA-CASE-LAR-13453-1] c 37 N88-14361
- WIEBE, E. R.**  
Automatic thermal switch Patent  
[NASA-CASE-XNP-03796] c 23 N71-15467  
Helium refrigerator and method for decontaminating the  
refrigerator  
[NASA-CASE-NPO-10634] c 23 N72-25619  
Refrigerated coaxial coupling  
[NASA-CASE-NPO-13504-1] c 33 N75-30430  
Helium refrigerator  
[NASA-CASE-NPO-13435-1] c 31 N76-14284  
Multistation refrigeration system  
[NASA-CASE-NPO-13839-1] c 31 N78-25256
- WIECH, R. E.**  
Zeta potential flowmeter Patent  
[NASA-CASE-XNP-06509] c 14 N71-23226
- WIEDEMANN, KARL E.**  
Multi-layer light-weight protective coating and method  
for application  
[NASA-CASE-LAR-14448-1] c 27 N93-11912
- WIKER, G. A.**  
Compact artificial hand  
[NASA-CASE-NPO-13906-1] c 54 N79-24652  
Automatic multi-banking of memory for  
microprocessors  
[NASA-CASE-NPO-15295-1] c 60 N85-21992
- WIKER, GORDON A.**  
Timing control system  
[NASA-CASE-NPO-16882-1-CU] c 33 N88-24863
- WILCOX, BRIAN**  
Real time pipelined system for forming the sum of  
products in the processing of video data  
[NASA-CASE-NPO-16462-1-CU] c 60 N88-24169  
Programmable pipelined image processor  
[NASA-CASE-NPO-16461-1-CU] c 60 N89-26400
- WILCOX, BRIAN H.**  
A method for surmounting an obstacle by a robot  
vehicle  
[NASA-CASE-NPO-18764-1-CU] c 37 N93-17272
- WILCOX, FLOYD J., JR.**  
Passive venting technique for shallow cavities  
[NASA-CASE-LAR-14031-1] c 05 N90-20079  
Passive venting technique for shallow cavities  
[NASA-CASE-LAR-13875-1] c 05 N91-27156
- WILEM, R. T.**  
Natural turbulence electrical power generator  
[NASA-CASE-LAR-11551-1] c 44 N80-29834
- WILEY, F. L.**  
Temperature regulation circuit Patent  
[NASA-CASE-XNP-02792] c 14 N71-28958
- WILEY, P. H.**  
Logarithmic circuit with wide dynamic range  
[NASA-CASE-GSC-12145-1] c 33 N78-32339
- WILGUS, D. S.**  
Adaptive voting computer system  
[NASA-CASE-MS-13932-1] c 62 N74-14920
- WILHELM, H. E.**  
Apparatus for extraction and separation of a  
preferentially photo-dissociated molecular isotope into  
positive and negative ions by means of an electric field  
[NASA-CASE-LEW-12465-1] c 25 N78-25148
- WILHITE, W. F.**  
Micropacked column for a chromatographic system  
[NASA-CASE-XNP-04816] c 06 N69-39936
- WILKEY, J. W., JR.**  
Velocity package Patent  
[NASA-CASE-XLA-01339] c 31 N71-15692
- WILKINS, J. R.**  
Apparatus for microbiological sampling  
[NASA-CASE-LAR-11069-1] c 35 N75-12272  
Automatic inoculating apparatus  
[NASA-CASE-LAR-11074-1] c 51 N75-13502  
Automatic microbial transfer device  
[NASA-CASE-LAR-11354-1] c 35 N75-27330  
Measurement of gas production of microorganisms  
[NASA-CASE-LAR-11326-1] c 35 N75-33368  
Automated single-slide staining device  
[NASA-CASE-LAR-11649-1] c 51 N77-27677  
Electrochemical detection device  
[NASA-CASE-LAR-11922-1] c 25 N79-24073  
Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c 51 N81-28698  
Apparatus and process for microbial detection and  
enumeration  
[NASA-CASE-LAR-12709-1] c 35 N82-28604
- WILL, H. A.**  
Process for fabricating SiC semiconductor devices  
[NASA-CASE-LEW-12094-1] c 76 N76-25049
- WILL, R. W.**  
Attitude control and damping system for spacecraft  
Patent  
[NASA-CASE-XLA-02551] c 21 N71-21708
- WILLEY, NORMAN F.**  
Blind fastening apparatus  
[NASA-CASE-LAR-14542-1] c 37 N93-22384
- WILLIAMS, B. A.**  
Thermistor holder for skin temperature measurements  
[NASA-CASE-ARC-10855-1] c 52 N77-10780  
Liquid cooled brassiere and method of diagnosing  
malignant tumors therewith  
[NASA-CASE-ARC-11007-1] c 52 N77-14736  
Cooling system for removing metabolic heat from an  
hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c 54 N78-32721
- WILLIAMS, D. D.**  
Apparatus for changing the orientation and velocity of  
a spinning body traversing a path Patent  
[NASA-CASE-HQN-00936] c 31 N71-29050
- WILLIAMS, D. N.**  
Low temperature aluminum alloy Patent  
[NASA-CASE-XMF-02786] c 17 N71-20743
- WILLIAMS, E. F.**  
Automatic liquid inventory collecting and dispensing  
unit  
[NASA-CASE-LAR-11071-1] c 35 N75-19611
- WILLIAMS, J. G.**  
Light regulator  
[NASA-CASE-LAR-10836-1] c 26 N72-27784  
Light intensity strain analysis  
[NASA-CASE-LAR-10765-1] c 32 N73-20740
- WILLIAMS, J. J.**  
Flow modifying device  
[NASA-CASE-LEW-13562-2] c 07 N85-35195
- WILLIAMS, J. R.**  
Holographic thin film analyzer  
[NASA-CASE-MFS-20823-1] c 16 N73-30476
- WILLIAMS, L. A.**  
Apparatus for electrolytically tapered or contoured  
cavities  
[NASA-CASE-XNP-08835-1] c 37 N80-14395
- WILLIAMS, L. A., JR.**  
Fluid velocity measuring device  
[NASA-CASE-LAR-11729-1] c 34 N79-12359
- WILLIAMS, M. D.**  
Measurement of time differences between luminous  
events Patent  
[NASA-CASE-XLA-01987] c 23 N71-23976  
Volumetric direct nuclear pumped laser  
[NASA-CASE-LAR-12183-1] c 36 N79-18307
- WILLIAMS, M. L.**  
Non-destructive method for applying and removing  
instrumentation on helicopter rotor blades  
[NASA-CASE-LAR-11201-1] c 35 N78-24515
- WILLIAMS, MICHAEL D.**  
Method for remotely powering a device such as a lunar  
rover  
[NASA-CASE-LAR-14789-1] c 37 N92-30388
- WILLIAMS, R. M.**  
Photoelectrochemical electrodes  
[NASA-CASE-NPO-15458-1] c 25 N84-12262  
Corrosion resistant coating  
[NASA-CASE-NPO-15928-1] c 26 N85-29005

## WILLIAMS, ROBERT M.

AMTEC vapor-vapor series connected cells  
[NASA-CASE-NPO-18667-1-CU] c 33 N93-19330

## WILLIAMS, ROGER M.

Solid state electrical switch employing materials with reversible phase transistors  
[NASA-CASE-NPO-17621-1-CU] c 33 N90-17010  
Organic cathode for a secondary battery  
[NASA-CASE-NPO-17604-1-CU] c 33 N91-14536

## WILLIAMS, S. R.

Bidirectional step torque filter with zero backlash characteristic Patent  
[NASA-CASE-XGS-04227] c 15 N71-21744

## WILLIAMS, T. E.

System for and method of freezing biological tissue  
[NASA-CASE-GSC-12173-1] c 51 N79-10694

## WILLIAMS, W. F.

System for interference signal nulling by polarization adjustment  
[NASA-CASE-NPO-13140-1] c 32 N75-24982  
Dual band combiner for horn antenna  
[NASA-CASE-NPO-14519-1] c 32 N80-23524

## WILLIAMSSEN, JOEL E.

Pressure wall patch  
[NASA-CASE-MFS-28724-1] c 18 N93-17061

## WILLIS, A. E.

Static inverters which sum a plurality of waves Patent  
[NASA-CASE-XMF-00663] c 08 N71-18752  
A dc to dc converter  
[NASA-CASE-MFS-25430-1] c 33 N84-16453

## WILLIS, PAUL B.

Predictive aging of polymers  
[NASA-CASE-NPO-17524-1-CU] c 27 N90-10261

## WILLNER, K.

Inverter oscillator with voltage feedback  
[NASA-CASE-NPO-10760] c 09 N72-25254

## WILLNER, B. M.

Electrolytically regenerative hydrogen-oxygen fuel cell Patent  
[NASA-CASE-XLE-04526] c 03 N71-11052

## WILSON, A. H.

Vehicular impact absorption system  
[NASA-CASE-NPO-14014-1] c 37 N79-10420

## WILSON, D. J.

Wind measurement system  
[NASA-CASE-MFS-23362-1] c 47 N77-10753

## WILSON, E. M.

Wind tunnel  
[NASA-CASE-LAR-10135-1] c 09 N79-21083

## WILSON, I. J.

Method of producing complex aluminum alloy parts of high temper, and products thereof  
[NASA-CASE-MSC-19693-1] c 26 N78-24333

## WILSON, J. C.

Exhaust flow deflector  
[NASA-CASE-LAR-11570-1] c 34 N76-18364  
Helicopter anti-torque system using strakes  
[NASA-CASE-LAR-13233-1] c 05 N84-33400

## WILSON, JOHN C.

Helicopter anti-torque system using fuselage strakes  
[NASA-CASE-LAR-13630-1] c 08 N86-23809  
Helicopter low-speed yaw control  
[NASA-CASE-LAR-14219-1] c 08 N93-25998

## WILSON, L. R.

Phase modulating with odd and even finite power series of a modulating signal  
[NASA-CASE-LAR-11607-1] c 32 N77-14292

## WILSON, M. E.

Wide-angle flat field telescope  
[NASA-CASE-GSC-12825-1] c 74 N86-28732

## WILSON, M. L.

Nondestructive spot test method for titanium and titanium alloys  
[NASA-CASE-LAR-10539-1] c 17 N73-12547  
Nondestructive spot test method for magnesium and magnesium alloys  
[NASA-CASE-LAR-10953-1] c 17 N73-27446

## WILSON, M. N., JR.

Space simulator Patent  
[NASA-CASE-XNP-00459] c 11 N70-38675

## WILSON, MAYWOOD L.

Pultrusion die assembly  
[NASA-CASE-LAR-13719-1] c 37 N89-12867  
Continuous fiber thermoplastic prepreg  
[NASA-CASE-LAR-14459-1] c 24 N91-15334  
Continuous fiber thermoplastic prepreg  
[NASA-CASE-LAR-14459-1] c 24 N93-24597

## WILSON, R. E.

Automatic pump Patent  
[NASA-CASE-XNP-04731] c 15 N71-24042

## WILSON, R. L.

Twin-capacitive shaft angle encoder with analog output signal  
[NASA-CASE-ARC-10897-1] c 33 N77-31404

## WILSON, T. G.

Regulated dc-to-dc converter for voltage step-up or step-down with input-output isolation  
[NASA-CASE-HQN-10792-1] c 33 N74-11049

## WILSON, T. L.

Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c 34 N81-26402

## WILSON, W. A.

Methods and apparatus employing vibratory energy for wrenching Patent  
[NASA-CASE-MFS-20586] c 15 N71-17686

## WILSON, W. O.

Rocket chamber leak test fixture  
[NASA-CASE-XFR-09479] c 14 N69-27503

## WIMBER, R. T.

Silicide coatings for refractory metals Patent  
[NASA-CASE-XLE-10910] c 18 N71-29040

## WINBLADE, R. L.

Energy management system for glider type vehicle Patent  
[NASA-CASE-XFR-00756] c 02 N71-13421

## WINCHESKI, BUZZ A.

High speed thin plate fatigue crack monitor  
[NASA-CASE-LAR-14816-1-SB] c 39 N93-19329

## WINFREE, WILLIAM P.

Thermal remote anemometer system  
[NASA-CASE-LAR-13508-1] c 35 N92-21710  
Method and apparatus for thermographically and quantitatively analyzing a structure for disbands and/or inclusions  
[NASA-CASE-LAR-14559-1] c 38 N92-29829

Method of remotely characterizing thermal properties of a sample  
[NASA-CASE-LAR-13508-3-CU] c 09 N93-11057  
Rapid detection and quantification of features such as damage or flaws in composite and metallic structures  
[NASA-CASE-LAR-14850-1-CU] c 38 N93-17048

## WING, L. D.

Automatic thermal switch  
[NASA-CASE-GSC-12415-1] c 33 N82-24419  
Automatic thermal switch  
[NASA-CASE-GSC-12553-1] c 34 N83-28356

## WINGFIELD, G. A.

Resonant waveguide stark cell  
[NASA-CASE-LAR-11352-1] c 33 N75-26245

## WINIARSKI, F. J.

Wobble gear drive mechanism  
[NASA-CASE-WOO-00625] c 37 N78-17385

## WINITZ, M.

Amino acid analysis  
[NASA-CASE-NPO-12130-1] c 25 N75-14844  
Reduction of blood serum cholesterol  
[NASA-CASE-NPO-12119-1] c 52 N75-15270

## WINKELSTEIN, R. A.

Noninterruptable digital counting system Patent  
[NASA-CASE-XNP-09759] c 08 N71-24891  
Controlled oscillator system with a time dependent output frequency  
[NASA-CASE-NPO-11962-1] c 33 N74-10194

## WINKELSTEIN, R. A.

Baseband signal combiner for large aperture antenna array  
[NASA-CASE-NPO-14641-1] c 32 N81-29308

## WINKLER, C. E.

Static inverters which sum a plurality of waves Patent  
[NASA-CASE-XMF-00663] c 08 N71-18752

## WINKLER, H. E.

Electrophotolysis oxidation system for measurement of organic concentration in water  
[NASA-CASE-MSC-16497-1] c 25 N82-12166

## WINKLER, ROGER V.

Bio-medical flow sensor  
[NASA-CASE-MSC-18761-1] c 52 N83-27577  
Pressurized bellows flat contact heat exchanger interface  
[NASA-CASE-MSC-21271-1] c 34 N90-21999

## WINKLER, T.

AC logic flip-flop circuits Patent  
[NASA-CASE-XGS-00823] c 10 N71-15910

## WINN, L. E.

Ellipsograph for pantograph Patent  
[NASA-CASE-XLA-03102] c 14 N71-21079  
Lathe tool bit and holder for machining fiberglass materials  
[NASA-CASE-XLA-10470] c 15 N72-21489

## WINTUCKY, E. G.

Liquid waste feed system  
[NASA-CASE-LAR-10365-1] c 05 N72-27102  
Ion sputter textured graphite  
[NASA-CASE-LEW-12919-1] c 24 N83-10117

## WINTUCKY, E. G.

Ion sputter textured graphite electrode plates  
[NASA-CASE-LEW-12919-2] c 70 N84-28565

## WIRTH, M. N.

Selective data segment monitoring system  
[NASA-CASE-ARC-10899-1] c 60 N77-19760

## WISANDER, D. W.

Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-2] c 37 N82-26674

## WISANDER, D. W.

Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c 27 N82-29453  
Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c 18 N83-20996

## WISANDER, D. W.

Method of fabricating an abradable gas path seal  
[NASA-CASE-LEW-13269-2] c 37 N84-22957

## WISE, R. C.

Space suit  
[NASA-CASE-MSC-12609-1] c 05 N73-32012

## WISE, STEPHANIE A.

Process for applying a superconductive powder to a wide variety of substrates  
[NASA-CASE-LAR-14729-1-CU] c 33 N93-19051

## WISE, T. E.

Microwave dichroic plate  
[NASA-CASE-GSC-12171-1] c 33 N79-28416

## WITHEROW, W. K.

Dual laser optical system and method for studying fluid flow  
[NASA-CASE-MFS-25315-1] c 36 N83-29680  
Method of and apparatus for double-exposure holographic interferometry  
[NASA-CASE-MFS-25405-1] c 35 N84-22929

## WITHEROW, WILLIAM K.

A reference standard for bidirectional reflection distribution function and bidirectional transmission distribution function measurement  
[NASA-CASE-MFS-28183-1] c 74 N89-13253  
Dual wavelength holographic interferometry system  
[NASA-CASE-MFS-28242-1] c 35 N89-26202

## WITHEROW, WILLIAM K.

X ray sensitive area detection device  
[NASA-CASE-MFS-28232-1] c 74 N91-14835  
Hanging drop crystal growth apparatus  
[NASA-CASE-MFS-26061-1] c 76 N91-16815

## WITHEROW, WILLIAM K.

Radiation sensitive area detection device and method  
[NASA-CASE-MFS-28563-1] c 35 N91-25388

## WITTE, R. S.

Gas ion laser construction for electrically isolating the pressure gauge thereof  
[NASA-CASE-MFS-22597] c 36 N78-17366

## WITTMANN, A. E.

Method of coating circuit paths on printed circuit boards with solder Patent  
[NASA-CASE-XMF-01599] c 09 N71-20705

## WITTMANN, A. E.

Metal shearing energy absorber  
[NASA-CASE-HQN-10638-1] c 15 N73-30460

## WITTRY, DAVID B.

Dual cathode system for electron beam instruments  
[NASA-CASE-NPO-16878-1-CU] c 35 N90-20351

## WITZKE, W. R.

Apparatus for making a metal slurry product Patent  
[NASA-CASE-XLE-00010] c 15 N70-33382  
Process for making a high toughness-high strength ion alloy  
[NASA-CASE-LEW-12542-2] c 26 N79-22271

## WITZKE, W. R.

High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c 26 N80-32484

## WOBIG, O. A.

Fluid power transmission Patent  
[NASA-CASE-XMS-01445] c 12 N71-16031  
Apparatus for machining geometric cones Patent  
[NASA-CASE-XMS-04292] c 15 N71-22722

## WOELLER, F. H.

Chelate-modified polymers for atmospheric gas chromatography  
[NASA-CASE-ARC-11154-1] c 25 N80-23383

## WOELLER, FRITZ H.

Self-compensating solenoid valve  
[NASA-CASE-ARC-11620-1] c 37 N87-25573

## WOJCIECHOWSKI, C. J.

Diffuser/ejector system for a very high vacuum environment  
[NASA-CASE-MFS-25791-1] c 09 N84-27749

## WOJTASINSKI, R. J.

Lighting tracking system  
[NASA-CASE-KSC-10729-1] c 09 N73-32110  
Automatic lightning detection and photographic system  
[NASA-CASE-KSC-10728-1] c 14 N73-32319

## WOJTASINSKI, R. J.

Electric field measuring and display system  
[NASA-CASE-KSC-10731-1] c 33 N74-27862  
Lightning current measuring systems  
[NASA-CASE-KSC-10807-1] c 33 N75-26246

## WOJTASINSKI, R. J.

Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c 33 N79-10337

## WOLCZOK, J. M.

Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c 32 N77-28346

- WOLF, C. B.**  
Method of producing silicon  
[NASA-CASE-NPO-14382-1] c 31 N80-18231
- WOLF, D. A.**  
Heat pipe thermal switch  
[NASA-CASE-GSC-12812-1] c 34 N83-35307
- WOLF, DAVID A.**  
Rotating bio-reactor cell culture apparatus  
[NASA-CASE-MSC-21293-1] c 51 N91-21700  
Horizontally rotated cell culture system with a coaxial tubular oxygenator  
[NASA-CASE-MSC-21294-1] c 51 N91-30667  
Three-dimensional co-culture process  
[NASA-CASE-MSC-21560-1] c 51 N92-34229  
Three-dimensional cell to tissue assembly process  
[NASA-CASE-MSC-21559-1] c 51 N92-34231  
High aspect reactor vessel and method of use  
[NASA-CASE-MSC-21662-1] c 51 N92-34232  
Method for culturing mammalian cells in a perfused bioreactor  
[NASA-CASE-MSC-21293-2] c 51 N93-10109  
Method for culturing mammalian cells in a horizontally rotated bioreactor  
[NASA-CASE-MSC-21294-2] c 51 N93-10110
- WOLF, F. T.**  
Air bearing  
[NASA-CASE-WLP-10002] c 15 N72-17451
- WOLF, M. F.**  
Planar oscillatory stirring apparatus  
[NASA-CASE-MFS-26002-1-CU] c 35 N86-26598
- WOLF, PETER**  
Poly 1, 2, 4-triazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14440-1] c 23 N92-10066  
Poly(1,3,4-oxadiazoles) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14427-1] c 23 N92-29141  
Poly(1,2,4-triazole) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14440-1] c 23 N93-18283
- WOLFE, J. F.**  
Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-2] c 27 N84-22746  
Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-1] c 27 N85-20123
- WOLFF, J. R.**  
High speed binary to decimal conversion system  
Patent  
[NASA-CASE-XGS-01230] c 08 N71-19544
- WOLLER, J. A.**  
Evacuation port seal Patent  
[NASA-CASE-XMF-03290] c 15 N71-23256
- WOLOWICZ, C. H.**  
Free wing assembly for an aircraft  
[NASA-CASE-FRC-10092-1] c 05 N79-12061
- WOLTHUIS, R. A.**  
Contourograph system for monitoring electrocardiograms  
[NASA-CASE-MSC-13407-1] c 10 N72-20225  
Apparatus and method for processing Korotkov sounds  
[NASA-CASE-MSC-13999-1] c 52 N74-26626
- WOLVERTON, B. C.**  
Method for treating wastewater using microorganisms and vascular aquatic plants  
[NASA-CASE-NSTL-10] c 45 N84-12654
- WOLVERTON, BILLY C.**  
Combined air and water pollution control system  
[NASA-CASE-NST-00007-1] c 45 N91-14662
- WONG, R. Y.**  
Plurality of photosensitive cells on a pyramidal base for planetary trackers  
[NASA-CASE-XNP-04180] c 07 N69-39736  
Apparatus for absorbing and measuring power Patent  
[NASA-CASE-XLE-00720] c 14 N70-40201  
Television signal processing system Patent  
[NASA-CASE-NPO-10140] c 07 N71-24742  
Video signal enhancement system with dynamic range compression and modulation index expansion Patent  
[NASA-CASE-NPO-10343] c 07 N71-27341
- WONG, W. J.**  
Phase protection system for ac power lines  
[NASA-CASE-MSC-17832-1] c 33 N74-14956
- WOO, K. E.**  
High impact antenna Patent  
[NASA-CASE-NPO-10231] c 07 N71-26101  
Multi-purpose antenna employing dish reflector with plural coaxial horn feeds  
[NASA-CASE-NPO-11264] c 07 N72-25174
- WOO, KENNETH E.**  
A satellite-tracking millimeter-wave reflector antenna system for mobile satellite-tracking  
[NASA-CASE-NPO-18772-1-CU] c 32 N93-28955
- WOO, R. T.**  
Low loss dichroic plate  
[NASA-CASE-NPO-13171-1] c 32 N74-11000
- WOOD, A. D.**  
Transient heat transfer gauge Patent  
[NASA-CASE-XNP-09802] c 33 N71-15641
- WOOD, C. E.**  
Gas ion laser construction for electrically isolating the pressure gauge thereof  
[NASA-CASE-MFS-22597] c 36 N78-17366
- WOOD, CHARLES**  
Thermocouple for heating and cooling of memory metal actuators  
[NASA-CASE-NPO-17068-1-CU] c 35 N88-29151  
Annealing group III-V compound doped silicon-germanium alloy for improved thermo-electric conversion efficiency  
[NASA-CASE-NPO-17259-1-CU] c 76 N90-19884
- WOOD, G. E.**  
Simultaneous acquisition of tracking data from two stations  
[NASA-CASE-NPO-13292-1] c 32 N75-15854
- WOOD, G. M.**  
Low energy electron magnetometer using a monoenergetic electron beam  
[NASA-CASE-LAR-12706-1] c 35 N84-12444
- WOOD, G. M., JR.**  
Gas analyzer for bi-gaseous mixtures Patent  
[NASA-CASE-XLA-01131] c 14 N71-10774
- WOOD, G. P.**  
Plasma accelerator Patent  
[NASA-CASE-XLA-00675] c 25 N70-33267
- WOOD, GEORGE M.**  
Isotope exchange in oxide-containing catalyst  
[NASA-CASE-LAR-13542-2-SB] c 25 N90-20154
- WOOD, J. W.**  
Broadband video process with very high input impedance  
[NASA-CASE-NPO-10199] c 09 N72-17156
- WOOD, K. E.**  
High temperature penetrator assembly with bayonet plug and ramp-activated lock  
[NASA-CASE-MSC-18526-1] c 37 N82-24494  
Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MSC-18791-1] c 37 N83-36482
- WOOD, L. L.**  
Continuous plasma light source  
[NASA-CASE-XNP-04167-2] c 25 N72-24753  
Continuous plasma laser  
[NASA-CASE-XNP-04167-3] c 36 N77-19416
- WOOD, P. C.**  
Process for the preparation of calcium superoxide  
[NASA-CASE-ARC-11053-1] c 25 N79-10162  
Use of glow discharge in fluidized beds  
[NASA-CASE-ARC-11245-1] c 28 N82-18401
- WOOD, R. A.**  
Low temperature aluminum alloy Patent  
[NASA-CASE-XMF-02786] c 17 N71-20743
- WOOD, R. C.**  
Apparatus for sampling particulates in gases  
[NASA-CASE-HQN-10037-1] c 14 N73-27376
- WOOD, RICHARD M.**  
Device for quick changeover between wind tunnel force and pressure testing  
[NASA-CASE-LAR-13512-1] c 35 N87-28884  
Multi-body aircraft with an all-movable center fuselage actively controlling fuselage pressure drag  
[NASA-CASE-LAR-13511-1] c 05 N88-23765  
Almond test body  
[NASA-CASE-LAR-13747-1-CU] c 32 N89-28672  
Passive control of pressure loads using porosity  
[NASA-CASE-LAR-14547-1] c 34 N92-17909  
Natural flow wing  
[NASA-CASE-LAR-14281-1] c 02 N92-28729  
Control and augmentation of passive porosity through transpiration control  
[NASA-CASE-LAR-14682-1] c 34 N92-30387
- WOOD, WILLIAM B.**  
Quick acting gimbal joint  
[NASA-CASE-MSC-21918-1] c 37 N93-23076
- WOODARD, STANLEY E.**  
Suspension mechanism and method  
[NASA-CASE-LAR-14142-1] c 37 N90-27116
- WOODBURY, R. C.**  
Noise limiter Patent  
[NASA-CASE-NPO-10169] c 10 N71-24844  
Gated compressor, distortionless signal limiter  
[NASA-CASE-NPO-11820-1] c 32 N74-19788  
Apparatus for scanning the surface of a cylindrical body  
[NASA-CASE-NPO-11861-1] c 36 N74-20009
- WOODGATE, B. E.**  
Method and apparatus for slicing crystals  
[NASA-CASE-GSC-12291-1] c 76 N80-18951
- WOODHOUSE, CHRISTOPHER E.**  
Digitized synchronous demodulator  
[NASA-CASE-GSC-13237-1] c 33 N91-14550
- WOODIE, P. E.**  
Thermal conductive connection and method of making same Patent  
[NASA-CASE-XMS-02087] c 09 N70-41717
- WOODS, G. J.**  
Electronic checkout system for space vehicles Patent  
[NASA-CASE-XKS-08012-2] c 31 N71-15566
- WOODS, G. M., JR.**  
Instrument for measuring potentials on two dimensional electric field plots Patent  
[NASA-CASE-XLA-08493] c 10 N71-19421
- WOODS, J. M.**  
Powerplexer  
[NASA-CASE-MSC-12396-1] c 03 N73-31988
- WOOLFSON, M. G.**  
Linear sawtooth voltage-wave generator employing transistor timing circuit having capacitor-zener diode combination feedback Patent  
[NASA-CASE-XMS-01315] c 09 N70-41675  
Pulse modulator providing fast rise and fall times Patent  
[NASA-CASE-XMS-04919] c 09 N71-23270  
Multiple slope sweep generator Patent  
[NASA-CASE-XMS-03542] c 09 N71-28926
- WOOLLAM, J. A.**  
Hall effect magnetometer  
[NASA-CASE-LEW-11632-2] c 35 N75-13213  
Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-1] c 28 N78-24365  
Atomic hydrogen storage  
[NASA-CASE-LEW-12081-2] c 28 N80-20402  
Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c 28 N81-14103
- WORKING, DENNIS C.**  
Vacuum powder injector and method of impregnating fiber with powder  
[NASA-CASE-LAR-14179-1] c 31 N93-26101
- WORNOW, D. E.**  
Leading edge curvature based on convective heating Patent  
[NASA-CASE-XLA-01486] c 01 N71-23497
- WORTMAN, J. J.**  
Semiconductor p-n junction stress and strain sensor  
[NASA-CASE-XLA-04980] c 09 N69-27422  
Method of making semiconductor p-n junction stress and strain sensor  
[NASA-CASE-XLA-04980-2] c 14 N72-28438  
Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c 35 N76-22509
- WORTMAN, JIM J.**  
Method and apparatus for determining time, direction, and composition of impacting space particles  
[NASA-CASE-LAR-13392-1-CU] c 19 N91-14412
- WREN, PAUL E.**  
Emergency locating transmitter  
[NASA-CASE-GSC-12821-2] c 33 N91-31530
- WRIGHT, D. B.**  
Method for measuring cutaneous sensory perception  
[NASA-CASE-MSC-13609-1] c 05 N72-25122
- WRIGHT, D. E.**  
Penetrating radiation system for detecting the amount of liquid in a tank Patent  
[NASA-CASE-MSC-12280] c 27 N71-16348
- WRIGHT, E. E., JR.**  
System for sterilizing objects  
[NASA-CASE-KSC-11085-1] c 54 N81-24724
- WRIGHT, JAY M.**  
Quick application/release nut with engagement indicator  
[NASA-CASE-MSC-21799-1] c 37 N92-29150
- WRIGHT, KENNETH D., II**  
Storage control system  
[NASA-CASE-LAR-14651-1] c 82 N92-30386
- WRIGHT, L. N.**  
Vibrophonocardiograph Patent  
[NASA-CASE-XFR-07172] c 05 N71-27234
- WRIGHT, LAWRENCE T.**  
Tapered, tubular polyester fabric  
[NASA-CASE-MSC-21082-1] c 27 N87-29672
- WRIGHT, W. H.**  
Voltage regulator with plural parallel power source sections Patent  
[NASA-CASE-GSC-10891-1] c 10 N71-26626  
Shunt regulation electric power system  
[NASA-CASE-GSC-10135] c 33 N78-17296
- WRINKLE, W. W.**  
Apparatus for remote handling of materials  
[NASA-CASE-LAR-10634-1] c 37 N74-18123
- WU, C.**  
Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c 32 N82-12297



## Y

- Pipelined digital SAR azimuth correlator using hybrid FFT-transversal filter  
[NASA-CASE-NPO-15519-1] c 32 N84-34651
- Method and apparatus for self-calibration and phasing of array antenna  
[NASA-CASE-NPO-15920-1] c 33 N85-21493
- Method and apparatus for contour mapping using synthetic aperture radar  
[NASA-CASE-NPO-15939-1] c 43 N86-19711
- WU, JIIN-CHUAN**  
Integrated, non-volatile, high-speed analog random access memory  
[NASA-CASE-NPO-17998-1-CU] c 60 N92-12438
- High speed magneto-resistive random access memory  
[NASA-CASE-NPO-17954-1-CU] c 60 N93-14704
- WU, JIUNN-JENG**  
Ultra-high temperature stability Joule-Thomson cooler with capability to accommodate pressure variations  
[NASA-CASE-NPO-18184-1-CU] c 35 N92-29156
- WU, MITCHELL B.**  
Magnetic attachment mechanism  
[NASA-CASE-MSC-21095-1] c 37 N89-12866
- WU, TE-KAO**  
Double-loop frequency-selected surfaces for multifrequency division multiplexing in a dual-reflector antenna  
[NASA-CASE-NPO-18701-1-CU] c 32 N92-30391
- WU, V. C.**  
Apparatus for determining changes in limb volume  
[NASA-CASE-MSC-18759-1] c 52 N83-27578
- WUENSCHER, H. F.**  
Recoverable rocket vehicle Patent  
[NASA-CASE-XMF-00389] c 31 N70-34176
- Serpentuator Patent  
[NASA-CASE-XMF-05344] c 31 N71-16345
- Space manufacturing machine Patent  
[NASA-CASE-MFS-20410] c 15 N71-19214
- Method of making foamed materials in zero gravity  
[NASA-CASE-XMF-09902] c 15 N72-11387
- Hermetically sealed elbow actuator  
[NASA-CASE-MFS-14710] c 09 N72-22195
- WUERKER, R. F.**  
Spatial filter for Q-switched lasers  
[NASA-CASE-LEW-12164-1] c 36 N77-32478
- Microbalance  
[NASA-CASE-MSC-11242] c 35 N78-17358
- WYBLE, C. W.**  
Thermal conductive connection and method of making same Patent  
[NASA-CASE-XMS-02087] c 09 N70-41717
- WYDEVEN, T.**  
Preparation of dielectric coating of variable dielectric constant by plasma polymerization  
[NASA-CASE-ARC-10892-2] c 27 N79-14214
- Use of glow discharge in fluidized beds  
[NASA-CASE-ARC-11245-1] c 28 N82-18401
- WYDEVEN, T. J.**  
Process for the preparation of calcium superoxide  
[NASA-CASE-ARC-11053-1] c 25 N79-10162
- Electric discharge for treatment of trace contaminants  
[NASA-CASE-ARC-10975-1] c 33 N79-15245
- Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers  
[NASA-CASE-ARC-10915-2] c 27 N79-18052
- Reverse osmosis membrane of high urea rejection properties  
[NASA-CASE-ARC-10980-1] c 27 N80-23452
- Method for the preparation of thin-skinned asymmetric reverse osmosis membranes and products thereof  
[NASA-CASE-ARC-11359-1] c 51 N84-28361
- WYDEVEN, T. J., JR.**  
Method of preparing water purification membranes  
[NASA-CASE-ARC-10643-1] c 25 N75-12087
- WYDEVEN, THEODORE J., JR.**  
Etching method for photoresists or polymers  
[NASA-CASE-ARC-11873-2] c 25 N91-31258
- WYLIE, G. M.**  
Sealed battery gas manifold construction Patent  
[NASA-CASE-XNP-03378] c 03 N71-11051
- WYMAN, C. L.**  
Acquisition and tracking system for optical radar  
[NASA-CASE-MFS-20125] c 16 N72-13437
- Strain gauge ambiguity sensor for segmented mirror active optical system  
[NASA-CASE-MFS-20506-1] c 35 N75-12273
- System for the measurement of ultra-low stray light levels  
[NASA-CASE-MFS-23513-1] c 74 N79-11865
- WYNVEEN, R. A.**  
Iodine generator for reclaimed water purification  
[NASA-CASE-MSC-14632-1] c 54 N78-14784
- WYSOCKI, J. J.**  
Radiation resistant silicon semiconductor devices Patent  
[NASA-CASE-XGS-07801] c 09 N71-12513

- YADLOWSKY, ANN B.**  
Printer port interface  
[NASA-CASE-LAR-13950-1] c 60 N92-30541
- YAGER, S. P.**  
Piping arrangement through a double chamber structure  
[NASA-CASE-XNP-08882] c 15 N69-39935
- YAMAKAWA, K. A.**  
Scriber for silicon wafers  
[NASA-CASE-NPO-15539-1] c 37 N82-11469
- Apparatus and method to keep the walls of a free-space reactor free from deposits of solid materials  
[NASA-CASE-NPO-15851-1] c 37 N85-21652
- YAMAKI, D. A.**  
Solvent resistant thermoplastic aromatic poly(imidesulfone) and process for preparing same  
[NASA-CASE-LAR-12858-1] c 27 N83-34041
- Process for preparing solvent resistant, thermoplastic aromatic poly(imidesulfone)  
[NASA-CASE-LAR-12858-2] c 27 N85-20124
- YAMAUCHI, S. T.**  
Degassifying and mixing apparatus for liquids  
[NASA-CASE-MSC-18936-1] c 35 N83-29652
- YANAGITA, H.**  
Rhomboid prism pair for rotating the plane of parallel light beams  
[NASA-CASE-ARC-11311-1] c 74 N83-13978
- YANG, C. Y.**  
Zirconium carbide as an electrocatalyst for the chromous-chromic redox couple  
[NASA-CASE-LEW-13246-1] c 44 N83-27344
- YANG, L. C.**  
Optically actuated two position mechanical mover  
[NASA-CASE-NPO-13105-1] c 37 N74-21060
- Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c 28 N74-27425
- Compact pulsed laser having improved heat conductance  
[NASA-CASE-NPO-13147-1] c 36 N77-25502
- Seismic vibration source  
[NASA-CASE-NPO-14112-1] c 46 N79-22679
- Underwater seismic source  
[NASA-CASE-NPO-14255-1] c 46 N79-23555
- Portable heatable container  
[NASA-CASE-NPO-14237-1] c 44 N80-20808
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-1] c 35 N82-25484
- Method and device for detection of a substance  
[NASA-CASE-NPO-14940-1] c 33 N83-31954
- Apparatus and method for destructive removal of particles contained in flowing fluid  
[NASA-CASE-NPO-15426-1] c 35 N84-17555
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71-NPO-15494-2] c 35 N85-34373
- YANG, LI-FARN**  
Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N91-28184
- Noncircular rolling joints for vibrational reduction in slewing maneuvers  
[NASA-CASE-LAR-14515-1-CU] c 37 N92-33031
- Counter-balanced, multiple cable construction crane  
[NASA-CASE-LAR-14565-1-CU] c 37 N92-34212
- Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N93-24598
- YANG, M. M.**  
Trace water sensor  
[NASA-CASE-NPO-15722-1] c 35 N85-29212
- YANG, P. M.**  
Fluid power transmitting gas bearing Patent  
[NASA-CASE-ERC-10097] c 15 N71-28465
- YANG, ROBERT ALEXANDER**  
Toggle release  
[NASA-CASE-MSC-21354-1] c 37 N88-24969
- YARIV, A.**  
Arrangement for damping the resonance in a laser diode  
[NASA-CASE-NPO-15980-1] c 36 N85-30305
- YASUI, R. K.**  
Solar cell submodule Patent  
[NASA-CASE-XNP-05821] c 03 N71-11056
- Solar cell matrix Patent  
[NASA-CASE-NPO-10821] c 03 N71-19545
- Solar cell matrix  
[NASA-CASE-NPO-11190] c 03 N71-34044
- Stacked solar cell arrays  
[NASA-CASE-NPO-11771] c 03 N73-20040
- Solar cell grid patterns  
[NASA-CASE-NPO-13087-2] c 44 N76-31666
- Solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-1] c 44 N79-17314
- Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c 44 N79-24431

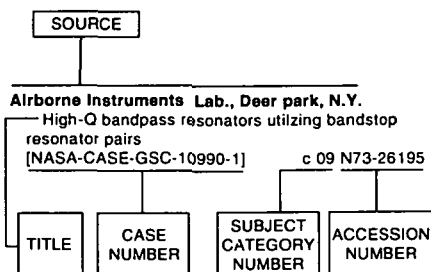
- Method for forming a solar array strip  
[NASA-CASE-NPO-13652-3] c 44 N80-14474
- YEAGER, P. R.**  
Gas analyzer for bi-gaseous mixtures Patent  
[NASA-CASE-XLA-01131] c 14 N71-10774
- Thermopile vacuum gage tube simulator Patent  
[NASA-CASE-XLA-02758] c 14 N71-18481
- Fast scan, control for deflection type mass spectrometers  
[NASA-CASE-LAR-11428-1] c 35 N74-34857
- YEH, C.**  
Fiber distributed feedback laser  
[NASA-CASE-NPO-13531-1] c 36 N76-24553
- YEH, HEN-GEUL**  
Systolic VLSI array for implementing the Kalman filter algorithm  
[NASA-CASE-NPO-17108-1-CU] c 33 N89-28713
- YEH, Y. C. M.**  
Schottky barrier solar cell  
[NASA-CASE-NPO-13689-2] c 44 N81-29525
- Method of Fabricating Schottky Barrier solar cell  
[NASA-CASE-NPO-13689-4] c 44 N82-28780
- YEN, S. P. S.**  
Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c 25 N81-19244
- YEN, SHIAO-PING S.**  
High energy and high power density ultracapacitors and supercapacitors  
[NASA-CASE-NPO-18568-1-CU] c 33 N93-17274
- YIN, L. I.**  
Low intensity X-ray and gamma-ray imaging device  
[NASA-CASE-GSC-12263-1] c 74 N79-20857
- Low intensity X-ray and gamma-ray spectrometer  
[NASA-CASE-GSC-12587-1] c 35 N82-32659
- Real-time 3-D X-ray and gamma-ray viewer  
[NASA-CASE-GSC-12640-1] c 74 N84-11920
- Three-dimensional and tomographic imaging device for X-ray and gamma-ray emitting objects  
[NASA-CASE-GSC-12851-1] c 35 N85-30281
- YIP, LONG P.**  
Stall departure resistance enhancer  
[NASA-CASE-LAR-14221-1] c 06 N93-19023
- YOSHINO, S. Y.**  
Bonding or repairing process  
[NASA-CASE-MSC-12357] c 15 N73-12489
- YOST, V. H.**  
Apparatus for welding torch angle and seam tracking control Patent  
[NASA-CASE-XMF-03287] c 15 N71-15607
- YOST, VAUGHN H.**  
X ray sensitive area detection device  
[NASA-CASE-MFS-28232-1] c 74 N91-14835
- Macromolecular crystal growing system  
[NASA-CASE-MFS-26088-1-CU] c 76 N92-25398
- YOST, W. T.**  
Liquid-immersible electrostatic ultrasonic transducer  
[NASA-CASE-LAR-12465-1] c 33 N82-26572
- YOST, WILLIAM T.**  
Acoustic radiation stress measurement  
[NASA-CASE-LAR-13440-1] c 71 N87-21653
- Ultrasonic method and apparatus for determining crack opening load  
[NASA-CASE-LAR-13889-1] c 39 N88-30160
- Magneto acoustic emission apparatus for testing materials for embrittlement  
[NASA-CASE-LAR-13817-1] c 26 N90-21170
- Method and apparatus for characterizing reflected ultrasonic pulses  
[NASA-CASE-LAR-13966-1] c 71 N91-27914
- Method and apparatus for using magneto-acoustic remanence to determine embrittlement  
[NASA-CASE-LAR-13817-5] c 39 N92-28757
- Magnetic remanence method and apparatus to test materials for embrittlement  
[NASA-CASE-LAR-13817-4] c 39 N92-29101
- Magneto acoustic emission method for testing materials for embrittlement  
[NASA-CASE-LAR-13817-2] c 39 N92-29155
- Method of characterizing residual stress in ferromagnetic materials using a pulse histogram of acoustic emission signals  
[NASA-CASE-LAR-14239-1] c 26 N93-14705
- Constant frequency pulsed phase-locked loop measuring device  
[NASA-CASE-LAR-13823-1] c 35 N93-29084
- A quality monitor and monitoring technique employing optically stimulated electron emission  
[NASA-CASE-LAR-15063-1] c 38 N93-30414
- YOUNG, BRUCE R.**  
Closed loop fiber optic rotation sensor  
[NASA-CASE-NPO-16558-1-CU] c 74 N87-23259
- YOUNG, A. L.**  
Control valve and co-axial variable injector Patent  
[NASA-CASE-XNP-09702] c 15 N71-17654
- Semitoroidal diaphragm cavitating valve Patent  
[NASA-CASE-XNP-09704] c 12 N71-18615

- YOUNG, D. L.**  
Fluidized bed coal combustion reactor  
[NASA-CASE-NPO-14273-1] c 25 N82-11144
- YOUNG, D. R.**  
Skeletal stressing method and apparatus Patent  
[NASA-CASE-ARC-10100-1] c 05 N71-24738  
Programmable physiological infusion  
[NASA-CASE-ARC-10447-1] c 52 N74-22771
- YOUNG, H.**  
Radio frequency shielded enclosure Patent  
[NASA-CASE-XMF-09422] c 07 N71-19436
- YOUNG, K. M.**  
High voltage power supply  
[NASA-CASE-GSC-12818-1] c 33 N85-29147
- YOUNG, L. R.**  
Display research collision warning system  
[NASA-CASE-HQN-10703] c 21 N73-13643  
Adaptive polarization separation  
[NASA-CASE-LAR-12196-1] c 33 N81-26358
- YOUNG, LAWRENCE E.**  
System and method for measuring ocean surface currents at locations remote from land masses using synthetic aperture radar  
[NASA-CASE-NPO-17937-1-CU] c 43 N91-21621
- YOUNG, R. N.**  
Ac power amplifier Patent Application  
[NASA-CASE-LAR-10218-1] c 09 N70-34559  
Automatic balancing device Patent  
[NASA-CASE-LAR-10774] c 10 N71-13545  
Independent power generator  
[NASA-CASE-LAR-11208-1] c 44 N78-32539  
Electrochemical detection device  
[NASA-CASE-LAR-11922-1] c 25 N79-24073
- YOUNG, S. G.**  
Method of protecting a surface with a silicon-slurry/aluminide coating  
[NASA-CASE-LEW-13343-1] c 27 N82-28441  
Silicon-slurry/aluminide coating  
[NASA-CASE-LEW-13343] c 26 N83-31795
- YOUNG, W. J.**  
Phonocardiograph transducer Patent  
[NASA-CASE-XMS-05365] c 14 N71-22993
- YOUNG, W. R.**  
Apparatus for measuring an aircraft's speed and height  
[NASA-CASE-LAR-12275-1] c 35 N79-18296
- YOUNGBERG, C. L.**  
Sphere forming method and apparatus  
[NASA-CASE-NPO-15070-1] c 31 N83-35176
- YOUNGBLUTH, O., JR.**  
Method and apparatus for mapping the sensitivity of the face of a photodetector specifically a PMT  
[NASA-CASE-LAR-10320-1] c 09 N72-23172  
Versatile LDV burst simulator  
[NASA-CASE-LAR-11859-1] c 35 N79-14349
- YOUNGHANS, J. L.**  
Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c 07 N81-14999
- YU, I. P.**  
Multiple band circularly polarized microstrip antenna  
[NASA-CASE-MS-C-18334-1] c 32 N80-32604
- YU, JEFFREY W.**  
Improved real-time imaging spectrometer  
[NASA-CASE-NPO-18410-1-CU] c 74 N93-29086

## Z

- ZABOWER, H. R.**  
Hand-held photomicroscope  
[NASA-CASE-ARC-10468-1] c 14 N73-33361
- ZAHlava, B. A.**  
Vacuum probe surface sampler  
[NASA-CASE-LAR-10623-1] c 14 N73-30395
- ZALAMEDA, JOSEPH N.**  
Rapid detection and quantification of features such as damage or flaws in composite and metallic structures  
[NASA-CASE-LAR-14850-1-CU] c 38 N93-17048
- ZAPLATYNSKY, I.**  
Method and apparatus for coating substrates using a laser  
[NASA-CASE-LEW-13526-1] c 36 N84-22944
- ZAPLATYNSKY, ISIDOR**  
Plasma gun with coaxial powder feed and adjustable cathode  
[NASA-CASE-LEW-14901-1] c 75 N91-25875  
Composite thermal barrier coating  
[NASA-CASE-LEW-14999-1] c 24 N92-21725
- ZAREMBA, J. G.**  
Passive caging mechanism Patent  
[NASA-CASE-GSC-10306-1] c 15 N71-24694
- ZARETSKY, E. V.**  
Method of improving the reliability of a rolling element system Patent  
[NASA-CASE-XLE-02999] c 15 N71-16052
- ZAVADA, E. J.**  
Frangible tube energy dissipation Patent  
[NASA-CASE-XLA-00754] c 15 N70-34850
- ZAVESKY, RALPH J.**  
Heat exchanger for electrothermal devices  
[NASA-CASE-LEW-14037-1] c 20 N87-16875
- ZAVIANTSEFF, V.**  
Apparatus for ionization analysis  
[NASA-CASE-ARC-10017-1] c 14 N72-29464
- ZEANAH, H. W.**  
Filtering device  
[NASA-CASE-MFS-22729-1] c 32 N76-21366
- ZEBKER, H. A.**  
Synthetic aperture radar target simulator  
[NASA-CASE-NPO-15024-1] c 32 N84-27951
- ZEBKER, HOWARD A.**  
Data volume reduction for imaging radar polarimetry  
[NASA-CASE-NPO-17184-1-CU] c 32 N88-26541  
Method for detecting surface motions and mapping small terrestrial or planetary surface deformations with synthetic aperture radar  
[NASA-CASE-NPO-17831-1-CU] c 43 N91-14642
- ZEBROWSKI, Z. E.**  
Attitude control system for sounding rockets Patent  
[NASA-CASE-XGS-01654] c 31 N71-24750
- ZEBUS, P. P.**  
Adjustable securing base  
[NASA-CASE-MS-C-19666-1] c 37 N78-17383  
Variable contour securing system  
[NASA-CASE-MS-C-16270-1] c 37 N78-27423
- ZEIGER, R. J.**  
Concentric differential gearing arrangement  
[NASA-CASE-ARC-10462-1] c 37 N74-27901
- ZELLNER, G. J.**  
Gas cooled high temperature thermocouple Patent  
[NASA-CASE-XLE-09475-1] c 33 N71-15568
- ZEMAN, J. R.**  
Lamp modulator  
[NASA-CASE-KSC-10565] c 09 N72-25250
- ZENTNER, RONALD C.**  
Mechanized fluid connector and assembly tool system with ball detents  
[NASA-CASE-MS-C-21434-1] c 37 N92-10197
- ZERGER, R. S.**  
Constant temperature heat sink for calorimeters Patent  
[NASA-CASE-XMF-04208] c 33 N71-29051
- ZERLAUT, G. A.**  
Stabilized zinc oxide coating compositions Patent  
[NASA-CASE-XMF-07770-2] c 18 N71-26772  
Synthesis of zinc titanate pigment and coatings containing the same  
[NASA-CASE-MFS-13532] c 18 N72-17532
- ZERWEKH, P. S.**  
Ultrasonic transducer with Gaussian radial pressure distribution  
[NASA-CASE-LAR-12967-1] c 35 N84-22932
- ZIEMKE, M. C.**  
Constant temperature heat sink for calorimeters Patent  
[NASA-CASE-XMF-04208] c 33 N71-29051
- ZIMMERMAN, B. G.**  
Sun tracker with rotatable plane-parallel plate and two photocells Patent  
[NASA-CASE-XGS-01159] c 21 N71-10678  
Gravity gradient attitude control system Patent  
[NASA-CASE-GSC-10555-1] c 21 N71-27324  
Passive dual spin misalignment compensators  
[NASA-CASE-GSC-11479-1] c 35 N74-28097
- ZIMMERMAN, E. F.**  
Apparatus for applying cover slides  
[NASA-CASE-NPO-10575] c 03 N72-25019
- ZIMMERMAN, J. E.**  
Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c 43 N80-14423
- ZIMMERMAN, NORMAN B.**  
Ceramic-ceramic shell tile thermal protection system and method thereof  
[NASA-CASE-ARC-11641-1] c 24 N88-18628
- ZIMMERMAN, P. A.**  
Chassis unit insert tightening-extract device  
[NASA-CASE-XMS-01077-1] c 37 N79-33467
- ZIMMERMAN, R. L.**  
Thermally operated valve Patent  
[NASA-CASE-XLE-00815] c 15 N70-35407  
Double optic system for ion engine Patent  
[NASA-CASE-XNP-02839] c 28 N70-41922
- ZIMMERMAN, ROBERT K., JR.**  
Coaxial turnstile junction  
[NASA-CASE-GSC-13422-1] c 33 N92-23462
- ZIOLKOWSKI, A. J.**  
Multi-lobe scan horizon sensor Patent  
[NASA-CASE-XGS-00809] c 21 N70-35427
- ZLATKIS, A.**  
Analysis of volatile organic compounds  
[NASA-CASE-MS-C-14428-1] c 23 N77-17161
- ZMUDA, L. J.**  
Safety-type locking pin  
[NASA-CASE-MFS-18495] c 15 N72-11385
- ZMUIDZINAS, J. S.**  
Stabilization of He2(a 3 Sigma u+) molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c 72 N79-13826
- ZOHAR, S.**  
Counting digital filters  
[NASA-CASE-NPO-11821-1] c 08 N73-26175
- ZOOK, H. A.**  
Meteoroid capture cell construction  
[NASA-CASE-MS-C-12423-1] c 91 N76-30131
- ZORUMSKI, W. E.**  
Remote controlled tubular disconnect Patent  
[NASA-CASE-XLA-01396] c 03 N71-12259  
Noise suppressor  
[NASA-CASE-LAR-11141-1] c 07 N74-32418
- ZOTTARELLI, L. J.**  
Magnetic core current steering commutator Patent  
[NASA-CASE-NPO-10201] c 08 N71-18694  
Drive circuit utilizing two cores Patent  
[NASA-CASE-XNP-01318] c 10 N71-23033  
Current steering switch Patent  
[NASA-CASE-XNP-08567] c 09 N71-26000  
Digital memory in which the driving of each word location is controlled by a switch core Patent  
[NASA-CASE-NPO-01466] c 10 N71-26434
- ZOUTENDYK, J. A.**  
Method of measuring field funneling and range straggling in semiconductor charge-collecting junctions  
[NASA-CASE-NPO-16584-1-CU] c 76 N86-25269
- ZOUTENDYK, JOHN A.**  
Detection of multiple-bit errors from single-ion tracks in integrated circuits  
[NASA-CASE-NPO-18075-1-CU] c 33 N91-13622  
Method and apparatus for increasing resistance of bipolar buried layer integrated circuit devices to single-event upsets  
[NASA-CASE-NPO-17573-2-CU] c 33 N92-16196
- ZRUBEK, W. E.**  
System for monitoring signal amplitude ranges  
[NASA-CASE-XMS-04061-1] c 09 N69-39885
- ZUCCARO, J. J.**  
Electrode construction Patent  
[NASA-CASE-ARC-10043-1] c 05 N71-11193
- ZUCKERWAR, A. J.**  
Instrumentation for measurement of aircraft noise and sonic boom  
[NASA-CASE-LAR-11173-1] c 35 N75-19614  
Instrumentation for measuring aircraft noise and sonic boom  
[NASA-CASE-LAR-11476-1] c 07 N76-27232  
Differential sound level meter  
[NASA-CASE-LAR-12106-1] c 71 N78-14867  
High-temperature microphone system  
[NASA-CASE-LAR-12375-1] c 32 N79-24203  
Flow resistivity instrument  
[NASA-CASE-LAR-13053-1] c 43 N83-29783  
Acoustic ground impedance meter  
[NASA-CASE-LAR-12995-1] c 35 N84-22933
- ZUCKERWAR, ALLAN J.**  
Ultrasonic depth gauge for liquids under high pressure  
[NASA-CASE-LAR-13300-1-CU] c 35 N89-14407  
Passive fetal monitoring sensor  
[NASA-CASE-LAR-14088-1-CU] c 35 N92-33016  
High temperature fiber optic microphone having a pressure-sensing reflective membrane under tensile stress  
[NASA-CASE-LAR-14402-1-CU] c 74 N92-33017  
Vacuum-isolation vessel and method for measurement of thermal noise in microphones  
[NASA-CASE-LAR-14567-1-CU] c 33 N92-33021  
Fiber optic microphone having a pressure sensing reflective membrane and a voltage source for calibration purpose  
[NASA-CASE-LAR-14402-2-CU] c 71 N93-24602
- ZUPP, GEORGE A., JR.**  
Assured crew return vehicle  
[NASA-CASE-MS-C-21536-1] c 18 N92-21999
- ZURASKY, J. L.**  
Monitoring deposition of films  
[NASA-CASE-MFS-20675] c 26 N73-26751
- ZWIENER, J. M.**  
Real time reflectometer  
[NASA-CASE-MFS-23118-1] c 35 N77-31465
- ZYGIELBAUM, A. I.**  
Communications link for computers  
[NASA-CASE-NPO-11161] c 08 N72-25207  
Digital video display system using cathode ray tube  
[NASA-CASE-NPO-11342] c 09 N72-25248  
Numerical computer peripheral interactive device with manual controls  
[NASA-CASE-NPO-11497] c 08 N73-25206  
Digital demodulator-correlator  
[NASA-CASE-NPO-13982-1] c 32 N79-14267

### Typical Source Index Listing



Listings in this index are arranged alphabetically by source. The title of the document provides the user with a brief description of the subject matter. The case number is the prime access point to patent documents. The subject category number indicates the category in Section 1 (Abstracts) in which the citation is located. The accession number denotes the number by which the citation is identified within the subject category. The titles are arranged under each source in ascending accession number order.

### A

- Adjunct Systems, Inc., Huntsville, AL.**  
Longwall shearer tracking system  
[NASA-CASE-MFS-25717-1] c 35 N84-33768
- Aeroflex Labs., Inc., Plainview, NY.**  
Rotary actuator  
[NASA-CASE-NPO-10244] c 15 N72-26371
- Aerojet-General Corp., El Monte, CA.**  
High-speed infrared furnace  
[NASA-CASE-XLE-10466] c 17 N69-25147
- Ammonium perchlorate composite propellant containing an organic transitional metal chelate catalytic additive Patent  
[NASA-CASE-LAR-10173-1] c 27 N71-14090
- Swirling flow nozzle Patent  
[NASA-CASE-XNP-03692] c 28 N71-24321
- Automatic battery charger Patent  
[NASA-CASE-XNP-04758] c 03 N71-24605
- Attitude control system for sounding rockets Patent  
[NASA-CASE-XGS-01654] c 31 N71-24750
- Tensile strength testing device Patent  
[NASA-CASE-XNP-05634] c 15 N71-24834
- Hydroforming techniques using epoxy molds Patent  
[NASA-CASE-XLE-05641-1] c 15 N71-26346
- Electrical apparatus for detection of thermal decomposition of insulation Patent  
[NASA-CASE-XMF-03968] c 14 N71-27186
- Method and apparatus for nondestructive testing of pressure vessels  
[NASA-CASE-NPO-12142-1] c 38 N76-28563
- Aerojet-General Corp., Glendale, CA.**  
Rotating shaft seal Patent  
[NASA-CASE-XNP-02862-1] c 15 N71-26294
- Aerojet-General Corp., Sacramento, CA.**  
Process of forming particles in a cryogenic path Patent  
[NASA-CASE-NPO-10250] c 23 N71-16212

- Aeronautical Research Associates of Princeton, Inc., NJ.**  
Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c 05 N75-12930
- Air Products and Chemicals, Inc., Philadelphia, PA.**  
Low heat leak connector for cryogenic system  
[NASA-CASE-XLE-02367-1] c 31 N79-21225
- Airborne Instruments Lab., Deer Park, NY.**  
High-Q bandpass resonators utilizing bandstop resonator pairs  
[NASA-CASE-GSC-10990-1] c 09 N73-26195
- AIRResearch Mfg. Co., Torrance, CA.**  
Combinational logic for generating gate drive signals for phase control rectifiers  
[NASA-CASE-MFS-25208-1] c 33 N83-10345
- Adaptive control system for line-commutated inverters  
[NASA-CASE-MFS-25209-1] c 33 N83-35227
- Airtronics, Inc., Washington, DC.**  
Protection for energy conversion systems  
[NASA-CASE-XGS-04808] c 03 N69-25146
- Inverter with means for base current shaping for sweeping charge carriers from base region Patent  
[NASA-CASE-XGS-06226] c 10 N71-25950
- American Air Filter Co., Inc., Saint Louis, MO.**  
Gas filter mounting structure  
[NASA-CASE-MSC-12297] c 14 N72-23457
- American Optical Co., Pittsburgh, PA.**  
Telespectrograph Patent  
[NASA-CASE-XLA-03273] c 14 N71-18699
- American Optical Co., Southbridge, MA.**  
Pneumatic mirror support system  
[NASA-CASE-XLA-03271] c 11 N69-24321
- American Science and Engineering, Inc., Cambridge, MA.**  
X-ray reflection collimator adapted to focus X-radiation directly on a detector Patent  
[NASA-CASE-XHO-04106] c 14 N70-40240
- Ampex Corp., Redwood City, CA.**  
Method for making conductors for ferrite memory arrays  
[NASA-CASE-LAR-10994-1] c 24 N75-13032
- Anocut Engineering Co., Chicago, IL.**  
Apparatus for electrolytically tapered or contoured cavities  
[NASA-CASE-XNP-08835-1] c 37 N80-14395
- Applied Magnetics Corp., Goleta, CA.**  
Magnetic recording head and method of making same Patent  
[NASA-CASE-GSC-10097-1] c 08 N71-27210
- Applied Space Products, Inc., Palo Alto, CA.**  
Intumescent paints Patent  
[NASA-CASE-ARC-10099-1] c 18 N71-15469
- Army Air Mobility Research and Development Lab., Hampton, VA.**  
Helicopter anti-torque system using strakes  
[NASA-CASE-LAR-13233-1] c 05 N84-33400
- Army Aviation Research and Development Command, Moffett Field, CA.**  
Clutchless multiple drive source for output shaft  
[NASA-CASE-ARC-11325-1] c 37 N82-22496
- ARO, Inc., Arnold AFS, TN.**  
Rhomboid prism pair for rotating the plane of parallel light beams  
[NASA-CASE-ARC-11311-1] c 74 N83-13978
- Astro Research Corp., Carpinteria, CA.**  
Foldable beam  
[NASA-CASE-LAR-12077-1] c 31 N81-25259
- Astro-Space Labs., Inc., Huntsville, AL.**  
Linear differential pressure sensor Patent  
[NASA-CASE-XMF-01974] c 14 N71-22752
- Athens Coll., AL.**  
Apparatus and method for heating a material in a transparent ampoule  
[NASA-CASE-MFS-25436-1] c 27 N83-36220
- Atlantic Research Corp., Alexandria, VA.**  
Spherically-shaped rocket motor Patent  
[NASA-CASE-XHQ-01897] c 28 N70-35381
- Auburn Research Foundation, Inc., AL.**  
Shear modulated fluid amplifier Patent  
[NASA-CASE-MFS-10412] c 12 N71-17578
- Laser coolant and ultraviolet filter  
[NASA-CASE-MFS-20180] c 16 N72-12440

- Auburn Univ., AL.**  
Automatic frequency control for FM transmitter  
[NASA-CASE-MFS-21540-1] c 32 N74-19790
- Isolated output system for a class D switching-mode amplifier  
[NASA-CASE-MFS-21616-1] c 33 N75-30429
- Frequency modulated oscillator  
[NASA-CASE-MFS-23181-1] c 33 N77-17351
- Autonetics, Anaheim, CA.**  
Adaptive voting computer system  
[NASA-CASE-MSC-13932-1] c 62 N74-14920
- Avco Corp., Cincinnati, OH.**  
Method for forming pyrrone molding powders and products of said method  
[NASA-CASE-LAR-10423-1] c 23 N82-29358
- Avco Corp., New York, NY.**  
Signal multiplexer  
[NASA-CASE-XGS-01110] c 07 N69-24334
- Avco Corp., Wilmington, MA.**  
Method and apparatus for making a heat insulating and ablative structure Patent  
[NASA-CASE-XMS-02009] c 33 N71-20834

### B

- Baldwin Electronics, Inc., Little Rock, AR.**  
Digital plus analog output encoder  
[NASA-CASE-GSC-12115-1] c 62 N76-31946
- Baldwin-Lima-Hamilton Corp., San Francisco, CA.**  
Valve actuator Patent  
[NASA-CASE-XHQ-01208] c 15 N70-35409
- Ball Bros. Research Corp., Boulder, CO.**  
Turnstile slot antenna  
[NASA-CASE-GSC-11428-1] c 32 N74-20864
- Star scanner  
[NASA-CASE-GSC-11569-1] c 89 N74-30886
- Barnes Engineering Co., Stamford, CT.**  
Multi-lobar scan horizon sensor Patent  
[NASA-CASE-XGS-00809] c 21 N70-35427
- Horizon sensor with a plurality of fixedly positioned radiation compensated radiation sensitive detectors Patent  
[NASA-CASE-XNP-06957] c 14 N71-21088
- Miniature carbon dioxide sensor and methods  
[NASA-CASE-MSC-13332-1] c 14 N72-21408
- Wedge immersed thermistor bolometers  
[NASA-CASE-XGS-01245-1] c 35 N79-33449
- Battelle Columbus Labs., OH.**  
Attaching of strain gages to substrates  
[NASA-CASE-FRC-10093-1] c 35 N80-20560
- Battelle Memorial Inst., Columbus, OH.**  
Process for preparation of dianilinosilanes Patent  
[NASA-CASE-XMF-06409] c 06 N71-23230
- Process for preparation of high-molecular-weight polyaryloxysilanes Patent  
[NASA-CASE-XMF-08674] c 06 N71-28807
- Method for determining presence of OH in magnesium oxide  
[NASA-CASE-NPO-10774] c 06 N72-17095
- Porus electrode comprising a bonded stack of pieces of corrugated metal foil  
[NASA-CASE-GSC-11368-1] c 09 N73-32108
- Method of making porous conductive supports for electrodes  
[NASA-CASE-GSC-11367-1] c 44 N74-19692
- Battelle Memorial Inst., Richland, WA.**  
Low temperature aluminum alloy Patent  
[NASA-CASE-XMF-02786] c 17 N71-20743
- Battelle Northwest Labs., Richland, WA.**  
Preparation of high purity copper fluoride  
[NASA-CASE-LEW-10794-1] c 06 N72-17093
- Bausch and Lomb, Inc., Rochester, NY.**  
Petzval type objective including field shaping lens Patent  
[NASA-CASE-GSC-10700] c 23 N71-30027
- Illumination system including a virtual light source Patent  
[NASA-CASE-HQN-10781] c 23 N71-30292
- Baylor Univ., Houston, TX.**  
EEG sleep analyzer and method of operation Patent  
[NASA-CASE-MSC-13282-1] c 05 N71-24729

# Beckman Instruments, Inc.

# CORPORATE SOURCE

## C

Compressible biomedical electrode  
[NASA-CASE-MSC-13648] c 05 N72-27103

**Beckman Instruments, Inc., Anaheim, CA.**  
Pressure modulating valve  
[NASA-CASE-MSC-14905-1] c 37 N77-28487

**Beckman Instruments, Inc., Fullerton, CA.**  
Pulse activated polarographic hydrogen detector  
Patent  
[NASA-CASE-XMF-06531] c 14 N71-17575  
Electronic divider and multiplier using photocells  
Patent  
[NASA-CASE-XFR-05637] c 09 N71-19480  
Pulse generating circuit employing switch means on ends of delay line for alternately charging and discharging same  
Patent  
[NASA-CASE-XNP-00745] c 10 N71-28960  
Gas operated actuator  
[NASA-CASE-NPO-11340] c 15 N72-33477  
Specific wavelength colorimeter  
[NASA-CASE-MSC-14081-1] c 35 N74-27860

**Beckman Instruments, Inc., Pasadena, CA.**  
Pneumatic system for controlling and actuating pneumatic cyclic devices  
[NASA-CASE-XMS-04843] c 03 N69-21469

**Becton, Dickinson and Co., Rutherford, NJ.**  
Vacuum probe surface sampler  
[NASA-CASE-LAR-10623-1] c 14 N73-30395

**Beech Aircraft Corp., Boulder, CO.**  
X-ray determination of parts alignment  
[NASA-CASE-MSC-20418-1] c 74 N86-20126

**Bell Aerospace Co., Buffalo, NY.**  
Modulator for tone and binary signals  
[NASA-CASE-GSC-11743-1] c 32 N75-24981  
Correlation type phase detector  
[NASA-CASE-GSC-11744-1] c 33 N75-26243

**Bell Aerosystems Co., Buffalo, NY.**  
Lunar landing flight research vehicle  
Patent  
[NASA-CASE-XFR-00929] c 31 N70-34966  
Flexibly connected support and skin  
Patent  
[NASA-CASE-XLA-01027] c 31 N71-24035  
Injection head for delivering liquid fuel and oxidizers  
[NASA-CASE-NPO-10046] c 28 N72-17843  
Flight control system  
[NASA-CASE-MSC-13397-1] c 21 N72-25595

**Bell and Howell Co., Chicago, IL.**  
Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c 27 N78-31233  
Process for producing a well-adhered durable optical coating on an optical plastic substrate  
[NASA-CASE-ARC-11039-1] c 74 N78-32854

**Bellcomm, Inc., Washington, DC.**  
Physical correction filter for improving the optical quality of an image  
[NASA-CASE-HQN-10542-1] c 74 N75-25706

**Bendix Corp., Ann Arbor, MI.**  
Circuit breaker utilizing magnetic latching relays  
Patent  
[NASA-CASE-MSC-11277] c 09 N71-29008

**Bendix Corp., Columbia, MD.**  
Microwave dichroic plate  
[NASA-CASE-GSC-12171-1] c 33 N79-28416

**Bendix Corp., Davenport, IA.**  
Dual stage check valve  
[NASA-CASE-MSC-13587-1] c 15 N73-30459

**Bendix Corp., Detroit, MI.**  
Deformable vehicle wheel  
Patent  
[NASA-CASE-MFS-20400] c 31 N71-18611

**Bendix Corp., Huntsville, AL.**  
Multi axes vibration fixtures  
[NASA-CASE-MFS-20242] c 14 N73-19421

**Bendix Corp., Kennedy Space Center, FL.**  
Color perception tester  
[NASA-CASE-KSC-10278] c 05 N72-16015

**Bendix Corp., Teterboro, NJ.**  
Evacuation valve  
[NASA-CASE-LAR-10061-1] c 15 N72-31483

**Bendix Research Labs., Southfield, MI.**  
Image tube  
[NASA-CASE-GSC-11602-1] c 33 N74-21850

**Bionetics Corp., Hampton, VA.**  
Small conductive particle sensor  
[NASA-CASE-LAR-12552-1] c 35 N82-11431

**Boeing Aerospace Co., Houston, TX.**  
Fluid sample collection and distribution system  
[NASA-CASE-MSC-16841-1] c 34 N79-24285  
Method and automated apparatus for detecting coliform organisms  
[NASA-CASE-MSC-16777-1] c 51 N80-27067

**Boeing Aerospace Co., Seattle, WA.**  
Method and apparatus for fabricating improved solar cell modules  
[NASA-CASE-NPO-14416-1] c 44 N81-14389

**Boeing Co., Cocoa Beach, FL.**  
Positive contact resistance soldering unit  
[NASA-CASE-KSC-10242] c 15 N72-23497

Variable resistance constant tension and lubrication device  
[NASA-CASE-KSC-10723-1] c 37 N75-13265

**Boeing Co., Houston, TX.**  
Method and apparatus for eliminating luminol interference material  
[NASA-CASE-MSC-16260-1] c 51 N80-16714

**Boeing Co., Huntsville, AL.**  
Hydrogen fire blink detector  
[NASA-CASE-MFS-15063] c 14 N72-25412  
Borescope with variable angle scope  
[NASA-CASE-MFS-15162] c 14 N72-32452  
Guide for a typewriter  
[NASA-CASE-MFS-15218-1] c 37 N77-19457

**Boeing Co., Pasadena, TX.**  
Medical subject monitoring systems  
[NASA-CASE-MSC-14180-1] c 52 N76-14757

**Boeing Co., Seattle, WA.**  
Strain gage Patent Application  
[NASA-CASE-FRC-10053] c 14 N70-35587  
Method of inhibiting stress corrosion cracks in titanium alloys  
Patent  
[NASA-CASE-NPO-10271] c 17 N71-16393  
Strain sensor for high temperatures  
[NASA-CASE-XNP-09205] c 14 N71-17657  
Forming tool for ribbon or wire  
[NASA-CASE-XLA-05966] c 15 N72-12408  
Solar cell assembly test method  
[NASA-CASE-NPO-10401] c 03 N72-20033  
Thermal compression bonding of interconnectors  
[NASA-CASE-GSC-10303] c 15 N72-22487  
Extrusion can  
[NASA-CASE-NPO-10812] c 15 N73-13464  
Radiation sensitive solid state switch  
[NASA-CASE-NPO-10817-1] c 08 N73-30135  
Plasma cleaning device  
[NASA-CASE-MFS-22906-1] c 75 N78-27913  
Calibrating pressure switch  
[NASA-CASE-XMF-04494-1] c 33 N79-33392

**Boeing Commercial Airplane Co., Seattle, WA.**  
Tire/wheel concept  
[NASA-CASE-LAR-11695-2] c 37 N81-24443  
Fuselage structure using advanced technology fiber reinforced composites  
[NASA-CASE-LAR-11688-1] c 24 N82-26384  
Slotted variable camber flap  
[NASA-CASE-LAR-12541-1] c 05 N84-22551

**Borden, Inc., New York, NY.**  
Process of treating cellulosic membrane and alkaline with membrane separator  
[NASA-CASE-GSC-10019-1] c 44 N82-24641  
Separator for alkaline batteries and method of making same  
[NASA-CASE-GSC-10350-1] c 44 N82-24642  
Separator for alkaline electric cells and method of making  
[NASA-CASE-GSC-10017-1] c 44 N82-24643  
Separator for alkaline electric batteries and method of making  
[NASA-CASE-GSC-10018-1] c 44 N82-24644  
Alkaline electrochemical cells and method of making  
[NASA-CASE-GSC-10349-1] c 44 N82-24645  
Aqueous alkali metal hydroxide insoluble cellulose ether membrane  
[NASA-CASE-XGS-05584-1] c 25 N82-29370

**Borg-Warner Corp., Chicago, IL.**  
Data transfer system  
Patent  
[NASA-CASE-NPO-12107] c 08 N71-27255

**Brown and Root-Northrop, Houston, TX.**  
Anti-fog composition  
[NASA-CASE-MSC-13530-2] c 23 N75-14834

**Brown Engineering Co., Inc., Huntsville, AL.**  
Air bearing  
Patent  
[NASA-CASE-XMF-01887] c 15 N71-10617  
Collapsible nozzle extension for rocket engines  
Patent  
[NASA-CASE-MFS-11497] c 28 N71-16224  
Inspection gage for boss  
Patent  
[NASA-CASE-XMF-04966] c 14 N71-17658  
Method of recording a gas flow pattern  
Patent  
[NASA-CASE-XMF-01779] c 12 N71-20815  
Trigonometric vehicle guidance assembly which aligns the three perpendicular axes of two three-axes systems  
Patent  
[NASA-CASE-XMF-00684] c 21 N71-21688  
Vapor liquid separator  
Patent  
[NASA-CASE-XMF-04042] c 15 N71-23023  
Thruster maintenance system  
Patent  
[NASA-CASE-MFS-20325] c 28 N71-27095  
Inflatable transpiration cooled nozzle  
[NASA-CASE-MFS-20619] c 28 N72-11708

**California Computer Products, Inc., Anaheim.**  
Temperature regulation circuit  
Patent  
[NASA-CASE-XNP-02792] c 14 N71-28958

**California Inst. of Tech., Pasadena.**  
Altitude control for spacecraft  
Patent  
[NASA-CASE-XNP-02982] c 31 N70-41855  
Baseband signal combiner for large aperture antenna array  
[NASA-CASE-NPO-14641-1] c 32 N81-29308  
Schottky barrier solar cell  
[NASA-CASE-NPO-13689-2] c 44 N81-29525  
Interferometer  
[NASA-CASE-NPO-14448-1] c 74 N81-29963  
Crude oil desulfurization  
[NASA-CASE-NPO-14542-1] c 25 N82-23282  
Electronic system for high power load control  
[NASA-CASE-NPO-15358-1] c 33 N83-27126  
Supercritical solvent coal extraction  
[NASA-CASE-NPO-15210-1] c 25 N84-22709  
Absorbable-susceptor joining of ceramic surfaces  
[NASA-CASE-NPO-15640-1] c 27 N84-22748  
Radiative cooler  
[NASA-CASE-NPO-15465-1] c 34 N84-22903  
Method and apparatus for precision control of radiometer  
[NASA-CASE-NPO-15398-1] c 35 N84-22931  
Spectrophone stabilized laser with line center offset frequency control  
[NASA-CASE-NPO-15516-1] c 36 N84-22943  
Wind and solar powered turbine  
[NASA-CASE-NPO-15496-1] c 44 N84-23018  
Acoustic rotation control  
[NASA-CASE-NPO-15689-1] c 71 N84-23233  
Programmable scan/read circuitry for charge coupled device imaging detectors  
[NASA-CASE-NPO-15345-1] c 74 N84-23247  
Laser activated MTOS microwave device  
[NASA-CASE-NPO-16112-1] c 33 N86-19516

**California Univ., Berkeley.**  
Adjustable mount for a trihedral mirror  
Patent  
[NASA-CASE-XNP-08907] c 23 N71-29123  
Infrared detectors  
[NASA-CASE-LAR-10728-1] c 14 N73-12445  
Resistive anode image converter  
[NASA-CASE-HQN-10876-1] c 33 N76-27473  
Low gravity phase separator  
[NASA-CASE-MSC-14773-1] c 35 N78-12390  
Automatic multiple-sample applicator and electrophoresis apparatus  
[NASA-CASE-ARC-10991-1] c 25 N78-14104  
Process for preparing higher oxides of the alkali and alkaline earth metals  
[NASA-CASE-ARC-10992-1] c 26 N78-32229  
Microelectrophoretic apparatus and process  
[NASA-CASE-ARC-11121-1] c 25 N79-14169

**California Univ., Los Angeles.**  
Continuous plasma light source  
[NASA-CASE-XNP-04167-2] c 25 N72-24753  
Continuous plasma laser  
[NASA-CASE-XNP-04167-3] c 36 N77-19416

**Catholic Univ. of America, Washington, DC.**  
Electromagnetic wave energy converter  
[NASA-CASE-GSC-11394-1] c 09 N73-32109

**Chance Vought Corp., Dallas, TX.**  
Coupling for linear shaped charge  
Patent  
[NASA-CASE-XLA-00189] c 33 N70-36846  
Spin forming tubular elbows  
Patent  
[NASA-CASE-XMF-01083] c 15 N71-22723  
Single action separation mechanism  
Patent  
[NASA-CASE-XLA-00188] c 15 N71-22874

**Christopher Newport Coll., Newport News, VA.**  
Photoelectrochemical cells including chalcogenophosphate photoelectrodes  
[NASA-CASE-LAR-12958-1] c 44 N84-23019

**Chrysler Corp., Detroit, MI.**  
Ceramic insulation for radiant heating environments and method of preparing the same  
Patent  
[NASA-CASE-MFS-14253] c 33 N71-24858  
Constant temperature heat sink for calorimeters  
Patent  
[NASA-CASE-XMF-04208] c 33 N71-29051

**Chrysler Corp., Huntsville, AL.**  
Apparatus for ejection of an instrument cover  
[NASA-CASE-MSC-04132] c 15 N69-27502

**Collins Radio Co., Cedar Rapids, IA.**  
Power responsive overload sensing circuit  
Patent  
[NASA-CASE-GSC-10667-1] c 10 N71-33129  
Chassis unit insert tightening-extract device  
[NASA-CASE-XMS-01077-1] c 37 N79-33467

**Collins Radio Co., Dallas, TX.**  
Signal path series step biased multidevice high efficiency amplifier  
Patent  
[NASA-CASE-GSC-10668-1] c 07 N71-28430

- Heat conductive resiliently compressible structure for space electronics package modules Patent  
[NASA-CASE-MSC-12389] c 33 N71-29052  
Infinite range electronics gain control circuit  
[NASA-CASE-GSC-10786-1] c 10 N72-28241
- Colorado State Univ., Fort Collins.**  
Apparatus for extraction and separation of a preferentially photo-dissociated molecular isotope into positive and negative ions by means of an electric field  
[NASA-CASE-LEW-12465-1] c 25 N78-25148
- Comprehensive Designers, Inc., Sherman Oaks, CA.**  
Vehicle for use in planetary exploration  
[NASA-CASE-NPO-11366] c 11 N73-26238
- Computer Control Co., Inc., Framingham, MA.**  
Test fixture for pellet-like electrical elements  
[NASA-CASE-XNP-06032] c 09 N69-21926  
Support structure for irradiated elements Patent  
[NASA-CASE-XNP-06031] c 15 N71-15606  
Counter Patent  
[NASA-CASE-XNP-06234] c 10 N71-27137
- Computer Sciences Corp., Falls Church, VA.**  
Oceanic wave measurement system  
[NASA-CASE-MFS-23862-1] c 48 N80-18667
- Computer Sciences Corp., Greenbelt, MD.**  
Method and apparatus for mapping the distribution of chemical elements in an extended medium  
[NASA-CASE-GSC-12808-1] c 25 N85-21279
- Computer Sciences Corp., Mountain View, CA.**  
Thumb-actuated two-axis controller  
[NASA-CASE-ARC-11372-1] c 08 N86-27288
- Conrac Corp., Pasadena, CA.**  
Penetrating radiation system for detecting the amount of liquid in a tank Patent  
[NASA-CASE-MSC-12280] c 27 N71-16348
- Consolidated Controls Corp., El Segundo, CA.**  
Low temperature latching solenoid  
[NASA-CASE-MSC-18106-1] c 33 N82-11357
- Cornell Univ., Ithaca, NY.**  
Flux sensing device using a tubular core with toroidal gating coil and solenoidal output coil wound thereon Patent  
[NASA-CASE-XGS-01881] c 09 N70-40123
- Crane Co., Burbank, CA.**  
Hydraulic transformer Patent  
[NASA-CASE-MFS-20830] c 15 N71-30028
- Curtiss-Wright Corp., Wood-Ridge, NJ.**  
Gas turbine combustion apparatus Patent  
[NASA-CASE-XLE-103477-1] c 28 N71-20330
- Cuttler-Hammer, Inc., Melville, NY.**  
Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c 32 N77-28346

## D

- Delaware Univ., Newark.**  
High field CdS detector for infrared radiation  
[NASA-CASE-LAR-11027-1] c 35 N74-18088
- Denver Univ., CO.**  
Metal shearing energy absorber  
[NASA-CASE-HQN-10638-1] c 15 N73-30460
- Department of Transportation, Cambridge, MA.**  
Optical noise suppression device and method  
[NASA-CASE-MSC-12640-1] c 74 N76-31998
- Dorne and Margolin, Inc., Bohemia, NY.**  
Nose cone mounted heat resistant antenna Patent  
[NASA-CASE-XMS-04312] c 07 N71-22984
- Douglas Aircraft Co., Inc., Santa Monica, CA.**  
Recoverable single stage spacecraft booster Patent  
[NASA-CASE-XMF-01973] c 31 N70-41588  
Switching circuit employing regeneratively connected complementary transistors Patent  
[NASA-CASE-XNP-02654] c 10 N70-42032  
Split nut separation system Patent  
[NASA-CASE-XNP-06914] c 15 N71-21489  
Artificial gravity spin deployment system Patent  
[NASA-CASE-XNP-02595] c 31 N71-21881  
Portable superclean air column device Patent  
[NASA-CASE-XMF-03212] c 15 N71-22721  
Energy absorption device Patent  
[NASA-CASE-XNP-01848] c 15 N71-28959  
Collapsible pistons  
[NASA-CASE-MSC-13789-1] c 11 N73-32152
- Duke Univ., Durham, NC.**  
Regulated dc-to-dc converter for voltage step-up or step-down with input-output isolation  
[NASA-CASE-HQN-10792-1] c 33 N74-11049
- Dumont Electron Tubes, Clifton, NJ.**  
High contrast cathode ray tube  
[NASA-CASE-ERC-10468] c 09 N72-20206
- Dynatherm Corp., Cockeysville, MD.**  
Heat pipe thermal switch  
[NASA-CASE-GSC-12812-1] c 34 N83-35307

## E

- Echo Science Corp., Mountain View, CA.**  
Dynamic capacitor having a peripherally driven element and system incorporating the same  
[NASA-CASE-XNP-02899-1] c 33 N79-21265
- Eitel-McCullough, Inc., San Carlos, CA.**  
Method of forming ceramic to metal seal Patent  
[NASA-CASE-XNP-01263-2] c 15 N71-26312
- Electrac, Inc., Anaheim, CA.**  
Optimum predetection diversity receiving system Patent  
[NASA-CASE-XGS-00740] c 07 N71-23098
- Electric Storage Battery Co., Raleigh, NC.**  
Electric battery and method for operating same Patent  
[NASA-CASE-XGS-01674] c 03 N71-29129  
Storage battery comprising negative plates of a wedge shaped configuration  
[NASA-CASE-NPO-11806-1] c 44 N74-19693
- Electric Storage Battery Co., Yardley, PA.**  
Electric storage battery  
[NASA-CASE-NPO-11021] c 03 N72-20032
- Electro-Optical Systems, Inc., Pasadena, CA.**  
Focussing system for an ion source having apertured electrodes Patent  
[NASA-CASE-XNP-03332] c 09 N71-10618  
Electrolytically regenerative hydrogen-oxygen fuel cell Patent  
[NASA-CASE-XLE-04526] c 03 N71-11052  
Method of producing refractory bodies having controlled porosity Patent  
[NASA-CASE-LEW-10393-1] c 17 N71-15468  
Soil particles separator, collector and viewer Patent  
[NASA-CASE-XNP-09770] c 15 N71-20440  
Particle detection apparatus including a ballistic pendulum Patent  
[NASA-CASE-XMS-04201] c 14 N71-22990  
Polarity sensitive circuit Patent  
[NASA-CASE-XNP-00952] c 10 N71-23271  
Ion engine casing construction and method of making same Patent  
[NASA-CASE-XNP-06942] c 28 N71-23293  
Material handling device Patent  
[NASA-CASE-XNP-09770-3] c 11 N71-27036  
Screen particle separator  
[NASA-CASE-XNP-09770-2] c 15 N72-22483
- Electronic Image Systems Corp., Cambridge, MA.**  
Drying apparatus for photographic sheet material  
[NASA-CASE-GSC-11074-1] c 14 N73-28489
- Eloret Corp., Palo Alto, CA.**  
Composite flexible blanket insulation  
[NASA-CASE-ARC-11907-1-NP] c 24 N91-31236
- Essex Corp., Huntsville, AL.**  
Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c 18 N83-29303
- Ewen Knight Corp., East Natick, MA.**  
Method and means for providing an absolute power measurement capability Patent  
[NASA-CASE-ERC-11020] c 14 N71-26774

## F

- Fairchild Hiller Corp., Germantown, MD.**  
Two axis fluxgate magnetometer Patent  
[NASA-CASE-GSC-10441-1] c 14 N71-27325  
Space simulation and radiative property testing system and method Patent  
[NASA-CASE-MFS-20096] c 14 N71-30026  
Thermal control system for a spacecraft modular housing  
[NASA-CASE-GSC-11018-1] c 31 N73-30829
- Fairchild Republic Co., Farmingdale, NY.**  
Surface conforming thermal/pressure seal  
[NASA-CASE-MSC-18422-1] c 37 N82-16408
- Faraday Labs, Inc., La Jolla, CA.**  
Method for attaching a fused-quartz mirror to a conductive metal substrate  
[NASA-CASE-MFS-23405-1] c 26 N77-29260
- Federal-Mogul Corp., Los Alamitos, CA.**  
Hydraulic casting of liquid polymers Patent  
[NASA-CASE-XNP-07659] c 06 N71-22975
- Florida Univ., Gainesville.**  
Safety flywheel  
[NASA-CASE-HQN-10888-1] c 44 N79-14527
- FMC Corp., New York, NY.**  
Decomposition unit Patent  
[NASA-CASE-XMS-00583] c 28 N70-38504
- Foothill Coll., Los Altos Hills, CA.**  
Electrical conductivity cell and method for fabricating the same  
[NASA-CASE-ARC-10810-1] c 33 N76-19339
- Ford Motor Co., Dearborn, MI.**  
Omnidirectional acceleration device Patent  
[NASA-CASE-HQN-10780] c 14 N71-30265

## G

- Garrett Corp., Los Angeles, CA.**  
Relief valve  
[NASA-CASE-XMS-05894-1] c 15 N69-21924  
Portable environmental control system Patent  
[NASA-CASE-XMS-09632-1] c 05 N71-11203  
Dual latching solenoid valve Patent  
[NASA-CASE-XMS-05890] c 09 N71-23191  
Water management system and an electrolytic cell therefor Patent  
[NASA-CASE-MSC-10960-1] c 03 N71-24718  
Low cycle fatigue testing machine  
[NASA-CASE-LAR-10270-1] c 32 N72-25877  
Process for separation of dissolved hydrogen from water by use of palladium and process for coating palladium with palladium black  
[NASA-CASE-XMS-13335-1] c 06 N72-31140  
Flexible joint for pressurizable garment  
[NASA-CASE-MSC-11072] c 54 N74-32546  
Gas compression apparatus  
[NASA-CASE-MSC-14757-1] c 35 N78-10428  
Wind tunnel  
[NASA-CASE-LAR-10135-1] c 09 N79-21083  
Water separator  
[NASA-CASE-XMS-01295-1] c 37 N79-21345
- Garrett Corp., Torrance, CA.**  
Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c 33 N83-31953
- GCA Corp., Bedford, MA.**  
Analytical photoionization mass spectrometer with an argon gas filter between the light source and monochromator Patent  
[NASA-CASE-LAR-10180-1] c 06 N71-13461
- General Dynamics/Astronautics, San Diego, CA.**  
Determination of spot weld quality Patent  
[NASA-CASE-XNP-02588] c 15 N71-18613  
Pressure transducer calibrator Patent  
[NASA-CASE-XNP-01660] c 14 N71-23036  
Plating nickel on aluminum castings Patent  
[NASA-CASE-XNP-04148] c 17 N71-24830
- General Dynamics/Convair, San Diego, CA.**  
Signal generator  
[NASA-CASE-XNP-05612] c 09 N69-21468  
Separation nut Patent  
[NASA-CASE-XGS-01971] c 15 N71-15922  
Zero gravity separator Patent  
[NASA-CASE-XLE-00586] c 15 N71-15968  
Catalyst cartridge for carbon dioxide reduction unit  
[NASA-CASE-LAR-10551-1] c 25 N74-12813  
Heat exchanger  
[NASA-CASE-MFS-22991-1] c 34 N77-10463
- General Dynamics Corp., San Diego, CA.**  
Light radiation direction indicator with a baffle of two parallel grids  
[NASA-CASE-XNP-03930] c 14 N69-24331  
Method and apparatus for attaching physiological monitoring electrodes Patent  
[NASA-CASE-XFR-07658-1] c 05 N71-26293  
Driving lamps by induction  
[NASA-CASE-MFS-21214-1] c 09 N73-30181
- General Electric Co., Cincinnati, OH.**  
Dual output variable pitch turbofan actuation system  
[NASA-CASE-LEW-12419-1] c 07 N77-14025  
Reverse pitch fan with divided splitter  
[NASA-CASE-LEW-12760-1] c 07 N77-17059  
Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c 24 N77-19170  
Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c 07 N77-23106  
Blade retainer assembly  
[NASA-CASE-LEW-12608-1] c 07 N77-27116  
Platform for a swing root turbomachinery blade  
[NASA-CASE-LEW-12312-1] c 07 N77-32148  
Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c 37 N77-32500  
Bearing seat usable in a gas turbine engine  
[NASA-CASE-LEW-12477-1] c 37 N77-32501  
Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c 37 N78-10467  
Impact absorbing blade mounts for variable pitch blades  
[NASA-CASE-LEW-12313-1] c 37 N78-10468  
Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c 07 N78-17055  
Gas turbine engine with convertible accessories  
[NASA-CASE-LEW-12390-1] c 07 N78-17056  
Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c 37 N78-17384  
Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c 07 N78-25089  
Redundant disc  
[NASA-CASE-LEW-12496-1] c 07 N78-33101

## H

Fuel delivery system including heat exchanger means  
[NASA-CASE-LEW-12793-1] c 37 N79-11403

Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-3] c 07 N79-14096

Variable area exhaust nozzle  
[NASA-CASE-LEW-12378-1] c 07 N79-14097

Sound-suppressing structure with thermal relief  
[NASA-CASE-LEW-12658-1] c 71 N79-14871

Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c 07 N80-18039

Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c 07 N81-14999

Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c 07 N81-19115

Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c 07 N81-19116

Thrust reverser for a long duct fan engine  
[NASA-CASE-LEW-13199-1] c 07 N82-26293

Control means for a gas turbine engine  
[NASA-CASE-LEW-14586-1] c 07 N83-31603

Apparatus for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-1] c 07 N83-36029

Tip cap for a rotor blade  
[NASA-CASE-LEW-13654-1] c 07 N84-22560

Air modulation apparatus  
[NASA-CASE-LEW-13524-1] c 07 N84-33410

Flow modifying device  
[NASA-CASE-LEW-13562-2] c 07 N85-35195

Method for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-2] c 07 N86-20389

**General Electric Co., Cleveland, OH.**  
Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c 07 N78-18067

**General Electric Co., Philadelphia, PA.**  
Catalyst for growth of boron carbide single crystal whiskers  
[NASA-CASE-XHQ-03903] c 15 N69-21922

Didymium hydrate additive to nickel hydroxide electrodes  
Patent

[NASA-CASE-XGS-03505] c 03 N71-10608

Bismuth-lead coatings for gas bearings used in atmospheric environments and vacuum chambers  
Patent  
[NASA-CASE-XGS-02011] c 15 N71-20739

Automatic control of liquid cooling garment by cutaneous and external auditory meatus temperatures  
[NASA-CASE-MS-13917-1] c 05 N72-15098

Method for measuring cutaneous sensory perception  
[NASA-CASE-MS-13609-1] c 05 N72-25122

Reaction tester  
[NASA-CASE-MS-13604-1] c 05 N73-13114

Air conditioned suit  
[NASA-CASE-LAR-10076-1] c 05 N73-20137

Compton scatter attenuation gamma ray spectrometer  
[NASA-CASE-MFS-21441-1] c 14 N73-30392

Inverter ratio failure detector  
[NASA-CASE-NPO-13160-1] c 35 N74-18090

Electrophoretic sample insertion  
[NASA-CASE-MFS-21395-1] c 25 N74-26948

Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c 34 N74-27744

Multiparameter vision testing apparatus  
[NASA-CASE-MS-13601-2] c 54 N75-27759

Automatic biowaste sampling  
[NASA-CASE-MS-14640-1] c 54 N76-14804

Solar cell module  
[NASA-CASE-NPO-14467-1] c 44 N79-31753

Voltage feed through apparatus having reduced partial discharge  
[NASA-CASE-GSC-12347-1] c 33 N80-18286

**General Electric Co., Pleasanton, CA.**  
Method of making a cermet  
Patent  
[NASA-CASE-LEW-10219-1] c 18 N71-28729

**General Electric Co., Schenectady, NY.**  
Superconductive accelerometer  
Patent  
[NASA-CASE-XMF-01099] c 14 N71-15969

Remote manipulator system  
[NASA-CASE-MFS-22022-1] c 37 N76-15460

Automatic transponder  
[NASA-CASE-GSC-12075-1] c 32 N77-31350

Directionally solidified eutectic gamma plus beta nickel-base superalloys  
[NASA-CASE-LEW-12906-1] c 26 N77-32279

**General Electric Co., Utica, NY.**  
Method of determining bond quality of power transistors attached to substrates  
[NASA-CASE-MFS-21931-1] c 37 N75-26372

**General Motors Corp., Detroit, MI.**  
Hermetic sealed vibration damper  
Patent  
[NASA-CASE-MS-10959] c 15 N71-26243

**General Motors Corp., Milwaukee, WI.**  
Adjustable tension wire guide  
Patent  
[NASA-CASE-XMS-02383] c 15 N71-15918

**General Motors Corp., Santa Barbara, CA.**  
Resilient wheel  
Patent  
[NASA-CASE-MFS-13929] c 15 N71-27091

**General Precision, Inc., Little Falls, NJ.**  
Reversible current control apparatus  
Patent  
[NASA-CASE-XLA-09371] c 10 N71-18724

**General Precision, Inc., Sunnyvale, CA.**  
Broadband video process with very high input impedance  
[NASA-CASE-NPO-10199] c 09 N72-17156

**General Precision Systems, Inc., Little Falls, NJ.**  
Fluidic-thermochromic display device  
Patent  
[NASA-CASE-ERC-10031] c 12 N71-18603

**General Research Corp., Santa Barbara, CA.**  
Sequentially deployable maneuverable tetrahedral beam  
[NASA-CASE-LAR-13098-1] c 31 N86-19479

**General Technologies Corp., Reston, VA.**  
Method of making reinforced composite structure  
[NASA-CASE-LEW-12619-1] c 24 N77-19171

**Geophysics Corp. of America, Bedford, MA.**  
Inflation system for balloon type satellites  
Patent  
[NASA-CASE-XGS-03351] c 31 N71-16081

Bakeable McLeod gauge  
[NASA-CASE-XGS-01293-1] c 35 N79-33450

**Geophysics Corp. of America, Boston, MA.**  
Ionospheric battery  
Patent  
[NASA-CASE-XGS-01593] c 03 N70-35408

**George Washington Univ., Washington, DC.**  
Bacteria detection instrument and method  
[NASA-CASE-GSC-11533-1] c 14 N73-13435

Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c 52 N74-27566

**Glenn Scientific Corp., Santa Ana, CA.**  
Electric arc light source having undercut recessed anode  
[NASA-CASE-ARC-10266-1] c 33 N75-29318

Combination automatic-starting electrical plasma torch and gas shutoff valve  
[NASA-CASE-XLE-10717] c 37 N75-29426

**Giner, Inc., Waltham, MA.**  
Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c 33 N80-20487

Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c 44 N81-29524

**Globe-Union, Inc., Milwaukee, WI.**  
Method of coating solar cell with borosilicate glass and resultant product  
[NASA-CASE-GSC-11514-1] c 03 N72-24037

**Goodyear Aerospace Corp., Akron, OH.**  
Foldable solar concentrator  
Patent  
[NASA-CASE-XLA-04622] c 03 N70-41580

Method of making a filament-wound container  
Patent  
[NASA-CASE-XLE-03803-2] c 15 N71-17651

Filament wound container  
Patent  
[NASA-CASE-XLE-03803] c 15 N71-23816

Panelized high performance multilayer insulation  
Patent  
[NASA-CASE-MFS-14023] c 33 N71-25351

Thermally activated foaming compositions  
Patent  
[NASA-CASE-LAR-10373-1] c 18 N71-26155

Compression test assembly  
[NASA-CASE-LAR-10440-1] c 14 N73-32323

Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c 37 N76-22540

**Grace (W. R.) and Co., Clarksville, MD.**  
Metal containing polymers from cyclic tetrameric phenylphosphonitriamides  
Patent  
[NASA-CASE-HQN-10364] c 06 N71-27363

**Grumman Aerospace Corp., Bethpage, NY.**  
Multi-leg heat pipe evaporator  
[NASA-CASE-MS-20812-1] c 34 N86-27593

**Grumman Aircraft Engineering Corp., Bethpage, NY.**  
Sealed cabinetry  
Patent  
[NASA-CASE-MS-12168-1] c 09 N71-18600

Out of tolerance warning alarm system for plurality of monitored circuits  
Patent  
[NASA-CASE-XMS-10984-1] c 10 N71-19417

**Gulf General Atomic, San Diego, CA.**  
Waveform simulator  
Patent  
[NASA-CASE-NPO-10251] c 10 N71-27365

**Gulton Industries, Inc., Albuquerque, NM.**  
Analog-to-digital converter  
[NASA-CASE-MS-13110-1] c 08 N72-22163

**Hamilton Standard, Windsor Locks, CT.**  
Venting device for pressurized space suit helmet  
Patent  
[NASA-CASE-XMS-09652-1] c 05 N71-26333

Regenerable device for scrubbing breathable air of CO<sub>2</sub> and moisture without special heat exchanger equipment  
[NASA-CASE-MS-14771-1] c 54 N77-32722

Cell and method for electrolysis of water and anode  
[NASA-CASE-MS-16394-1] c 28 N81-24280

Slow opening valve  
[NASA-CASE-MS-20112-1] c 37 N85-20338

**Hamilton Standard Div., United Aircraft Corp., Windsor Locks, CT.**  
Condensate removal device for heat exchanger  
[NASA-CASE-MS-14143-1] c 77 N75-20139

**Harris Corp., Melbourne, FL.**  
Adaptive polarization separation  
[NASA-CASE-LAR-12196-1] c 33 N81-26358

Telescoping columns  
[NASA-CASE-LAR-12195-1] c 31 N81-27324

**Hayes International Corp., Birmingham, AL.**  
Space craft soft landing system  
Patent  
[NASA-CASE-XMF-02108] c 31 N70-36845

Device for preventing high voltage arcing in electron beam welding  
Patent  
[NASA-CASE-XMF-08522] c 15 N71-19486

**Hayes International Corp., Huntsville, AL.**  
Method and apparatus for cryogenic wire stripping  
Patent  
[NASA-CASE-MFS-10340] c 15 N71-17628

Self-balancing strain gage transducer  
Patent  
[NASA-CASE-MFS-12827] c 14 N71-17656

Automatic closed circuit television arc guidance control  
Patent  
[NASA-CASE-MFS-13046] c 07 N71-19433

**Hazleton Labs., Falls Church, VA.**  
Use of the enzyme hexokinase for the reduction of inherent light levels  
[NASA-CASE-XGS-05533] c 04 N69-27487

Light detection instrument  
Patent  
[NASA-CASE-XGS-05534] c 23 N71-16355

Lyophilized reaction mixtures  
Patent  
[NASA-CASE-XGS-05532] c 06 N71-17705

Firefly pump-metering system  
[NASA-CASE-GSC-10218-1] c 15 N72-21465

**HC Chem Research and Service, San Jose, CA.**  
High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1SB] c 24 N86-21590

**Hercules, Inc., Wilmington, DE.**  
Method of repairing discontinuity in fiberglass structures  
[NASA-CASE-LAR-10416-1] c 24 N74-30001

**Hoffman Electronics Corp., El Monte, CA.**  
Method for producing a solar cell having an integral protective covering  
[NASA-CASE-XGS-04531] c 03 N69-24267

**Honeywell, Inc., Hopkins, MN.**  
Frequency control network for a current feedback oscillator  
Patent  
[NASA-CASE-GSC-10041-1] c 10 N71-19418

**Honeywell, Inc., Minneapolis, MN.**  
Bus voltage compensation circuit for controlling direct current motor  
[NASA-CASE-XMS-04215-1] c 09 N69-39987

Apparatus for overcurrent protection of a push-pull amplifier  
Patent  
[NASA-CASE-MS-12033-1] c 09 N71-13531

Static inverter  
Patent  
[NASA-CASE-XGS-05289] c 09 N71-19470

High impedance measuring apparatus  
Patent  
[NASA-CASE-XMS-08589-1] c 09 N71-20569

Clamping assembly for inertial components  
Patent  
[NASA-CASE-XMS-02184] c 15 N71-20813

Piezoelectric pump  
Patent  
[NASA-CASE-XNP-05429] c 26 N71-21824

Controllers  
Patent  
[NASA-CASE-XMS-07487] c 15 N71-23255

Convoluting device for forming convolutions and the like  
Patent  
[NASA-CASE-XNP-05297] c 15 N71-23811

Failure sensing and protection circuit for converter networks  
Patent  
[NASA-CASE-GSC-10114-1] c 10 N71-27366

Voice operated controller  
Patent  
[NASA-CASE-XLA-04063] c 31 N71-33160

Load current sensor for a series pulse width modulated power supply  
[NASA-CASE-GSC-10656-1] c 09 N72-25249

Radiant source tracker independent of nonconstant irradiance  
[NASA-CASE-NPO-11686] c 14 N73-25462

Optical instruments  
[NASA-CASE-MS-14096-1] c 74 N74-15095



Method of forming shrink-fit compression seal  
[NASA-CASE-LAR-11563-1] c 37 N77-23482

**Honeywell, Inc., Saint Petersburg, FL.**  
Reconfiguring redundancy management  
[NASA-CASE-MSC-18498-1] c 60 N82-29013

**Houston Univ., TX.**  
Analysis of volatile organic compounds  
[NASA-CASE-MSC-14428-1] c 23 N77-17161

**Howard Univ., Washington, DC.**  
Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-1] c 54 N76-22914  
Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c 52 N81-25661  
Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c 52 N82-22875  
Navigation system and method  
[NASA-CASE-GSC-12508-1] c 04 N84-22546  
GaAs Schottky barrier photo-responsive device and method of fabrication  
[NASA-CASE-GSC-12816-1] c 76 N86-20150

**Hughes Aircraft Co., Culver City, CA.**  
Varactor high level mixer  
[NASA-CASE-XGS-02171] c 09 N69-24324  
Thermally operated valve Patent  
[NASA-CASE-XLE-00815] c 15 N70-35407  
Thrust dynamometer Patent  
[NASA-CASE-XLE-00702] c 14 N70-40203  
Solid state chemical source for ammonia beam maser Patent  
[NASA-CASE-XGS-01504] c 16 N70-41578  
Canopus detector including automotive gain control of photomultiplier tube Patent  
[NASA-CASE-XNP-03914] c 21 N71-10771  
Horn feed having overlapping apertures Patent  
[NASA-CASE-GSC-10452] c 07 N71-12396  
Deflective rod switch with elastic support and sealing means Patent  
[NASA-CASE-XNP-09808] c 09 N71-12518  
Guidance and maneuver analyzer Patent  
[NASA-CASE-XNP-09572] c 14 N71-15621  
Method of making screen by casting Patent  
[NASA-CASE-XLE-00953] c 15 N71-15966  
Fluid flow control valve Patent  
[NASA-CASE-XLE-00703] c 15 N71-15967  
Low noise single aperture multimode monopulse antenna feed system Patent  
[NASA-CASE-XNP-01735] c 07 N71-22750  
Multilayer porous ionizer Patent  
[NASA-CASE-XNP-04338] c 17 N71-23046  
Construction and method of arranging a plurality of ion engines to form a cluster Patent  
[NASA-CASE-XNP-02923] c 28 N71-23081  
Method for fiberizing ceramic materials Patent  
[NASA-CASE-XNP-00597] c 18 N71-23088  
Inorganic thermal control pigment Patent  
[NASA-CASE-XNP-02139] c 18 N71-24184  
Triaxial antenna Patent  
[NASA-CASE-XGS-02290] c 07 N71-28809  
Variable frequency oscillator with temperature compensation Patent  
[NASA-CASE-XNP-03916] c 09 N71-28810  
High efficiency ionizer assembly Patent  
[NASA-CASE-XNP-01954] c 28 N71-28850  
Apparatus for changing the orientation and velocity of a spinning body traversing a path Patent  
[NASA-CASE-HQN-00936] c 31 N71-29050  
Fabrication of controlled-porosity metals Patent  
[NASA-CASE-XNP-04339] c 17 N71-29137  
Ion thruster  
[NASA-CASE-LEW-10770-1] c 28 N72-22770  
Refractory porcelain enamel passive control coating for high temperature alloys  
[NASA-CASE-MFS-22324-1] c 27 N75-27160

**Hughes Aircraft Co., Los Angeles, CA.**  
Power control circuit  
[NASA-CASE-XNP-02713] c 10 N69-39888  
Thermal switch Patent  
[NASA-CASE-XNP-00463] c 33 N70-36847  
Double optic system for ion engine Patent  
[NASA-CASE-XNP-02839] c 28 N70-41922  
Sample collecting impact bit Patent  
[NASA-CASE-XNP-01412] c 15 N70-42034  
Bootstrap unloader Patent  
[NASA-CASE-XNP-09768] c 09 N71-12516  
Difference circuit Patent  
[NASA-CASE-XNP-08274] c 10 N71-13537  
Gas regulator Patent  
[NASA-CASE-NPO-10298] c 12 N71-17661  
A dc-coupled noninverting one-shot Patent  
[NASA-CASE-XNP-09450] c 10 N71-18723  
Phase demodulation system with two phase locked loops Patent  
[NASA-CASE-XNP-00777] c 10 N71-19469  
High voltage transistor circuit Patent  
[NASA-CASE-XNP-06937] c 09 N71-19516

Drift compensation circuit for analog to digital converter Patent  
[NASA-CASE-XNP-04780] c 08 N71-19687  
System for monitoring the presence of neutrals in a stream of ions Patent  
[NASA-CASE-XNP-02592] c 24 N71-20518  
Broadband frequency discriminator Patent  
[NASA-CASE-NPO-10096] c 07 N71-24583  
Flexible, repairable, portable material for electrical connectors Patent  
[NASA-CASE-XGS-05180] c 18 N71-25881  
Phase multiplying electronic scanning system Patent  
[NASA-CASE-NPO-10302] c 10 N71-26142  
Narrow bandwidth video Patent  
[NASA-CASE-XMS-06740-1] c 07 N71-26579  
Solar panel fabrication Patent  
[NASA-CASE-XNP-03413] c 03 N71-26726  
Method for removing oxygen impurities from cesium Patent  
[NASA-CASE-XNP-04262-2] c 17 N71-26773  
Virtual wall slot circularly polarized planar array antenna  
[NASA-CASE-NPO-10301] c 07 N72-11148  
Conical reflector antenna  
[NASA-CASE-NPO-10303] c 07 N72-22127  
Injector for use in high voltage isolators for liquid feed lines  
[NASA-CASE-NPO-11377] c 15 N73-27406  
High efficiency multifrequency feed  
[NASA-CASE-GSC-11909] c 32 N74-20863  
Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids  
[NASA-CASE-MFS-22411-1] c 37 N74-21058  
Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c 74 N74-21304  
Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c 74 N77-26942  
Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c 35 N77-27366  
Wide power range microwave feedback controller  
[NASA-CASE-GSC-12146-1] c 33 N78-32340  
System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c 32 N79-20296  
Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c 32 N81-15179  
Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c 32 N81-27341  
Liquid crystal light valve structures  
[NASA-CASE-MSC-20036-1] c 76 N85-33826

**Hughes Research Labs., Malibu, CA.**  
Thrust dynamometer Patent  
[NASA-CASE-XLE-05260] c 14 N71-20429

#### IIT Research Inst., Chicago, IL.

Spectral method for monitoring atmospheric contamination of inert-gas welding shields Patent  
[NASA-CASE-XMF-02039] c 15 N71-15871  
Lightweight refractory insulation and method of preparing the same Patent  
[NASA-CASE-XMF-05279] c 18 N71-16124  
Stabilized zinc oxide coating compositions Patent  
[NASA-CASE-XMF-07770-2] c 18 N71-26772  
Synthesis of zinc titanate pigment and coatings containing the same  
[NASA-CASE-MFS-13532] c 18 N72-17532  
Junction range finder  
[NASA-CASE-KSC-10108] c 14 N73-25461  
Method of preparing zinc orthotitanate pigment  
[NASA-CASE-MFS-23345-1] c 27 N77-30237

#### ILC Technology, Inc., Sunnyvale, CA.

Direct current ballast circuit for metal halide lamp  
[NASA-CASE-MSC-18407-1] c 33 N82-24427

#### Illinois Univ., Urbana.

Spillage detector for liquid chromatography systems  
[NASA-CASE-MSC-20206-1] c 25 N86-27431

#### Image Information, Inc., Danbury, CT.

Recorder/processor apparatus  
[NASA-CASE-GSC-11553-1] c 35 N74-15831

#### Inca Engineering Corp., San Gabriel, CA.

Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c 34 N74-27730

#### Institute for Research, Inc., Houston, TX.

Method of making a perspiration resistant biopotential electrode  
[NASA-CASE-MSC-90153-2] c 05 N72-25120

#### Institute of Research and Instrumentation, Houston, TX.

Pressed disc type sensing electrodes with ion-screening means Patent  
[NASA-CASE-XMS-04212-1] c 05 N71-12346

#### International Business Machines Corp., Hopewell Junction, NY.

Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c 76 N79-23798  
Electrical connector pin with wiping action  
[NASA-CASE-XMF-04238] c 09 N69-39734  
Tool attachment for spreading loose elements away from work Patent  
[NASA-CASE-XMF-02107] c 15 N71-10809  
Redundant memory organization Patent  
[NASA-CASE-GSC-10564] c 10 N71-29135

#### International Business Machines Corp., Poughkeepsie, NY.

Method of growing a ribbon crystal particularly suited for facilitating automated control of ribbon width  
[NASA-CASE-NPO-14295-1] c 76 N80-32245

#### International Harvester Co., San Diego, CA.

Silicide coatings for refractory metals Patent  
[NASA-CASE-XLE-10910] c 18 N71-29040

#### International Laser Systems, Inc., Orlando, FL.

Active lamp pulse driver circuit  
[NASA-CASE-GSC-12566-1] c 33 N83-34189  
Laser Resonator  
[NASA-CASE-GSC-12565-1] c 36 N84-14509

#### International Latex Corp., Dover, DE.

Space suit  
[NASA-CASE-MSC-12609-1] c 05 N73-32012

#### Isomet Corp., Palisades Park, NJ.

Metabolic rate meter and method  
[NASA-CASE-MSC-12239-1] c 52 N79-21750

#### ITT Corp., Nutley, NJ.

Time division radio relay synchronizing system using different sync code words for in sync and out of sync conditions Patent  
[NASA-CASE-GSC-10373-1] c 07 N71-19773  
Tracking receiver Patent  
[NASA-CASE-XGS-08679] c 10 N71-21473  
Satellite interlace synchronization system  
[NASA-CASE-GSC-10390-1] c 07 N72-11149

## J

#### James and Associates, Lancaster, CA.

System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c 06 N82-16075

#### Jet Propulsion Lab., California Inst. of Tech., Pasadena.

Pressure variable capacitor  
[NASA-CASE-XNP-09752] c 14 N69-21541  
Rock drill for recovering samples  
[NASA-CASE-XNP-07478] c 14 N69-21923  
Data compression system  
[NASA-CASE-XNP-09785] c 08 N69-21928  
Magnetohydrodynamic induction machine  
[NASA-CASE-XNP-07481] c 25 N69-21929  
Electromechanical actuator  
[NASA-CASE-XNP-05975] c 15 N69-23185  
Refrigeration apparatus  
[NASA-CASE-NPO-10309] c 15 N69-23190  
Direct radiation cooling of the collector of linear beam tubes  
[NASA-CASE-XNP-09227] c 15 N69-24319  
Excitation and detection circuitry for a flux responsive magnetic head  
[NASA-CASE-XNP-04183] c 09 N69-24329  
Telemetry word forming unit  
[NASA-CASE-XNP-09225] c 09 N69-24333  
Solid state switch  
[NASA-CASE-XNP-09228] c 09 N69-27560  
Belleville spring assembly with elastic guides  
[NASA-CASE-XNP-09452] c 15 N69-27504  
Trifunctional alcohol  
[NASA-CASE-NPO-10714] c 06 N69-31244  
Plurality of photosensitive cells on a pyramidal base for planetary trackers  
[NASA-CASE-XNP-04180] c 07 N69-39736  
Coating process  
[NASA-CASE-XNP-06508] c 18 N69-39895  
Bimetallic power controlled actuator  
[NASA-CASE-XNP-09776] c 09 N69-39929  
Piping arrangement through a double chamber structure  
[NASA-CASE-XNP-08882] c 15 N69-39935  
Micropacked column for a chromatographic system  
[NASA-CASE-XNP-04816] c 06 N69-39936

Temperature sensitive capacitor device [NASA-CASE-XNP-09750]	c 14	N69-39937	Reinforcing means for diaphragms Patent [NASA-CASE-XNP-01962]	c 32	N70-41370	Dual mode horn antenna Patent [NASA-CASE-XNP-01057]	c 07	N71-15907
Thermionic tantalum emitter doped with oxygen Patent Application [NASA-CASE-NPO-11138]	c 03	N70-34646	High pressure filter Patent [NASA-CASE-XNP-00732]	c 28	N70-41447	Means for controlling rupture of shock tube diaphragms Patent [NASA-CASE-XAC-00731]	c 11	N71-15960
Data handling system based on source significance, storage availability and data received from the source Patent Application [NASA-CASE-XNP-04162-1]	c 08	N70-34675	Phase-locked loop with sideband rejecting properties Patent [NASA-CASE-XNP-02723]	c 07	N70-41680	Insertion loss measuring apparatus having transformer means connected across a pair of bolometers Patent [NASA-CASE-XNP-01193]	c 10	N71-16057
Electro-optical scanning apparatus Patent Application [NASA-CASE-NPO-11106]	c 14	N70-34697	Digital television camera control system Patent [NASA-CASE-XNP-01472]	c 14	N70-41807	Polarimeter for transient measurement Patent [NASA-CASE-XNP-08883]	c 23	N71-16101
Liquid junction and method of fabricating the same Patent Application [NASA-CASE-NPO-10682]	c 15	N70-34699	Antiflutter ball check valve Patent [NASA-CASE-XNP-01152]	c 15	N70-41811	Flexible composite membrane Patent [NASA-CASE-XNP-08837]	c 18	N71-16210
Helium refining by superfluidity Patent [NASA-CASE-XNP-00733]	c 06	N70-34946	Roll attitude star sensor system Patent [NASA-CASE-XNP-01307]	c 21	N70-41856	Mount for thermal control system Patent [NASA-CASE-NPO-10138]	c 33	N71-16357
Means and methods of depositing thin films on substrates Patent [NASA-CASE-XNP-00595]	c 15	N70-34967	Process for preparing sterile solid propellants Patent [NASA-CASE-XNP-01749]	c 27	N70-41897	Optical characteristics measuring apparatus Patent [NASA-CASE-XNP-08840]	c 23	N71-16365
Photosensitive device to detect bearing deviation Patent [NASA-CASE-XNP-00438]	c 21	N70-35089	Solenoid construction Patent [NASA-CASE-XNP-01951]	c 09	N70-41929	Parallel plate viscometer Patent [NASA-CASE-XNP-09462]	c 14	N71-17584
Antenna beam-shaping apparatus Patent [NASA-CASE-XNP-00611]	c 09	N70-35219	Closed loop ranging system Patent [NASA-CASE-XNP-01501]	c 21	N70-41930	Means and method of measuring viscoelastic strain Patent [NASA-CASE-XNP-01153]	c 32	N71-17645
Temperature-compensating means for cavity resonator of amplifier Patent [NASA-CASE-XNP-00449]	c 14	N70-35220	Printed circuit board with bellows rivet connection Patent [NASA-CASE-XNP-05082]	c 15	N70-41960	Interferometer direction sensor Patent [NASA-CASE-NPO-10320]	c 14	N71-17655
Parabolic reflector horn feed with spillover correction Patent [NASA-CASE-XNP-00540]	c 09	N70-35382	Phase-shift data transmission system having a pseudo-noise SYNC code modulated with the data in a single channel Patent [NASA-CASE-XNP-00911]	c 08	N70-41961	Interferometer servo system Patent [NASA-CASE-NPO-10300]	c 14	N71-17662
Means for visually indicating flight paths of vehicles between the Earth, Venus, and Mercury Patent [NASA-CASE-XNP-00708]	c 14	N70-35394	Baseline stabilization system for ionization detector Patent [NASA-CASE-XNP-03128]	c 10	N70-41991	Electrical spot terminal assembly Patent [NASA-CASE-NPO-10034]	c 15	N71-17685
Space vehicle attitude control Patent [NASA-CASE-XNP-00465]	c 21	N70-35395	Single or joint amplitude distribution analyzer Patent [NASA-CASE-XNP-01383]	c 09	N71-10659	Sealed separable connection Patent [NASA-CASE-NPO-10064]	c 15	N71-17693
Binary to binary-coded-decimal converter Patent [NASA-CASE-XNP-00432]	c 08	N70-35423	Dual waveguide mode source having control means for adjusting the relative amplitude of two modes Patent [NASA-CASE-XNP-03134]	c 07	N71-10676	Incremental motion drive system Patent [NASA-CASE-NPO-08897]	c 15	N71-17694
Cassegrainian antenna subreflector flange for suppressing ground noise Patent [NASA-CASE-XNP-00683]	c 09	N70-35425	Method for determining the state of charge of batteries by the use of tracers Patent [NASA-CASE-XNP-01464]	c 03	N71-10728	Microbalance including crystal oscillators for measuring contaminants in a gas system Patent [NASA-CASE-NPO-10144]	c 14	N71-17701
Ionization vacuum gauge Patent [NASA-CASE-XNP-00646]	c 14	N70-35666	High pressure regulator valve Patent [NASA-CASE-XNP-00710]	c 15	N71-10778	Apparatus and method for protecting a photographic device Patent [NASA-CASE-NPO-10174]	c 14	N71-18465
Two-fluid magnetohydrodynamic system and method for thermal-electric power conversion Patent [NASA-CASE-XNP-00644]	c 03	N70-36803	Solar battery with interconnecting means for plural cells Patent [NASA-CASE-XNP-06506]	c 03	N71-11050	Ranging system Patent [NASA-CASE-NPO-10066]	c 09	N71-18598
Mechanical coordinate converter Patent [NASA-CASE-XNP-00614]	c 14	N70-36907	Sealed battery gas manifold construction Patent [NASA-CASE-XNP-03378]	c 03	N71-11051	High impact pressure regulator Patent [NASA-CASE-NPO-10175]	c 14	N71-18625
High pressure four-way valve Patent [NASA-CASE-XNP-00214]	c 15	N70-36908	Solar cell submodule Patent [NASA-CASE-XNP-05821]	c 03	N71-11056	Magnetic core current steering commutator Patent [NASA-CASE-NPO-10201]	c 08	N71-18694
Liquid rocket system Patent [NASA-CASE-XNP-00610]	c 28	N70-36910	Reflectometer for receiver input impedance match measurement Patent [NASA-CASE-XNP-10843]	c 07	N71-11267	Method of using photovoltaic cell using poly-N-vinylcarbazole complex Patent [NASA-CASE-NPO-10373]	c 03	N71-18698
Radar ranging receiver Patent [NASA-CASE-XNP-00748]	c 07	N70-36911	Means for generating a sync signal in an FM communication system Patent [NASA-CASE-XNP-10830]	c 07	N71-11281	A dc-coupled noninverting one-shot Patent [NASA-CASE-XNP-09450]	c 10	N71-18723
Attitude control for spacecraft Patent [NASA-CASE-XNP-00294]	c 21	N70-36938	Multi-feed cone Cassegrain antenna Patent [NASA-CASE-NPO-10539]	c 07	N71-11285	Automatic fault correction system for parallel signal channels Patent [NASA-CASE-XNP-03263]	c 09	N71-18843
Elastic universal joint Patent [NASA-CASE-XNP-00416]	c 15	N70-36947	Thermionic diode switch Patent [NASA-CASE-NPO-10404]	c 03	N71-12255	Data compression processor Patent [NASA-CASE-NPO-10068]	c 08	N71-19288
Apparatus and method for control of a solid fueled rocket vehicle Patent [NASA-CASE-XNP-00217]	c 28	N70-38181	Anti-backlash circuit for hydraulic drive system Patent [NASA-CASE-XNP-01020]	c 03	N71-12260	Tape guidance system and apparatus for the provision thereof Patent [NASA-CASE-XNP-09453]	c 08	N71-19420
Expulsion bladder-equipped storage tank structure Patent [NASA-CASE-XNP-00612]	c 11	N70-38182	Binary number sorter Patent [NASA-CASE-NPO-10112]	c 08	N71-12502	High voltage transistor circuit Patent [NASA-CASE-XNP-06937]	c 09	N71-19516
High-voltage cable Patent [NASA-CASE-XNP-00738]	c 09	N70-38201	Linear three-tap feedback shift register Patent [NASA-CASE-NPO-10351]	c 08	N71-12503	Solar cell matrix Patent [NASA-CASE-NPO-10821]	c 03	N71-19545
Umbilical separator for rockets Patent [NASA-CASE-XNP-00425]	c 11	N70-38202	Binary sequence detector Patent [NASA-CASE-XNP-05415]	c 08	N71-12505	Electrical switching device Patent [NASA-CASE-NPO-10037]	c 09	N71-19610
Multiple Belleville spring assembly Patent [NASA-CASE-XNP-00840]	c 15	N70-38225	Data compression system with a minimum time delay unit Patent [NASA-CASE-XNP-08832]	c 08	N71-12506	Drift compensation circuit for analog to digital converter Patent [NASA-CASE-XNP-04780]	c 08	N71-19687
Ignition system for monopropellant combustion devices Patent [NASA-CASE-XNP-00249]	c 28	N70-38249	Magnetic counter Patent [NASA-CASE-XNP-08836]	c 09	N71-12515	Roll-up solar array Patent [NASA-CASE-NPO-10188]	c 03	N71-20273
Pressure regulating system Patent [NASA-CASE-XNP-00450]	c 15	N70-38603	Operational integrator Patent [NASA-CASE-NPO-10230]	c 09	N71-12520	Method and device for determining battery state of charge Patent [NASA-CASE-NPO-10194]	c 03	N71-20407
Slit regulated gas journal bearing Patent [NASA-CASE-XNP-00476]	c 15	N70-38620	Starting circuit for vapor lamps and the like Patent [NASA-CASE-XNP-01058]	c 09	N71-12540	Soil particles separator, collector and viewer Patent [NASA-CASE-XNP-09770]	c 15	N71-20440
Steerable solid propellant rocket motor Patent [NASA-CASE-XNP-00234]	c 28	N70-38645	Matched thermistors for microwave power meters Patent [NASA-CASE-NPO-10348]	c 10	N71-12554	Transmission line thermal short Patent [NASA-CASE-XNP-09775]	c 09	N71-20445
Space simulator Patent [NASA-CASE-XNP-00459]	c 11	N70-38675	Micro current measuring device using plural logarithmic response heated filamentary type diodes Patent [NASA-CASE-XNP-00384]	c 09	N71-13530	Synchronous servo loop control system Patent [NASA-CASE-XNP-03744]	c 10	N71-20448
Ejection unit Patent [NASA-CASE-XNP-00676]	c 15	N70-38996	Automatic thermal switch Patent [NASA-CASE-XNP-03796]	c 23	N71-15467	Processing for producing a sterilized instrument Patent [NASA-CASE-XNP-09763]	c 14	N71-20461
Time-division multiplexer Patent [NASA-CASE-XNP-00431]	c 09	N70-38998	Photoelectric energy spectrometer Patent [NASA-CASE-XNP-04161]	c 14	N71-15599	Signal-to-noise ratio estimating by taking ratio of mean and standard deviation of integrated signal samples Patent [NASA-CASE-XNP-05254]	c 07	N71-20791
Trajectory-correction propulsion system Patent [NASA-CASE-XNP-01104]	c 28	N70-39931	Anti-glare improvement for optical imaging systems Patent [NASA-CASE-NPO-10337]	c 14	N71-15604	Elimination of frequency shift in a multiplex communication system Patent [NASA-CASE-XNP-01306]	c 07	N71-20814
Electrically-operated rotary shutter Patent [NASA-CASE-XNP-00637]	c 14	N70-40273	Fluid flow restrictor Patent [NASA-CASE-NPO-10117]	c 15	N71-15608	High power-high voltage waterload Patent [NASA-CASE-XNP-05381]	c 09	N71-20842
Zero gravity starting means for liquid propellant motors Patent [NASA-CASE-XNP-01390]	c 28	N70-41275	High temperature lens construction Patent [NASA-CASE-XNP-04111]	c 14	N71-15622	Coaxial cable connector Patent [NASA-CASE-XNP-04732]	c 09	N71-20851
Parallel motion suspension device Patent [NASA-CASE-XNP-01567]	c 15	N70-41310	Solder flux which leaves corrosion-resistant coating Patent [NASA-CASE-XNP-03459-2]	c 18	N71-15688	Soldering with solder flux which leaves corrosion resistant coating Patent [NASA-CASE-XNP-03459]	c 15	N71-21078
Ignition means for monopropellant Patent [NASA-CASE-XNP-00876]	c 28	N70-41311	Intermittent type silica gel adsorption refrigerator Patent [NASA-CASE-XNP-00920]	c 15	N71-15906	Miniature stress transducer Patent [NASA-CASE-XNP-02983]	c 14	N71-21091

Holder for crystal resonators Patent			Fluid containers and resealable septum therefor Patent		Epoxy-aziridine polymer product Patent	
[NASA-CASE-XNP-03637]	c 15	N71-21311	[NASA-CASE-NPO-10123]	c 15	[NASA-CASE-NPO-10701]	c 06
Correlation function apparatus Patent			Temperature telemetric transmitter Patent		Fluid impervious barrier including liquid metal alloy and method of making same Patent	
[NASA-CASE-XNP-00746]	c 07	N71-21476	[NASA-CASE-NPO-10649]	c 07	[NASA-CASE-XNP-08881]	c 17
Split nut separation system Patent			Tuning arrangement for an electron discharge device or the like Patent		Wind tunnel microphone structure Patent	
[NASA-CASE-XNP-06914]	c 15	N71-21489	[NASA-CASE-XNP-09771]	c 09	[NASA-CASE-XNP-00250]	c 11
Light position locating system Patent			Noise limiter Patent		Trialkyl-dihalotantalum and niobium compounds Patent	
[NASA-CASE-XNP-01059]	c 23	N71-21821	[NASA-CASE-NPO-10169]	c 10	[NASA-CASE-XNP-04023]	c 06
Electron bombardment ion engine Patent			Noninterruptable digital counting system Patent		Digital memory sense amplifying means Patent	
[NASA-CASE-XNP-04124]	c 28	N71-21822	[NASA-CASE-XNP-09759]	c 08	[NASA-CASE-XNP-01012]	c 08
Data compressor Patent			Drive circuit for minimizing power consumption in inductive load Patent		Digital filter for reducing sampling jitter in digital control systems Patent	
[NASA-CASE-XNP-04067]	c 08	N71-22707	[NASA-CASE-NPO-10716]	c 09	[NASA-CASE-NPO-11088]	c 08
Error correcting method and apparatus Patent			Space simulator Patent		Method and apparatus for aligning a laser beam projector Patent	
[NASA-CASE-XNP-02748]	c 08	N71-22749	[NASA-CASE-NPO-10141]	c 11	[NASA-CASE-NPO-11087]	c 23
Counter and shift register Patent			Process for reducing secondary electron emission Patent		Rotable accurate reflector system for telescopes Patent	
[NASA-CASE-XNP-01753]	c 08	N71-22897	[NASA-CASE-XNP-09469]	c 24	[NASA-CASE-NPO-10468]	c 23
Friction measuring apparatus Patent			Minimal logic block encoder Patent		Encoder/decoder system for a rapidly synchronizable binary code Patent	
[NASA-CASE-XNP-08680]	c 14	N71-22995	[NASA-CASE-NPO-10595]	c 10	[NASA-CASE-NPO-10342]	c 10
Hybrid lubrication system and bearing Patent			Novel polycarboxylic prepolymeric materials and polymers thereof Patent		High power microwave power divider Patent	
[NASA-CASE-XNP-01641]	c 15	N71-22997	[NASA-CASE-NPO-10596]	c 06	[NASA-CASE-NPO-11031]	c 07
Filler valve Patent			Current steering switch Patent		A dc servosystem including an ac motor Patent	
[NASA-CASE-XNP-01747]	c 15	N71-23024	[NASA-CASE-XNP-08567]	c 09	[NASA-CASE-NPO-10700]	c 07
Refrigeration apparatus Patent			Dual polarity full wave dc motor drive Patent		Solar cell matrix	
[NASA-CASE-XNP-08877]	c 15	N71-23025	[NASA-CASE-XNP-07477]	c 09	[NASA-CASE-NPO-11190]	c 03
Reduced bandwidth video communication system utilizing sampling techniques Patent			High impact antenna Patent		Manually actuated heat pump	
[NASA-CASE-XNP-02791]	c 07	N71-23026	[NASA-CASE-NPO-10231]	c 07	[NASA-CASE-NPO-10677]	c 05
Model launcher for wind tunnels Patent			Video communication system and apparatus Patent		Virtual wall slot circularly polarized planar array antenna	
[NASA-CASE-XNP-03578]	c 11	N71-23030	[NASA-CASE-XNP-06611]	c 07	[NASA-CASE-NPO-10301]	c 07
Drive circuit utilizing two cores Patent			Parallel generation of the check bits of a PN sequence Patent		System for controlling the operation of a variable signal device	
[NASA-CASE-XNP-01318]	c 10	N71-23033	[NASA-CASE-XNP-04623]	c 10	[NASA-CASE-NPO-11064]	c 07
Solar vane actuator Patent			Phase multiplying electronic scanning system Patent		Method and apparatus for data compression by a decreasing slope threshold test	
[NASA-CASE-XNP-05535]	c 14	N71-23040	[NASA-CASE-NPO-10302]	c 10	[NASA-CASE-NPO-10769]	c 08
Time of flight mass spectrometer with feedback means from the detector to the low source and a specific counter Patent			Electron beam tube containing a multiple cathode array employing indexing means for cathode substitution Patent		Apparatus for remote measurement of displacement of marks on a specimen undergoing a tensile test	
[NASA-CASE-XNP-01056]	c 14	N71-23041	[NASA-CASE-NPO-10625]	c 09	[NASA-CASE-NPO-10778]	c 14
Connector internal force gauge Patent			Fluid phase analyzer Patent		Vibration isolation system using compression springs	
[NASA-CASE-XNP-03918]	c 14	N71-23087	[NASA-CASE-NPO-10691]	c 14	[NASA-CASE-NPO-11012]	c 15
Circulator having quarter wavelength resonant post and parametric amplifier circuits utilizing the same Patent			Variable frequency nuclear magnetic resonance spectrometer Patent		Feed system for an ion thruster	
[NASA-CASE-XNP-02140]	c 09	N71-23097	[NASA-CASE-NPO-09830]	c 14	[NASA-CASE-NPO-10737]	c 28
Method of resolving clock synchronization error and means therefor Patent			Time synchronization system utilizing moon reflected coded signals Patent		Thermostatic actuator	
[NASA-CASE-XNP-08875]	c 10	N71-23099	[NASA-CASE-NPO-10143]	c 10	[NASA-CASE-NPO-10637]	c 15
Impact testing machine Patent			Broadband stable power multiplier Patent		High voltage transistor amplifier with constant current load	
[NASA-CASE-XNP-04817]	c 14	N71-23225	[NASA-CASE-XNP-10854]	c 10	[NASA-CASE-NPO-11023]	c 09
Zeta potential flowmeter Patent			Cascaded complementary pair broadband transistor amplifiers Patent		Reference voltage switching unit	
[NASA-CASE-XNP-06509]	c 14	N71-23226	[NASA-CASE-NPO-10003]	c 10	[NASA-CASE-NPO-11253]	c 09
Comparator for the comparison of two binary numbers Patent			Digital memory in which the driving of each word location is controlled by a switch core Patent		Valving device for automatic refilling in cryogenic liquid systems	
[NASA-CASE-XNP-04819]	c 08	N71-23295	[NASA-CASE-XNP-01466]	c 10	[NASA-CASE-NPO-11177]	c 15
Decontamination of petroleum products Patent			Conically shaped cavity radiometer with a dual purpose cone winding Patent		Expandable support means	
[NASA-CASE-XNP-03835]	c 06	N71-23499	[NASA-CASE-XNP-09701]	c 14	[NASA-CASE-NPO-11059]	c 15
Dicyanoacetylene polymers Patent			Analog signal integration and reconstruction system Patent		Breakaway connector	
[NASA-CASE-XNP-03250]	c 06	N71-23500	[NASA-CASE-NPO-10344]	c 10	[NASA-CASE-NPO-11140]	c 15
Indexing microwave switch Patent			Rapid sync acquisition system Patent		Modular encoder	
[NASA-CASE-XNP-06507]	c 09	N71-23548	[NASA-CASE-NPO-10214]	c 10	[NASA-CASE-NPO-10629]	c 08
Millimeter wave radiometer for radio astronomy Patent			Cryogenic cooling system Patent		Transition tracking bit synchronization system	
[NASA-CASE-XNP-09832]	c 30	N71-23723	[NASA-CASE-NPO-10467]	c 23	[NASA-CASE-NPO-10844]	c 07
Radiant energy intensity measurement system Patent			Vacuum evaporator with electromagnetic ion steering Patent		Data compression system	
[NASA-CASE-XNP-06510]	c 14	N71-23797	[NASA-CASE-NPO-10331]	c 09	[NASA-CASE-NPO-11243]	c 07
High speed phase detector Patent			Automated fluid chemical analyzer Patent		Digital quasi-exponential function generator	
[NASA-CASE-XNP-01306-2]	c 09	N71-24596	[NASA-CASE-XNP-09451]	c 06	[NASA-CASE-NPO-11130]	c 08
Apparatus for testing polymeric materials Patent			Material handling device Patent		Method and apparatus for high resolution spectral analysis	
[NASA-CASE-XNP-09699]	c 06	N71-24607	[NASA-CASE-XNP-09770-3]	c 11	[NASA-CASE-NPO-10748]	c 08
Digital synchronizer Patent			Pressure seal Patent		Flow rate switch	
[NASA-CASE-NPO-10851]	c 07	N71-24613	[NASA-CASE-NPO-10796]	c 15	[NASA-CASE-NPO-10722]	c 09
Signal processing apparatus for multiplex transmission Patent			Multiducted electromagnetic pump Patent		Electrical connector	
[NASA-CASE-NPO-10388]	c 07	N71-24622	[NASA-CASE-NPO-10755]	c 15	[NASA-CASE-NPO-10694]	c 09
Self-testing and repairing computer Patent			Peak acceleration limiter for vibrational tester Patent		Wide band doubler and sine wave quadrature generator	
[NASA-CASE-NPO-10567]	c 08	N71-24633	[NASA-CASE-NPO-10556]	c 14	[NASA-CASE-NPO-11133]	c 10
Serial digital decoder Patent			Thin film capacitive bolometer and temperature sensor Patent		Signal phase estimator	
[NASA-CASE-NPO-10150]	c 08	N71-24650	[NASA-CASE-NPO-10607]	c 09	[NASA-CASE-NPO-11203]	c 10
Detentling servomotor Patent			Black body cavity radiometer Patent		Optimal control system for an electric motor driven vehicle	
[NASA-CASE-XNP-06936]	c 15	N71-24695	[NASA-CASE-NPO-10810]	c 14	[NASA-CASE-NPO-11210]	c 11
Reversible motion drive system Patent			Video signal enhancement system with dynamic range compression and modulation index expansion Patent		Impact energy absorbing system utilizing fractureable material	
[NASA-CASE-NPO-10173]	c 15	N71-24696	[NASA-CASE-NPO-10343]	c 07	[NASA-CASE-NPO-10671]	c 15
Decoder system Patent			Force-balanced, throttle valve Patent		Torsional disconnect unit	
[NASA-CASE-NPO-10118]	c 07	N71-24741	[NASA-CASE-NPO-10808]	c 15	[NASA-CASE-NPO-10704]	c 15
Television signal processing system Patent			Cavity emitter for thermionic converter Patent		Solid propellant rocket motor	
[NASA-CASE-NPO-10140]	c 07	N71-24742	[NASA-CASE-NPO-10412]	c 09	[NASA-CASE-NXP-03282]	c 28
Switching circuit Patent			Frictionless universal joint Patent		Shell side liquid metal boiler	
[NASA-CASE-XNP-06505]	c 10	N71-24799	[NASA-CASE-NPO-10646]	c 15	[NASA-CASE-NPO-10831]	c 33
Magnetic power switch Patent					Method and apparatus for mapping planets	
[NASA-CASE-NPO-10242]	c 09	N71-24803			[NASA-CASE-NPO-11001]	c 07
Remodulator filter Patent						
[NASA-CASE-NPO-10198]	c 09	N71-24806				
Broadband microwave waveguide window Patent						
[NASA-CASE-XNP-08880]	c 09	N71-24808				
Cavity radiometer Patent						
[NASA-CASE-XNP-08961]	c 14	N71-24809				
High-gain, broadband traveling wave maser Patent						
[NASA-CASE-NPO-10548]	c 16	N71-24831				

Current steering commutator [NASA-CASE-NPO-10743]	c 08	N72-21199	Singly-curved reflector for use in high-gain antennas [NASA-CASE-NPO-11361]	c 07	N72-32169	Disconnect unit [NASA-CASE-NPO-11330]	c 33	N73-26958
Automated equipotential plotter [NASA-CASE-NPO-11134]	c 09	N72-21246	Digital slope threshold data compressor [NASA-CASE-NPO-11630]	c 08	N72-33172	Filter for third order phase locked loops [NASA-CASE-NPO-11941-1]	c 10	N73-27171
Pressure transducer [NASA-CASE-NPO-10832]	c 14	N72-21405	Continuously variable voltage controlled phase shifter [NASA-CASE-NPO-11129]	c 09	N72-33204	Receiver with an improved phase lock loop in a multichannel telemetry system with suppressed carrier [NASA-CASE-NPO-11593-1]	c 07	N73-28012
Positioning mechanism [NASA-CASE-NPO-10679]	c 15	N72-21462	Pseudonoise sequence generators with three tap linear feedback shift registers [NASA-CASE-NPO-11406]	c 08	N73-12175	Analog-to-digital converter [NASA-CASE-NXP-00477]	c 08	N73-28045
Solid state matrices [NASA-CASE-NPO-10591]	c 03	N72-22041	Versatile arithmetic unit for high speed sequential decoder [NASA-CASE-NPO-11371]	c 08	N73-12177	Pseudonoise (PN) synchronization of data system with derivation of clock frequency from received signal for clocking receiver PN generator [NASA-CASE-NXP-03623]	c 09	N73-28084
Solar cell panels with light transmitting plate [NASA-CASE-NPO-10747]	c 03	N72-22042	Dual frequency microwave reflex feed [NASA-CASE-NPO-13091-1]	c 09	N73-12214	Apparatus and method for measuring the Seebeck coefficient and resistivity of materials [NASA-CASE-NPO-11749]	c 14	N73-28486
Data multiplexer using tree switching configuration [NASA-CASE-NPO-11333]	c 08	N72-22162	Audio system with means for reducing noise effects [NASA-CASE-NPO-11631]	c 10	N73-12244	Dual purpose optical instrument capable of simultaneously acting as spectrometer and diffractometer [NASA-CASE-NXP-05231]	c 14	N73-28491
System for quantizing graphic displays [NASA-CASE-NPO-10745]	c 08	N72-22164	Interferometer-polarimeter [NASA-CASE-NPO-11239]	c 14	N73-12446	Continuous magnetic flux pump [NASA-CASE-NXP-01187]	c 15	N73-28516
Digital function generator [NASA-CASE-NPO-11104]	c 08	N72-22165	Irradiance measuring device [NASA-CASE-NPO-11493]	c 14	N73-12447	Preparation of alkali metal dispersions [NASA-CASE-NXP-08876]	c 17	N73-28573
Analog-to-digital converter analyzing system [NASA-CASE-NPO-10560]	c 08	N72-22166	Program for computer aided reliability estimation [NASA-CASE-NPO-13086-1]	c 15	N73-12495	Superconductive magnetic-field-trapping device [NASA-CASE-NXP-01185]	c 26	N73-28710
Feedback shift register with states decomposed into cycles of equal length [NASA-CASE-NPO-11082]	c 08	N72-22167	Apparatus for deriving synchronizing pulses from pulses in a single channel PCM communications system [NASA-CASE-NPO-11302-1]	c 07	N73-13149	Automatic carrier acquisition system [NASA-CASE-NPO-11628-1]	c 07	N73-30113
Self-obturator, gas operated launcher [NASA-CASE-NPO-11013]	c 11	N72-22247	Rotary vane attenuator wherein rotor has orthogonally disposed resistive and dielectric cards [NASA-CASE-NPO-11418-1]	c 14	N73-13420	Ferrofluidic solenoid [NASA-CASE-NPO-11738-1]	c 09	N73-30185
Optical binocular scanning apparatus [NASA-CASE-NPO-11002]	c 14	N72-22441	Gas flow control device [NASA-CASE-NPO-11479]	c 15	N73-13462	Silent emergency alarm system for schools and the like [NASA-CASE-NPO-11307-1]	c 10	N73-30205
Ionene membrane separator [NASA-CASE-NPO-11091]	c 18	N72-22567	Electrolytic gas operated actuator [NASA-CASE-NPO-11369]	c 15	N73-13467	RF-source resistance meters [NASA-CASE-NPO-11291-1]	c 14	N73-30388
Deployable solar cell array [NASA-CASE-NPO-10883]	c 31	N72-22874	Dual purpose momentum wheels for spacecraft with magnetic recording [NASA-CASE-NPO-11481]	c 21	N73-13644	Event sequence detector [NASA-CASE-NPO-11703-1]	c 10	N73-32144
Thermal to electrical power conversion system with solid-state switches with Seebeck effect compensation [NASA-CASE-NPO-11388]	c 03	N72-23048	Multiple reflection conical microwave antenna [NASA-CASE-NPO-11661]	c 07	N73-14130	Soil penetrometer [NASA-CASE-NXP-05530]	c 14	N73-32321
Optical frequency waveguide and transmission system [NASA-CASE-HQN-10541-3]	c 23	N72-23695	Cyclically operable optical shutter [NASA-CASE-NPO-10758]	c 14	N73-14427	Quadrupole mass filter with means to generate a noise spectrum exclusive of the resonant frequency of the desired ions to deflect stable ions [NASA-CASE-NXP-04231]	c 14	N73-32325
Bipropellant injector [NASA-CASE-NXP-09461]	c 28	N72-23809	Heat detection and compositions and devices therefor [NASA-CASE-NPO-10764-1]	c 14	N73-14428	Magnetic-flux pump [NASA-CASE-NXP-01188]	c 15	N73-32361
Solid propellant rocket motor nozzle [NASA-CASE-NPO-11458]	c 28	N72-23810	Parallel-plate viscometer with double diaphragm suspension [NASA-CASE-NPO-11387]	c 14	N73-14429	Burrowing apparatus [NASA-CASE-NXP-07169]	c 15	N73-32362
Analysis of hydrogen-deuterium mixtures [NASA-CASE-NPO-11322]	c 06	N72-25146	Rotary actuator [NASA-CASE-NPO-10680]	c 31	N73-14855	Electrostatically controlled heat shutter [NASA-CASE-NPO-11942-1]	c 33	N73-32818
Flexible computer accessed telemetry [NASA-CASE-NPO-11358]	c 07	N72-25172	Magnetically actuated tuning method for Gunn oscillators [NASA-CASE-NPO-12106]	c 09	N73-15235	Method and apparatus for a single channel digital communications system [NASA-CASE-NPO-11302-2]	c 32	N74-10132
Multi-purpose antenna employing dish reflector with plural coaxial horn feeds [NASA-CASE-NPO-11264]	c 07	N72-25174	Multichannel telemetry system [NASA-CASE-NPO-11572]	c 07	N73-16121	Controlled oscillator system with a time dependent output frequency [NASA-CASE-NPO-11962-1]	c 33	N74-10194
Communications link for computers [NASA-CASE-NPO-11161]	c 08	N72-25207	Data-aided carrier tracking loops [NASA-CASE-NPO-11282]	c 10	N73-16205	Low loss dichroic plate [NASA-CASE-NPO-13171-1]	c 32	N74-11000
Method and apparatus for frequency-division multiplex communications by digital phase shift of carrier [NASA-CASE-NPO-11338]	c 08	N72-25208	Stacked solar cell arrays [NASA-CASE-NPO-11771]	c 03	N73-20040	Image data rate converter having a drum with a fixed head and a rotatable head [NASA-CASE-NPO-11659-1]	c 35	N74-11283
Binary coded sequential acquisition ranging system [NASA-CASE-NPO-11194]	c 08	N72-25209	A m-ary linear feedback shift register with binary logic [NASA-CASE-NPO-11868]	c 10	N73-20254	Monitoring atmospheric pollutants with a heterodyne radiometer transmitter-receiver [NASA-CASE-NPO-11919-1]	c 35	N74-11284
MOD 2 sequential function generator for multibit binary sequence [NASA-CASE-NPO-10636]	c 08	N72-25210	Apparatus for recovering matter adhered to a host surface [NASA-CASE-NPO-11213]	c 15	N73-20514	Digital second-order phase-locked loop [NASA-CASE-NPO-11905-1]	c 33	N74-12887
Digital video display system using cathode ray tube [NASA-CASE-NPO-11342]	c 09	N72-25248	Scan converting video tape recorder [NASA-CASE-NPO-10166-1]	c 07	N73-22076	Automatic vehicle location system [NASA-CASE-NPO-11850-1]	c 32	N74-12912
Inverter oscillator with voltage feedback [NASA-CASE-NPO-10760]	c 09	N72-25254	Collapsible structure for an antenna reflector [NASA-CASE-NPO-11751]	c 07	N73-24176	Thermomagnetic recording and magneto-optic playback system having constant intensity laser beam control [NASA-CASE-NPO-11317-2]	c 36	N74-13205
Thermal motor [NASA-CASE-NPO-11283]	c 09	N72-25260	Pump for delivering heated fluids [NASA-CASE-NPO-11417]	c 15	N73-24513	Use of thin film light detector [NASA-CASE-NPO-11432-2]	c 35	N74-15090
Two phase flow system with discrete impinging two-phase jets [NASA-CASE-NPO-11556]	c 12	N72-25292	Ion thruster with a combination keeper electrode and electron baffle [NASA-CASE-NPO-11880]	c 28	N73-24783	Temperature compensated digital inertial sensor [NASA-CASE-NPO-13044-1]	c 35	N74-15094
Atmospheric sampling devices [NASA-CASE-NPO-11373]	c 13	N72-25323	Solid propellant rocket motor [NASA-CASE-NPO-11559]	c 28	N73-24784	Compact hydrogenator [NASA-CASE-NPO-11682-1]	c 35	N74-15127
Light sensor [NASA-CASE-NPO-11311]	c 14	N72-25414	Code regenerative clean-up loop transponder for a mu-type ranging system [NASA-CASE-NPO-11707]	c 07	N73-25161	Short range laser obstacle detector [NASA-CASE-NPO-11856-1]	c 36	N74-15145
Quick disconnect coupling [NASA-CASE-NPO-11202]	c 15	N72-25450	Numerical computer peripheral interactive device with manual controls [NASA-CASE-NPO-11497]	c 08	N73-25206	System for stabilizing cable phase delay utilizing a coaxial cable under pressure [NASA-CASE-NPO-13138-1]	c 33	N74-17927
Coaxial injector for reaction motors [NASA-CASE-NPO-11095]	c 15	N72-25455	Radiant source tracker independent of nonconstant irradiance [NASA-CASE-NPO-11686]	c 14	N73-25462	Storage battery comprising negative plates of a wedge shaped configuration [NASA-CASE-NPO-11806-1]	c 44	N74-19693
Ball screw linear actuator [NASA-CASE-NPO-11222]	c 15	N72-25456	Two carrier communication system with single transmitter [NASA-CASE-NPO-11548]	c 07	N73-26118	Gated compressor, distortionless signal limiter [NASA-CASE-NPO-11820-1]	c 32	N74-19788
Helium refrigerator and method for decontaminating the refrigerator [NASA-CASE-NPO-10634]	c 23	N72-25619	High pulse rate high resolution optical radar system [NASA-CASE-NPO-11426]	c 07	N73-26119	Apparatus for scanning the surface of a cylindrical body [NASA-CASE-NPO-11861-1]	c 36	N74-20009
Uninsulated in-core thermionic diode [NASA-CASE-NPO-10542]	c 09	N72-27228	Counting digital filters [NASA-CASE-NPO-11821-1]	c 08	N73-26175	Decision feedback loop for tracking a polyphase modulated carrier [NASA-CASE-NPO-13103-1]	c 32	N74-20811
Audio frequency marker system [NASA-CASE-NPO-11147]	c 14	N72-27408	Automated attendance accounting system [NASA-CASE-NPO-11456]	c 08	N73-26176	Optically actuated two position mechanical mover [NASA-CASE-NPO-13105-1]	c 37	N74-21060
Light direction sensor [NASA-CASE-NPO-11201]	c 14	N72-27409	Low phase noise digital frequency divider [NASA-CASE-NPO-11569]	c 10	N73-26229	Thin film gauge [NASA-CASE-NPO-10617-1]	c 35	N74-22095
Adjustable support [NASA-CASE-NPO-10721]	c 15	N72-27484	Vehicle for use in planetary exploration [NASA-CASE-NPO-11366]	c 11	N73-26238			
Method for controlling vapor content of a gas [NASA-CASE-NPO-10633]	c 03	N72-28025	Temperature control system with a pulse width modulated bridge [NASA-CASE-NPO-11304]	c 14	N73-26430			
Maser for frequencies in the 7-20 GHz range [NASA-CASE-NPO-11437]	c 16	N72-28521						
Thin film temperature sensor and method of making same [NASA-CASE-NPO-11775]	c 26	N72-28761						
Circularly polarized antenna [NASA-CASE-ERC-10214]	c 09	N72-31235						

High isolation RF signal selection switches			Nonlinear nonsingular feedback shift registers		The dc-to-dc converters employing staggered-phase power switches with two-loop control			
[NASA-CASE-NPO-13081-1]	c 33	N74-22814	[NASA-CASE-NPO-13451-1]	c 33	N76-14373			
Single reflector interference spectrometer and drive system therefor			Strain gage mounting assembly		[NASA-CASE-NPO-13512-1]	c 33	N77-10428	
[NASA-CASE-NPO-11932-1]	c 35	N74-23040	[NASA-CASE-NPO-13170-1]	c 35	N76-14430	Ion and electron detector for use in an ICR spectrometer		
Scanning nozzle plating system			Thermostatically controlled non-tracking type solar energy concentrator		[NASA-CASE-NPO-13479-1]	c 35	N77-10492	
[NASA-CASE-NPO-11758-1]	c 31	N74-23065	[NASA-CASE-NPO-13497-1]	c 44	N76-14602	Hydrogen-rich gas generator		
Rock sampling			Multi-computer multiple data path hardware exchange system		[NASA-CASE-NPO-13560-1]	c 44	N77-10636	
[NASA-CASE-XNP-10007-1]	c 46	N74-23068	[NASA-CASE-NPO-13422-1]	c 60	N76-14818	Space communication system for compressed data with a concatenated Reed-Solomon-Viterbi coding channel		
Rock sampling			Cermet composition and method of fabrication		[NASA-CASE-NPO-13545-1]	c 32	N77-12240	
[NASA-CASE-XNP-09755]	c 46	N74-23069	[NASA-CASE-NPO-13120-1]	c 27	N76-15311	Computer interface system		
Miniature multichannel biotelemetry system			Dichroic plate		[NASA-CASE-NPO-13428-1]	c 60	N77-12721	
[NASA-CASE-NPO-13065-1]	c 52	N74-26625	[NASA-CASE-NPO-13506-1]	c 35	N76-15435	High temperature oxidation resistant cermet compositions		
Dispensing targets for ion beam particle generators			Magnetometer using superconducting rotating body		[NASA-CASE-NPO-13666-1]	c 27	N77-13217	
[NASA-CASE-NPO-13112-1]	c 73	N74-26767	[NASA-CASE-NPO-13388-1]	c 35	N76-16390	Frequency discriminator and phase detector circuit		
Optically detonated explosive device			Scan converting video tape recorder		[NASA-CASE-NPO-15151-1]	c 33	N77-13315	
[NASA-CASE-NPO-11743-1]	c 28	N74-27425	[NASA-CASE-NPO-10166-2]	c 35	N76-16391	Mass spectrometer with magnetic pole pieces providing the magnetic fields for both the magnetic sector and an ion-type vacuum pump		
Coherent receiver employing nonlinear coherence detection for carrier tracking			Hydrogen rich gas generator		[NASA-CASE-NPO-13342-1]	c 37	N76-16446	
[NASA-CASE-NPO-11921-1]	c 32	N74-30523	[NASA-CASE-NPO-13342-1]	c 37	N76-16446	[NASA-CASE-NPO-13663-1]	c 35	N77-14406
Digital servo control of random sound test excitation			Automated system for identifying traces of organic chemical compounds in aqueous solutions		[NASA-CASE-NPO-13540-1]	c 35	N77-14409	
[NASA-CASE-NPO-11623-1]	c 71	N74-31148	[NASA-CASE-NPO-13063-1]	c 25	N76-18245	Method and apparatus for background signal reduction in opto-acoustic absorption measurement		
Apparatus for forming drive belts			Analog to digital converter		[NASA-CASE-NPO-13683-1]	c 35	N77-14411	
[NASA-CASE-NPO-13205-1]	c 31	N74-32917	[NASA-CASE-NPO-13385-1]	c 33	N76-18345	Nuclear thermionic converter		
Tool for use in lifting pin supported objects			Sampler of gas borne particles		[NASA-CASE-NPO-13121-1]	c 73	N77-18891	
[NASA-CASE-NPO-13157-1]	c 37	N74-32918	[NASA-CASE-NPO-13396-1]	c 35	N76-18401	Multiple rate digital command detection system with range clean-up capability		
Preparing oxidizer coated metal fuel particles			Stark-effect modulation of CO2 laser with NH2D		[NASA-CASE-NPO-13753-1]	c 32	N77-20289	
[NASA-CASE-NPO-11975-1]	c 28	N74-33209	[NASA-CASE-NPO-11945-1]	c 36	N76-18427	Charge storage diode modulators and demodulators		
Geneva mechanism			Diffused waveguiding capillary tube with distributed feedback for a gas laser		[NASA-CASE-NPO-10189-1]	c 33	N77-21314	
[NASA-CASE-NPO-13281-1]	c 37	N75-13266	[NASA-CASE-NPO-13544-1]	c 36	N76-18428	Compact, high intensity arc lamp with internal magnetic field producing means		
Method of producing a storage bulb for an atomic hydrogen maser			System for minimizing internal combustion engine pollution emission		[NASA-CASE-NPO-11510-1]	c 33	N77-21315	
[NASA-CASE-NPO-13050-1]	c 36	N75-15029	[NASA-CASE-NPO-13402-1]	c 37	N76-18457	Depressurization of arc lamps		
Combined pressure regulator and shutoff valve			Hydrogen-bromine secondary battery		[NASA-CASE-NPO-10790-1]	c 33	N77-21316	
[NASA-CASE-NPO-13201-1]	c 37	N75-15050	[NASA-CASE-NPO-13237-1]	c 44	N76-18641	Electromagnetic transducer recording head having a laminated core section and tapered gap		
Simultaneous acquisition of tracking data from two stations			Hydrogen-rich gas generator		[NASA-CASE-NPO-10711-1]	c 35	N77-21392	
[NASA-CASE-NPO-13292-1]	c 32	N75-15854	[NASA-CASE-NPO-13464-1]	c 44	N76-18642	Cryogenic liquid sensor		
Shock absorbing mount for electrical components			Zinc-halide battery with molten electrolyte		[NASA-CASE-NPO-10619-1]	c 35	N77-21393	
[NASA-CASE-NPO-13253-1]	c 37	N75-18573	[NASA-CASE-NPO-11961-1]	c 44	N76-18643	Uniform variable light source		
System for generating timing and control signals			Priority interrupt system		[NASA-CASE-NPO-11429-1]	c 74	N77-21941	
[NASA-CASE-NPO-13125-1]	c 33	N75-19519	[NASA-CASE-NPO-13067-1]	c 60	N76-18800	Arc control in compact arc lamps		
Motor run-up system			Miniature muscle displacement transducer		[NASA-CASE-NPO-10870-1]	c 33	N77-22386	
[NASA-CASE-NPO-13374-1]	c 33	N75-19524	[NASA-CASE-NPO-13519-1]	c 33	N76-19338	Hydraulic drain means for servo-systems		
Deep trap, laser activated image converting system			Zero torque gear head wrench		[NASA-CASE-NPO-10316-1]	c 37	N77-22479	
[NASA-CASE-NPO-13131-1]	c 36	N75-19652	[NASA-CASE-NPO-13059-1]	c 37	N76-20480	Automated multi-level vehicle parking system		
Multitarget sequential sputtering apparatus			Method and apparatus for measurement of trap density and energy distribution in dielectric films		[NASA-CASE-NPO-13058-1]	c 37	N77-22480	
[NASA-CASE-NPO-13345-1]	c 37	N75-19684	[NASA-CASE-NPO-13443-1]	c 76	N76-20994	Sun direction detection system		
Wide angle sun sensor			Indicator providing continuous indication of the presence of a specific pollutant in air		[NASA-CASE-NPO-13722-1]	c 74	N77-22951	
[NASA-CASE-NPO-13327-1]	c 35	N75-23910	[NASA-CASE-NPO-13474-1]	c 45	N76-21742	Isotope separation using metallic vapor lasers		
Material suspension within an acoustically excited resonant chamber			Shared memory for a fault-tolerant computer		[NASA-CASE-NPO-13550-1]	c 36	N77-26477	
[NASA-CASE-NPO-13263-1]	c 12	N75-24774	[NASA-CASE-NPO-13139-1]	c 60	N76-21914	Distributed feedback acoustic surface wave oscillator		
Heat operated cryogenic electrical generator			Wind sensor		[NASA-CASE-NPO-13673-1]	c 71	N77-26919	
[NASA-CASE-NPO-13303-1]	c 20	N75-24837	[NASA-CASE-NPO-13462-1]	c 35	N76-24524	Penetrometer		
System for interference signal nulling by polarization adjustment			Fiber distributed feedback laser		[NASA-CASE-NPO-11103-1]	c 35	N77-27367	
[NASA-CASE-NPO-13140-1]	c 32	N75-24982	[NASA-CASE-NPO-13531-1]	c 36	N76-24553	Lightweight reflector assembly		
Heat detection and compositions and devices therefor			Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback		[NASA-CASE-NPO-13707-1]	c 74	N77-28933	
[NASA-CASE-NPO-10764-2]	c 35	N75-25122	[NASA-CASE-NPO-13346-1]	c 36	N76-29575	Aldehyde-containing urea-absorbing polysaccharides		
Servo-controlled intravital microscope system			Stirling cycle engine and refrigeration systems		[NASA-CASE-NPO-13620-1]	c 27	N77-30236	
[NASA-CASE-NPO-13214-1]	c 35	N75-25123	[NASA-CASE-NPO-13613-1]	c 37	N76-29590	Phase substitution of spare converter for a failed one of parallel phase staggered converters		
Vehicle locating system utilizing AM broadcasting station carriers			Hydrogen rich gas generator		[NASA-CASE-NPO-13812-1]	c 33	N77-30365	
[NASA-CASE-NPO-13217-1]	c 32	N75-26194	[NASA-CASE-NPO-13342-2]	c 44	N76-29700	Oil and fat absorbing polymers		
Asynchronous, multiplexing, single line transmission and recovery data system			Solar-powered pump		[NASA-CASE-NPO-11609-2]	c 27	N77-31308	
[NASA-CASE-NPO-13321-1]	c 32	N75-26195	[NASA-CASE-NPO-13567-1]	c 44	N76-29701	Combustion engine		
Fluorescence detector for monitoring atmospheric pollutants			Hydrogen rich gas generator		[NASA-CASE-NPO-13671-1]	c 37	N77-31497	
[NASA-CASE-NPO-13231-1]	c 45	N75-27585	[NASA-CASE-NPO-13464-2]	c 44	N76-29704	Apparatus for photon excited catalysis		
Cooperative multi-axis sensor for teleoperation of article manipulating apparatus			Myocardium wall thickness transducer and measuring method		[NASA-CASE-NPO-13566-1]	c 25	N77-32255	
[NASA-CASE-NPO-13386-1]	c 54	N75-27758	[NASA-CASE-NPO-13644-1]	c 52	N76-29895	Charge-coupled device data processor for an airborne imaging radar system		
Heat sterilizable patient ventilator			Catheter tip force transducer for cardiovascular research		[NASA-CASE-NPO-13587-1]	c 32	N77-32342	
[NASA-CASE-NPO-13313-1]	c 54	N75-27761	[NASA-CASE-NPO-13643-1]	c 52	N76-29896	Direct reading inductance meter		
Refrigerated coaxial coupling			Real time analysis of voiced sounds		[NASA-CASE-NPO-13792-1]	c 35	N77-32455	
[NASA-CASE-NPO-13504-1]	c 33	N75-30430	[NASA-CASE-NPO-13465-1]	c 32	N76-31372	Solar photolysis of water		
Electric power generation system directory from laser power			High resolution Fourier interferometer-spectrophotopolarimeter		[NASA-CASE-NPO-13675-1]	c 44	N77-32580	
[NASA-CASE-NPO-13308-1]	c 36	N75-30524	[NASA-CASE-NPO-13604-1]	c 35	N76-31490	Low to high temperature energy conversion system		
Subminiature insertable force transducer			Reflected-wave maser		[NASA-CASE-NPO-13510-1]	c 44	N77-32581	
[NASA-CASE-NPO-13423-1]	c 33	N75-31329	[NASA-CASE-NPO-13490-1]	c 36	N76-31512	Solar energy collection system		
Symmetrical odd-modulus frequency divider			Method of making hollow elastomeric bodies		[NASA-CASE-NPO-13810-1]	c 44	N77-32582	
[NASA-CASE-NPO-13426-1]	c 33	N75-31330	[NASA-CASE-NPO-13535-1]	c 37	N76-31524	Three-dimensional tracking solar energy concentrator and method for making same		
Stored charge transistor			Solar cell grid patterns		[NASA-CASE-NPO-13736-1]	c 44	N77-32583	
[NASA-CASE-NPO-11156-2]	c 33	N75-31331	[NASA-CASE-NPO-13087-2]	c 44	N76-31666	Overload protection system for power inverter		
Doped Josephson tunneling junction for use in a sensitive IR detector			Furlable antenna		[NASA-CASE-NPO-13872-1]	c 33	N78-10377	
[NASA-CASE-NPO-13348-1]	c 33	N75-31332	[NASA-CASE-NPO-13553-1]	c 33	N76-32457	Photoelectron spectrometer with means for stabilizing sample surface potential		
Acoustically controlled distributed feedback laser			Annular arc accelerator shock tube		[NASA-CASE-NPO-13772-1]	c 35	N78-10429	
[NASA-CASE-NPO-13175-1]	c 36	N75-31427	[NASA-CASE-NPO-13528-1]	c 09	N77-10071	Machine for use in monitoring fatigue life for a plurality of elastomeric specimens		
Inert gas metallic vapor laser			Cryostat system for temperatures on the order of 2 deg K or less		[NASA-CASE-NPO-13731-1]	c 39	N78-10493	
[NASA-CASE-NPO-13449-1]	c 36	N75-32441	[NASA-CASE-NPO-13459-1]	c 31	N77-10229			
Helium refrigerator								
[NASA-CASE-NPO-13435-1]	c 31	N76-14284						

- Portable linear-focused solar thermal energy collecting system  
[NASA-CASE-NPO-13734-1] c 44 N78-10554
- Acoustic energy shaping  
[NASA-CASE-NPO-13802-1] c 71 N78-10837
- High voltage, high current Schottky barrier solar cell  
[NASA-CASE-NPO-13482-1] c 44 N78-13526
- Durable antistatic coating for polymethylmethacrylate  
[NASA-CASE-NPO-13867-1] c 27 N78-14164
- Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c 32 N78-15323
- Selective image area control of X-ray film exposure density  
[NASA-CASE-NPO-13808-1] c 35 N78-15461
- Motion restraining device  
[NASA-CASE-NPO-13619-1] c 37 N78-16369
- Nuclear alkylated pyridine aldehyde polymers and conductive compositions thereof  
[NASA-CASE-NPO-10557] c 27 N78-17214
- Method of adhering bone to a rigid substrate using a graphite fiber reinforced bone cement  
[NASA-CASE-NPO-13764-1] c 27 N78-17215
- Purging means and method for Xenon arc lamps  
[NASA-CASE-NPO-11978] c 31 N78-17238
- Pressure transducer  
[NASA-CASE-NPO-11150] c 35 N78-17359
- Cross correlation anomaly detection system  
[NASA-CASE-NPO-13283] c 38 N78-17395
- Automatic visual inspection system for microelectronics  
[NASA-CASE-NPO-13282] c 38 N78-17396
- Low cost solar energy collection system  
[NASA-CASE-NPO-13579-1] c 44 N78-17460
- Differential optoacoustic absorption detector  
[NASA-CASE-NPO-13759-1] c 74 N78-17867
- Interferometer mirror tilt correcting system  
[NASA-CASE-NPO-13687-1] c 35 N78-18391
- Over-under double-pass interferometer  
[NASA-CASE-NPO-13999-1] c 35 N78-18395
- Independent gain and bandwidth control of a traveling wave maser  
[NASA-CASE-NPO-13801-1] c 36 N78-18410
- High temperature resistant cermet and ceramic compositions  
[NASA-CASE-NPO-13690-1] c 27 N78-19302
- Thin conformal antenna array for microwave power conversions  
[NASA-CASE-NPO-13886-1] c 32 N78-24391
- Multistation refrigeration system  
[NASA-CASE-NPO-13839-1] c 31 N78-25256
- Swept group delay measurement  
[NASA-CASE-NPO-13909-1] c 33 N78-25319
- Polymeric electrolytic hygrometer  
[NASA-CASE-NPO-13948-1] c 35 N78-25391
- Charge transfer reaction laser with preionization means  
[NASA-CASE-NPO-13945-1] c 36 N78-27402
- RF beam center location method and apparatus for power transmission system  
[NASA-CASE-NPO-13821-1] c 44 N78-28594
- Control for nuclear thermionic power source  
[NASA-CASE-NPO-13114-2] c 73 N78-28913
- Magneto-optic detection system with noise cancellation  
[NASA-CASE-NPO-11954-1] c 35 N78-29421
- Nitramine propellants  
[NASA-CASE-NPO-14103-1] c 28 N78-31255
- Reflex feed system for dual frequency antenna with frequency cutoff means  
[NASA-CASE-NPO-14022-1] c 32 N78-31321
- Solar pond  
[NASA-CASE-NPO-13581-2] c 44 N78-31525
- Non-tracking solar energy collector system  
[NASA-CASE-NPO-13813-1] c 44 N78-31526
- Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c 44 N78-31527
- Solid propellant motor  
[NASA-CASE-NPO-11458A] c 20 N78-32179
- Thermoplastic rubber comprising ethylene-vinyl acetate copolymer, asphalt and fluxing oil  
[NASA-CASE-NPO-08835-1] c 27 N78-33228
- Hydrogen-fueled engine  
[NASA-CASE-NPO-13763-1] c 44 N78-33526
- Plural output optometric sample cell and analysis system  
[NASA-CASE-NPO-10233-1] c 74 N78-33913
- Portable electrophoresis apparatus using minimum electrolyte  
[NASA-CASE-NPO-13274-1] c 25 N79-10163
- Automatic communication signal monitoring system  
[NASA-CASE-NPO-13941-1] c 32 N79-10262
- Surface roughness measuring system  
[NASA-CASE-NPO-13862-1] c 35 N79-10391
- Vehicular impact absorption system  
[NASA-CASE-NPO-14014-1] c 37 N79-10420
- Dual membrane hollow fiber fuel cell and method of operating same  
[NASA-CASE-NPO-13732-1] c 44 N79-10513
- Combuster  
[NASA-CASE-NPO-13958-1] c 25 N79-11151
- Surfactant-assisted liquefaction of particulate carbonaceous substances  
[NASA-CASE-NPO-13904-1] c 25 N79-11152
- Electroexplosive device  
[NASA-CASE-NPO-13858-1] c 28 N79-11231
- Space-charge-limited solid-state triode  
[NASA-CASE-NPO-13064-1] c 33 N79-11314
- Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c 37 N79-11405
- Non-tracking solar energy collector system  
[NASA-CASE-NPO-13817-1] c 44 N79-11471
- Method of controlling defect orientation in silicon crystal ribbon growth  
[NASA-CASE-NPO-13918-1] c 76 N79-11920
- Method and apparatus for measuring minority carrier lifetimes and bulk diffusion length in P-N junction solar cells  
[NASA-CASE-NPO-14100-1] c 44 N79-12541
- Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c 52 N79-12694
- Conical scan tracking system employing a large antenna  
[NASA-CASE-NPO-14009-1] c 32 N79-13214
- Stabilization of He2(a 3 Sigma u+ molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c 72 N79-13826
- High temperature resistant cermet and ceramic compositions  
[NASA-CASE-NPO-13690-2] c 27 N79-14213
- Inhibited solid propellant composition containing beryllium hydride  
[NASA-CASE-NPO-10866-1] c 28 N79-14228
- Digital demodulator-correlator  
[NASA-CASE-NPO-13982-1] c 32 N79-14267
- Azimuth correlator for real-time synthetic aperture radar image processing  
[NASA-CASE-NPO-14019-1] c 32 N79-14268
- Apparatus for providing a servo drive signal in a high-speed stepping interferometer  
[NASA-CASE-NPO-13569-2] c 35 N79-14348
- High-torque open-end wrench  
[NASA-CASE-NPO-13541-1] c 37 N79-14383
- Sun tracking solar energy collector  
[NASA-CASE-NPO-13921-1] c 44 N79-14526
- Primary reflector for solar energy collection systems  
[NASA-CASE-NPO-13579-4] c 44 N79-14529
- Gas diffusion liquid storage bag and method of use for storing blood  
[NASA-CASE-NPO-13930-1] c 52 N79-14749
- Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c 52 N79-14751
- Thermomagnetic recording and magnetic-optic playback system  
[NASA-CASE-NPO-10872-1] c 35 N79-16246
- Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
[NASA-CASE-NPO-11336-1] c 76 N79-16678
- Multispectral imaging and analysis system  
[NASA-CASE-NPO-13691-1] c 43 N79-17288
- Solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-1] c 44 N79-17314
- Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c 85 N79-17747
- Thermal energy transformer  
[NASA-CASE-NPO-14058-1] c 44 N79-18443
- Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-1] c 32 N79-19195
- Method and turbine for extracting kinetic energy from a stream of two-phase fluid  
[NASA-CASE-NPO-14130-1] c 34 N79-20335
- Digital data reformatter/deserializer  
[NASA-CASE-NPO-13676-1] c 60 N79-20751
- Acoustic driving of rotor  
[NASA-CASE-NPO-14005-1] c 71 N79-20827
- System and method for obtaining wide screen Schlieren photographs  
[NASA-CASE-NPO-14174-1] c 74 N79-20856
- Seismic vibration source  
[NASA-CASE-NPO-14112-1] c 46 N79-22679
- Underwater seismic source  
[NASA-CASE-NPO-14255-1] c 46 N79-23555
- Resolution enhanced sound detecting apparatus  
[NASA-CASE-NPO-14134-1] c 71 N79-23753
- Phase conjugation method and apparatus for an active retrodirective antenna array  
[NASA-CASE-NPO-13641-1] c 32 N79-24210
- Module failure isolation circuit for paralleled inverters  
[NASA-CASE-NPO-14000-1] c 33 N79-24254
- Circuit for automatic load sharing in parallel converter modules  
[NASA-CASE-NPO-14056-1] c 33 N79-24257
- Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c 44 N79-24431
- Primary reflector for solar energy collection systems and method of making same  
[NASA-CASE-NPO-13579-3] c 44 N79-24432
- Solar energy collection system  
[NASA-CASE-NPO-13579-2] c 44 N79-24433
- Compact artificial hand  
[NASA-CASE-NPO-13906-1] c 54 N79-24652
- Double-sided solar cell package  
[NASA-CASE-NPO-14199-1] c 44 N79-25482
- Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means  
[NASA-CASE-NPO-13910-1] c 52 N79-27836
- Chemical vapor deposition reactor  
[NASA-CASE-NPO-13650-1] c 25 N79-28253
- High performance ammonium nitrate propellant  
[NASA-CASE-NPO-14260-1] c 28 N79-28342
- Biocontamination and particulate detection system  
[NASA-CASE-NPO-13953-1] c 35 N79-28527
- Multi-channel rotating optical interface for data transmission  
[NASA-CASE-NPO-14066-1] c 74 N79-34011
- Start up system for hydrogen generator used with an internal combustion engine  
[NASA-CASE-NPO-13849-1] c 28 N80-10374
- System for detecting substructure microfractures and method therefore  
[NASA-CASE-NPO-14192-1] c 39 N80-10507
- Borehole geological assessment  
[NASA-CASE-NPO-14231-1] c 46 N80-10709
- Electromagnetic power absorber  
[NASA-CASE-NPO-13830-1] c 32 N80-14281
- Multiple anode arc lamp system  
[NASA-CASE-NPO-10857-1] c 33 N80-14330
- Method for analyzing radiation sensitivity of integrated circuits  
[NASA-CASE-NPO-14350-1] c 33 N80-14332
- Method for forming a solar array strip  
[NASA-CASE-NPO-13652-3] c 44 N80-14474
- Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c 45 N80-14579
- System for real-time crustal deformation monitoring  
[NASA-CASE-NPO-14124-1] c 46 N80-14603
- Dialysis system  
[NASA-CASE-NPO-14101-1] c 52 N80-14687
- High resolution threshold photoelectron spectroscopy by electron attachment  
[NASA-CASE-NPO-14078-1] c 72 N80-14877
- Strong thin membrane structure  
[NASA-CASE-NPO-14021-2] c 27 N80-16163
- Antenna feed system for receiving circular polarization and transmitting linear polarization  
[NASA-CASE-NPO-14362-1] c 32 N80-16261
- High-speed data link for moderate distances and noisy environments  
[NASA-CASE-NPO-14152-1] c 32 N80-18252
- Radio frequency arraying method for receivers  
[NASA-CASE-NPO-14328-1] c 32 N80-18253
- High power RF coaxial switch  
[NASA-CASE-NPO-14229-1] c 33 N80-18285
- Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c 33 N80-18287
- Viscosity measuring instrument  
[NASA-CASE-NPO-14501-1] c 35 N80-18357
- Frequency-scanning particle size spectrometer  
[NASA-CASE-NPO-13606-2] c 35 N80-18364
- Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c 36 N80-18372
- Driver for solar cell I-V characteristic plots  
[NASA-CASE-NPO-14096-1] c 44 N80-18551
- Method and means for helium/hydrogen ratio measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c 25 N80-20334
- Satellite personal communications system  
[NASA-CASE-NPO-14480-1] c 32 N80-20448
- Velocity servo for continuous scan Fourier interference spectrometer  
[NASA-CASE-NPO-14093-1] c 35 N80-20563
- Portable heatable container  
[NASA-CASE-NPO-14237-1] c 44 N80-20808
- Dual band combiner for horn antenna  
[NASA-CASE-NPO-14519-1] c 32 N80-23524
- Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c 33 N80-23559
- Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c 32 N80-24510
- Method of mitigating titanium impurities effects in p-type silicon material for solar cells  
[NASA-CASE-NPO-14635-1] c 44 N80-24741



- Geological assessment probe  
[NASA-CASE-NPO-14558-1] c 46 N80-24906
- Cooled echelle grating spectrometer  
[NASA-CASE-NPO-14372-1] c 35 N80-26635
- Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c 52 N80-27072
- Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c 72 N80-27163
- Silicone containing solid propellant  
[NASA-CASE-NPO-14477-1] c 28 N80-28536
- System for slicing silicon wafers  
[NASA-CASE-NPO-14406-1] c 37 N80-29703
- Induced junction solar cell and method of fabrication  
[NASA-CASE-NPO-13786-1] c 44 N80-29835
- Interferometric locating system  
[NASA-CASE-NPO-14173-1] c 04 N80-32359
- Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same  
[NASA-CASE-NPO-13137-1] c 27 N80-32514
- Prepolymer dianhydrides  
[NASA-CASE-NPO-13899-1] c 27 N80-32515
- System for plotting subsoil structure and method therefor  
[NASA-CASE-NPO-14191-1] c 31 N80-32584
- Support assembly for cryogenically coolable low-noise choke waveguide  
[NASA-CASE-NPO-14253-1] c 32 N80-32605
- Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c 25 N81-14015
- Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c 27 N81-14076
- Frequency translating phase conjugation circuit for active retrodirective antenna array  
[NASA-CASE-NPO-14536-1] c 32 N81-14185
- Precise RF timing signal distribution to remote stations  
[NASA-CASE-NPO-14749-1] c 32 N81-14186
- Base drive for paralleled inverter systems  
[NASA-CASE-NPO-14163-1] c 33 N81-14220
- Low cost cryostat  
[NASA-CASE-NPO-14513-1] c 35 N81-14287
- Power control for hot gas engines  
[NASA-CASE-NPO-14220-1] c 37 N81-14318
- Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c 27 N81-15104
- Continuous coal processing method  
[NASA-CASE-NPO-13758-2] c 31 N81-15154
- Speed control device for a heavy duty shaft  
[NASA-CASE-NPO-14170-1] c 37 N81-15364
- Redundant operation of counter modules  
[NASA-CASE-NPO-14162-1] c 60 N81-15706
- Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
[NASA-CASE-NPO-13530-1] c 25 N81-17187
- Molten salt pyrolysis of latex  
[NASA-CASE-NPO-14315-1] c 27 N81-17261
- Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c 37 N81-17432
- Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c 44 N81-17518
- System for forming a quadrified image comprising angularly related fields of view of a three dimensional object  
[NASA-CASE-NPO-14219-1] c 74 N81-17886
- Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NPO-14657-1] c 74 N81-17887
- Interferometer  
[NASA-CASE-NPO-14502-1] c 74 N81-17888
- Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c 25 N81-19244
- Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c 33 N81-19393
- Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NPO-14670-1] c 44 N81-19558
- System and method for character recognition  
[NASA-CASE-NPO-11337-1] c 74 N81-19896
- X-ray position detector  
[NASA-CASE-NPO-12087-1] c 74 N81-19898
- Controller for computer control of brushless dc motors  
[NASA-CASE-NPO-13970-1] c 33 N81-20352
- Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c 52 N81-20703
- Polymeric compositions and their method of manufacture  
[NASA-CASE-NPO-10424-1] c 27 N81-24258
- Low current linearization of magnetic amplifier for dc transducer  
[NASA-CASE-NPO-14617-1] c 33 N81-24338
- Stark effect spectrophone for continuous absorption spectra monitoring  
[NASA-CASE-NPO-15102-1] c 25 N81-25159
- Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c 37 N81-25370
- Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c 37 N81-25371
- Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c 39 N81-25400
- Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c 43 N81-26509
- CCD correlated quadruple sampling processor  
[NASA-CASE-NPO-14426-1] c 33 N81-27396
- Terminal guidance sensor system  
[NASA-CASE-NPO-14521-1] c 37 N81-27519
- Medical diagnosis system and method with multispectral imaging  
[NASA-CASE-NPO-14402-1] c 52 N81-27783
- High-speed multiplexing of keyboard data inputs  
[NASA-CASE-NPO-14554-1] c 60 N81-27814
- Coal desulfurization  
[NASA-CASE-NPO-14272-1] c 25 N81-33246
- Method and apparatus for producing concentric hollow spheres  
[NASA-CASE-NPO-14596-1] c 31 N81-33319
- Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c 33 N81-33404
- Optical gyroscope system  
[NASA-CASE-NPO-14258-1] c 35 N81-33448
- Head for high speed spinner having a vacuum chuck  
[NASA-CASE-NPO-15227-1] c 37 N81-33482
- Fluidized bed coal combustion reactor  
[NASA-CASE-NPO-14273-1] c 25 N82-11144
- Scriber for silicon wafers  
[NASA-CASE-NPO-15539-1] c 37 N82-11469
- Sewage sludge additive  
[NASA-CASE-NPO-13877-1] c 45 N82-11634
- Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c 32 N82-12297
- Microwave limb sounder  
[NASA-CASE-NPO-14544-1] c 46 N82-12685
- Faraday rotation measurement method and apparatus  
[NASA-CASE-NPO-14839-1] c 35 N82-15381
- Solar heated fluidized bed gasification system  
[NASA-CASE-NPO-15071-1] c 44 N82-16475
- Method for shaping and aiming narrow beams  
[NASA-CASE-NPO-14632-1] c 32 N82-18443
- Fiber optic transmission line stabilization apparatus and method  
[NASA-CASE-NPO-15036-1] c 74 N82-19029
- Suspension system for a wheel rolling on a flat track  
[NASA-CASE-NPO-14395-1] c 37 N82-21587
- Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c 32 N82-23376
- Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N82-24072
- Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c 33 N82-24418
- Hermetic seal for a shaft  
[NASA-CASE-NPO-15115-1] c 37 N82-24493
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-1] c 35 N82-25484
- Automotive absorption air conditioner utilizing solar and motor waste heat  
[NASA-CASE-NPO-15183-1] c 44 N82-26776
- Efficiency of silicon solar cells containing chromium  
[NASA-CASE-NPO-15179-1] c 44 N82-26777
- Acoustic levitation methods and apparatus  
[NASA-CASE-NPO-15562-1] c 71 N82-27086
- Thermochemical generation of hydrogen  
[NASA-CASE-NPO-15015-1] c 25 N82-28368
- Method of forming frozen spheres in a force-free drop tower  
[NASA-CASE-NPO-14845-1] c 27 N82-28442
- High power metallic halide laser  
[NASA-CASE-NPO-14782-1] c 36 N82-28616
- Method of Fabricating Schottky Barrier solar cell  
[NASA-CASE-NPO-13689-4] c 44 N82-28780
- Coal desulfurization by aqueous chlorination  
[NASA-CASE-NPO-14902-1] c 25 N82-29371
- Control means for a solid state crossbar switch  
[NASA-CASE-NPO-15066-1] c 33 N82-29538
- Coherently pulsed laser source  
[NASA-CASE-NPO-15111-1] c 36 N82-29589
- Solid electrolyte cell  
[NASA-CASE-NPO-15269-1] c 44 N82-29710
- Electromigration process for the purification of molten silicon during crystal growth  
[NASA-CASE-NPO-14831-1] c 76 N82-30105
- CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c 06 N83-10040
- Method and apparatus for convection control of metallic halide vapor density in a metallic halide laser  
[NASA-CASE-NPO-15021-1] c 36 N83-10417
- Thermal reactor  
[NASA-CASE-NPO-14369-1] c 44 N83-10501
- Enhancement of in vitro guayule propagation  
[NASA-CASE-NPO-15213-1] c 51 N83-17045
- Servomechanism for Doppler shift compensation in optical correlator for synthetic aperture radar  
[NASA-CASE-NPO-14998-1] c 32 N83-18975
- Synchronized voltage contrast display analysis system  
[NASA-CASE-NPO-14567-1] c 33 N83-18996
- Broadband optical radiation detector  
[US-PATENT-4,262,198] c 74 N83-19597
- Elastomer coated filler and composites thereof comprising at least 60% by weight of a hydrated filler and an elastomer containing an acid substituent  
[NASA-CASE-NPO-14857-1] c 27 N83-19900
- Thin wire pointing method  
[NASA-CASE-NPO-15789-1] c 31 N83-19947
- Clutter free synthetic aperture radar correlator  
[NASA-CASE-NPO-14035-1] c 32 N83-19968
- Controlled in situ etch-back  
[NASA-CASE-NPO-15625-1] c 76 N83-20789
- Stabilized lanthanum sulphur compounds  
[NASA-CASE-NPO-16135-1] c 25 N83-24572
- Mobile sampler for use in acquiring samples of terrestrial atmospheric gases  
[NASA-CASE-NPO-15220-1] c 45 N83-25217
- System and method for moving a probe to follow movements of tissue  
[NASA-CASE-NPO-15197-1] c 52 N83-25346
- Waveguide cooling system  
[NASA-CASE-NPO-15401-1] c 32 N83-27085
- Particle analyzing method and apparatus  
[NASA-CASE-NPO-15292-1] c 35 N83-27184
- Hydrodesulfurization of chlorinated coal  
[NASA-CASE-NPO-15304-1] c 25 N83-31743
- Method and apparatus for producing gas-filled hollow spheres  
[NASA-CASE-NPO-14596-3] c 31 N83-31896
- Cycling Joule Thomson refrigerator  
[NASA-CASE-NPO-15251-1] c 31 N83-31897
- Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c 32 N83-31918
- Method and device for detection of a substance  
[NASA-CASE-NPO-14940-1] c 33 N83-31954
- System for monitoring physical characteristics of fluids  
[NASA-CASE-NPO-15400-1] c 34 N83-31993
- Cloud cover sensor  
[NASA-CASE-NPO-14936-1] c 47 N83-32232
- Distributed multiport memory architecture  
[NASA-CASE-NPO-15342-1] c 60 N83-32342
- Acoustic system for material transport  
[NASA-CASE-NPO-15453-1] c 71 N83-32515
- System for controlled acoustic rotation of objects  
[NASA-CASE-NPO-15522-1] c 71 N83-32516
- Mixed polyvalent-monovalent metal coating for carbon-graphite fibers  
[NASA-CASE-NPO-14987-1] c 24 N83-33950
- Antenna grout replacement system  
[NASA-CASE-NPO-15202-1] c 27 N83-34043
- Sphere forming method and apparatus  
[NASA-CASE-NPO-15070-1] c 31 N83-35176
- Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c 36 N83-35350
- Acoustic bubble removal method  
[NASA-CASE-NPO-15334-1] c 71 N83-35781
- Method of increasing minority carrier lifetime in silicon web or the like  
[NASA-CASE-NPO-15530-1] c 76 N83-35888
- Acoustic suspension system  
[NASA-CASE-NPO-15435-1] c 71 N83-36846
- Optical fiber tactile sensor  
[NASA-CASE-NPO-15375-1] c 74 N84-11921
- Photoelectrochemical electrodes  
[NASA-CASE-NPO-15458-1] c 25 N84-12262
- Method and apparatus for minimizing convection during crystal growth from solution  
[NASA-CASE-NPO-15811-1] c 76 N84-12968
- Pressure letdown method and device for coal conversion systems  
[NASA-CASE-NPO-15100-1] c 44 N84-14583
- Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NPO-15767-1] c 23 N84-16255
- Electrodes for solid state devices  
[NASA-CASE-NPO-15161-1] c 33 N84-16456
- Contactless pellet fabrication  
[NASA-CASE-NPO-15592-1] c 71 N84-16940
- Ion beam accelerator system  
[NASA-CASE-NPO-15547-1] c 72 N84-16959
- Apparatus and method for destructive removal of particles contained in flowing fluid  
[NASA-CASE-NPO-15426-1] c 35 N84-17555

- Oil shale extraction using super-critical extraction  
[NASA-CASE-NPO-15656-1] c 43 N84-23012
- Laser pulse detection method and apparatus  
[NASA-CASE-NPO-16030-1] c 36 N84-25037
- Synthetic aperture radar target simulator  
[NASA-CASE-NPO-15024-1] c 32 N84-27951
- Ion mass spectrometer  
[NASA-CASE-NPO-15423-1] c 35 N84-28016
- Shaft transducer having dc output proportional to angular velocity  
[NASA-CASE-NPO-15706-1] c 35 N84-28017
- Centrifugal-reciprocating compressor  
[NASA-CASE-NPO-14597-2] c 37 N84-28081
- Solar energy modulator  
[NASA-CASE-NPO-15388-1] c 44 N84-28203
- Integrating IR detector imaging systems  
[NASA-CASE-NPO-15805-1] c 74 N84-28590
- Glass heating panels and method for preparing the same from architectural reflective glass  
[NASA-CASE-NPO-15753-1] c 27 N84-33589
- Portable reflectance spectrometer  
[NASA-CASE-NPO-13556-1] c 35 N84-33766
- Means and method for calibrating a photon detector utilizing electron-photon coincidence  
[NASA-CASE-NPO-15644-1] c 35 N84-33767
- Phase sensitive guidance sensor for wire-following vehicles  
[NASA-CASE-NPO-15341-1] c 35 N84-33769
- System for indicating fuel-efficient aircraft altitude  
[NASA-CASE-NPO-15351-2] c 06 N84-34443
- Pipelined digital SAR azimuth correlator using hybrid FFT-transversal filter  
[NASA-CASE-NPO-15519-1] c 32 N84-34651
- Correlation spectrometer having high resolution and multiplexing capability  
[NASA-CASE-NPO-15558-1] c 35 N84-34705
- Satellite solar pond  
[NASA-CASE-NPO-15808-1] c 44 N84-34792
- Epitaxial thinning process  
[NASA-CASE-NPO-15786-1] c 76 N84-35112
- Process and apparatus for growing a crystal ribbon  
[NASA-CASE-NPO-15629-1] c 76 N84-35113
- Multicomputer communication system  
[NASA-CASE-NPO-15433-1] c 32 N85-21428
- Hollow cathode apparatus  
[NASA-CASE-NPO-15560-1] c 33 N85-21491
- Method and apparatus for self-calibration and phasing of array antenna  
[NASA-CASE-NPO-15920-1] c 33 N85-21493
- State-of-charge coulometer  
[NASA-CASE-NPO-15759-1] c 35 N85-21596
- Carbon granule probe microphone for leak detection  
[NASA-CASE-NPO-16027-1] c 35 N85-21597
- Portable remote laser sensor for methane leak detection  
[NASA-CASE-NPO-15790-1] c 36 N85-21631
- Ingot slicing machine and method  
[NASA-CASE-NPO-15483-1] c 37 N85-21650
- Apparatus and method to keep the walls of a free-space reactor free from deposits of solid materials  
[NASA-CASE-NPO-15851-1] c 37 N85-21652
- Method of measuring sea surface water temperature with a satellite including wideband passive synthetic-aperture multichannel receiver  
[NASA-CASE-NPO-15651-1] c 43 N85-21723
- Method and apparatus for calibrating the ionosphere and application to surveillance of geophysical events  
[NASA-CASE-NPO-15430-1] c 46 N85-21846
- Automatic multi-banking of memory for microprocessors  
[NASA-CASE-NPO-15295-1] c 60 N85-21992
- Acoustic agglomeration methods and apparatus  
[NASA-CASE-NPO-15466-1] c 71 N85-22104
- High temperature acoustic levitator  
[NASA-CASE-NPO-16022-1] c 71 N85-22105
- Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c 74 N85-22139
- Optical system  
[NASA-CASE-NPO-15801-1] c 74 N85-23396
- Corrosion resistant coating  
[NASA-CASE-NPO-15928-1] c 26 N85-29005
- Stabilized unsaturated polyesters  
[NASA-CASE-NPO-16103-1] c 27 N85-29043
- Reciprocating magnetic refrigerator employing tandem porous matrices within a reciprocating displacer  
[NASA-CASE-NPO-16257-1] c 31 N85-29082
- Retinally stabilized differential resolution television display  
[NASA-CASE-NPO-15432-1] c 32 N85-29117
- Beam forming network  
[NASA-CASE-NPO-15743-1] c 32 N85-29118
- Closed loop electrostatic levitation system  
[NASA-CASE-NPO-15553-1] c 33 N85-29142
- Maser cavity servo-tuning system  
[NASA-CASE-NPO-15890-1-CU] c 33 N85-29143
- Jet pump-drive system for heat removal  
[NASA-CASE-NPO-16494-1-CU] c 34 N85-29182
- Trace water sensor  
[NASA-CASE-NPO-15722-1] c 35 N85-29212
- Digital control of diode laser for atmospheric spectroscopy  
[NASA-CASE-NPO-16000-1] c 36 N85-29264
- Method for driving two-phase turbines with enhanced efficiency  
[NASA-CASE-NPO-15037-2] c 37 N85-29282
- Gravity enhanced acoustic levitation method and apparatus  
[NASA-CASE-NPO-16147-1-CU] c 71 N85-29693
- Optical fiber coupling method and apparatus  
[NASA-CASE-NPO-15464-1] c 74 N85-29749
- Method for growth of crystals by pressure reduction of supercritical or subcritical solution  
[NASA-CASE-NPO-15772-1] c 76 N85-29800
- Split-cross-bridge resistor for testing for proper fabrication of integrated circuits  
[NASA-CASE-NPO-16021-1] c 33 N85-30187
- Arrangement for damping the resonance in a laser diode  
[NASA-CASE-NPO-15980-1] c 36 N85-30305
- Stable density stratification solar pond  
[NASA-CASE-NPO-15419-2] c 44 N85-30474
- Increased voltage photovoltaic cell  
[NASA-CASE-NPO-16155-1] c 44 N85-30475
- Acoustic particle separation  
[NASA-CASE-NPO-15559-1] c 71 N85-30765
- Low defect, high purity crystalline layers grown by selective deposition  
[NASA-CASE-NPO-15813-1] c 76 N85-30922
- Method and apparatus for Delta Kappa synthetic aperture radar measurement of ocean current  
[NASA-CASE-NPO-15704-1] c 32 N85-34327
- Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-2] c 35 N85-34373
- Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629
- Shuttle car loading system  
[NASA-CASE-NPO-15949-1] c 85 N85-34722
- Production of butanol by fermentation in the presence of cocultures of clostridium  
[NASA-CASE-NPO-16203-1] c 23 N85-35227
- Fluidized bed desulfurization  
[NASA-CASE-NPO-15924-1] c 25 N85-35253
- Memory metal actuator  
[NASA-CASE-NPO-15960-1] c 37 N86-19604
- Joint for deployable structures  
[NASA-CASE-NPO-16038-1] c 37 N86-19605
- Method and apparatus for contour mapping using synthetic aperture radar  
[NASA-CASE-NPO-15939-1] c 43 N86-19711
- Brushless DC motor control system responsive to control signals generated by a computer or the like  
[NASA-CASE-NPO-16420-1] c 33 N86-20681
- Self-locking double retention redundant full pin release  
[NASA-CASE-NPO-16233-1] c 37 N86-20801
- Neighborhood comparison operator  
[NASA-CASE-NPO-16464-1-CU] c 60 N86-24224
- High dynamic global positioning system receiver  
[NASA-CASE-NPO-16171-1-CU] c 04 N86-27270
- Protective telescoping shield for solar concentrator  
[NASA-CASE-NPO-16236-1] c 44 N86-27706
- Oxygen chemisorption cryogenic refrigerator  
[NASA-CASE-NPO-16734-1-CU] c 31 N88-14223
- Timing control system  
[NASA-CASE-NPO-16882-1-CU] c 33 N88-24863
- Noncontact temperature pattern measuring device  
[NASA-CASE-NPO-17024-1-CU] c 35 N88-24943
- Real-time optical multiple object recognition and tracking system and method  
[NASA-CASE-NPO-17139-1-CU] c 74 N88-25301
- Low-loss, high-isolation, fiber-optic isolator  
[NASA-CASE-NPO-17207-1-CU] c 74 N88-25304
- Real-time image difference detection using a polarization rotation spatial light modulator  
[NASA-CASE-NPO-17144-1-CU] c 74 N88-25305
- Television monitor field shifter and an opto-electronic method for obtaining a stereo image of optimal depth resolution and reduced depth distortion on a single screen  
[NASA-CASE-NPO-17249-1-CU] c 32 N89-28676
- Systolic VLSI array for implementing the Kalman filter algorithm  
[NASA-CASE-NPO-17108-1-CU] c 33 N89-28713
- Robust high-performance control for robotic manipulators  
[NASA-CASE-NPO-17785-1-CU] c 37 N89-28846
- Trochoidal analysis of scattered electrons in a merged electron-ion beam geometry  
[NASA-CASE-NPO-16789-1-CU] c 72 N89-29169
- Two stage sorption type cryogenic refrigerator including heat regeneration system  
[NASA-CASE-NPO-17630-1-CU] c 31 N89-29577
- Integrated circuit reliability testing  
[NASA-CASE-NPO-17393-1-CU] c 33 N89-29679
- Low power consumption current transducer  
[NASA-CASE-NPO-16888-1-CU] c 33 N89-29681
- Distributed proximity sensor system  
[NASA-CASE-NPO-17275-1-CU] c 37 N89-29750
- Predictive aging of polymers  
[NASA-CASE-NPO-17524-1-CU] c 27 N90-10261
- Acoustic controlled rotation and orientation  
[NASA-CASE-NPO-16995-1-CU] c 71 N90-12289
- Stripline feed for a microstrip array of patch elements with teardrop shaped probes  
[NASA-CASE-NPO-17548-1-CU] c 32 N90-16104
- Solid state electrical switch employing materials with reversible phase transistors  
[NASA-CASE-NPO-17621-1-CU] c 33 N90-17010
- VLSI single-chip (255,223) Reed-Solomon encoder with interleaver  
[NASA-CASE-NPO-17280-1-CU] c 17 N90-21061
- Atmospheric autorotating imaging device  
[NASA-CASE-NPO-17390-1-CU] c 35 N90-22769
- Multi-element spherical shell generation  
[NASA-CASE-NPO-17203-1-CU] c 34 N90-23700
- Computer access security code system  
[NASA-CASE-NPO-17525-1-CU] c 60 N90-25583
- Improving the geometric fidelity of imaging systems employing sensor arrays  
[NASA-CASE-NPO-17970-1-CU] c 43 N90-26384
- MBE growth technology for high quality strained III-V layers  
[NASA-CASE-NPO-17723-1-CU] c 76 N90-26685
- Multi-stage estimation of received carrier signal parameters under very high dynamic conditions of the receiver  
[NASA-CASE-NPO-17911-1-CU] c 32 N90-27016
- Method of forming three-dimensional semiconductor structures  
[NASA-CASE-NPO-17835-1-CU] c 76 N90-27518
- Method for providing a polarization filter for processing synthetic aperture radar image data  
[NASA-CASE-NPO-17904-1-CU] c 32 N91-13594
- Pipeline synthetic aperture radar data compression utilizing systolic binary tree-searched architecture for vector quantization  
[NASA-CASE-NPO-17941-1-CU] c 32 N91-13595
- Detection of multiple-bit errors from single-ion tracks in integrated circuits  
[NASA-CASE-NPO-18075-1-CU] c 33 N91-13622
- Measurement of waves in flows across a surface  
[NASA-CASE-NPO-17479-1-CU] c 34 N91-13658
- Composite passive damping struts for large precision structures  
[NASA-CASE-NPO-17914-1-CU] c 39 N91-13767
- Motion detection, novelty filtering, and target tracking using an interferometric technique with a GaAs phase conjugate mirror  
[NASA-CASE-NPO-17784-1-CU] c 74 N91-13998
- Efficient detection and signal parameter estimation with application to high dynamic GPS receiver  
[NASA-CASE-NPO-17820-1-CU] c 04 N91-14321
- High temperature refractory member with radiation emissive overcoat  
[NASA-CASE-NPO-17122-1-CU] c 27 N91-14489
- Trellis coded modulation for transmission over fading mobile satellite channel  
[NASA-CASE-NPO-16904-2-CU] c 32 N91-14523
- Organic cathode for a secondary battery  
[NASA-CASE-NPO-17604-1-CU] c 33 N91-14536
- Copper chloride cathode for a secondary battery  
[NASA-CASE-NPO-17640-1-CU] c 33 N91-14538
- Improved high power/high frequency inductor  
[NASA-CASE-NPO-17830-1-CU] c 33 N91-14539
- Millimeter-wave monolithic diode-grid frequency multiplier  
[NASA-CASE-NPO-17258-1-CU] c 33 N91-14551
- Apparatus and method for characterizing the transmission efficiency of a mass spectrometer  
[NASA-CASE-NPO-16989-1-CU] c 35 N91-14587
- Field induced gap infrared detector  
[NASA-CASE-NPO-17526-1-CU] c 35 N91-14588
- Multi-fingered robotic hand  
[NASA-CASE-NPO-15959-2] c 37 N91-14616
- Method for detecting surface motions and mapping small terrestrial or planetary surface deformations with synthetic aperture radar  
[NASA-CASE-NPO-17831-1-CU] c 43 N91-14642
- Distributed computing system with dual independent communications paths between computers and employing split tokens  
[NASA-CASE-NPO-17185-1-CU] c 62 N91-14772

- Acoustic positioning and orientation prediction  
[NASA-CASE-NPO-17511-1-CU] c 71 N91-14807
- Acoustic transducer apparatus with reduced thermal conduction  
[NASA-CASE-NPO-17620-1-CU] c 71 N91-14808
- Surface modification using low energy ground state ion beams  
[NASA-CASE-NPO-17498-1-CU] c 72 N91-14813
- Energy efficient continuous flow ash lockhopper  
[NASA-CASE-NPO-16985-1-CU] c 31 N91-15423
- Remote object configuration/orientation determination  
[NASA-CASE-NPO-17436-1-CU] c 35 N91-15512
- Tm,Ho:YLF laser end-pumped by a semiconductor diode laser array  
[NASA-CASE-NPO-17282-1-CU] c 36 N91-15528
- Ribbon growing method and apparatus  
[NASA-CASE-NPO-16306-1-CU] c 76 N91-15898
- Torque sensor having a spaced sensor element support structure  
[NASA-CASE-NPO-17461-1-CU] c 35 N91-17350
- Cladding for transverse-pumped solid-state laser  
[NASA-CASE-NPO-17355-1-CU] c 36 N91-17360
- Laterally stacked Schottky diodes for infrared sensor applications  
[NASA-CASE-NPO-17426-1-CU] c 33 N91-21434
- Method and apparatus for configuration control of redundant robots  
[NASA-CASE-NPO-17801-1-CU] c 37 N91-21544
- System and method for measuring ocean surface currents at locations remote from land masses using synthetic aperture radar  
[NASA-CASE-NPO-17937-1-CU] c 43 N91-21621
- Doppler-corrected differential detection system  
[NASA-CASE-NPO-16987-1-CU] c 32 N91-25316
- Phase ambiguity resolution for offset QPSK modulation systems  
[NASA-CASE-NPO-17853-1-CU] c 32 N91-25318
- Fluid-loop reaction system  
[NASA-CASE-NPO-17204-1-CU] c 34 N91-25380
- Dynamic resource allocation scheme for distributed heterogeneous computer systems  
[NASA-CASE-NPO-17197-1-CU] c 62 N91-25693
- High-gain AlGaAs/GaAs double heterojunction Darlington phototransistors for optical neural networks  
[NASA-CASE-NPO-18101-1-CU] c 74 N91-25841
- Method and apparatus for second-rank tensor generation  
[NASA-CASE-NPO-17512-1-CU] c 74 N91-26918
- Molecules with enhanced electronic polarizabilities based on defect-like states in conjugated polymers  
[NASA-CASE-NPO-17633-1-CU] c 27 N91-27372
- Flexible thermal apparatus for mounting of thermoelectric cooler  
[NASA-CASE-NPO-17806-1-CU] c 31 N91-27385
- Multiple symbol differential detection  
[NASA-CASE-NPO-17896-1-CU] c 32 N91-27439
- Metal chloride cathode for a battery  
[NASA-CASE-NPO-17809-1-CU] c 33 N91-27478
- Fiber optic frequency transfer link  
[NASA-CASE-NPO-17703-1-CU] c 74 N91-27957
- Thermal treatment of silicon integrated circuit chips to prevent and heal voids in aluminum metallization  
[NASA-CASE-NPO-17678-1-CU] c 76 N91-28014
- Composite flexible blanket insulation  
[NASA-CASE-ARC-11907-1-NP] c 24 N91-31236
- A universal computer control system for motors  
[NASA-CASE-NPO-17134-1-CU] c 33 N91-31528
- Asymmetric soft-error resistant memory  
[NASA-CASE-NPO-17394-1-CU] c 60 N91-31810
- Synchronized computational architecture for generalized bilateral control of robot arms  
[NASA-CASE-NPO-17401-1-CU] c 63 N91-31885
- Method and apparatus for producing microshells  
[NASA-CASE-NPO-16635-1-CU] c 31 N91-32240
- Telerobot control system  
[NASA-CASE-NPO-18116-1-CU] c 37 N91-32509
- A generalized compliant motion primitive  
[NASA-CASE-NPO-18134-1-CU] c 37 N91-32510
- Highly parallel computer architecture for robotic computation  
[NASA-CASE-NPO-17632-1-CU] c 60 N91-32805
- Analog hardware for learning neural networks  
[NASA-CASE-NPO-17664-1-CU] c 62 N91-32852
- Feedback controlled optics with wavefront compensation  
[NASA-CASE-NPO-18194-1-CU] c 74 N91-32924
- Optoelectronic associative memory  
[NASA-CASE-NPO-18278-1-CU] c 74 N91-32925
- Regenerative Cu/La zeolite supported desulfurizing sorbents  
[NASA-CASE-NPO-17480-1-CU] c 25 N92-10073
- Composite video and graphics display for multiple camera viewing system in robotics and teleoperation  
[NASA-CASE-NPO-17836-1-CU] c 32 N92-10126
- Formation of self-aligned guard rings for monolithic Schottky-barrier diode arrays  
[NASA-CASE-NPO-17734-1-CU] c 33 N92-10146
- Passivation of high temperature superconductors  
[NASA-CASE-NPO-17949-1-CU] c 76 N92-10681
- Dual frequency optical carrier technique for transmission of reference frequencies in dispersive media  
[NASA-CASE-NPO-18007-1-CU] c 74 N92-11791
- Integrated, non-volatile, high-speed analog random access memory  
[NASA-CASE-NPO-17998-1-CU] c 60 N92-12438
- Multicomponent gas sorption Joule-Thomson refrigeration  
[NASA-CASE-NPO-17569-1-CU] c 31 N92-15203
- Network of dedicated processors for finding lowest-cost map path  
[NASA-CASE-NPO-17716-1-CU] c 62 N92-15620
- Silicon containing electroconductive polymers and structures made therefrom  
[NASA-CASE-NPO-17826-1-CU] c 27 N92-16121
- Method and apparatus for increasing resistance of bipolar buried layer integrated circuit devices to single-event upsets  
[NASA-CASE-NPO-17573-2-CU] c 33 N92-16196
- Thermal power transfer system using applied potential difference to sustain operating pressure difference  
[NASA-CASE-NPO-18034-1-CU] c 44 N92-16457
- All-optical photochromic spatial light modulators based on photoinduced electron transfer in rigid matrices  
[NASA-CASE-NPO-17612-1-CU] c 74 N92-16808
- Stereoscopic camera and viewing systems with undistorted depth presentation and reduced or eliminated erroneous acceleration and deceleration perceptions, or with perceptions produced or enhanced for special effects  
[NASA-CASE-NPO-18028-1-CU] c 74 N92-16809
- Method for non-destructive estimation of waveguide directional coupler dimensions  
[NASA-CASE-NPO-18454-1-CU] c 33 N92-17865
- Neural-network dedicated processor for solving competitive assignment problems  
[NASA-CASE-NPO-17781-1-CU] c 60 N92-17884
- Wide field strip-imaging optical system  
[NASA-CASE-NPO-18146-1-CU] c 74 N92-17892
- High level language-based robotic control system  
[NASA-CASE-NPO-17918-2-CU] c 63 N92-17895
- Fabrication of nanometer single crystal metallic CoSi<sub>2</sub> structures on Si  
[NASA-CASE-NPO-17736-2-CU] c 24 N92-18561
- Device for mechanically stabilizing web ribbon buttons during growth initiation  
[NASA-CASE-NPO-17074-2-CU] c 76 N92-21499
- Digital carrier demodulator employing components working beyond normal limits  
[NASA-CASE-NPO-17628-1-CU] c 32 N92-21712
- Adjustable steam producing flexible orifice independent of fluid pressure  
[NASA-CASE-NPO-17625-1-CU] c 34 N92-21724
- Analog hardware for delta-backpropagation neural networks  
[NASA-CASE-NPO-17564-1-CU] c 32 N92-22033
- Equal path, phase shifting, sample point interferometer for monitoring the configuration of surfaces  
[NASA-CASE-NPO-17913-1-CU] c 74 N92-22034
- Growth of III-V films by control of MBE growth front stoichiometry  
[NASA-CASE-NPO-17724-1-CU] c 76 N92-22035
- Bilevel shared control for teleoperators  
[NASA-CASE-NPO-17800-1-CU] c 37 N92-22036
- Method for producing edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-2-CU] c 76 N92-22040
- Edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-3-CU] c 76 N92-22041
- Electrorepulsive actuator  
[NASA-CASE-NPO-17684-1-CU] c 33 N92-22042
- Planar varactor frequency multiplier devices with blocking barrier  
[NASA-CASE-NPO-18428-1-CU] c 33 N92-23464
- Optical inner product neural associative memory  
[NASA-CASE-NPO-18491-1-CU] c 60 N92-23546
- Electro-optic resonant phase modulator  
[NASA-CASE-NPO-18702-1-CU] c 74 N92-23551
- Configuration control of seven-degree-of-freedom arms  
[NASA-CASE-NPO-18607-1-CU] c 37 N92-23553
- Controlling flexible robot arms using a high speed dynamics process  
[NASA-CASE-NPO-18499-1-CU] c 37 N92-24042
- Controlling under-actuated robot arms using a high speed dynamics process  
[NASA-CASE-NPO-18498-1-CU] c 37 N92-24043
- Synchronous parallel system for emulation and discrete event simulation  
[NASA-CASE-NPO-18414-1-CU] c 62 N92-24045
- GaAs-based optoelectronic neurons  
[NASA-CASE-NPO-18497-1-CU] c 63 N92-24245
- An improved SNS superconducting junction with weak link barrier and method of producing  
[NASA-CASE-NPO-18552-1-CU] c 33 N92-24246
- Secondary Li battery incorporating 12-Crown-4 ether  
[NASA-CASE-NPO-17922-1-CU] c 33 N92-28753
- Method and apparatus for phasing segmented mirror arrays  
[NASA-CASE-NPO-18095-1-CU] c 74 N92-29122
- Method and apparatus for frequency spectrum analysis  
[NASA-CASE-NPO-17759-1-CU] c 32 N92-29124
- Method and apparatus for predicting the direction of movement in machine vision  
[NASA-CASE-NPO-17552-1-CU] c 54 N92-29129
- Precision measurement of magnetic characteristics of an article with nullification of external magnetic fields  
[NASA-CASE-NPO-18187-1-CU] c 70 N92-29130
- Microwave temperature profiler for clear air turbulence prediction  
[NASA-CASE-NPO-18115-1-CU] c 47 N92-29148
- Ultra-high temperature stability Joule-Thomson cooler with capability to accommodate pressure variations  
[NASA-CASE-NPO-18184-1-CU] c 35 N92-29156
- Position-error-based force reflection and compliance control  
[NASA-CASE-NPO-18668-1-CU] c 37 N92-29765
- Electronic neural network for solving traveling salesman and similar global optimization problems  
[NASA-CASE-NPO-17807-2-CU] c 63 N92-29955
- Sample positioning in microgravity  
[NASA-CASE-NPO-18448-1-CU] c 29 N92-30083
- Dynamic aperture fringe discriminator  
[NASA-CASE-NPO-18478-1-CU] c 74 N92-30084
- Fast temporal neural learning using teacher forcing  
[NASA-CASE-NPO-18553-1-CU] c 63 N92-30085
- Nonvolatile programmable neural network synaptic array  
[NASA-CASE-NPO-18578-1-CU] c 33 N92-30086
- Method of forming silicon structures with selectable optical characteristics  
[NASA-CASE-NPO-18625-1-CU] c 76 N92-30102
- Programmable hyperspectral image mapper with on-array processing  
[NASA-CASE-NPO-17794-1-CU] c 74 N92-30104
- Double-loop frequency-selected surfaces for multifrequency division multiplexing in a dual-reflector antenna  
[NASA-CASE-NPO-18701-1-CU] c 32 N92-30391
- Hybridization of detector array and integrated circuit for readout  
[NASA-CASE-NPO-18062-1-CU] c 33 N92-30542
- Encyclopedia of software components  
[NASA-CASE-NPO-18435-1-CU] c 61 N92-30543
- VLSI architecture for a Reed-Solomon decoder  
[NASA-CASE-NPO-17897-1-CU] c 33 N92-33011
- Obstacle avoidance for redundant robots using configuration control  
[NASA-CASE-NPO-17852-1-CU] c 63 N92-33019
- Real-time edge-enhanced optical correlator  
[NASA-CASE-NPO-18379-1-CU] c 74 N92-33022
- Real time pre-detection dynamic range compression  
[NASA-CASE-NPO-18098-1-CU] c 74 N92-33028
- Auto and hetero-associative memory using a 2-D optical logic gate  
[NASA-CASE-NPO-17997-1-CU] c 60 N92-33057
- Hazardous materials emergency response mobile robot  
[NASA-CASE-NPO-18690-1-CU] c 37 N92-34205
- Cascaded VLSI neural network architecture for on-line learning  
[NASA-CASE-NPO-18645-1-CU] c 63 N92-34240
- Alkali metal for ultraviolet band-pass filter  
[NASA-CASE-NPO-18433-1-CU] c 74 N92-34241
- INAs hole-immobilized doping superlattice long-wave-infrared detector  
[NASA-CASE-NPO-17880-1-CU] c 76 N93-11056
- The adaptive neuron model: An architecture for the rapid learning of nonlinear topological transformations  
[NASA-CASE-NPO-18579-1-CU] c 63 N93-11174
- Terminal slider control of nonlinear robotic systems  
[NASA-CASE-NPO-18584-1-CU] c 37 N93-11177
- Overcharge and overdischarge protection of ambient temperature secondary lithium cells  
[NASA-CASE-NPO-18343-1-CU] c 33 N93-11456
- Mappings between codewords of two distinct (N,K) Reed-Solomon codes over GF(2 sup J)  
[NASA-CASE-NPO-18771-1-CU] c 61 N93-11664
- Backward assembly planning with DFA analysis  
[NASA-CASE-NPO-18817-1-CU] c 31 N93-12202
- Quantum well, beam deflecting surface emitting lasers  
[NASA-CASE-NPO-18243-1-CU] c 36 N93-13418

L

Integrated filter and detector array for spectral imaging  
[NASA-CASE-NPO-18317-1-CU] c 74 N93-13419

Acoustic device and method for measuring gas densities  
[NASA-CASE-NPO-18155-1-CU] c 71 N93-13421

Three-stage sorption type cryogenic refrigeration systems and methods employing heat regeneration  
[NASA-CASE-NPO-18366-1-CU] c 31 N93-13422

Large area projection liquid-crystal video display system with inherent grid pattern optically removed  
[NASA-CASE-NPO-16932-2-CU] c 74 N93-13711

Real-time edge-enhanced optical correlator  
[NASA-CASE-NPO-18521-1-CU] c 74 N93-14404

Core design for use with precision composite reflectors  
[NASA-CASE-NPO-17858-1-CU] c 24 N93-14700

Multiperiod-grating surface-emitting lasers  
[NASA-CASE-NPO-17763-1-CU] c 36 N93-14703

High speed magneto-resistive random access memory  
[NASA-CASE-NPO-17954-1-CU] c 60 N93-14704

A method for surmounting an obstacle by a robot vehicle  
[NASA-CASE-NPO-18764-1-CU] c 37 N93-17272

Operator-tailored adjustable control station with movable monitors and cameras for viewing systems in robotics and teleoperations  
[NASA-CASE-NPO-17837-1-CU] c 74 N93-17273

High energy and high power density ultracapacitors and supercapacitors  
[NASA-CASE-NPO-18568-1-CU] c 33 N93-17274

New kinematic functions for redundancy resolution using configuration control  
[NASA-CASE-NPO-18608-1-CU] c 63 N93-17275

Neural network training by integration of adjoint systems of equations forward in time  
[NASA-CASE-NPO-18586-1-CU] c 63 N93-17276

Enhanced fatigue and retention in ferroelectric thin film memory capacitors by post-top electrode anneal treatment  
[NASA-CASE-NPO-18551-1-CU] c 33 N93-17277

Anode for rechargeable ambient temperature lithium cells  
[NASA-CASE-NPO-18580-1-CU] c 33 N93-17278

Near real-time stereo vision system  
[NASA-CASE-NPO-18593-1-CU] c 74 N93-18276

Self-collimated unstable resonator semiconductor laser  
[NASA-CASE-NPO-18386-1-CU] c 36 N93-18277

Cascaded transformerless DC-DC voltage amplifier with optically isolated switching devices  
[NASA-CASE-NPO-17994-1-CU] c 33 N93-18278

Composite video and graphics display for camera viewing systems in robotics and teleoperation  
[NASA-CASE-NPO-17836-1-CU] c 32 N93-18284

Method for non-destructive estimation of waveguide directional coupler dimensions  
[NASA-CASE-NPO-18454-1-CU] c 33 N93-18285

High temperature sorbents for oxygen  
[NASA-CASE-NPO-18409-1-CU] c 25 N93-19025

AMTEC vapor-vapor series connected cells  
[NASA-CASE-NPO-18667-1-CU] c 33 N93-19330

Long wavelength infrared detector  
[NASA-CASE-NPO-17543-2-CU] c 35 N93-19387

Neural-network dedicated processor for solving competitive assignment problems  
[NASA-CASE-NPO-17781-1-CU] c 60 N93-20116

Self-checking on-line testable static RAM  
[NASA-CASE-NPO-17939-1-CU] c 60 N93-22032

Force reflecting hand controller  
[NASA-CASE-NPO-17851-1-CU] c 37 N93-23078

Composite passive damping struts for large precision structures  
[NASA-CASE-NPO-17914-1-CU] c 39 N93-24596

GaAs-based optoelectronic neurons  
[NASA-CASE-NPO-18497-1-CU] c 63 N93-24599

Sample positioning in microgravity  
[NASA-CASE-NPO-18448-1-CU] c 29 N93-24600

Motion measurement of acoustically levitated object  
[NASA-CASE-NPO-18191-1-CU] c 09 N93-24601

Pseudomonas screening assay  
[NASA-CASE-NPO-17653-1-CU] c 51 N93-25994

Multipath noise reduction spread spectrum signals  
[NASA-CASE-NPO-18970-1-CU] c 32 N93-28126

Extended task space control for robotic manipulators  
[NASA-CASE-NPO-18902-1-CU] c 37 N93-28129

Separation tool for multipin electrical connectors  
[NASA-CASE-NPO-18786-1-CU] c 37 N93-28131

Burst-by-burst laser frequency monitor  
[NASA-CASE-NPO-18596-1-CU] c 36 N93-28132

Motion-sensitive optical correlator  
[NASA-CASE-NPO-18769-1-CU] c 74 N93-28133

Correction-free pyrometry in radiant wall furnaces  
[NASA-CASE-NPO-18655-1-CU] c 35 N93-28322

Parallel and series fed microstrip array with high efficiency and low cross polarization  
[NASA-CASE-NPO-18678-1-CU] c 32 N93-28422

Three-grid accelerator system for an ion propulsion engine  
[NASA-CASE-NPO-18391-1-CU] c 20 N93-28424

Diamond composite films for protective coatings on metals and method of formation  
[NASA-CASE-NPO-18501-1-CU] c 27 N93-28426

Digital parallel processor array for optimum path planning  
[NASA-CASE-NPO-18727-1-CU] c 62 N93-28427

Aberration correction of unstable resonators  
[NASA-CASE-NPO-18662-1-CU] c 74 N93-28428

Dual arm generalized compliant motion with shared control  
[NASA-CASE-NPO-18738-1-CU] c 37 N93-28954

A satellite-tracking millimeter-wave reflector antenna system for mobile satellite-tracking  
[NASA-CASE-NPO-18772-1-CU] c 32 N93-28955

Improved real-time imaging spectrometer  
[NASA-CASE-NPO-18410-1-CU] c 74 N93-29086

Miniature modular microwave end-to-end receiver  
[NASA-CASE-NPO-18713-1-CU] c 32 N93-29087

Three-parameter tunable Tilt-Integral-Derivative (TID) controller  
[NASA-CASE-NPO-18492-1-CU] c 63 N93-29176

Special purpose parallel computer architecture for real-time control and simulation in robotic applications  
[NASA-CASE-NPO-17629-1-CU] c 60 N93-29608

Wavelength-division multiplexed optical integrated circuit with vertical diffraction grating  
[NASA-CASE-NPO-18357-1-CU] c 74 N93-29848

Hidden Markov models for fault detection in dynamic systems  
[NASA-CASE-NPO-18982-1-CU] c 38 N93-30413

Tunable CW diode-pumped Tm,Ho:YLiF<sub>4</sub> laser operating at or near room temperature  
[NASA-CASE-NPO-18611-1-CU] c 36 N93-30415

Virtual reality flight control display with six-degree-of-freedom controller and spherical orientation overlay  
[NASA-CASE-NPO-18733-1-CU] c 06 N93-30416

**Johns Hopkins Univ., Laurel, MD.**  
Telemetry synchronizer  
[NASA-CASE-GSC-11868-1] c 17 N76-22245

**Johns Hopkins Univ., Silver Spring, MD.**  
Open loop digital frequency multiplier  
[NASA-CASE-MSC-12709-1] c 33 N77-24375

K

**Kansas Univ., Lawrence.**  
Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13734-1-CU] c 09 N90-20096

**Kelsey-Hayes Co., Romulus, MI.**  
Variable thrust ion engine utilizing thermally decomposable solid fuel Patent  
[NASA-CASE-XMF-00923] c 28 N70-36802

**Keltec Industries, Inc., Alexandria, VA.**  
Unfurlable structure including coiled strips thrust launched upon tension release Patent  
[NASA-CASE-HQN-00937] c 07 N71-28979

**Kentucky Univ., Lexington.**  
Apparatus for determining changes in limb volume  
[NASA-CASE-MSC-18759-1] c 52 N83-27578

**Kinologic Corp., Pasadena, CA.**  
Excitation and detection circuitry for a flux responsive magnetic head  
[NASA-CASE-XNP-04183] c 09 N69-24329

Tape guidance system and apparatus for the provision thereof Patent  
[NASA-CASE-XNP-09453] c 08 N71-19420

Incremental tape recorder and data rate converter Patent  
[NASA-CASE-XNP-02778] c 08 N71-22710

**Kollman Instrument Corp., Elmhurst, NY.**  
Wide angle long eye relief eyepiece Patent  
[NASA-CASE-XMS-06056-1] c 23 N71-24857

**Kollman Instrument Corp., Syosset, NY.**  
Digital modulator and demodulator Patent  
[NASA-CASE-ERC-10041] c 08 N71-29138

Ritchey-Chretien Telescope  
[NASA-CASE-GSC-11487-1] c 14 N73-30393

**Konigsberg Instruments, Inc., Pasadena, CA.**  
Accelerometer telemetry system  
[NASA-CASE-ARC-10849-1] c 17 N76-29347

**Korad Corp., New York, NY.**  
Laser apparatus for removing material from rotating objects Patent  
[NASA-CASE-MFS-11279] c 16 N71-20400

**Life Systems, Inc., Beachwood, OH.**  
Iodine generator for reclaimed water purification  
[NASA-CASE-MSC-14632-1] c 54 N78-14784

**Ling-Temco-Vought, Inc., Dallas, TX.**  
Latch/ejector unit Patent  
[NASA-CASE-XLA-03538] c 15 N71-24897

**Little (Arthur D.), Inc., Cambridge, MA.**  
Apparatus for measuring thermal conductivity Patent  
[NASA-CASE-XGS-01052] c 14 N71-15992

Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c 27 N76-24405

Flame retardant spandex type polyurethanes  
[NASA-CASE-MSC-14331-2] c 27 N78-17213

Process for spinning flame retardant elastomeric compositions  
[NASA-CASE-MSC-14331-3] c 27 N78-32262

Heat sealable, flame and abrasion resistant coated fabric  
[NASA-CASE-MSC-18382-1] c 27 N82-16238

Heat sealable, flame and abrasion resistant coated fabric  
[NASA-CASE-MSC-18382-2] c 27 N84-14324

Heat resistant protective hand covering  
[NASA-CASE-MSC-20261-2] c 54 N84-23113

Heat resistant protective hand covering  
[NASA-CASE-MSC-20261-1] c 54 N84-28484

**Litton Industries, Beverly Hills, CA.**  
Life support system  
[NASA-CASE-MSC-12411-1] c 05 N72-20096

**Litton Industries, College Park, MD.**  
Shrink-fit gas valve Patent  
[NASA-CASE-XGS-00587] c 15 N70-35087

**Litton Industries, San Carlos, CA.**  
Very high intensity light source using a cathode ray tube  
[NASA-CASE-XNP-01296] c 33 N75-27250

**Litton Systems, Inc., Minneapolis, MN.**  
Apparatus for sampling particulates in gases  
[NASA-CASE-HQN-10037-1] c 14 N73-27376

**Lockheed Aircraft Corp., Burbank, CA.**  
Aerodynamic protection for space flight vehicles Patent  
[NASA-CASE-XNP-02507] c 31 N71-17679

**Lockheed-California Co., Burbank.**  
Absorptive splitter for closely spaced supersonic engine air inlets Patent  
[NASA-CASE-XLA-02865] c 28 N71-15563

Multistage aerospace craft  
[NASA-CASE-XMF-02263] c 05 N74-10907

**Lockheed Electronics Co., Houston, TX.**  
Television signal scan rate conversion system Patent  
[NASA-CASE-MSC-07168] c 07 N71-11300

Burst synchronization detection system Patent  
[NASA-CASE-XMS-05605-1] c 10 N71-19468

Automatic signal range selector for metering devices Patent  
[NASA-CASE-XMS-06497] c 14 N71-26244

Monostable multivibrator with complementary NOR gates Patent  
[NASA-CASE-MSC-13492-1] c 10 N71-28860

Ultrastable calibrated light source  
[NASA-CASE-MSC-12293-1] c 14 N72-27411

Data storage, image tube type  
[NASA-CASE-MSC-14053-1] c 60 N74-12888

Differential phase shift keyed communication system  
[NASA-CASE-MSC-14065-1] c 32 N74-26654

Differential phase shift keyed signal resolver  
[NASA-CASE-MSC-14066-1] c 33 N74-27705

Method and apparatus for decoding compatible convolutional codes  
[NASA-CASE-MSC-14070-1] c 32 N74-32598

Pulse stretcher for narrow pulses  
[NASA-CASE-MSC-14130-1] c 33 N74-32711

Peak holding circuit for extremely narrow pulses  
[NASA-CASE-MSC-14129-1] c 33 N75-18479

Random pulse generator  
[NASA-CASE-MSC-14131-1] c 33 N75-19515

Digital transmitter for data bus communications system  
[NASA-CASE-MSC-14558-1] c 32 N75-21486

Low distortion receiver for bi-level baseband PCM waveforms  
[NASA-CASE-MSC-14557-1] c 32 N76-16249

System for producing chroma signals  
[NASA-CASE-MSC-14683-1] c 74 N77-18893

Phased array antenna control  
[NASA-CASE-MSC-14939-1] c 32 N79-11264

Apparatus and method for stabilized phase detection for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c 33 N79-11313

Multiple band circularly polarized microstrip antenna  
[NASA-CASE-MSC-18334-1] c 32 N80-32604

Multispectral scanner optical system  
[NASA-CASE-MSC-18255-1] c 74 N80-33210  
Random digital encryption secure communication system  
[NASA-CASE-MSC-16462-1] c 32 N82-31583  
**Lockheed Engineering and Management Services Co., Inc., Las Cruces, NM.**  
Device and method for frictionally testing materials for ignitability  
[NASA-CASE-MSC-20622-1] c 25 N86-19413  
**Lockheed Missiles and Space Co., Huntsville, AL.**  
Diffuser/ejector system for a very high vacuum environment  
[NASA-CASE-MFS-25791-1] c 09 N84-27749  
**Lockheed Missiles and Space Co., Sunnyvale, CA.**  
Device for handling heavy loads  
[NASA-CASE-XNP-04969] c 11 N69-27466  
Transient heat transfer gauge Patent  
[NASA-CASE-XNP-09802] c 33 N71-15641  
Dual solid cryogenics for spacecraft refrigeration Patent  
[NASA-CASE-GSC-10188-1] c 23 N71-24725  
Apparatus for detecting the amount of material in a resonant cavity container Patent  
[NASA-CASE-XNP-02500] c 18 N71-27397  
Emergency earth orbital escape device  
[NASA-CASE-MSC-13281] c 31 N72-18859  
Solar energy powered heliostole  
[NASA-CASE-GSC-10945-1] c 21 N72-31637  
Coaxial inverted geometry transistor having buried emitter  
[NASA-CASE-ARC-10330-1] c 09 N73-32112  
Whole body measurement systems  
[NASA-CASE-MSC-13972-1] c 52 N74-10975  
Four phase logic systems  
[NASA-CASE-MSC-14240-1] c 33 N75-14957  
Strain arrestor plate for fused silica tile  
[NASA-CASE-MSC-14182-1] c 27 N76-14264  
Medical subject monitoring systems  
[NASA-CASE-MSC-14180-1] c 52 N76-14757  
Two-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-1] c 27 N76-22377  
Optical alignment device  
[NASA-CASE-ARC-10932-1] c 74 N76-22993  
Three-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-2] c 27 N76-23426  
Process of forming catalytic surfaces for wet oxidation reactions  
[NASA-CASE-MSC-14831-1] c 25 N78-10225  
Partial polarizer filter  
[NASA-CASE-GSC-12225-1] c 74 N79-14891  
Method of fabricating a photovoltaic module of a substantially transparent construction  
[NASA-CASE-NPO-14303-1] c 44 N80-18550  
**Lockheed Propulsion Co., Redlands, CA.**  
Propellant grain for rocket motors Patent  
[NASA-CASE-XGS-03556] c 27 N70-35534  
**LTV Aerospace Corp., Dallas, TX.**  
Method of fluxless brazing and diffusion bonding of aluminum containing components  
[NASA-CASE-MSC-14435-1] c 37 N76-18455  
**LTV Aerospace Corp., Hampton, VA.**  
Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c 01 N83-35992

## M

**Macon-Rust Co., Lexington, KY.**  
Stretcher Patent  
[NASA-CASE-XMF-06589] c 05 N71-23159  
**Marlin-Rockwell Corp., Jamestown, NY.**  
Drilled ball bearing with a one piece anti-tipping cage assembly  
[NASA-CASE-LEW-11925-1] c 37 N75-31446  
**Marquardt Corp., Van Nuys, CA.**  
Fuel injection pump for internal combustion engines Patent  
[NASA-CASE-MSC-12139-1] c 28 N71-14058  
Multislit film cooled pyrolytic graphite rocket nozzle Patent  
[NASA-CASE-XNP-04389] c 28 N71-20942  
Tube sealing device Patent  
[NASA-CASE-NPO-10431] c 15 N71-29132  
**Martin Marietta Aerospace, Denver, CO.**  
Method and apparatus for tensile testing of metal foil  
[NASA-CASE-LAR-10208-1] c 35 N76-18400  
Pulse transducer with artifact signal attenuator  
[NASA-CASE-FRC-11012-1] c 52 N80-23969  
Urine collection apparatus  
[NASA-CASE-MSC-18381-1] c 52 N81-28740  
**Martin Marietta Corp., Baltimore, MD.**  
Landing gear Patent  
[NASA-CASE-XMF-01174] c 02 N70-41589  
Emergency escape system Patent  
[NASA-CASE-XKS-02342] c 05 N71-11199

**Martin Marietta Corp., Denver, CO.**  
Flexible/rigidifiable cable assembly  
[NASA-CASE-MSC-13512-1] c 15 N72-22485  
Derivation of a tangent function using an integrated circuit four-quadrant multiplier  
[NASA-CASE-MSC-13907-1] c 10 N73-26230  
Low distortion automatic phase control circuit  
[NASA-CASE-MFS-21671-1] c 33 N74-22885  
Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
[NASA-CASE-MSC-14245-1] c 18 N75-27041  
Filter regeneration systems  
[NASA-CASE-MSC-14273-1] c 34 N75-33342  
Turnstile and flared cone UHF antenna  
[NASA-CASE-LAR-10970-1] c 33 N76-14372  
Method and apparatus for fluffing, separating, and cleaning fibers  
[NASA-CASE-LAR-11224-1] c 37 N76-18456  
Hearing aid malfunction detection system  
[NASA-CASE-MSC-14916-1] c 33 N78-10375  
Positive isolation disconnect  
[NASA-CASE-MSC-16043-1] c 37 N79-11402  
Urine collection device  
[NASA-CASE-MSC-16433-1] c 52 N81-24711  
Amplifier for measuring low-level signals in the presence of high common mode voltage  
[NASA-CASE-MFS-25868-1] c 33 N86-20670  
**Maryland Univ., College Park.**  
Method and apparatus for optical modulating a light signal Patent  
[NASA-CASE-GSC-10216-1] c 23 N71-26722  
**Massachusetts Inst. of Tech., Cambridge.**  
Pretreatment method for anti-wettable materials  
[NASA-CASE-XMS-03537] c 15 N69-21471  
Hydraulic drive mechanism Patent  
[NASA-CASE-XMS-03252] c 15 N71-10658  
Electronic amplifier with power supply switching Patent  
[NASA-CASE-XMS-00945] c 09 N71-10798  
Method and apparatus for stabilizing a gaseous optical maser Patent  
[NASA-CASE-XGS-03644] c 16 N71-18614  
Power supply Patent  
[NASA-CASE-XMS-02159] c 10 N71-22961  
Optical frequency waveguide Patent  
[NASA-CASE-HQN-10541-1] c 07 N71-26291  
Laser machining apparatus Patent  
[NASA-CASE-HQN-10541-2] c 15 N71-27135  
Optical frequency waveguide and transmission system Patent  
[NASA-CASE-HQN-10541-4] c 16 N71-27183  
Compact spectroradiometer  
[NASA-CASE-HQN-10683] c 14 N71-34389  
Optical frequency waveguide and transmission system  
[NASA-CASE-HQN-10541-3] c 23 N72-23695  
Display research collision warning system  
[NASA-CASE-HQN-10703] c 21 N73-13643  
Transparent switchboard  
[NASA-CASE-MSC-13746-1] c 10 N73-32143  
Vapor deposition apparatus  
[NASA-CASE-HQN-10462] c 25 N75-29192  
Fault tolerant clock apparatus utilizing a controlled minority of clock elements  
[NASA-CASE-MSC-12531-1] c 35 N75-30504  
**MB Associates, San Ramon, CA.**  
Hypervelocity gun  
[NASA-CASE-XLE-03186-1] c 09 N79-21084  
**McDonnell Aircraft Co., Saint Louis, MO.**  
Method for making a heat insulating and ablative structure  
[NASA-CASE-XMS-01108] c 15 N69-24322  
Heat flux sensor assembly  
[NASA-CASE-XMS-05909-1] c 14 N69-27459  
Apparatus for purging systems handling toxic, corrosive, noxious and other fluids Patent  
[NASA-CASE-XMS-01905] c 12 N71-21089  
Power supply circuit Patent  
[NASA-CASE-XMS-00913] c 10 N71-23543  
Multiple circuit protector device  
[NASA-CASE-XMS-02744] c 33 N75-27249  
Apparatus for welding sheet material  
[NASA-CASE-XMS-01330] c 37 N75-27376  
Fused switch  
[NASA-CASE-XMS-01244-1] c 33 N79-33393  
Cooling system for high speed aircraft  
[NASA-CASE-LAR-12406-1] c 05 N81-26114  
**McDonnell-Douglas Astronautics Co., Huntington Beach, CA.**  
Heat transfer device  
[NASA-CASE-MFS-22938-1] c 34 N76-18374  
**McDonnell-Douglas Astronautics Co., Santa Monica, CA.**  
New polymers of perfluorobutadiene and method of manufacture Patent application  
[NASA-CASE-NPO-10863] c 06 N70-11251

Method of polymerizing perfluorobutadiene Patent application  
[NASA-CASE-NPO-10447] c 06 N70-11252  
**McDonnell-Douglas Astronautics Co., Saint Louis, MO.**  
Passive propellant system  
[NASA-CASE-MFS-23642-2] c 20 N78-27176  
**McDonnell-Douglas Corp., Huntington Beach, CA.**  
Variable direction force coupler  
[NASA-CASE-MFS-20317] c 15 N73-13463  
Potable water dispenser  
[NASA-CASE-MFS-21115-1] c 54 N74-12779  
Metering gun for dispensing precisely measured charges of fluid  
[NASA-CASE-MFS-21163-1] c 54 N74-17853  
Airlock  
[NASA-CASE-MFS-20922-1] c 18 N74-22136  
Device for monitoring a change in mass in varying gravimetric environments  
[NASA-CASE-MFS-21556-1] c 35 N74-26945  
Thrust-isolating mounting  
[NASA-CASE-MFS-21680-1] c 18 N74-27397  
Device for measuring tensile forces  
[NASA-CASE-MFS-21728-1] c 35 N74-27865  
Flame detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c 19 N74-29410  
Phase-locked servo system  
[NASA-CASE-MFS-22073-1] c 33 N75-13139  
Vacuum leak detector  
[NASA-CASE-LAR-11237-1] c 35 N75-19612  
Meter for use in detecting tension in straps having predetermined elastic characteristics  
[NASA-CASE-MFS-22189-1] c 35 N75-19615  
Latching device  
[NASA-CASE-MFS-21606-1] c 37 N75-19685  
Device for use in loading tension members  
[NASA-CASE-MFS-21488-1] c 14 N75-24794  
**McDonnell-Douglas Corp., Long Beach, CA.**  
Optimized bolted joint  
[NASA-CASE-LAR-13250-1] c 37 N86-27630  
**McDonnell-Douglas Corp., Newport Beach, CA.**  
Method of making membranes  
[NASA-CASE-XNP-04264] c 03 N69-21337  
**McDonnell-Douglas Corp., Santa Monica, CA.**  
Rocket nozzle test method Patent  
[NASA-CASE-NPO-10311] c 31 N71-15643  
Reaction of fluorine with polyperfluoropolyenes  
[NASA-CASE-NPO-10862] c 06 N72-22107  
Polymers of perfluorobutadiene and method of manufacture  
[NASA-CASE-NPO-10863-2] c 06 N72-25152  
Electrolytic cell structure  
[NASA-CASE-LAR-11042-1] c 33 N75-27252  
Prevention of hydrogen embrittlement of high strength steel by hydrazine compositions  
[NASA-CASE-NPO-12122-1] c 24 N76-14203  
Utilization of oxygen difluoride for syntheses of fluoropolymers  
[NASA-CASE-NPO-12061-1] c 27 N76-16228  
**McDonnell-Douglas Corp., Saint Louis, MO.**  
Thermally conductive polymers  
[NASA-CASE-GSC-11304-1] c 06 N72-21105  
Passive propellant system  
[NASA-CASE-MFS-23642-1] c 20 N80-10278  
**Medical Sciences Research Foundation, San Francisco, CA.**  
Reduction of blood serum cholesterol  
[NASA-CASE-NPO-12119-1] c 52 N75-15270  
**Mellon Inst., Pittsburgh, PA.**  
Instrument for measuring torsional creep and recovery Patent  
[NASA-CASE-XLE-01481] c 14 N71-10781  
**Melpar, Inc., Falls Church, VA.**  
Television simulation for aircraft and space flight Patent  
[NASA-CASE-XFR-03107] c 09 N71-19449  
Compact solar still Patent  
[NASA-CASE-XMS-04533] c 15 N71-23086  
**Metcom, Inc., Salem, MA.**  
Tuning arrangement for an electron discharge device or the like Patent  
[NASA-CASE-XNP-09771] c 09 N71-24841  
**Methodist Hospital, Houston, TX.**  
Snap-in compressible biomedical electrode  
[NASA-CASE-MSC-14623-1] c 52 N77-28717  
**Microwave Electronics Corp., Palo Alto, CA.**  
Folded traveling wave maser structure Patent  
[NASA-CASE-NPO-05219] c 16 N71-15550  
Superconducting magnet Patent  
[NASA-CASE-XNP-06503] c 23 N71-29049  
**Microwave Research Corp., North Andover, MA.**  
Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NPO-13568-1] c 32 N76-21365  
Multifrequency broadband polarized horn antenna  
[NASA-CASE-NPO-14588-1] c 32 N81-25278

## Midwest Research Inst., Kansas City, MO.

- Preparation of ordered poly farylenesiloxane/  
polymers: [NASA-CASE-XMF-10753] c 06 N71-11237
- Inorganic solid film lubricants Patent  
[NASA-CASE-XMF-03883] c 15 N71-21403
- Fluorinated esters of polycarboxylic acids  
[NASA-CASE-MFS-21040-1] c 06 N73-30098

## Milliken (D. B.) Co., Azusa, CA.

- Film feed camera having a detent means Patent  
[NASA-CASE-LARR-10586] c 14 N71-28935

## Minneapolis-Honeywell Regulator Co., MN.

- Microelectronic module package Patent  
[NASA-CASE-XMS-02182] c 10 N71-28783

## Modern Machine and Tool Co., Newport News, VA.

- Means for accommodating large overstrain in lead  
wires [NASA-CASE-LARR-10589-1] c 33 N74-22865

## Monsanto Co., Saint Louis, MO.

- Method for the preparation of inorganic single crystal  
and polycrystalline electronic materials  
[NASA-CASE-XUE-02545-1] c 76 N79-21910

## Monsanto Research Corp., Dayton, OH.

- Perfluoroalkylene dioxyl-bis (4-phthalic anhydrides and  
oxy-bis(perfluoroalkyleneoxy)phthalic anhydrides  
[NASA-CASE-MFS-22355-1] c 23 N75-30256
- Polyimides, off ether-linked aryl tetracarboxylic  
dianhydrides [NASA-CASE-MFS-22355-1] c 23 N76-15268

## Motorola, Inc., Phoenix, AZ.

- Automatic frequency discriminators and control for a  
phase-lock loop providing frequency preset capabilities  
Patent [NASA-CASE-XMF-08665] c 10 N71-19467
- Method of purifying metallurgical grade silicon employing  
reduced pressure atmospheric control  
[NASA-CASE-NPD-14474-1] c 26 N80-14229
- Quartz ball valve [NASA-CASE-NPD-14473-1] c 37 N80-23654
- Method and apparatus for quadrupole phase shift key and  
linear phase modulation [NASA-CASE-NPD-14444-1] c 33 N81-15192
- PN lock indicator for diathermy PNI code tracking loop  
[NASA-CASE-NPD-14435-1] c 33 N81-33405

## Motorola, Inc., Scottsdale, AZ.

- Sealed catheter Patent [NASA-CASE-MSC-12163-1] c 09 N71-18600
- Digital frequency discriminator Patent  
[NASA-CASE-MFS-14322] c 08 N71-18692
- Phase modulator Patent [NASA-CASE-MSC-13301-1] c 07 N71-28429
- Capacitive multiplier and filter synthesizing network  
[NASA-CASE-NPD-11948-1] c 33 N74-32712
- Quadrupole demodulation [NASA-CASE-GSC-12137-1] c 33 N76-32338
- Discriminator aided phase lock acquisition for  
suppressed carrier signals [NASA-CASE-NPD-14031-1] c 33 N82-29539

## N

## National Academy of Sciences - National Research

## Council, Washington, DC.

- Gyrator employing field effect transistors  
[NASA-CASE-MFS-21433] c 09 N73-20232
- Suppression of flutter [NASA-CASE-LAR-10682-1] c 02 N73-26004
- Optical data processing using paraboloidal mirror  
segments [NASA-CASE-GSC-11296-1] c 23 N73-30666
- Power supply for carbon dioxide lasers  
[NASA-CASE-GSC-11222-1] c 16 N73-32391
- High field CdS detector for infrared radiation  
[NASA-CASE-LAR-11027-1] c 35 N74-18088
- Holography utilizing surface plasmon resonances  
[NASA-CASE-MFS-22040-1] c 35 N74-26946
- Stagnation pressure probe [NASA-CASE-LARR-111039-1] c 35 N74-32878
- Integrated P-channel MOS gyrator  
[NASA-CASE-MFS-22343-1] c 33 N74-34638
- Automated analysis of oxidative metabolites  
[NASA-CASE-ARC-10469-1] c 25 N75-12086
- Method of preparing water purification membranes  
[NASA-CASE-ARC-10643-1] c 25 N75-12087
- Method of forming aperture plate for electron  
microscope [NASA-CASE-ARC-10448-2] c 74 N75-12732
- Dually mode locked Nd:YAG laser  
[NASA-CASE-GSC-11746-1] c 36 N75-19654
- Anti-gravity device [NASA-CASE-MFS-22758-1] c 70 N75-26789
- Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c 35 N75-27331
- Integrable power gyrator [NASA-CASE-MFS-22342-1] c 33 N75-30428

## Two stage light gas-plasma projectile accelerator

- [NASA-CASE-MFS-22287-1] c 75 N76-14931
- Micrometeoroid velocity and trajectory analyzer  
[NASA-CASE-GSC-11892-1] c 35 N76-15433
- Moving particle composition analyzer  
[NASA-CASE-GSC-11889-1] c 35 N76-16393
- Self-energized plasma compressor  
[NASA-CASE-MFS-22145-1] c 75 N76-17951
- Readout electrode assembly for measuring biological  
impedance [NASA-CASE-ARC-10816-1] c 35 N76-24525
- Electron microscope aperture system  
[NASA-CASE-ARC-10448-3] c 35 N77-14408
- Method for making a hot wire anemometer and product  
thereof [NASA-CASE-ARC-10900-1] c 35 N77-24454
- Length controlled stabilized mode-lock Nd:YAG laser  
[NASA-CASE-GSC-11571-1] c 36 N78-25499
- Method of growing composites of the type exhibiting  
the Soret effect [NASA-CASE-MFS-22926-1] c 24 N77-27187
- Method and apparatus for splitting a beam of energy  
[NASA-CASE-GSC-12083-1] c 73 N78-32848
- Cantilever mounted resilient pad gas bearing  
[NASA-CASE-LEW-12569-1] c 37 N79-10418
- Shock isolator for operating a diode laser on a  
closed-cycle refrigerator [NASA-CASE-GSC-12297-1] c 37 N79-28549
- Pocket ECG electrode [NASA-CASE-ARC-11258-1] c 52 N80-33081
- Subcutaneous electrode structure  
[NASA-CASE-ARC-11117-1] c 52 N81-14612
- Microwave integrated circuit for Josephson voltage  
standards [NASA-CASE-MFS-23845-1] c 33 N81-17348
- Autonomous navigation system  
[NASA-CASE-ARC-11257-1] c 04 N81-21047
- Phosphorus-containing bisimide resins  
[NASA-CASE-ARC-11321-1] c 27 N81-27272
- Synthesis of polyformals [NASA-CASE-ARC-11244-1] c 23 N82-16174
- Nickel ternary alloy having improved cyclic oxidation  
resistance [NASA-CASE-LEW-13339-1] c 26 N82-31505
- Massively parallel processor computer  
[NASA-CASE-GSC-12223-1] c 60 N83-25378
- Non-invasive method and apparatus for measuring  
pressure within a pleable vessel [NASA-CASE-ARC-11264-2] c 52 N83-29991
- Elastomer-modified phosphorus-containing imide  
resins [NASA-CASE-ARC-11400-1] c 27 N84-14322
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-3] c 27 N84-22745
- Method for the preparation of thin-skinned asymmetric  
reverse osmosis membranes and products thereof  
[NASA-CASE-ARC-11359-1] c 51 N84-28361
- Synthesis of 2,4,8,10-tetroxaspiro[5.5]undecane  
[NASA-CASE-ARC-11243-2] c 23 N85-33187
- Fire-resistant phosphorus containing polyimides and  
copolyimides [NASA-CASE-ARC-11522-2] c 27 N85-34280
- Metal (2,4,4',4') phthalocyanine tetraamines as curing  
agents for epoxy resins [NASA-CASE-ARC-11424-1] c 27 N85-34281
- Toughening reinforced epoxy composites with  
brominated polymeric additives [NASA-CASE-ARC-11427-1] c 24 N86-19380
- Metal phthalocyanine intermediates for the preparation  
of polymers [NASA-CASE-ARC-11405-2] c 27 N86-19455

## National Aeronautics and Space Administration,

## Washington, DC.

- Optical spin compensator [NASA-CASE-XGS-02401] c 14 N69-27485
- Waveguide mixer [NASA-CASE-ERC-10179] c 07 N72-20141
- Semiconductor-ferroelectric memory device  
[NASA-CASE-ERC-10307] c 08 N72-21198
- Shielded cathode mode bulk effect devices  
[NASA-CASE-ERC-10119] c 26 N72-21701
- Fabrication of single crystal film semiconductor  
devices [NASA-CASE-ERC-10222] c 09 N72-22199
- Two color horizon sensor [NASA-CASE-ERC-10174] c 14 N72-25409
- Ultraviolet atomic emission detector  
[NASA-CASE-HQN-10756-1] c 14 N72-25428
- Optical pump and driver system for lasers  
[NASA-CASE-ERC-10283] c 16 N72-25485
- Clear air turbulence detector [NASA-CASE-ERC-10081] c 14 N72-28437
- Head-up attitude display [NASA-CASE-ERC-10392] c 21 N73-14692
- System for indicating direction of intruder aircraft  
[NASA-CASE-ERC-10226-1] c 14 N73-16483

## Aircraft control system

- [NASA-CASE-ERC-10439] c 02 N73-19004
- Display system [NASA-CASE-ERC-10350] c 14 N73-20474
- Method and apparatus for measuring solar activity and  
atmospheric radiation effects [NASA-CASE-ERC-10276] c 14 N73-26432
- Doppler shift system [NASA-CASE-HQN-10740-1] c 72 N74-19310
- Auditory display for the blind [NASA-CASE-HQN-10832-1] c 71 N74-21014
- Laser system with an antiresonant optical ring  
[NASA-CASE-HQN-10844-1] c 36 N75-19653
- Physical correction filter for improving the optical quality  
of an image [NASA-CASE-HQN-10542-1] c 74 N75-25706
- Folding structure fabricated of rigid panels  
[NASA-CASE-HQX-02146] c 18 N75-27040
- Traveling wave solid state amplifier utilizing a  
semiconductor with negative differential mobility  
[NASA-CASE-HQN-10069] c 33 N75-27251
- Vapor deposition apparatus [NASA-CASE-HQN-10462] c 25 N75-29192
- Resistive anode image converter [NASA-CASE-HQN-10876-1] c 33 N76-27473
- Rechargeable battery which combats shape change of  
the zinc anode [NASA-CASE-HQN-10862-1] c 44 N76-29699
- System and method for tracking a signal source  
[NASA-CASE-HQN-10880-1] c 17 N78-17140
- Non-equilibrium radiation nuclear reactor  
[NASA-CASE-HQN-10841-1] c 73 N78-19920
- Cooling system for removing metabolic heat from an  
hermetically sealed spacesuit [NASA-CASE-ARC-11059-1] c 54 N78-32721
- Safety flywheel [NASA-CASE-HQN-10888-1] c 44 N79-14527
- Flow diverter valve and flow diversion method  
[NASA-CASE-HQN-00573-1] c 37 N79-33468
- Glass compositions with a high modulus of elasticity  
[NASA-CASE-HQN-10274-1] c 27 N82-29451
- High modulus invert analog glass compositions  
containing beryllia [NASA-CASE-HQN-10931-2] c 27 N82-29452
- Non-toxic invert analog glass compositions of high  
modulus [NASA-CASE-HQN-10328-2] c 27 N82-29454
- High modulus rare earth and beryllium containing silicate  
glass compositions [NASA-CASE-HQN-10595-1] c 27 N82-29455
- High resistance and raised modulus carbon fibers  
[NASA-TM-76884] c 24 N85-25436
- Work attachment mechanism/work attachment fixture  
[NASA-CASE-GSC-13430-1] c 37 N93-14712

National Aeronautics and Space Administration. Ames  
Research Center, Moffett Field, CA.

- Nonmagnetic thermal motor for a magnetometer  
[NASA-CASE-XAR-03786] c 09 N69-21313
- Balanced bellows spirometer [NASA-CASE-XAR-01547] c 05 N69-21473
- Cryogenic apparatus for measuring the intensity of  
magnetic fields [NASA-CASE-XAC-02407] c 14 N69-27423
- Variable stiffness polymeric damper  
[NASA-CASE-XAC-11225] c 14 N69-27486
- Shock-layer radiation measurement  
[NASA-CASE-XAC-02970] c 14 N69-39896
- Protective circuit of the spark gap type  
[NASA-CASE-XAC-08981] c 09 N69-39897
- Apparatus for coupling a plurality of ungrounded circuits  
to a grounded circuit Patent [NASA-CASE-XAC-00086] c 09 N70-33182
- Two-plane balance Patent [NASA-CASE-XAC-00073] c 14 N70-34813
- Centrifuge mounted motion simulator Patent  
[NASA-CASE-XAC-00399] c 11 N70-34815
- Differential pressure cell Patent [NASA-CASE-XAC-00042] c 14 N70-34816
- High-temperature, high-pressure spherical segment  
valve Patent [NASA-CASE-XAC-00074] c 15 N70-34817
- Magnetically centered liquid column float Patent  
[NASA-CASE-XAC-00030] c 14 N70-34820
- Propeller blade loading control Patent  
[NASA-CASE-XAC-00139] c 02 N70-34856
- Temperature compensated solid state differential  
amplifier Patent [NASA-CASE-XAC-00435] c 09 N70-35440
- High speed low level electrical stepping switch Patent  
[NASA-CASE-XAC-00060] c 09 N70-39915
- Analog-to-digital conversion system Patent  
[NASA-CASE-XAC-00404] c 08 N70-40125
- Null-type vacuum microbalance Patent  
[NASA-CASE-XAC-00472] c 15 N70-40180
- Thermo-protective device for balances Patent  
[NASA-CASE-XAC-00648] c 14 N70-40400



- Three-axis controller Patent  
[NASA-CASE-XAC-01404] c 05 N70-41581
- Electric arc device for heating gases Patent  
[NASA-CASE-XAC-00319] c 25 N70-41629
- Dynamic sensor Patent  
[NASA-CASE-XAC-02877] c 14 N70-41681
- Universal pilot restraint suit and body support therefor Patent  
[NASA-CASE-XAC-00405] c 05 N70-41819
- Proportional controller Patent  
[NASA-CASE-XAC-03392] c 03 N70-41954
- Force transducer Patent  
[NASA-CASE-XAC-01101] c 14 N70-41957
- Electrode construction Patent  
[NASA-CASE-ARC-10043-1] c 05 N71-11193
- Telemeter adaptable for implanting in an animal Patent  
[NASA-CASE-XAC-05706] c 05 N71-12342
- Gyrator type circuit Patent  
[NASA-CASE-XAC-10608-1] c 09 N71-12517
- Ultraviolet resonance lamp Patent  
[NASA-CASE-ARC-10030] c 09 N71-12521
- Differential temperature transducer Patent  
[NASA-CASE-XAC-00812] c 14 N71-15598
- Multiple circuit switch apparatus with improved pivot actuator structure Patent  
[NASA-CASE-XAC-03777] c 10 N71-15909
- Method of planetary atmospheric investigation using a split-trajectory dual flyby mode Patent  
[NASA-CASE-XAC-08494] c 30 N71-15990
- High efficiency multivibrator Patent  
[NASA-CASE-XAC-00942] c 10 N71-16042
- Apparatus for measuring conductivity and velocity of plasma utilizing a plurality of sensing coils positioned in the plasma Patent  
[NASA-CASE-XAC-05695] c 25 N71-16073
- Flight craft Patent  
[NASA-CASE-XAC-02058] c 02 N71-16087
- Three-axis finger tip controller for switches Patent  
[NASA-CASE-XAC-02405] c 09 N71-16089
- Electrostatic charged particle analyzer having deflection members shaped according to the periodic voltage applied thereto Patent  
[NASA-CASE-XAC-05506-1] c 24 N71-16095
- Inertial reference apparatus Patent  
[NASA-CASE-XAC-03107] c 23 N71-16098
- Fastener apparatus Patent  
[NASA-CASE-ARC-10140-1] c 15 N71-17653
- Stabilization of gravity oriented satellites Patent  
[NASA-CASE-XAC-01591] c 31 N71-17729
- Microwave flaw detector Patent  
[NASA-CASE-ARC-10009-1] c 15 N71-17822
- Hypervelocity gun Patent  
[NASA-CASE-XAC-05902] c 11 N71-18578
- Nonlinear analog-to-digital converter Patent  
[NASA-CASE-XAC-04031] c 08 N71-18594
- Demodulation system Patent  
[NASA-CASE-XAC-04030] c 10 N71-19472
- Phase quadrature-plural channel data transmission system Patent  
[NASA-CASE-XAC-06302] c 08 N71-19763
- Two force component measuring device Patent  
[NASA-CASE-XAC-04886-1] c 14 N71-20439
- Attitude controls for VTOL aircraft Patent  
[NASA-CASE-XAC-08972] c 02 N71-20570
- Electric arc apparatus Patent  
[NASA-CASE-XAC-01677] c 09 N71-20816
- Inertia diaphragm pressure transducer Patent  
[NASA-CASE-XAC-02981] c 14 N71-21072
- Stirring apparatus for plural test tubes Patent  
[NASA-CASE-XAC-06956] c 15 N71-21177
- Exposure system for animals Patent  
[NASA-CASE-XAC-05333] c 11 N71-22875
- Vibrating element electrometer with output signal magnified over input signal by a function of the mechanical Q of the vibrating element Patent  
[NASA-CASE-XAC-02807] c 09 N71-23021
- Hall current measuring apparatus having a series resistor for temperature compensation Patent  
[NASA-CASE-XAC-01662] c 14 N71-23037
- Transfer valve Patent  
[NASA-CASE-XAC-01158] c 15 N71-23051
- Hard space suit Patent  
[NASA-CASE-XAC-07043] c 05 N71-23161
- Method and apparatus for continuously monitoring blood oxygenation, blood pressure, pulse rate and the pressure pulse curve utilizing an ear oximeter as transducer Patent  
[NASA-CASE-XAC-05422] c 04 N71-23185
- Feedback integrator with grounded capacitor Patent  
[NASA-CASE-XAC-10607] c 10 N71-23669
- Floating two force component measuring device Patent  
[NASA-CASE-XAC-04885] c 14 N71-23790
- Control device Patent  
[NASA-CASE-XAC-10019] c 15 N71-23809
- Means for suppressing or attenuating bending motion of elastic bodies Patent  
[NASA-CASE-XAC-05632] c 32 N71-23971
- Device for measuring pressure Patent  
[NASA-CASE-XAC-04458] c 14 N71-24232
- Transducer circuit and catheter transducer Patent  
[NASA-CASE-ARC-10132-1] c 09 N71-24597
- Skeletal stressing method and apparatus Patent  
[NASA-CASE-ARC-10100-1] c 05 N71-24738
- Modified polyurethane foams for fuel-fire Patent  
[NASA-CASE-ARC-10098-1] c 06 N71-24739
- Deep space monitor communication satellite system Patent  
[NASA-CASE-XAC-06029-1] c 31 N71-24813
- Laser fluid velocity detector Patent  
[NASA-CASE-XAC-10770-1] c 16 N71-24828
- Transient video signal recording with expanded playback Patent  
[NASA-CASE-ARC-10003-1] c 09 N71-25866
- Thermally cycled magnetometer Patent  
[NASA-CASE-XAC-03740] c 14 N71-26135
- Optical machine tool alignment indicator Patent  
[NASA-CASE-XAC-09489-1] c 15 N71-26673
- Energy limiter for hydraulic actuators Patent  
[NASA-CASE-ARC-10131-1] c 15 N71-27754
- Multivibrator circuit with means to prevent false triggering from supply voltage fluctuations Patent  
[NASA-CASE-ARC-10137-1] c 09 N71-28468
- Locomotion and restraint aid Patent  
[NASA-CASE-ARC-10153] c 05 N71-28619
- Line following servosystem Patent  
[NASA-CASE-XAC-00001] c 15 N71-28952
- Mechanically limited, electrically operated hydraulic valve system for aircraft controls Patent  
[NASA-CASE-XAC-00048] c 02 N71-29128
- Precision rectifier with FET switching means Patent  
[NASA-CASE-ARC-10101-1] c 09 N71-33109
- Solar cell Patent  
[NASA-CASE-ARC-10050] c 03 N71-33409
- Phase shift circuit apparatus  
[NASA-CASE-ARC-10269-1] c 10 N72-16172
- High intensity radiant energy pulse source having means for opening shutter when light flux has reached a desired level  
[NASA-CASE-ARC-10178-1] c 09 N72-17152
- Telemetry actuated switch  
[NASA-CASE-ARC-10105] c 09 N72-17153
- Active RC networks  
[NASA-CASE-ARC-10020] c 10 N72-17172
- Apparatus for automatically stabilizing the attitude of a nonguided vehicle  
[NASA-CASE-ARC-10134] c 30 N72-17873
- Method and apparatus for swept-frequency impedance measurements of welds  
[NASA-CASE-ARC-10176-1] c 15 N72-21464
- Space suit having improved waist and torso movement  
[NASA-CASE-ARC-10275-1] c 05 N72-22092
- RF controlled solid state switch  
[NASA-CASE-ARC-10136-1] c 09 N72-22202
- Wide range dynamic pressure sensor  
[NASA-CASE-ARC-10263-1] c 14 N72-22438
- Method and apparatus for measuring the damping characteristics of a structure  
[NASA-CASE-ARC-10154-1] c 14 N72-22440
- Magnetic position detection method and apparatus  
[NASA-CASE-ARC-10179-1] c 21 N72-22619
- Fluidic proportional thruster system  
[NASA-CASE-ARC-10106-1] c 28 N72-22769
- Thermoelectric radiometer utilizing polymer film  
[NASA-CASE-ARC-10138-1] c 14 N72-24477
- Polymeric vehicles as carriers for sulfonic acid salt of nitrosubstituted aromatic amines  
[NASA-CASE-ARC-10325] c 06 N72-25147
- Stereoscopic television system and apparatus  
[NASA-CASE-ARC-10160-1] c 23 N72-27728
- Metallic intrusion detector system  
[NASA-CASE-ARC-10265-1] c 10 N72-28240
- Apparatus for ionization analysis  
[NASA-CASE-ARC-10017-1] c 14 N72-29464
- Nondispersive gas analyzing method and apparatus wherein radiation is serially passed through a reference and unknown gas  
[NASA-CASE-ARC-10308-1] c 06 N72-31141
- Two degree inverted flexure  
[NASA-CASE-ARC-10345-1] c 15 N73-12488
- Intumescent paint containing nitrile rubber  
[NASA-CASE-ARC-10196-1] c 18 N73-13562
- Temperature compensated light source using a light emitting diode  
[NASA-CASE-ARC-10467-1] c 09 N73-14214
- Self-tuning bandpass filter  
[NASA-CASE-ARC-10264-1] c 09 N73-20231
- Micrometeoroid analyzer  
[NASA-CASE-ARC-10443-1] c 14 N73-20477
- Multiple pass reimaging optical system  
[NASA-CASE-ARC-10194-1] c 29 N73-20741
- Intruder detection system  
[NASA-CASE-ARC-10097-2] c 07 N73-25160
- Interferometric rotation sensor  
[NASA-CASE-ARC-10278-1] c 14 N73-25463
- Dual-lenslage aircraft leading yawable wing and horizontal stabilizer  
[NASA-CASE-ARC-10470-1] c 02 N73-26005
- Temperature controller for a fluid cooled garment  
[NASA-CASE-ARC-10599-1] c 05 N73-26071
- Visual examination apparatus  
[NASA-CASE-ARC-10329-1] c 05 N73-26072
- Intumescent composites, foamed product prepared therewith, and process for making same  
[NASA-CASE-ARC-10304-1] c 18 N73-26572
- Infrared tunable laser  
[NASA-CASE-ARC-10463-1] c 09 N73-32111
- Low power electromagnetic flowmeter providing accurate zero set  
[NASA-CASE-ARC-10362-1] c 14 N73-32826
- Hand-held photomicroscope  
[NASA-CASE-ARC-10468-1] c 14 N73-33361
- Alignment apparatus using a laser having a gravitationally sensitive cavity reflector  
[NASA-CASE-ARC-10444-1] c 16 N73-33397
- Polyimide foam for the thermal insulation and fire protection  
[NASA-CASE-ARC-10464-1] c 27 N74-112812
- Flexible fire retardant polyisocyanate modified neoprene foam  
[NASA-CASE-ARC-10180-1] c 27 N74-112814
- Heater-motor for stored fluids  
[NASA-CASE-ARC-10442-1] c 35 N74-115093
- Biometric fluid displacement apparatus  
[NASA-CASE-ARC-10441-1] c 35 N74-115126
- Automatic real-time pair-feeding system for animals  
[NASA-CASE-ARC-10302-1] c 51 N74-115778
- Overvoltage protection network  
[NASA-CASE-ARC-10197-1] c 33 N74-117929
- Ultrasonic biomedical measuring and recording apparatus  
[NASA-CASE-ARC-10597-1] c 52 N74-120726
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c 27 N74-211166
- High speed shutter  
[NASA-CASE-ARC-10516-1] c 70 N74-213100
- Bio-isolated dc operational amplifier  
[NASA-CASE-ARC-10596-1] c 33 N74-216351
- Programmable physiological infusion  
[NASA-CASE-ARC-10447-1] c 52 N74-222771
- Chromato-fluorographic drug detector  
[NASA-CASE-ARC-10633-1] c 25 N74-226847
- Intumescent composition, foamed product prepared therewith and process for making same  
[NASA-CASE-ARC-10304-2] c 27 N74-227037
- Photomultiplier circuit including means for rapidly reducing the sensitivity thereof  
[NASA-CASE-ARC-10593-1] c 33 N74-227882
- Concentric differential gearing arrangement  
[NASA-CASE-ARC-10462-1] c 37 N74-227901
- Measurement of plasma temperature and density using radiation absorption  
[NASA-CASE-ARC-10598-1] c 75 N74-301166
- Abating exhaust noises in jet engines  
[NASA-CASE-ARC-10712-1] c 07 N74-332178
- Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c 44 N74-33379
- Automated analysis of oxidative metabolites  
[NASA-CASE-ARC-10469-1] c 25 N75-12086
- Method of preparing water purification membranes  
[NASA-CASE-ARC-10643-1] c 25 N75-12087
- Method of forming aperture plate for electron microscope  
[NASA-CASE-ARC-10448-2] c 74 N75-127382
- Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c 05 N75-12950
- Wind tunnel flow generation section  
[NASA-CASE-ARC-10710-1] c 09 N75-12969
- Continuous Fourier transform method and apparatus  
[NASA-CASE-ARC-10466-1] c 60 N75-13539
- Dual wavelength scanning Doppler velocimeter  
[NASA-CASE-ARC-10637-1] c 35 N75-16783
- Signal conditioning circuit apparatus  
[NASA-CASE-ARC-10348-1] c 33 N75-19518
- Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-3] c 33 N75-19520
- Reversed cowli flap inlet thrust augmentor  
[NASA-CASE-ARC-10754-1] c 07 N75-24736
- Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-2] c 33 N75-25041
- Rotary plant growth accelerating apparatus  
[NASA-CASE-ARC-10722-1] c 51 N75-25503
- Shoulder harness and lap belt restraint system  
[NASA-CASE-ARC-10519-2] c 05 N75-25915

- Gas chromatograph injection system  
[NASA-CASE-ARC-10344-2] c 35 N75-26334
- Reference apparatus for medical ultrasonic transducer  
[NASA-CASE-ARC-10753-1] c 54 N75-27760
- Electric arc light source having undercut recessed anode  
[NASA-CASE-ARC-10266-1] c 33 N75-29318
- G-load measuring and indicator apparatus  
[NASA-CASE-ARC-10806-1] c 35 N75-29381
- NDIR gas analyzer based on absorption modulation ratios for known and unknown samples  
[NASA-CASE-ARC-10802-1] c 35 N75-30502
- Diatomic infrared gasdynamic laser  
[NASA-CASE-ARC-10370-1] c 36 N75-31426
- Pneumatic load compensating or controlling system  
[NASA-CASE-ARC-10907-1] c 37 N75-32465
- Combined dual scatter, local oscillator laser Doppler velocimeter  
[NASA-CASE-ARC-10642-1] c 36 N76-14447
- Fiber modified polyurethane foam for ballistic protection  
[NASA-CASE-ARC-10714-1] c 27 N76-15310
- Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c 27 N76-16230
- Modulated hydrogen ion flame detector  
[NASA-CASE-ARC-10322-1] c 35 N76-18403
- Electrical conductivity cell and method for fabricating the same  
[NASA-CASE-ARC-10810-1] c 33 N76-19339
- Method and apparatus for compensating reflection losses in a path length modulated absorption-absorption trace gas detector  
[NASA-CASE-ARC-10631-1] c 74 N76-20958
- Trielectrode capacitive pressure transducer  
[NASA-CASE-ARC-10711-2] c 33 N76-21390
- Nulling device for detection of trace gases by NDIR absorption  
[NASA-CASE-ARC-10760-1] c 25 N76-22323
- Silica reusable surface insulation  
[NASA-CASE-ARC-10721-1] c 27 N76-22376
- Optical alignment device  
[NASA-CASE-ARC-10932-1] c 74 N76-22993
- Vehicle simulator binocular multiplexed visual display system  
[NASA-CASE-ARC-10808-1] c 09 N76-24280
- Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c 35 N76-24525
- System for measuring Reynolds in a turbulently flowing fluid  
[NASA-CASE-ARC-10755-2] c 34 N76-27517
- Oblique-wing supersonic aircraft  
[NASA-CASE-ARC-10470-3] c 05 N76-29217
- Accelerometer telemetry system  
[NASA-CASE-ARC-10849-1] c 17 N76-29347
- Miniature ingestible telemeter devices to measure deep-body temperature  
[NASA-CASE-ARC-10583-1] c 52 N76-29894
- Visual examination apparatus  
[US-PATENT-RE-28,921] c 52 N76-30793
- Integrated structure vacuum tube  
[NASA-CASE-ARC-10445-1] c 31 N76-31365
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c 27 N76-32315
- Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-1] c 52 N76-33835
- Thermistor holder for skin temperature measurements  
[NASA-CASE-ARC-10855-1] c 52 N77-10780
- Smoke generator  
[NASA-CASE-ARC-10905-1] c 37 N77-13418
- Electron microscope aperture system  
[NASA-CASE-ARC-10448-3] c 35 N77-14408
- Liquid cooled brassiere and method of diagnosing malignant tumors therewith  
[NASA-CASE-ARC-11007-1] c 52 N77-14736
- Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c 05 N77-17029
- The engine air intake system  
[NASA-CASE-ARC-10761-1] c 07 N77-18154
- Spring operated accelerator and constant force spring mechanism therefor  
[NASA-CASE-ARC-10898-1] c 35 N77-18417
- Rotating launch device for a remotely piloted aircraft  
[NASA-CASE-ARC-10979-1] c 09 N77-19076
- Tubular sublimatory evaporator heat sink  
[NASA-CASE-ARC-10912-1] c 34 N77-19353
- Selective data segment monitoring system  
[NASA-CASE-ARC-10899-1] c 60 N77-19760
- All sky pointing attitude control system  
[NASA-CASE-ARC-10716-1] c 35 N77-20399
- Metallic hot wire anemometer  
[NASA-CASE-ARC-10911-1] c 35 N77-20400
- Optical instrument employing reticle having preselected visual response pattern formed thereon  
[NASA-CASE-ARC-10976-1] c 74 N77-22950
- Sampling video compression system  
[NASA-CASE-ARC-10984-1] c 32 N77-24328
- Method for making a hot wire anemometer and product thereof  
[NASA-CASE-ARC-10900-1] c 35 N77-24454
- Pseudo-backscatter laser Doppler velocimeter employing antiparallel-reflector in the forward direction  
[NASA-CASE-ARC-10970-1] c 36 N77-25501
- System for measuring three fluctuating velocity components in a turbulently flowing fluid  
[NASA-CASE-ARC-10974-1] c 34 N77-27345
- Twin-capacitive shaft angle encoder with analog output signal  
[NASA-CASE-ARC-10897-1] c 33 N77-31404
- Anthropomorphic master/slave manipulator system  
[NASA-CASE-ARC-10756-1] c 54 N77-32721
- Mechanical energy storage device for hip disarticulation  
[NASA-CASE-ARC-10916-1] c 52 N78-10686
- Optically selective, acoustically resonant gas detecting transducer  
[NASA-CASE-ARC-10639-1] c 35 N78-13400
- Intumescent coatings containing 4,4'-dinitrosulfanilide  
[NASA-CASE-ARC-11042-1] c 24 N78-14096
- Automatic multiple-sample applicator and electrophoresis apparatus  
[NASA-CASE-ARC-10991-1] c 25 N78-14104
- Flow separation detector  
[NASA-CASE-ARC-11046-1] c 35 N78-14364
- Honeycomb-laminate composite structure  
[NASA-CASE-ARC-10913-1] c 24 N78-15180
- Heat pipe with dual working fluids  
[NASA-CASE-ARC-10198] c 34 N78-17336
- Multi-chamber controllable heat pipe  
[NASA-CASE-ARC-10199] c 34 N78-17337
- Walking boot assembly  
[NASA-CASE-ARC-11101-1] c 54 N78-17675
- Full color hybrid display for aircraft simulators  
[NASA-CASE-ARC-10903-1] c 09 N78-18083
- Apparatus for measuring a sorbate dispersed in a fluid stream  
[NASA-CASE-ARC-10896-1] c 35 N78-19465
- Automatic fluid dispenser  
[NASA-CASE-ARC-10820-1] c 35 N78-19466
- Intumescent-ablator coatings using endothermic fillers  
[NASA-CASE-ARC-11043-1] c 24 N78-27180
- Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-2] c 24 N78-27184
- Rotary leveling base platform  
[NASA-CASE-ARC-10981-1] c 37 N78-27425
- Tread drum for animals  
[NASA-CASE-ARC-10917-1] c 51 N78-27733
- Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c 27 N78-31232
- Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c 27 N78-31233
- Spacesuit mobility joints  
[NASA-CASE-ARC-11058-1] c 54 N78-31735
- Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c 54 N78-31736
- Process for preparing higher oxides of the alkali and alkaline earth metals  
[NASA-CASE-ARC-10992-1] c 26 N78-32229
- Reaction cured glass and glass coatings  
[NASA-CASE-ARC-11051-1] c 27 N78-32260
- Angle detector  
[NASA-CASE-ARC-11036-1] c 35 N78-32395
- Process for producing a well-adhered durable optical coating on an optical plastic substrate  
[NASA-CASE-ARC-11039-1] c 74 N78-32854
- Process for the preparation of calcium superoxide  
[NASA-CASE-ARC-11053-1] c 25 N79-10162
- Contour detector and data acquisition system for the left ventricular outline  
[NASA-CASE-ARC-10985-1] c 52 N79-10724
- Ambient cure polyimide foams  
[NASA-CASE-ARC-11170-1] c 27 N79-11215
- Microelectrophoretic apparatus and process  
[NASA-CASE-ARC-11121-1] c 25 N79-14169
- Preparation of dielectric coating of variable dielectric constant by plasma polymerization  
[NASA-CASE-ARC-10892-2] c 27 N79-14214
- Electric discharge for treatment of trace contaminants  
[NASA-CASE-ARC-10975-1] c 33 N79-15245
- Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c 24 N79-16915
- Constant lift rotor for a heavier than air craft  
[NASA-CASE-ARC-11045-1] c 05 N79-17847
- Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers  
[NASA-CASE-ARC-10915-2] c 27 N79-18052
- Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c 52 N79-18580
- Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c 27 N79-22300
- Fibrous refractory composite insulation  
[NASA-CASE-ARC-11169-1] c 24 N79-24062
- Spacesuit mobility knee joints  
[NASA-CASE-ARC-11058-2] c 54 N79-24651
- Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c 15 N79-26100
- Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-2] c 52 N79-26771
- Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c 37 N79-28551
- Acoustically swept rotor  
[NASA-CASE-ARC-11106-1] c 05 N80-14107
- Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides  
[NASA-CASE-ARC-11107-1] c 25 N80-16116
- Cryogenic container compound suspension strap  
[NASA-CASE-ARC-11157-1] c 37 N80-18393
- Induction powered biological radiosonde  
[NASA-CASE-ARC-11120-1] c 52 N80-18691
- Chelate-modified polymers for atmospheric gas chromatography  
[NASA-CASE-ARC-11154-1] c 25 N80-23383
- Reverse osmosis membrane of high urea rejection properties  
[NASA-CASE-ARC-10980-1] c 27 N80-23452
- Reduction of nitric oxide emissions from a combustor  
[NASA-CASE-ARC-10814-2] c 07 N80-26298
- Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c 07 N80-32392
- Pocket ECG electrode  
[NASA-CASE-ARC-11258-1] c 52 N80-33081
- Structural wood panels with improved fire resistance  
[NASA-CASE-ARC-11174-1] c 24 N81-13999
- Perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c 25 N81-14016
- Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c 51 N81-14605
- Subcutaneous electrode structure  
[NASA-CASE-ARC-11117-1] c 52 N81-14612
- Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c 52 N81-14613
- Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c 27 N81-17259
- The 1,2,4-oxadiazole elastomers  
[NASA-CASE-ARC-11253-1] c 27 N81-17262
- Pressure control valve  
[NASA-CASE-ARC-11251-1] c 37 N81-17433
- Autonomous navigation system  
[NASA-CASE-ARC-11257-1] c 04 N81-21047
- Bitfunctional monomers having terminal oxime and cyano or amide groups  
[NASA-CASE-ARC-11253-3] c 27 N81-24256
- Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c 52 N81-25662
- Process for the preparation of polycarbonylphosphazenes  
[NASA-CASE-ARC-11176-2] c 27 N81-27271
- Phosphorus-containing bisimide resins  
[NASA-CASE-ARC-11321-1] c 27 N81-27272
- Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c 52 N81-29763
- Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-1] c 52 N81-29764
- Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c 04 N82-16059
- Synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c 23 N82-16174
- Carboranylchlorophosphazenes and their polymers  
[NASA-CASE-ARC-11176-1] c 27 N82-18389
- Use of glow discharge in fluidized beds  
[NASA-CASE-ARC-11245-1] c 28 N82-18401
- Clutchless multiple drive source for output shaft  
[NASA-CASE-ARC-11325-1] c 37 N82-22496
- Environmental fog/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c 09 N82-24212
- High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c 15 N82-24272
- The 1,1,1-triaryl-2,2,2-trifluoroethanes and process for their synthesis  
[NASA-CASE-ARC-11097-1] c 25 N82-24312
- Preparation of crosslinked 1,2,4-oxadiazole polymer  
[NASA-CASE-ARC-11253-2] c 27 N82-24338
- Adjustable high emittance gap filter  
[NASA-CASE-ARC-11310-1] c 27 N82-24339

- Test apparatus for locating shorts during assembly of electrical buses  
[NASA-CASE-ARC-11116-1] c 33 N82-24420  
Spray coating apparatus having a rotatable workpiece holder  
[NASA-CASE-ARC-11110-1] c 37 N82-24492  
Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c 54 N82-26987  
Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c 23 N82-28353  
High performance channel injection sealant invention abstract  
[NASA-CASE-ARC-14408-1] c 27 N82-33523  
Rhomboid prism pair for rotating the plane of parallel light beams  
[NASA-CASE-ARC-11311-1] c 74 N83-13978  
Dual-beam skin friction interferometer  
[NASA-CASE-ARC-11354-1] c 74 N83-21949  
Method of carbonizing polyacrylonitrile fibers  
[NASA-CASE-ARC-11261-1] c 24 N83-25789  
Method for detecting coliform organisms  
[NASA-CASE-ARC-11322-1] c 51 N83-28849  
Non-invasive method and apparatus for measuring pressure within a pliable vessel  
[NASA-CASE-ARC-11264-2] c 52 N83-29991  
Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c 27 N83-31854  
Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c 07 N83-33884  
Synthesis of dawsonites  
[NASA-CASE-ARC-11326-1] c 25 N83-33977  
Method of tracing contour patterns for use in making gradual contour resin matrix composites  
[NASA-CASE-ARC-11246-1] c 31 N83-34073  
Scanning seismic intrusion detection method and apparatus  
[NASA-CASE-ARC-11317-1] c 35 N83-34272  
Sidetooking laser altimeter for a flight simulator  
[NASA-CASE-ARC-11312-1] c 36 N83-34304  
High temperature glass thermal control structure and coating  
[NASA-CASE-ARC-11164-1] c 44 N83-34448  
Fire extinguishant materials  
[NASA-CASE-ARC-11252-1] c 25 N83-36118  
Fluoroether modified epoxy composites  
[NASA-CASE-ARC-11418-1] c 24 N84-11213  
Visual accommodation trainer-tester  
[NASA-CASE-ARC-11426-1] c 09 N84-12193  
Elastomer-modified phosphorus-containing imide resins  
[NASA-CASE-ARC-11400-1] c 27 N84-14322  
Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612  
Process for preparing perfluorotriazine elastomers and precursors thereof  
[NASA-CASE-ARC-11402-1] c 27 N84-22744  
Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-3] c 27 N84-22745  
Carboranyl-methylene-substituted phosphazenes and polymers thereof  
[NASA-CASE-ARC-11370-1] c 27 N84-22750  
Electronic scanning pressure measuring system and transducer package  
[NASA-CASE-ARC-11361-1] c 35 N84-22934  
Metal phthalocyanine polymers  
[NASA-CASE-ARC-11405-1] c 27 N84-27884  
Method for the preparation of thin-skinned asymmetric reverse osmosis membranes and products thereof  
[NASA-CASE-ARC-11359-1] c 51 N84-28361  
Fire blocking systems for aircraft seat cushions  
[NASA-CASE-ARC-11423-1] c 03 N84-33394  
Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-2] c 27 N85-21347  
Phthalocyanine polymers  
[NASA-CASE-ARC-11413-1] c 27 N85-21348  
Aircraft rotor blade with passive tuned tab  
[NASA-CASE-ARC-11444-1] c 05 N85-29947  
Synthesis of 2,4,8,10-tetroxaspiro[5,5]undecane  
[NASA-CASE-ARC-11243-2] c 23 N85-33187  
Fire-resistant phosphorus containing polyimides and copolyimides  
[NASA-CASE-ARC-11522-2] c 27 N85-34280  
Metal (2,4,4',4') phthalocyanine tetraamines as curing agents for epoxy resins  
[NASA-CASE-ARC-11424-1] c 27 N85-34281  
Modulated voltage metastable ionization detector  
[NASA-CASE-ARC-11503-1] c 35 N85-34374  
Maleimido substituted aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-1] c 23 N86-19376  
Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-1] c 24 N86-19380  
Metal phthalocyanine intermediates for the preparation of polymers  
[NASA-CASE-ARC-11405-2] c 27 N86-19455  
Optical system with reflective baffles  
[NASA-CASE-ARC-11502-1] c 74 N86-20125  
Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
[NASA-CASE-ARC-11429-1-CU] c 27 N86-20560  
Laboratory glassware rack for seismic safety  
[NASA-CASE-ARC-11422-1] c 35 N86-20751  
Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797  
Perfluoro (Imidoylamidide) diamidines  
[NASA-CASE-ARC-11402-3] c 23 N86-21582  
High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1SB] c 24 N86-21590  
Laminate comprising fibers embedded in cured amine terminated bis-imide  
[NASA-CASE-ARC-11421-3] c 24 N86-25416  
Thumb-actuated two-axis controller  
[NASA-CASE-ARC-11372-1] c 08 N86-27288  
Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-2] c 27 N86-27451  
Load positioning system with gravity compensation  
[NASA-CASE-ARC-11525-1] c 37 N86-27629  
Light weight fire resistant graphite composites  
[US-PATENT-4,598,007] c 24 N86-28131  
Torso sizing ring construction for hard space suit  
[NASA-CASE-ARC-11616-1] c 54 N86-28618  
Elbow and knee joint for hard space suits  
[NASA-CASE-ARC-11610-1] c 54 N86-28619  
Shoulder and hip joint for hard space suits  
[NASA-CASE-ARC-11543-1] c 54 N86-28620  
Shoulder and hip joints for hard space suits and the like  
[NASA-CASE-ARC-11534-1] c 54 N86-29507  
Amine terminated bisaspartimide polymer  
[NASA-CASE-ARC-11421-2] c 27 N86-31726  
Simulator scene display evaluation device  
[NASA-CASE-ARC-11504-1] c 09 N86-32447  
Polymer of phosphonylmethyl-2,4- and -2,6-diamino benzene and polyfunctional monomer  
[NASA-CASE-ARC-11506-2] c 23 N86-32525  
Fire resistant polyamide based on 1-(diorganoxyphosphonyl)methyl-2,4- and -2,6-diamino benzene  
[NASA-CASE-ARC-11512-2] c 27 N86-32568  
Spinning disk calibration method and apparatus for laser Doppler velocimeter  
[NASA-CASE-ARC-11510-1] c 35 N86-32697  
Process for curing bismaleimide resins  
[NASA-CASE-ARC-11429-4CU] c 27 N87-15304  
Vinyl stilbazoles  
[NASA-CASE-ARC-11429-3CU] c 27 N87-16908  
Fire and heat resistant laminating resins based on maleimido substituted aromatic cyclotriphosphazene polymer  
[NASA-CASE-ARC-11428-2] c 27 N87-16909  
Elevated waterproof access floor system and method of making the same  
[NASA-CASE-ARC-11363-1] c 31 N87-16918  
Projection lens scanning laser velocimeter system  
[NASA-CASE-ARC-11547-1] c 36 N87-17026  
Process for preparing phthalocyanine polymer from imide containing bisphthalonitrile  
[NASA-CASE-ARC-11511-2] c 27 N87-21112  
Liquid seeding atomizer  
[NASA-CASE-ARC-11631-1] c 34 N87-21255  
Structural panels  
[NASA-CASE-ARC-11429-2-CU] c 27 N87-22845  
Swashplate control system  
[NASA-CASE-ARC-11633-1] c 08 N87-23631  
Preparation of B-trichloroborazine  
[NASA-CASE-ARC-11643-1-SB] c 23 N87-23698  
Ceramic honeycomb structures and the method thereof  
[NASA-CASE-ARC-11652-1] c 27 N87-23737  
Fire and heat resistant laminating resins based on maleimido and citraconimido substituted 1-,2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-1] c 27 N87-23751  
Fire and heat resistant laminating resins based on maleimido and citraconimido substituted 1-(diorgano oxyphosphonyl) methyl -2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-3] c 27 N87-24564  
Weightlessness simulation system and process  
[NASA-CASE-ARC-11646-1] c 14 N87-25344  
Aminophenoxycyclotriphosphazene cured epoxy resins and the composites, laminates, adhesives and structures thereof  
[NASA-CASE-ARC-11548-1] c 27 N87-25469  
Self-compensating solenoid valve  
[NASA-CASE-ARC-11620-1] c 37 N87-25573  
Liquid encapsulated crystal growth  
[NASA-CASE-NPO-16808-1-CU] c 76 N87-25868  
Method and apparatus for making an optical element having a dielectric film  
[NASA-CASE-ARC-11611-1] c 74 N87-28416  
The 1-(diorganoxy phosphonyl) methyl-2,4- and -2,6-diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-2] c 23 N87-28605  
Electro-expulsive separation system  
[NASA-CASE-ARC-11613-1] c 33 N87-28833  
Dual mode laser velocimeter  
[NASA-CASE-ARC-11634-1] c 36 N88-14350  
Airborne tracking sunphotometer apparatus and system  
[NASA-CASE-ARC-11622-1] c 44 N88-14492  
Ceramic-ceramic shell tile thermal protection system and method thereof  
[NASA-CASE-ARC-11641-1] c 24 N88-18628  
Aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-3] c 23 N88-24692  
High performance forward swept wing aircraft  
[NASA-CASE-ARC-11636-1] c 05 N88-28914  
Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-1-SB] c 27 N88-29040  
Laser Doppler velocimeter multiplexer interface for simultaneous measured events  
[NASA-CASE-ARC-11536-1] c 33 N89-14384  
Fire and heat resistant laminating resin based on maleimido and citraconimido substituted 1-(diorganoxyphosphonyl)methyl-2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-2] c 27 N89-16042  
Visual accommodation trainer-tester  
[NASA-CASE-ARC-11426-2] c 52 N89-16256  
Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-2] c 18 N89-25266  
Sulport extra-vehicular access facility  
[NASA-CASE-ARC-11635-1] c 18 N90-16860  
The 1-(diorganoxyphosphonyl)methyl-2,4- and -2,6-diamino benzenes  
[NASA-CASE-ARC-11425-4] c 23 N90-20133  
Boron-containing organosilane polymers and ceramic materials thereof  
[NASA-CASE-ARC-11649-2-SB] c 27 N90-21177  
Some 1-(diorganoxyphosphonyl)methyl-2,4- and -2,6-dinitro-benzenes  
[NASA-CASE-ARC-11425-3] c 23 N90-23475  
Three-dimensional laser velocimeter simultaneity detector  
[NASA-CASE-ARC-11876-1] c 36 N90-25340  
Wind tunnel balance  
[NASA-CASE-ARC-11877-1-SB] c 09 N91-14357  
Multiple axis reticle  
[NASA-CASE-ARC-11886-1-SB] c 35 N91-14591  
Laser velocimeter for near-surface measurements  
[NASA-CASE-ARC-11917-1] c 35 N91-15520  
Airborne rescue system  
[NASA-CASE-ARC-11909-1] c 03 N91-31113  
Etching method for photoresists or polymers  
[NASA-CASE-ARC-11873-2] c 25 N91-31258  
Cooling apparatus and couplings therefor  
[NASA-CASE-ARC-11921-1] c 34 N92-11286  
Toughened uni-piece fibrous insulation  
[NASA-CASE-ARC-11888-1] c 24 N92-16026  
Matching optics for Gaussian beams  
[NASA-CASE-ARC-11892-1-SB] c 74 N92-16810  
Apparatus for precision focussing and positioning of a beam waist on a target  
[NASA-CASE-ARC-11916-1-SB] c 74 N92-16811  
Boron-carbon-silicon polymers and ceramic and a process for the production thereof  
[NASA-CASE-ARC-11891-2-SB] c 27 N92-34160  
Passive zero-gravity leg restraint  
[NASA-CASE-ARC-11882-1-CU] c 54 N93-14713  
National Aeronautics and Space Administration.  
Electronics Research Center, Cambridge, MA.  
Method and apparatus for wavelength tuning of liquid lasers  
[NASA-CASE-ERC-10187] c 16 N69-31343  
A method for the deposition of beta-silicon carbide by isoeptaxy  
[NASA-CASE-ERC-10120] c 26 N69-33482  
Full flow with shut off and selective drainage control valve Patent application  
[NASA-CASE-ERC-10208] c 15 N70-10867  
A method for selective gold diffusion of monolithic silicon devices and/or circuits Patent application  
[NASA-CASE-ERC-10072] c 09 N70-11148  
Method and means for an improved electron beam scanning system Patent  
[NASA-CASE-ERC-10552] c 09 N71-12539

Apparatus and method for separating a semiconductor wafer Patent  
[NASA-CASE-ERC-10138] c 26 N71-14354

Focused image holography with extended sources Patent  
[NASA-CASE-ERC-10019] c 16 N71-15551

Recording and reconstructing focused image holograms Patent  
[NASA-CASE-ERC-10017] c 16 N71-15567

Sorption vacuum trap Patent  
[NASA-CASE-XER-09519] c 14 N71-18483

Voltage tunable Gunn-type microwave generator Patent  
[NASA-CASE-XER-07894] c 09 N71-18721

Array phasing device Patent  
[NASA-CASE-ERC-10046] c 10 N71-18722

Parametric microwave noise generator Patent  
[NASA-CASE-XER-11019] c 09 N71-23598

Saturation current protection apparatus for saturable core transformers Patent  
[NASA-CASE-ERC-10075] c 09 N71-24800

Repetitively pulsed, wavelength selective laser Patent  
[NASA-CASE-ERC-10178] c 16 N71-24832

Optical mirror apparatus Patent  
[NASA-CASE-ERC-10001] c 23 N71-24868

Unsaturating saturable core transformer Patent  
[NASA-CASE-ERC-10125] c 09 N71-24893

Leak detector wherein a probe is monitored with ultraviolet radiation Patent  
[NASA-CASE-ERC-10034] c 15 N71-24896

Method for detecting leaks in hermetically sealed containers Patent  
[NASA-CASE-ERC-10045] c 15 N71-24910

Satellite aided vehicle avoidance system Patent  
[NASA-CASE-ERC-10090] c 21 N71-24948

Transverse piezoresistance and pinch effect electromechanical transducers Patent  
[NASA-CASE-ERC-10088] c 26 N71-25490

A solid state acoustic variable time delay line Patent  
[NASA-CASE-ERC-10032] c 10 N71-25900

Method and means for recording and reconstructing holograms without use of a reference beam Patent  
[NASA-CASE-ERC-10020] c 16 N71-26154

Electromechanical control actuator system Patent  
[NASA-CASE-ERC-10022] c 15 N71-26635

Method and apparatus for detecting gross leaks Patent  
[NASA-CASE-ERC-10033] c 14 N71-26672

Field ionization electrodes Patent  
[NASA-CASE-ERC-10013] c 09 N71-26678

Voltage regulator Patent  
[NASA-CASE-ERC-10113] c 09 N71-27053

A multichannel photoionization chamber for absorption analysis Patent  
[NASA-CASE-ERC-10044-1] c 14 N71-27090

Pressure sensitive transducers Patent  
[NASA-CASE-ERC-10087] c 14 N71-27334

Constant frequency output two stage induction machine systems Patent  
[NASA-CASE-ERC-10065] c 09 N71-27364

Fluid power transmitting gas bearing Patent  
[NASA-CASE-ERC-10097] c 15 N71-28465

Color television systems using a single gun color cathode ray tube Patent  
[NASA-CASE-ERC-10098] c 09 N71-28618

Ion microprobe mass spectrometer for analyzing fluid materials Patent  
[NASA-CASE-ERC-10014] c 14 N71-28863

Orifice gross leak tester Patent  
[NASA-CASE-ERC-10150] c 14 N71-28992

Device for measuring light scattering wherein the measuring beam is successively reflected between a pair of parallel reflectors Patent  
[NASA-CASE-XER-11203] c 14 N71-28994

Quasi-optical microwave component Patent  
[NASA-CASE-ERC-10011] c 07 N71-29065

Multiple hologram recording and readout system Patent  
[NASA-CASE-ERC-10151] c 16 N71-29131

Plasma fluidic hybrid display Patent  
[NASA-CASE-ERC-10100] c 09 N71-33519

Optical systems having spatially invariant outputs  
[NASA-CASE-ERC-10248] c 14 N72-17323

Method of detecting impending saturation of magnetic cores  
[NASA-CASE-ERC-10089] c 23 N72-17747

Logarithmic function generator utilizing an exponentially varying signal in an inverse manner  
[NASA-CASE-ERC-10267] c 09 N72-23173

Method and apparatus for limiting field emission current  
[NASA-CASE-ERC-10015-2] c 10 N72-27246

**National Aeronautics and Space Administration. Flight Research Center, Edwards, CA.**

Rocket chamber leak test fixture  
[NASA-CASE-XFR-09479] c 14 N69-27503

Three axis controller Patent  
[NASA-CASE-XFR-00181] c 21 N70-33279

Catalyst bed removing tool Patent  
[NASA-CASE-XFR-00811] c 15 N70-36901

Two-axis controller Patent  
[NASA-CASE-XFR-04104] c 03 N70-42073

Controlled visibility device for an aircraft Patent  
[NASA-CASE-XFR-04147] c 11 N71-10748

Biomedical electrode arrangement Patent  
[NASA-CASE-XFR-10856] c 05 N71-11189

Lifting body Patent Application  
[NASA-CASE-FRC-10063] c 01 N71-12217

Energy management system for glider type vehicle Patent  
[NASA-CASE-XFR-00756] c 02 N71-13421

Quick attach mechanism Patent  
[NASA-CASE-XFR-05421] c 15 N71-22994

Heat flux measuring system Patent  
[NASA-CASE-XFR-03802] c 33 N71-23085

Threadless fastener apparatus Patent  
[NASA-CASE-XFR-05302] c 15 N71-23254

Traversing probe Patent  
[NASA-CASE-XFR-02007] c 12 N71-24692

Layout tool Patent  
[NASA-CASE-FRC-10005] c 15 N71-26145

Pulsed excitation voltage circuit for transducers  
[NASA-CASE-FRC-10036] c 09 N72-22200

Acoustical transducer calibrating system and apparatus  
[NASA-CASE-FRC-10060-1] c 14 N73-27379

Three-axis adjustable loading structure  
[NASA-CASE-FRC-10051-1] c 35 N74-13129

Terminal guidance system  
[NASA-CASE-FRC-10049-1] c 04 N74-13420

Full wave modulator-demodulator amplifier apparatus  
[NASA-CASE-FRC-10072-1] c 33 N74-14939

Rotating raster generator  
[NASA-CASE-FRC-10071-1] c 32 N74-20813

Inflatable device for installing strain gage bridges  
[NASA-CASE-FRC-11068-1] c 35 N84-12443

**National Aeronautics and Space Administration. Goddard Inst. for Space Studies, New York, NY.**

Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c 51 N77-22794

Method for fabricating a mass spectrometer inlet leak  
[NASA-CASE-GSC-12077-1] c 35 N77-24455

Length controlled stabilized mode-lock ND:YAG laser  
[NASA-CASE-GSC-11571-1] c 36 N77-25499

Three phase full wave dc motor decoder  
[NASA-CASE-GSC-11824-1] c 33 N77-26386

Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c 74 N77-26942

Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c 35 N77-27366

Controlled caging and uncaging mechanism  
[NASA-CASE-GSC-11063-1] c 37 N77-27400

Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c 32 N77-28346

Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c 74 N77-28932

Pseudo noise code and data transmission method and apparatus  
[NASA-CASE-GSC-12017-1] c 32 N77-30308

Speech analyzer  
[NASA-CASE-GSC-11898-1] c 32 N77-30309

Automatic transponder  
[NASA-CASE-GSC-12075-1] c 32 N77-31350

Method of treating the surface of a glass member  
[NASA-CASE-GSC-12110-1] c 27 N77-32308

Flat-plate heat pipe  
[NASA-CASE-GSC-11998-1] c 34 N77-32413

Fluid sampling device  
[NASA-CASE-GSC-12143-1] c 35 N77-32456

Analog to digital converter for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-3] c 60 N77-32731

Remote sensing of vegetation and soil using microwave ellipsometry  
[NASA-CASE-GSC-11976-1] c 43 N78-10529

Memory device for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-2] c 60 N78-10709

**National Aeronautics and Space Administration. Goddard Space Flight Center, Greenbelt, MD.**

Regulated dc to dc converter  
[NASA-CASE-XGS-03429] c 03 N69-21330

Apparatus for measuring swelling characteristics of membranes  
[NASA-CASE-XGS-03865] c 14 N69-21363

Tumbler system to provide random motion  
[NASA-CASE-XGS-02437] c 15 N69-21472

Automatic acquisition system for phase-lock loop  
[NASA-CASE-XGS-04994] c 09 N69-21543

Low power drain semi-conductor circuit  
[NASA-CASE-XGS-04999] c 09 N69-24317

Spacecraft battery seals  
[NASA-CASE-XGS-03864] c 15 N69-24320

Scanning aspect sensor employing an apertured disc and a commutator  
[NASA-CASE-XGS-08266] c 14 N69-27432

Monopulse system with an electronic scanner  
[NASA-CASE-XGS-05582] c 07 N69-27460

Ring counter  
[NASA-CASE-XGS-03095] c 09 N69-27463

Retrodirective optical system  
[NASA-CASE-XGS-04480] c 16 N69-27491

Time division multiplex system  
[NASA-CASE-XGS-05918] c 07 N69-39974

Doppler frequency spread correction device for multiplex transmissions  
[NASA-CASE-XGS-02749] c 07 N69-39978

Alkali-metal silicate protective coating  
[NASA-CASE-XGS-04119] c 18 N69-39979

Device for measuring electron-beam intensities and for subjecting materials to electron irradiation in an electron microscope  
[NASA-CASE-XGS-01725] c 14 N69-39982

Light sensitive digital aspect sensor Patent  
[NASA-CASE-XGS-00359] c 14 N70-34158

Method and apparatus for determining satellite orientation utilizing spatial energy sources Patent  
[NASA-CASE-XGS-00466] c 21 N70-34297

Binary magnetic memory device Patent  
[NASA-CASE-XGS-00174] c 08 N70-34743

Full binary adder Patent  
[NASA-CASE-XGS-00689] c 08 N70-34787

Ultra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit Patent  
[NASA-CASE-XGS-00381] c 09 N70-34819

Space and atmospheric reentry vehicle Patent  
[NASA-CASE-XGS-00260] c 31 N70-37924

Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00458] c 09 N70-38604

Switching mechanism with energy storage means Patent  
[NASA-CASE-XGS-00473] c 03 N70-38713

Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00131] c 09 N70-38995

Stretch de-spin mechanism Patent  
[NASA-CASE-XGS-00619] c 30 N70-40016

Folding boom assembly Patent  
[NASA-CASE-XGS-00938] c 32 N70-41367

Cryogenic connector for vacuum use Patent  
[NASA-CASE-XGS-02441] c 15 N70-41629

Endless tape cartridge Patent  
[NASA-CASE-XGS-00769] c 14 N70-41647

Apparatus for producing three-dimensional recordings of fluorescence spectra Patent  
[NASA-CASE-XGS-01231] c 14 N70-41676

Method and apparatus for determining electromagnetic characteristics of large surface area passive reflectors Patent  
[NASA-CASE-XGS-02608] c 07 N70-41678

Prevention of pressure build-up in electrochemical cells Patent  
[NASA-CASE-XGS-01419] c 03 N70-41864

Variable time constant smoothing circuit Patent  
[NASA-CASE-XGS-01983] c 10 N70-41964

Endless tape transport mechanism Patent  
[NASA-CASE-XGS-01223] c 07 N71-10609

Reversible ring counter employing cascaded single SCR stages Patent  
[NASA-CASE-XGS-01473] c 09 N71-10673

Electronic beam switching commutator Patent  
[NASA-CASE-XGS-01451] c 09 N71-10677

Sun tracker with rotatable plane-parallel plate and two photocells Patent  
[NASA-CASE-XGS-01159] c 21 N71-10678

Non-magnetic battery case Patent  
[NASA-CASE-XGS-00886] c 03 N71-11053

Interconnection of solar cells Patent  
[NASA-CASE-XGS-01475] c 03 N71-11058

Frequency shift keyed demodulator Patent  
[NASA-CASE-XGS-02889] c 07 N71-11282

Bi-polar phase detector and corrector for split phase PCM data signals Patent  
[NASA-CASE-XGS-01590] c 07 N71-12392

Data processor having multiple sections activated at different times by selective power coupling to the sections Patent  
[NASA-CASE-XGS-04767] c 08 N71-12494

Position location system and method Patent  
[NASA-CASE-GSC-10087-2] c 21 N71-13958

Fire resistant coating composition Patent  
[NASA-CASE-GSC-10072] c 18 N71-14014

Passively regulated water electrolysis rocket engine Patent			System for recording and reproducing pulse code modulated data Patent			Direct current motor with stationary armature and field Patent		
[NASA-CASE-XGS-08729]	c 28	N71-14044	[NASA-CASE-XGS-01021]	c 08	N71-21042	[NASA-CASE-XGS-05290]	c 09	N71-25999
Altitude control system Patent			Satellite appendage tie down cord Patent			Buck boost voltage regulation circuit Patent		
[NASA-CASE-XGS-04393]	c 21	N71-14159	[NASA-CASE-XGS-02554]	c 31	N71-21064	[NASA-CASE-GSC-10735-1]	c 10	N71-26085
Retrodirective modulator Patent			Reaction wheel scanner Patent			Adaptive system and method for signal generation Patent		
[NASA-CASE-GSC-10062]	c 14	N71-15605	[NASA-CASE-XGS-02629]	c 14	N71-21082	[NASA-CASE-GSC-11367]	c 10	N71-26374
Spacecraft attitude detection system by stellar reference Patent			Nonmagnetic, explosive actuated indexing device Patent			Control apparatus for applying pulses of selectively predetermined duration to a sequence of loads Patent		
[NASA-CASE-XGS-03431]	c 21	N71-15642	[NASA-CASE-XGS-02422]	c 15	N71-21529	[NASA-CASE-XGS-04224]	c 10	N71-26418
Cartwheel satellite synchronization system Patent			Bidirectional step torque filter with zero backlash characteristic Patent			Turn on transient limiter Patent		
[NASA-CASE-XGS-05579]	c 31	N71-15676	[NASA-CASE-XGS-04227]	c 15	N71-21744	[NASA-CASE-GSC-10413]	c 10	N71-26531
Wide range linear fluxgate magnetometer Patent			Conforming polisher for aspheric surface of revolution Patent			Voltage regulator with plural parallel power source sections Patent		
[NASA-CASE-XGS-01587]	c 14	N71-15962	[NASA-CASE-XGS-02884]	c 15	N71-22705	[NASA-CASE-GSC-10891-1]	c 10	N71-26626
Low friction magnetic recording tape Patent			Precision thrust gage Patent			Method for generating ultra-precise angles Patent		
[NASA-CASE-XGS-00373]	c 23	N71-15978	[NASA-CASE-XGS-02319]	c 14	N71-22965	[NASA-CASE-XGS-04173]	c 19	N71-26674
Method for etching copper Patent			Sealing device for an electrochemical cell Patent			[NASA-CASE-GSC-11139]	c 09	N71-27016
[NASA-CASE-XGS-06306]	c 17	N71-16044	[NASA-CASE-XGS-02630]	c 03	N71-22974	Micro-pound extended range thrust stand Patent		
Bacteriostatic conformal coating and methods of application Patent			Rotary bead dropper and selector for testing micrometeorite detectors Patent			[NASA-CASE-GSC-10710-1]	c 28	N71-27094
[NASA-CASE-GSC-10007]	c 18	N71-16046	[NASA-CASE-XGS-03304]	c 09	N71-22988	Synchronous dc direct drive system Patent		
Serrodyne frequency converter re-entrant amplifier system Patent			Moment of inertia test fixture Patent			[NASA-CASE-GSC-10065-1]	c 10	N71-27136
[NASA-CASE-XGS-01022]	c 07	N71-16088	[NASA-CASE-XGS-01023]	c 14	N71-22992	Antenna array at focal plane of reflector with coupling network for beam switching Patent		
Position location and data collection system and method Patent			Fluid flow meter with comparator reference means Patent			[NASA-CASE-GSC-10220-1]	c 07	N71-27233
[NASA-CASE-GSC-10083-1]	c 30	N71-16090	[NASA-CASE-XGS-01331]	c 14	N71-22996	Gravity gradient attitude control system Patent		
Position sensing device employing misaligned magnetic field generating and detecting apparatus Patent			Foamed in place ceramic refractory insulating material Patent			[NASA-CASE-GSC-10555-1]	c 21	N71-27324
[NASA-CASE-XGS-07514]	c 23	N71-16099	[NASA-CASE-XGS-02435]	c 18	N71-22998	Segmented superconducting magnet for a broadband traveling wave maser Patent		
Optical tracker having overlapping reticles on parallel axes Patent			Digital telemetry system Patent			[NASA-CASE-XGS-10518]	c 16	N71-28554
[NASA-CASE-XGS-05715]	c 23	N71-16100	[NASA-CASE-XGS-01812]	c 07	N71-23001	Millimeter wave antenna system Patent		
Self-erecting reflector Patent			Bonded elastomeric seal for electrochemical cells Patent			[NASA-CASE-GSC-10949-1]	c 07	N71-28965
[NASA-CASE-XGS-09190]	c 31	N71-16102	[NASA-CASE-XGS-02631]	c 03	N71-23006	Sampled data controller Patent		
Dust particle injector for hypervelocity accelerators Patent			Apparatus providing a directive field pattern and attitude sensing of a spin stabilized satellite Patent			[NASA-CASE-GSC-10554-1]	c 08	N71-29033
[NASA-CASE-XGS-06628]	c 24	N71-16213	[NASA-CASE-XGS-02607]	c 31	N71-23009	Variable digital processor including a register for shifting and rotating bits in either direction Patent		
Ellipsoidal mirror reflectometer including means for averaging the radiation reflected from the sample Patent			[NASA-CASE-XGS-02751]	c 09	N71-23015	[NASA-CASE-GSC-10186]	c 08	N71-33110
[NASA-CASE-XGS-05291]	c 23	N71-16341	Complementary regenerative switch Patent			Combustion products generating and metering device		
Angular position and velocity sensing apparatus Patent			[NASA-CASE-XGS-02751]	c 09	N71-23015	[NASA-CASE-GSC-11095-1]	c 14	N72-10375
[NASA-CASE-XGS-05680]	c 14	N71-17585	Solid state pulse generator with constant output width, for variable input width, in nanosecond range Patent			Analog spatial maneuver computer		
Apparatus for controlling the velocity of an electromechanical drive for interferometers and the like Patent			[NASA-CASE-XGS-03427]	c 10	N71-23029	[NASA-CASE-GSC-10880-1]	c 08	N72-11172
[NASA-CASE-XGS-03532]	c 14	N71-17627	Sidereal frequency generator Patent			Helical recorder arrangement for multiple channel recording on both sides of the tape		
Omni-directional anisotropic molecular trap Patent			[NASA-CASE-XGS-02610]	c 14	N71-23174	[NASA-CASE-GSC-10614-1]	c 09	N72-11224
[NASA-CASE-XGS-00783]	c 30	N71-17788	Solar cell and circuit array and process for nullifying magnetic fields Patent			Method and apparatus for eliminating coherent noise in a coherent energy imaging system without destroying spatial coherence		
Method of making tubes Patent			[NASA-CASE-XGS-03390]	c 03	N71-23187	[NASA-CASE-GSC-11133-1]	c 23	N72-11568
[NASA-CASE-XGS-04175]	c 15	N71-18579	Passive synchronized spike generator with high input impedance and low output impedance and capacitor power supply Patent			Position location system and method		
Pulse-type magnetic core memory element circuit with blocking oscillator feedback Patent			[NASA-CASE-XGS-03632]	c 09	N71-23311	[NASA-CASE-GSC-10087-3]	c 07	N72-12080
[NASA-CASE-XGS-03303]	c 08	N71-18595	Sealed electrochemical cell provided with a flexible casing Patent			Facsimile video remodulation network		
Ripple add and ripple subtract binary counters Patent			[NASA-CASE-XGS-01513]	c 03	N71-23336	[NASA-CASE-GSC-10185-1]	c 07	N72-12081
[NASA-CASE-XGS-04766]	c 08	N71-18602	Digitally controlled frequency synthesizer Patent			Frangible electrochemical cell		
Computing apparatus Patent			[NASA-CASE-XGS-02317]	c 09	N71-23525	[NASA-CASE-XGS-10010]	c 03	N72-15986
[NASA-CASE-XGS-04765]	c 08	N71-18693	Radio frequency coaxial high pass filter Patent			Caterpillar micro positioner		
Stepping motor control circuit Patent			[NASA-CASE-XGS-01418]	c 09	N71-23573	[NASA-CASE-GSC-10780-1]	c 14	N72-16283
[NASA-CASE-GSC-10366-1]	c 10	N71-18772	Apparatus for phase stability determination Patent			Minimech self-deploying boom mechanism		
Traffic control system and method Patent			[NASA-CASE-XGS-01118]	c 10	N71-23662	[NASA-CASE-GSC-10566-1]	c 15	N72-18477
[NASA-CASE-GSC-10087-1]	c 02	N71-19287	Tape recorder Patent			Heated porous pulp microthrustor		
Apparatus for measuring current flow Patent			[NASA-CASE-XGS-08259]	c 14	N71-23698	[NASA-CASE-GSC-10640-1]	c 28	N72-18766
[NASA-CASE-XGS-02439]	c 14	N71-19431	Balance torquemeter Patent			Optimum performance spacecraft solar cell system		
Synchronous counter Patent			[NASA-CASE-XGS-01013]	c 14	N71-23725	[NASA-CASE-GSC-10669-1]	c 03	N72-20031
[NASA-CASE-XGS-02440]	c 08	N71-19432	Mechanical actuator Patent			Monostable multivibrator		
Wide range data compression system Patent			[NASA-CASE-XGS-04548]	c 15	N71-24045	[NASA-CASE-GSC-10082-1]	c 10	N72-20221
[NASA-CASE-XGS-02612]	c 08	N71-19435	Selective plating of etched circuits without removing previous plating Patent			Roll alignment detector		
Apparatus for computing square roots Patent			[NASA-CASE-XGS-03120]	c 15	N71-24047	[NASA-CASE-GSC-10514-1]	c 14	N72-20379
[NASA-CASE-XGS-04768]	c 08	N71-19437	Alkali metal silicate protective coating Patent			Cosmic dust sensor		
Method and apparatus for battery charge control Patent			[NASA-CASE-XGS-04799]	c 18	N71-24183	[NASA-CASE-GSC-10503-1]	c 14	N72-20381
[NASA-CASE-XGS-05432]	c 03	N71-19438	Strain gauge measuring techniques Patent			Solenoid valve including guide for armature and valve member		
Stable amplifier having a stable quiescent point Patent			[NASA-CASE-XGS-04478]	c 14	N71-24233	[NASA-CASE-GSC-10607-1]	c 15	N72-20442
[NASA-CASE-XGS-02812]	c 09	N71-19466	Electromagnetic polarization systems and methods Patent			Fast response low power drain logic circuits		
Tracking antenna system Patent			[NASA-CASE-GSC-10021-1]	c 09	N71-24595	[NASA-CASE-GSC-10878-1]	c 10	N72-22236
[NASA-CASE-GSC-10553-1]	c 07	N71-19854	Redundant actuating mechanism Patent			Trap for preventing diffusion pump backstreaming		
Electrochemical coulometer and method of forming same Patent			[NASA-CASE-XGS-08718]	c 15	N71-24600	[NASA-CASE-GSC-10518-1]	c 15	N72-22489
[NASA-CASE-XGS-05434]	c 03	N71-20491	Satellite communication system and method Patent			Resistance soldering apparatus		
Display for binary characters Patent			[NASA-CASE-GSC-10118-1]	c 07	N71-24621	[NASA-CASE-GSC-10913]	c 15	N72-22491
[NASA-CASE-XGS-04987]	c 08	N71-20571	Programmable telemetry system Patent			Optical system support apparatus		
Amplifier clamping circuit for horizon scanner Patent			[NASA-CASE-GSC-10131-1]	c 07	N71-24624	[NASA-CASE-XER-07896-2]	c 23	N72-22673
[NASA-CASE-XGS-01784]	c 10	N71-20782	Coulometer and third electrode battery charging circuit Patent			SCR lamp driver		
Diversity receiving system with diversity phase lock Patent			[NASA-CASE-GSC-10487-1]	c 03	N71-24719	[NASA-CASE-GSC-10221-1]	c 09	N72-23171
[NASA-CASE-XGS-01222]	c 10	N71-20841	Electronic scanning of 2-channel monopulse patterns Patent			Potassium silicate zinc coatings		
Signal detection and tracking apparatus Patent			[NASA-CASE-GSC-10299-1]	c 09	N71-24804	[NASA-CASE-GSC-10361-1]	c 18	N72-23581
[NASA-CASE-XGS-03502]	c 10	N71-20852	Annular slit colloid thruster Patent			Synchronous orbit battery cyclor		
Polarization diversity monopulse tracking receiver Patent			[NASA-CASE-GSC-10709-1]	c 28	N71-25213	[NASA-CASE-GSC-11211-1]	c 03	N72-25020
[NASA-CASE-XGS-03501]	c 09	N71-20864	Voltage to frequency converter Patent			Flavin coenzyme assay		
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10022-1]	c 10	N71-25882	[NASA-CASE-GSC-10565-1]	c 06	N72-25149
[NASA-CASE-XGS-03501]	c 09	N71-20864	Annular slit colloid thruster Patent			Location identification system		
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10709-1]	c 28	N71-25213	[NASA-CASE-ERC-10324]	c 07	N72-25173
[NASA-CASE-XGS-03501]	c 09	N71-20864	Voltage to frequency converter Patent			A dc to ac to dc converter having transistor synchronous rectifiers		
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10022-1]	c 10	N71-25882	[NASA-CASE-GSC-11126-1]	c 09	N72-25253
[NASA-CASE-XGS-03501]	c 09	N71-20864	Annular slit colloid thruster Patent			Tungsten contacts on silicon substrates		
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10709-1]	c 28	N71-25213	[NASA-CASE-GSC-10695-1]	c 09	N72-25255
[NASA-CASE-XGS-03501]	c 09	N71-20864	Voltage to frequency converter Patent			[NASA-CASE-GSC-10695-1]	c 09	N72-25255
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10022-1]	c 10	N71-25882	[NASA-CASE-GSC-10695-1]	c 09	N72-25255
[NASA-CASE-XGS-03501]	c 09	N71-20864	Annular slit colloid thruster Patent			[NASA-CASE-GSC-10695-1]	c 09	N72-25255
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10709-1]	c 28	N71-25213	[NASA-CASE-GSC-10695-1]	c 09	N72-25255
[NASA-CASE-XGS-03501]	c 09	N71-20864	Voltage to frequency converter Patent			[NASA-CASE-GSC-10695-1]	c 09	N72-25255
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10022-1]	c 10	N71-25882	[NASA-CASE-GSC-10695-1]	c 09	N72-25255
[NASA-CASE-XGS-03501]	c 09	N71-20864	Annular slit colloid thruster Patent			[NASA-CASE-GSC-10695-1]	c 09	N72-25255
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10709-1]	c 28	N71-25213	[NASA-CASE-GSC-10695-1]	c 09	N72-25255
[NASA-CASE-XGS-03501]	c 09	N71-20864	Voltage to frequency converter Patent			[NASA-CASE-GSC-10695-1]	c 09	N72-25255
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10022-1]	c 10	N71-25882	[NASA-CASE-GSC-10695-1]	c 09	N72-25255
[NASA-CASE-XGS-03501]	c 09	N71-20864	Annular slit colloid thruster Patent			[NASA-CASE-GSC-10695-1]	c 09	N72-25255
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10709-1]	c 28	N71-25213	[NASA-CASE-GSC-10695-1]	c 09	N72-25255
[NASA-CASE-XGS-03501]	c 09	N71-20864	Voltage to frequency converter Patent			[NASA-CASE-GSC-10695-1]	c 09	N72-25255
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10022-1]	c 10	N71-25882	[NASA-CASE-GSC-10695-1]	c 09	N72-25255
[NASA-CASE-XGS-03501]	c 09	N71-20864	Annular slit colloid thruster Patent			[NASA-CASE-GSC-10695-1]	c 09	N72-25255
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10709-1]	c 28	N71-25213	[NASA-CASE-GSC-10695-1]	c 09	N72-25255
[NASA-CASE-XGS-03501]	c 09	N71-20864	Voltage to frequency converter Patent			[NASA-CASE-GSC-10695-1]	c 09	N72-25255
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10022-1]	c 10	N71-25882	[NASA-CASE-GSC-10695-1]	c 09	N72-25255
[NASA-CASE-XGS-03501]	c 09	N71-20864	Annular slit colloid thruster Patent			[NASA-CASE-GSC-10695-1]	c 09	N72-25255
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10709-1]	c 28	N71-25213	[NASA-CASE-GSC-10695-1]	c 09	N72-25255
[NASA-CASE-XGS-03501]	c 09	N71-20864	Voltage to frequency converter Patent			[NASA-CASE-GSC-10695-1]	c 09	N72-25255
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10022-1]	c 10	N71-25882	[NASA-CASE-GSC-10695-1]	c 09	N72-25255
[NASA-CASE-XGS-03501]	c 09	N71-20864	Annular slit colloid thruster Patent			[NASA-CASE-GSC-10695-1]	c 09	N72-25255
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10709-1]	c 28	N71-25213	[NASA-CASE-GSC-10695-1]	c 09	N72-25255
[NASA-CASE-XGS-03501]	c 09	N71-20864	Voltage to frequency converter Patent			[NASA-CASE-GSC-10695-1]	c 09	N72-25255
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10022-1]	c 10	N71-25882	[NASA-CASE-GSC-10695-1]	c 09	N72-25255
[NASA-CASE-XGS-03501]	c 09	N71-20864	Annular slit colloid thruster Patent			[NASA-CASE-GSC-10695-1]	c 09	N72-25255
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10709-1]	c 28	N71-25213	[NASA-CASE-GSC-10695-1]	c 09	N72-25255
[NASA-CASE-XGS-03501]	c 09	N71-20864	Voltage to frequency converter Patent			[NASA-CASE-GSC-10695-1]	c 09	N72-25255
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10022-1]	c 10	N71-25882	[NASA-CASE-GSC-10695-1]	c 09	N72-25255
[NASA-CASE-XGS-03501]	c 09	N71-20864	Annular slit colloid thruster Patent			[NASA-CASE-GSC-10695-1]	c 09	N72-25255
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10709-1]	c 28	N71-25213	[NASA-CASE-GSC-10695-1]	c 09	N72-25255
[NASA-CASE-XGS-03501]	c 09	N71-20864	Voltage to frequency converter Patent			[NASA-CASE-GSC-10695-1]	c 09	N72-25255
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10022-1]	c 10	N71-25882	[NASA-CASE-GSC-10695-1]	c 09	N72-25255
[NASA-CASE-XGS-03501]	c 09	N71-20864	Annular slit colloid thruster Patent			[NASA-CASE-GSC-10695-1]	c 09	N72-25255
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10709-1]	c 28	N71-25213	[NASA-CASE-GSC-10695-1]	c 09	N72-25255
[NASA-CASE-XGS-03501]	c 09	N71-20864	Voltage to frequency converter Patent			[NASA-CASE-GSC-10695-1]	c 09	N72-25255
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10022-1]	c 10	N71-25882	[NASA-CASE-GSC-10695-1]	c 09	N72-25255
[NASA-CASE-XGS-03501]	c 09	N71-20864	Annular slit colloid thruster Patent			[NASA-CASE-GSC-10695-1]	c 09	N72-25255
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10709-1]	c 28	N71-25213	[NASA-CASE-GSC-10695-1]	c 09	N72-25255
[NASA-CASE-XGS-03501]	c 09	N71-20864	Voltage to frequency converter Patent			[NASA-CASE-GSC-10695-1]	c 09	N72-25255
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10022-1]	c 10	N71-25882	[NASA-CASE-GSC-10695-1]	c 09	N72-25255
[NASA-CASE-XGS-03501]	c 09	N71-20864	Annular slit colloid thruster Patent			[NASA-CASE-GSC-10695-1]	c 09	N72-25255
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10709-1]	c 28	N71-25213	[NASA-CASE-GSC-10695-1]	c 09	N72-25255
[NASA-CASE-XGS-03501]	c 09	N71-20864	Voltage to frequency converter Patent			[NASA-CASE-GSC-10695-1]	c 09	N72-25255
Annular slit colloid thruster Patent			[NASA-CASE-GSC-10022-1]	c 10	N71-25882	[NASA-CASE-GSC-10695-1]	c 09	N72-25255
[NASA-CASE-XGS-03501]	c 09	N71-20864	Ann					

Bacterial contamination monitor [NASA-CASE-GSC-10879-1]	c 14	N72-25413	Turnstile slot antenna [NASA-CASE-GSC-11428-1]	c 32	N74-20864	Fabrication of polycrystalline solar cells on low-cost substrates [NASA-CASE-GSC-12022-1]	c 44	N76-28635
Honeycomb panels formed of minimal surface periodic tubule layers [NASA-CASE-ERC-10364]	c 18	N72-25540	Method and apparatus for checking fire detectors [NASA-CASE-GSC-11600-1]	c 35	N74-21019	Method of detecting and counting bacteria [NASA-CASE-GSC-11917-2]	c 51	N76-29891
Honeycomb core structures of minimal surface tubule sections [NASA-CASE-ERC-10363]	c 18	N72-25541	Long range laser traversing system [NASA-CASE-GSC-11262-1]	c 36	N74-21091	Polarization compensator for optical communications [NASA-CASE-GSC-11782-1]	c 74	N76-30053
Gunn-type solid state devices [NASA-CASE-XER-07895]	c 26	N72-25679	Method and apparatus for optically monitoring the angular position of a rotating mirror [NASA-CASE-GSC-11353-1]	c 74	N74-21304	Static coefficient test method and apparatus [NASA-CASE-GSC-11893-1]	c 35	N76-31489
Use of unilluminated solar cells as shunt diodes for a solar array [NASA-CASE-GSC-10344-1]	c 03	N72-27053	Image tube [NASA-CASE-GSC-11602-1]	c 33	N74-21850	Digital plus analog output encoder [NASA-CASE-GSC-12115-1]	c 62	N76-31946
Active tuned circuit [NASA-CASE-GSC-11340-1]	c 10	N72-33230	Apparatus for controlling the temperature of balloon-borne equipment [NASA-CASE-GSC-11620-1]	c 34	N74-23039	Method and apparatus for neutralizing potentials induced on spacecraft surfaces [NASA-CASE-GSC-11963-1]	c 33	N77-10429
Electric motive machine including magnetic bearing [NASA-CASE-XGS-07805]	c 15	N72-33476	Coaxial anode wire for gas radiation counters [NASA-CASE-GSC-11492-1]	c 35	N74-26949	Inrush current limiter [NASA-CASE-GSC-11789-1]	c 33	N77-14333
Cosmic dust or other similar outer space particles impact location detector [NASA-CASE-GSC-11291-1]	c 25	N72-33696	Arterial pulse wave pressure transducer [NASA-CASE-GSC-11531-1]	c 52	N74-27566	Linear phase demodulator including a phase locked loop with auxiliary feedback loop [NASA-CASE-GSC-12018-1]	c 33	N77-14334
Method and apparatus for determining the contents of contained gas samples [NASA-CASE-GSC-10903-1]	c 14	N73-12444	Heat flow calorimeter [NASA-CASE-GSC-11434-1]	c 34	N74-27859	Reel safety brake [NASA-CASE-GSC-11960-1]	c 37	N77-14479
System for stabilizing torque between a balloon and gondola [NASA-CASE-GSC-11077-1]	c 02	N73-13008	Air conditioning system and component therefore distributing air flow from opposite directions [NASA-CASE-GSC-11445-1]	c 31	N74-27902	Two-dimensional radiant energy array computers and computing devices [NASA-CASE-GSC-11839-1]	c 60	N77-14751
Diffuse reflective coating [NASA-CASE-GSC-11214-1]	c 06	N73-13128	Passive dual spin misalignment compensators [NASA-CASE-GSC-11479-1]	c 35	N74-28097	Magnetic bearing system [NASA-CASE-GSC-11978-1]	c 37	N77-17464
Data processor with conditionally supplied clock signals [NASA-CASE-GSC-10975-1]	c 08	N73-13187	Star scanner [NASA-CASE-GSC-11569-1]	c 89	N74-30886	Method and apparatus for measuring web material wound on a reel [NASA-CASE-GSC-11902-1]	c 38	N77-17495
Apparatus for vibrational testing of articles [NASA-CASE-GSC-11302-1]	c 14	N73-13416	Millimeter wave pumped parametric amplifier [NASA-CASE-GSC-11617-1]	c 33	N74-32660	Cyclical bi-directional rotary actuator [NASA-CASE-GSC-11883-1]	c 37	N77-19458
Method and system for ejecting fairing sections from a rocket vehicle [NASA-CASE-GSC-10590-1]	c 31	N73-14853	Structural heat pipe [NASA-CASE-GSC-11619-1]	c 34	N75-12222	The 2 deg/90 deg laboratory scattering photometer [NASA-CASE-GSC-12088-1]	c 74	N78-13874
Plural beam antenna [NASA-CASE-GSC-11013-1]	c 09	N73-19234	Remote platform power conserving system [NASA-CASE-GSC-1182-1]	c 15	N75-13007	Transformer regulated self-stabilizing chopper [NASA-CASE-XGS-09186]	c 33	N78-17295
Star tracking reticles and process for the production thereof [NASA-CASE-GSC-11188-2]	c 21	N73-19630	Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide [NASA-CASE-GSC-11577-1]	c 37	N75-15992	Shunt regulation electric power system [NASA-CASE-GSC-10135]	c 33	N78-17296
Delayed simultaneous release mechanism [NASA-CASE-GSC-10814-1]	c 03	N73-20039	Magnetic bearing [NASA-CASE-GSC-11079-1]	c 37	N75-18574	Binary to binary coded decimal converter [NASA-CASE-GSC-12044-1]	c 60	N78-17691
Doppler compensation by shifting transmitted object frequency within limits [NASA-CASE-GSC-10087-4]	c 07	N73-20174	Dish antenna having switchable beamwidth [NASA-CASE-GSC-11760-1]	c 33	N75-19516	Magnifying image intensifier [NASA-CASE-GSC-12010-1]	c 74	N78-18905
Signal-to-noise ratio determination circuit [NASA-CASE-GSC-11239-1]	c 10	N73-25241	X-Y alphanumeric character generator for oscilloscopes [NASA-CASE-GSC-11582-1]	c 33	N75-19517	Energy storage apparatus [NASA-CASE-GSC-12030-1]	c 44	N78-24608
Nutation damper [NASA-CASE-GSC-11205-1]	c 15	N73-25513	Controllable high voltage source having fast settling time [NASA-CASE-GSC-11844-1]	c 33	N75-19522	Process for utilizing low-cost graphite substrates for polycrystalline solar cells [NASA-CASE-GSC-12022-2]	c 44	N78-24609
Low outgassing polydimethylsiloxane material and preparation thereof [NASA-CASE-GSC-11358-1]	c 06	N73-26100	Dually mode-locked Nd:YAG laser [NASA-CASE-GSC-11746-1]	c 36	N75-19654	Actuator mechanism [NASA-CASE-GSC-11883-2]	c 37	N78-31426
Method of detecting and counting bacteria in body fluids [NASA-CASE-GSC-11092-2]	c 04	N73-27052	Self-regulating proportionally controlled heating apparatus and technique [NASA-CASE-GSC-11752-1]	c 77	N75-20140	Quadrature demodulation [NASA-CASE-GSC-12137-1]	c 33	N78-32338
Protein sterilization method of firefly luciferase using reduced pressure and molecular sieves [NASA-CASE-GSC-10225-1]	c 06	N73-27086	Low speed phaselock speed control system [NASA-CASE-GSC-11127-1]	c 09	N75-24758	Logarithmic circuit with wide dynamic range [NASA-CASE-GSC-12145-1]	c 33	N78-32339
Process for making RF shielded cable connector assemblies and the products formed thereby [NASA-CASE-GSC-11215-1]	c 09	N73-28083	Modulator for tone and binary signals [NASA-CASE-GSC-11743-1]	c 32	N75-24981	Wide power range microwave feedback controller [NASA-CASE-GSC-12146-1]	c 33	N78-32340
Device for determining relative angular position between a spacecraft and a radiation emitting celestial body [NASA-CASE-GSC-11444-1]	c 14	N73-28490	Digital phase-locked loop [NASA-CASE-GSC-11623-1]	c 33	N75-25040	Method and apparatus for splitting a beam of energy [NASA-CASE-GSC-12083-1]	c 73	N78-32848
Fastener stretcher [NASA-CASE-GSC-11149-1]	c 15	N73-30457	Radiation hardening of MOS devices by boron [NASA-CASE-GSC-11425-2]	c 76	N75-25730	Time domain phase measuring apparatus [NASA-CASE-GSC-12228-1]	c 33	N79-10338
Spacecraft attitude sensor [NASA-CASE-GSC-10890-1]	c 21	N73-30640	Correlation type phase detector [NASA-CASE-GSC-11744-1]	c 33	N75-26243	System for and method of freezing biological tissue [NASA-CASE-GSC-12173-1]	c 51	N79-10694
Automatic instrument for chemical processing to detect microorganism in biological samples by measuring light reactions [NASA-CASE-GSC-11169-2]	c 05	N73-32011	Process for making sheets with parallel pores of uniform size [NASA-CASE-GSC-10984-1]	c 37	N75-26371	Systems and methods for determining radio frequency interference [NASA-CASE-GSC-12150-1]	c 32	N79-11265
Star tracking reticles [NASA-CASE-GSC-11188-1]	c 14	N73-32320	Impact position detector for outer space particles [NASA-CASE-GSC-11829-1]	c 35	N75-27331	Complementary DMOS-VMOS integrated circuit structure [NASA-CASE-GSC-12190-1]	c 33	N79-12321
Peen plating [NASA-CASE-GSC-11163-1]	c 15	N73-32360	Single frequency, two feed dish antenna having switchable beamwidth [NASA-CASE-GSC-11968-1]	c 32	N76-15329	Electrically conductive thermal control coatings [NASA-CASE-GSC-12207-1]	c 24	N79-14156
Recorder/processor apparatus [NASA-CASE-GSC-11553-1]	c 35	N74-15831	Micrometeoroid velocity and trajectory analyzer [NASA-CASE-GSC-11892-1]	c 35	N76-15433	External bulb variable volume maser [NASA-CASE-GSC-12334-1]	c 36	N79-14362
Method of making porous conductive supports for electrodes [NASA-CASE-GSC-11367-1]	c 44	N74-19692	Atomic standard with variable storage volume [NASA-CASE-GSC-11895-1]	c 35	N76-15436	Determination of antimicrobial susceptibilities on infected urines without isolation [NASA-CASE-GSC-12046-1]	c 52	N79-14750
Formation of star tracking reticles [NASA-CASE-GSC-11188-3]	c 74	N74-20008	High voltage distributor [NASA-CASE-GSC-11849-1]	c 33	N76-16332	Partial polarizer filter [NASA-CASE-GSC-12225-1]	c 74	N79-14891
Radiation hardening of MOS devices by boron [NASA-CASE-GSC-11425-1]	c 76	N74-20329	Moving particle composition analyzer [NASA-CASE-GSC-11889-1]	c 35	N76-16393	Thermal compensator for closed-cycle helium refrigerator [NASA-CASE-GSC-12168-1]	c 31	N79-17029
Amplitude steered array [NASA-CASE-GSC-11446-1]	c 33	N74-20860	Variable beamwidth antenna [NASA-CASE-GSC-11862-1]	c 32	N76-18295	Solar cell module assembly jig [NASA-CASE-XGS-00829-1]	c 44	N79-19447
Rotary solenoid shutter drive assembly and rotary inertia damper and stop plate assembly [NASA-CASE-GSC-11560-1]	c 33	N74-20861	Automatic character skew and spacing checking network [NASA-CASE-GSC-11925-1]	c 33	N76-18353	System for synchronizing synthesizers of communication systems [NASA-CASE-GSC-12148-1]	c 32	N79-20296
Ultra-stable oscillator with complementary transistors [NASA-CASE-GSC-11513-1]	c 33	N74-20862	Axially and radially controllable magnetic bearing [NASA-CASE-GSC-11551-1]	c 37	N76-18459	Rotary electric device [NASA-CASE-GSC-12138-1]	c 33	N79-20314
High efficiency multifrequency feed [NASA-CASE-GSC-11909]	c 32	N74-20863	Apparatus for simulating optical transmission links [NASA-CASE-GSC-11877-1]	c 74	N76-18913	Low intensity X-ray and gamma-ray imaging device [NASA-CASE-GSC-12263-1]	c 74	N79-20857
			Telemetry synchronizer [NASA-CASE-GSC-11868-1]	c 17	N76-22245	Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide [NASA-CASE-GSC-11577-3]	c 24	N79-25143
			Locking mechanism for orthopedic braces [NASA-CASE-GSC-12082-1]	c 54	N76-22914	Microwave dichroic plate [NASA-CASE-GSC-12171-1]	c 33	N79-28416
			Ultraviolet light reflective coating [NASA-CASE-GSC-11786-1]	c 24	N76-24363	Shock isolator for operating a diode laser on a closed-cycle refrigerator [NASA-CASE-GSC-12297-1]	c 37	N79-28549
			Switchable beamwidth monopulse method and system [NASA-CASE-GSC-11924-1]	c 33	N76-27472			



Toggel mechanism for pinching metal tubes			Inorganic spark chamber frame and method of making the same			Apparatus for disintegrating kidney stones		
[NASA-CASE-GSC-12274-1]	c 37	N79-28550	[NASA-CASE-GSC-12354-1]	c 35	N82-24471	[NASA-CASE-GSC-12652-1]	c 52	N84-34913
Alkali-metal silicate binders and methods of manufacture			Process of treating cellulosic membrane and alkaline with membrane separator			Portable pallet weighing apparatus		
[NASA-CASE-GSC-12303-1]	c 24	N79-31347	[NASA-CASE-GSC-10019-1]	c 44	N82-24641	[NASA-CASE-GSC-12789-1]	c 35	N85-20294
Thermal control canister			Separator for alkaline batteries and method of making same			Linear magnetic bearings		
[NASA-CASE-GSC-12253-1]	c 34	N79-31523	[NASA-CASE-GSC-10350-1]	c 44	N82-24642	[NASA-CASE-GSC-12582-2]	c 37	N85-20337
Wedge immersed thermistor bolometers			Separator for alkaline electric cells and method of making			Method and apparatus for mapping the distribution of chemical elements in an extended medium		
[NASA-CASE-XGS-01245-1]	c 35	N79-33449	[NASA-CASE-GSC-10017-1]	c 44	N82-24643	[NASA-CASE-GSC-12808-1]	c 25	N85-21279
Bakeable McLeod gauge			Separator for alkaline electric batteries and method of making			Magnetically actuated compressor		
[NASA-CASE-XGS-01293-1]	c 35	N79-33450	[NASA-CASE-GSC-10018-1]	c 44	N82-24644	[NASA-CASE-GSC-12799-1]	c 31	N85-21404
Fluid pressure balanced seal			Alkaline electrochemical cells and method of making			Method of and apparatus for measuring temperature and pressure		
[NASA-CASE-XGS-01286-1]	c 37	N79-33469	[NASA-CASE-GSC-10349-1]	c 44	N82-24645	[NASA-CASE-GSC-12558-1]	c 36	N85-21639
Antenna deployment mechanism for use with a spacecraft			Aqueous alkali metal hydroxide insoluble cellulose ether membrane			Diffusely reflecting paints including polytetrafluoroethylene and method of manufacture		
[NASA-CASE-GSC-12331-1]	c 18	N80-14183	[NASA-CASE-XGS-05584-1]	c 25	N82-29370	[NASA-CASE-GSC-12883-1]	c 27	N85-29044
Laser apparatus			Implantable electrical device			Reactanceless synthesized impedance bandpass amplifier		
[NASA-CASE-GSC-12237-1]	c 36	N80-14384	[NASA-CASE-GSC-12560-1]	c 52	N82-29863	[NASA-CASE-GSC-12788-1]	c 33	N85-29145
Coupling device for moving vehicles			Low intensity X-ray and gamma-ray spectrometer			High voltage isolation transformer		
[NASA-CASE-GSC-12322-1]	c 37	N80-14398	[NASA-CASE-GSC-12587-1]	c 35	N82-32659	[NASA-CASE-GSC-12817-1]	c 33	N85-29146
Voltage feed through apparatus having reduced partial discharge			Crystal cleaving machine			High voltage power supply		
[NASA-CASE-GSC-12347-1]	c 33	N80-18286	[NASA-CASE-GSC-12584-1]	c 37	N82-32730	[NASA-CASE-GSC-12818-1]	c 33	N85-29147
Distributed-switch Dicke radiometers			Multiplex collimator			Three-dimensional and tomographic imaging device for X-ray and gamma-ray emitting objects		
[NASA-CASE-GSC-12219-1]	c 35	N80-18359	[NASA-CASE-GSC-12608-1]	c 74	N83-10900	[NASA-CASE-GSC-12851-1]	c 35	N85-30281
Method and apparatus for slicing crystals			Massively parallel processor computer			JFET reflection oscillator		
[NASA-CASE-GSC-12291-1]	c 76	N80-18951	[NASA-CASE-GSC-12223-1]	c 60	N83-25378	[NASA-CASE-GSC-12555-1]	c 33	N86-19515
Diffraction grating configuration for X-ray and ultraviolet focusing			Variable speed drive			Temperature averaging thermal probe		
[NASA-CASE-GSC-12357-1]	c 74	N80-21140	[NASA-CASE-GSC-12643-1]	c 37	N83-26078	[NASA-CASE-GSC-12795-1]	c 35	N86-19580
Active nutation control			Method for milling and drilling glass			Cutting head for ultrasonic lithotripsy		
[NASA-CASE-GSC-12273-1]	c 35	N80-21719	[NASA-CASE-GSC-12636-1]	c 31	N83-27058	[NASA-CASE-GSC-12944-1]	c 52	N86-19885
Method and apparatus for holding two separate metal pieces together for welding			Rapid, quantitative determination of bacteria in water			GaAs Schottky barrier photo-responsive device and method of fabrication		
[NASA-CASE-GSC-12318-1]	c 37	N80-23655	[NASA-CASE-GSC-12158-1]	c 51	N83-27569	[NASA-CASE-GSC-12816-1]	c 76	N86-20150
Method of forming a sharp edge on an optical device			Method of damping nutation motion with minimum spin axis attitude disturbance			Automatic oscillator frequency control system		
[NASA-CASE-GSC-12348-1]	c 74	N80-24149	[NASA-CASE-GSC-12551-1]	c 18	N83-28064	[NASA-CASE-GSC-12804-1]	c 33	N86-20668
Scannable beam forming interferometer antenna array system			Automatic thermal switch			Rotatable electric cable connecting system		
[NASA-CASE-GSC-12365-1]	c 32	N80-28578	[NASA-CASE-GSC-12553-1]	c 34	N83-28256	[NASA-CASE-GSC-12899-1]	c 33	N86-20669
Apparatus for supplying conditioned air at a substantially constant temperature and humidity			Cooling by conversion of para to ortho-hydrogen			Optical multiple sample vacuum integrating sphere		
[NASA-CASE-GSC-12191-1]	c 31	N80-32583	[NASA-CASE-GSC-12770-1]	c 25	N83-29324	[NASA-CASE-GSC-12849-1]	c 74	N86-26190
Belt for transmitting power from a cogged driving member to a cogged driven member			Geodetic distance measuring apparatus			Wide-angle flat field telescope		
[NASA-CASE-GSC-12289-1]	c 37	N80-32717	[NASA-CASE-GSC-12609-2]	c 36	N83-29681	[NASA-CASE-GSC-12825-1]	c 74	N86-28732
System for a displaying at a remote station data generated at a central station and for powering the remote station from the central station			Linear magnetic bearing			Multispectral linear array multiband selection device		
[NASA-CASE-GSC-12411-1]	c 33	N81-14221	[NASA-CASE-GSC-12517-1]	c 37	N83-32067	[NASA-CASE-GSC-12911-1]	c 74	N86-29650
Device for coupling a first vehicle to a second vehicle			Interferometric angle monitor			Optical distance measuring instrument		
[NASA-CASE-GSC-12429-1]	c 37	N81-14320	[NASA-CASE-GSC-12614-1]	c 74	N83-32577	[NASA-CASE-GSC-12761-1]	c 74	N86-32266
Safety shield for vacuum/pressure chamber viewing port			Method of neutralizing the corrosive surface of amine-cured epoxy resins			Method of coating a substrate with a rapidly solidified metal		
[NASA-CASE-GSC-12513-1]	c 31	N81-19343	[NASA-CASE-GSC-12686-1]	c 27	N83-34039	[NASA-CASE-GSC-12880-1]	c 26	N86-32550
Buck/boost regulator			Active lamp pulse driver circuit			Temperature sensitive oscillator		
[NASA-CASE-GSC-12360-1]	c 33	N81-19392	[NASA-CASE-GSC-12566-1]	c 33	N83-34189	[NASA-CASE-GSC-12958-1]	c 33	N86-32624
Geodetic distance measuring apparatus			High stability amplifier			Method of fabricating an imaging X-ray spectrometer		
[NASA-CASE-GSC-12609-1]	c 36	N81-22344	[NASA-CASE-GSC-12646-1]	c 33	N83-34191	[NASA-CASE-GSC-12956-1]	c 35	N87-14671
Fluorescent radiation converter			Magnetic bearing and motor			Radial and torsionally controlled magnetic bearing		
[NASA-CASE-GSC-12528-1]	c 74	N81-24900	[NASA-CASE-GSC-12726-1]	c 37	N83-34323	[NASA-CASE-GSC-12957-1]	c 37	N87-17038
Portable appliance security apparatus			Heat pipe thermal switch			Low phase noise oscillator using two parallel connected amplifiers		
[NASA-CASE-GSC-12399-1]	c 33	N81-25299	[NASA-CASE-GSC-12812-1]	c 34	N83-35307	[NASA-CASE-GSC-13018-1]	c 33	N87-21232
Locking mechanism for orthopedic braces			Focal axis resolver for offset reflector antennas			Optical scanner		
[NASA-CASE-GSC-12082-2]	c 52	N81-25661	[NASA-CASE-GSC-12630-1]	c 33	N83-36355	[NASA-CASE-GSC-12897-1]	c 74	N87-21679
Method of making V-MOS field effect transistors utilizing a two-step anisotropic etching and ion implantation			High speed multi focal plane optical system			Programmable electronic synthesized capacitance		
[NASA-CASE-GSC-12515-1]	c 33	N81-26360	[NASA-CASE-GSC-12683-1]	c 74	N83-36898	[NASA-CASE-GSC-12961-1]	c 33	N87-22895
Apparatus and method for determining the position of a radiant energy source			Real-time 3-D X-ray and gamma-ray viewer			Reciprocating linear motor		
[NASA-CASE-GSC-12147-1]	c 32	N81-27341	[NASA-CASE-GSC-12640-1]	c 74	N84-11920	[NASA-CASE-GSC-12773-2]	c 33	N87-23904
Interleaving device			Holding fixture for a hot stamping press			Integrated photo-responsive metal oxide semiconductor circuit		
[NASA-CASE-GSC-12111-2]	c 33	N81-29342	[NASA-CASE-GSC-12619-1]	c 37	N84-12491	[NASA-CASE-GSC-12782-1]	c 33	N88-14271
Time delay and integration detectors using charge transfer devices			Unidirectional flexural pivot			Three axis attitude control system		
[NASA-CASE-GSC-12324-1]	c 33	N81-33403	[NASA-CASE-GSC-12622-1]	c 37	N84-12492	[NASA-CASE-GSC-12970-1]	c 08	N88-23808
Scanner			Tuned analog network			Cellular thermosetting fluoropolymers and process for making them		
[NASA-CASE-GSC-12032-2]	c 43	N82-13465	[NASA-CASE-GSC-12650-1]	c 33	N84-14421	[NASA-CASE-GSC-13008-1]	c 27	N88-23894
Microwave switching power divider			Thermal control system			Polymeric heat pipe wick		
[NASA-CASE-GSC-12420-1]	c 33	N82-16340	[NASA-CASE-GSC-12771-1]	c 34	N84-14461	[NASA-CASE-GSC-13019-1]	c 34	N88-29133
Laser measuring system for incremental assemblies			Laser Resonator			Legislated emergency locating transmitters and emergency position indicating radio beacons		
[NASA-CASE-GSC-12321-1]	c 36	N82-16396	[NASA-CASE-GSC-12565-1]	c 36	N84-14509	[NASA-CASE-GSC-12892-1]	c 32	N89-14374
Memory-based frame synchronizer			High stability buffered phase comparator			Surface tension confined liquid cryogen cooler		
[NASA-CASE-GSC-12430-1]	c 60	N82-16747	[NASA-CASE-GSC-12645-1]	c 33	N84-16454	[NASA-CASE-GSC-13112-1]	c 31	N89-29578
Low thrust monopropellant engine			Navigation system and method			Cellular thermosetting fluorodiepoxide polymers		
[NASA-CASE-GSC-12194-2]	c 20	N82-18314	[NASA-CASE-GSC-12508-1]	c 04	N84-22546	[NASA-CASE-GSC-13008-2]	c 27	N90-16949
Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer			Low noise tuned amplifier			Microwave field effect transistor		
[NASA-CASE-GSC-12081-2]	c 52	N82-22875	[NASA-CASE-GSC-12567-1]	c 33	N84-22887	[NASA-CASE-GSC-12442-2]	c 33	N90-20282
Automatic thermal switch			Dual aperture multispectral Schmidt objective			Ceramic heat pipe wick		
[NASA-CASE-GSC-12415-1]	c 33	N82-24419	[NASA-CASE-GSC-12756-1]	c 74	N84-23248	[NASA-CASE-GSC-13199-1]	c 27	N90-23541
Linear magnetic motor/generator			Off-axis coherently pumped laser			Reflection oscillators employing series resonant crystals		
[NASA-CASE-GSC-12518-1]	c 33	N82-24421	[NASA-CASE-GSC-12592-1]	c 36	N84-28065	[NASA-CASE-GSC-13173-1]	c 33	N90-23635
Non-contacting power transfer device			Apparatus for and method of compensating dynamic unbalance			Method of fabricating germanium and gallium arsenide devices		
[NASA-CASE-GSC-12595-1]	c 33	N82-24422	[NASA-CASE-GSC-12550-1]	c 37	N84-28082	[NASA-CASE-GSC-13265-1]	c 76	N91-14066
			Workpiece positioning vise			Digitized synchronous demodulator		
			[NASA-CASE-GSC-12762-1]	c 37	N84-28083	[NASA-CASE-GSC-13237-1]	c 33	N91-14555
			Memory-based parallel data output controller					
			[NASA-CASE-GSC-12447-2]	c 60	N84-28491			
			Imaging X-ray spectrometer					
			[NASA-CASE-GSC-12682-1]	c 35	N84-33765			

Compliant joint			Retractable tool bit having latch type catch mechanism		Combined air and water pollution control system		
[NASA-CASE-GSC-13153-1]	c 37	N91-17387	[NASA-CASE-GSC-13359-1]	c 37	[NASA-CASE-NST-00007-1]	c 45	N91-14662
Robot cable-compliant devices			Doppler shift compensation system for laser transmitters and receivers		Digital data registration and differencing compression system		
[NASA-CASE-GSC-13127-1]	c 37	N91-17388	[NASA-CASE-GSC-13194-1]	c 36	[NASA-CASE-SSC-00010-1]	c 82	N91-23976
Synchronous demodulator			Split rail gripper assembly and tool driver therefor		Gamma ray collimator		
[NASA-CASE-GSC-13179-1]	c 33	N91-26438	[NASA-CASE-GSC-13370-2]	c 37	[NASA-CASE-SSC-00013-1]	c 38	N91-32515
Nano-G research laboratory for a spacecraft			Method and apparatus for determination of material residual stress		Digital data registration and differencing compression system		
[NASA-CASE-GSC-13197-1]	c 18	N91-27201	[NASA-CASE-GSC-13451-1]	c 39	[NASA-CASE-SSC-00010-2]	c 82	N92-23550
Differential current source			Method and apparatus for deflection measurements using eddy current effects		<b>National Aeronautics and Space Administration. John F. Kennedy Space Center, Cocoa Beach, FL</b>		
[NASA-CASE-GSC-13280-1]	c 33	N91-27479	[NASA-CASE-GSC-13506-1]	c 35	Device for determining the accuracy of the flare on a flared tube		
Visual aid for the hearing impaired			Phase discriminating capacitive array sensor system		[NASA-CASE-XKS-03495]	c 14	N69-39785
[NASA-CASE-GSC-13027-1-CU]	c 35	N91-27522	[NASA-CASE-GSC-13460-1]	c 33	Quick attach and release fluid coupling assembly Patent		
Edge technique for measurement of laser frequency shifts including the Doppler shift			Spline screw autochanger		[NASA-CASE-XKS-01985]	c 15	N71-10782
[NASA-CASE-GSC-13343-1]	c 36	N91-28557	[NASA-CASE-GSC-13435-1]	c 37	[NASA-CASE-XKS-01985]	c 15	N71-10782
Emergency locating transmitter			Split rail gripper assembly and tool driver therefor		Parasitic probe antenna Patent		
[NASA-CASE-GSC-12821-2]	c 33	N91-31530	[NASA-CASE-GSC-13370-1]	c 37	[NASA-CASE-XKS-09348]	c 09	N71-13521
Robotic tool change mechanism			<b>National Aeronautics and Space Administration. Hugh L. Dryden Flight Research Center, Edwards, CA.</b>		Electronic checkout system for space vehicles Patent		
[NASA-CASE-GSC-13239-1]	c 37	N91-31656	Fifth wheel		[NASA-CASE-XKS-08012-2]	c 31	N71-15566
Generation of topographic terrain models utilizing synthetic aperture radar and surface level data			[NASA-CASE-FRC-10081-1]	c 37	Apparatus for tensile testing Patent		
[NASA-CASE-GSC-13212-1]	c 43	N91-32546	Window comparator		[NASA-CASE-XKS-06250]	c 14	N71-15600
Control system for ruling blazed, aberration corrected diffraction gratings			[NASA-CASE-FRC-10090-1]	c 33	Weatherproof helix antenna Patent		
[NASA-CASE-GSC-13240-1]	c 35	N92-10186	Wire stripper		[NASA-CASE-XKS-08485]	c 07	N71-19493
Magnetostrictive roller drive motor			[NASA-CASE-FRC-10111-1]	c 37	Valve seat with resilient support member Patent		
[NASA-CASE-GSC-13369-1]	c 33	N92-15331	Free wing assembly for an aircraft		[NASA-CASE-XKS-02582]	c 15	N71-21234
Whiskerless Schottky diode			[NASA-CASE-FRC-10092-1]	c 05	Diode and protection fuse unit Patent		
[NASA-CASE-GSC-13063-2-CU]	c 33	N92-16197	Voltage regulator for battery power source		[NASA-CASE-XKS-03381]	c 09	N71-22796
J-hook latching device			[NASA-CASE-FRC-10116-1]	c 33	Optical monitor panel Patent		
[NASA-CASE-GSC-13200-1]	c 37	N92-21500	Air speed and attitude probe		[NASA-CASE-XKS-03509]	c 14	N71-23175
Roller locking brake			[NASA-CASE-FRC-11009-1]	c 06	Separation simulator Patent		
[NASA-CASE-GSC-13376-1]	c 37	N92-21728	Attaching of strain gages to substrates		[NASA-CASE-XKS-04631]	c 10	N71-23663
High reliability robot friendly ORU interface			[NASA-CASE-FRC-10093-1]	c 35	Controlled release device Patent		
[NASA-CASE-GSC-13360-1]	c 37	N92-23377	Pulse transducer with artifact signal attenuator		[NASA-CASE-XKS-03338]	c 15	N71-24043
Retractable tool bit having latch type catch mechanism			[NASA-CASE-FRC-11012-1]	c 52	Phonocardiogram simulator Patent		
[NASA-CASE-GSC-13359-1]	c 37	N92-23378	Portable device for use in starting air-start-units for aircraft and having cable lead testing capability		[NASA-CASE-XKS-10804]	c 05	N71-24606
Coaxial turnstile junction			[NASA-CASE-FRC-10113-1]	c 33	VHF/UHF parasitic probe antenna Patent		
[NASA-CASE-GSC-13422-1]	c 33	N92-23462	System for use in conducting wake investigation for a wing in flight		[NASA-CASE-XKS-09340]	c 07	N71-24614
Microprocessor control of multiple peak power tracking DC/DC converters for use with solar cell arrays			[NASA-CASE-FRC-11024-1]	c 02	BCD to decimal decoder Patent		
[NASA-CASE-GSC-13450-1]	c 44	N92-23463	Active notch filter network with variable notch depth, width and frequency		[NASA-CASE-XKS-06167]	c 08	N71-24890
Climbing robot			[NASA-CASE-FRC-11055-1]	c 33	Flammability test chamber Patent		
[NASA-CASE-GSC-13442-1]	c 37	N92-23547	Skin friction measuring device for aircraft		[NASA-CASE-KSC-10126]	c 11	N71-24985
Helix translation device			[NASA-CASE-FRC-11029-1]	c 06	Video sync processor Patent		
[NASA-CASE-GSC-13141-1]	c 37	N92-23548	Method for observing the features characterizing the surface of a land mass		[NASA-CASE-KSC-10002]	c 10	N71-25865
Method and apparatus for determination of material residual stress			[NASA-CASE-FRC-11013-1]	c 43	Weld preparation machine Patent		
[NASA-CASE-GSC-13451-1]	c 39	N92-23549	Thermocouple, multiple junction reference oven		[NASA-CASE-XKS-07953]	c 15	N71-26134
Double-V block fingers with cruciform recess			[NASA-CASE-FRC-10112-1]	c 35	Validation device for spacecraft checkout equipment Patent		
[NASA-CASE-GSC-13356-1]	c 37	N92-24243	Electrical servo actuator bracket		[NASA-CASE-XKS-10543]	c 07	N71-26292
Robot serviced space facility			[NASA-CASE-FRC-11044-1]	c 37	Internal work light Patent		
[NASA-CASE-GSC-13408-1]	c 18	N92-24244	System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation		[NASA-CASE-XKS-05932]	c 09	N71-26787
Device for applying constant pressure to a surface			[NASA-CASE-FRC-11005-1]	c 06	Emergency escape system Patent		
[NASA-CASE-GSC-13230-1]	c 37	N92-28754	Multiple pure tone elimination strut assembly		[NASA-CASE-XKS-07814]	c 15	N71-27067
High temperature solder device for flat cables			[NASA-CASE-FRC-11062-1]	c 71	Voltage dropout sensor Patent		
[NASA-CASE-GSC-13344-1]	c 26	N92-29094	Apparatus for damping operator induced oscillations of a controlled system		[NASA-CASE-KSC-10020]	c 10	N71-27338
Superconducting bearings with levitation control configurations			[NASA-CASE-FRC-11041-1]	c 33	Autoignition test cell Patent		
[NASA-CASE-GSC-13346-1]	c 37	N92-29099	Power converter		[NASA-CASE-KSC-10198]	c 11	N71-28629
Coupling device with improved thermal interface			[NASA-CASE-FRC-11014-1]	c 33	Protective suit having an audio transceiver Patent		
[NASA-CASE-GSC-13251-1]	c 37	N92-29120	Sun sensing guidance system for high altitude aircraft		[NASA-CASE-KSC-10164]	c 07	N71-33108
Disk memory device			[NASA-CASE-FRC-11052-1]	c 04	Ripple indicator		
[NASA-CASE-GSC-13196-1]	c 60	N92-29132	Superplastically formed diffusion bonded metallic structure		[NASA-CASE-KSC-10162]	c 09	N72-11225
Laser optical disk position encoder with active heads			[NASA-CASE-FRC-11026-1]	c 24	High speed photo-optical time recording		
[NASA-CASE-GSC-13175-1]	c 74	N92-29133	Smoothing filter for digital to analog conversion		[NASA-CASE-KSC-10294]	c 14	N72-18411
Rolling friction robot fingers			[NASA-CASE-FRC-11025-1]	c 33	High speed direct binary-to-binary coded decimal converter		
[NASA-CASE-GSC-13261-1]	c 37	N92-29138	Computer circuit card puller		[NASA-CASE-KSC-10326]	c 08	N72-21197
Connection space reduction mechanism			[NASA-CASE-FRC-11042-1]	c 60	Automatic frequency control loop including synchronous switching circuits		
[NASA-CASE-GSC-13220-1]	c 37	N92-29140	Annular wing		[NASA-CASE-KSC-10393]	c 09	N72-21247
Cryogenic shutter			[NASA-CASE-FRC-11007-2]	c 05	Zero gravity shadow shield aligner		
[NASA-CASE-GSC-13189-2]	c 37	N92-29151	Low-drag ground vehicle particularly suited for use in safely transporting livestock		[NASA-CASE-KSC-10622-1]	c 31	N72-21893
User friendly joystick			[NASA-CASE-FRC-11058-1]	c 85	Universal environment package with sectional component housing		
[NASA-CASE-GSC-13187-1]	c 33	N92-29153	Aircraft canopy lock		[NASA-CASE-KSC-10031]	c 15	N72-22486
Method for advanced material characterization by laser induced eddy current imaging			[NASA-CASE-FRC-11065-1]	c 05	Buffered analog converter		
[NASA-CASE-GSC-13386-1]	c 38	N92-29154	Adapter for mounting a microphone flush with the external surface of the skin of a pressurized aircraft		[NASA-CASE-KSC-10397]	c 08	N72-25206
Device for removing foreign objects from anatomic organs			[NASA-CASE-FRC-11072-1]	c 05	Lamp modulator		
[NASA-CASE-GSC-13306-1]	c 52	N92-33032	Aircraft body-axis rotation measurement system		[NASA-CASE-KSC-10565]	c 09	N72-25250
Sub-Kelvin resistance thermometer			[NASA-CASE-FRC-11043-1]	c 06	Cable stabilizer for open shaft cable operated elevators		
[NASA-CASE-GSC-13406-1]	c 35	N92-33614	<b>National Aeronautics and Space Administration. John C. Stennis Space Center, Bay Saint Louis, MS.</b>		[NASA-CASE-KSC-10513]	c 15	N72-25453
Page turning system			Predictive sensor method and apparatus		[NASA-CASE-KSC-10644]	c 09	N72-27227
[NASA-CASE-GSC-13415-1]	c 37	N92-33616	[NASA-CASE-SSC-00006-1]	c 35	[NASA-CASE-KSC-10595]	c 08	N73-12176
Flexible robotic arm			Hydraulic lifting device		Geysering inhibitor for vertical cryogenic transfer pipe		
[NASA-CASE-GSC-13161-1]	c 37	N92-33634	[NASA-CASE-SSC-00008-1]	c 37	[NASA-CASE-KSC-10615]	c 15	N73-12486
Driven shielding capacitive proximity sensor			Hybrid butterfly valve		Electronic video editor		
[NASA-CASE-GSC-13377-1]	c 63	N93-14701	[NASA-CASE-SSC-00004-1]	c 37	[NASA-CASE-KSC-10003]	c 10	N73-13235
Compliant walker					Collapsible high gain antenna		
[NASA-CASE-GSC-13348-2]	c 52	N93-14708			[NASA-CASE-KSC-10392]	c 07	N73-26117
Retractable tool bit having slider type catch mechanism							
[NASA-CASE-GSC-13358-1]	c 37	N93-14710					
Double-V block fingers with cruciform recess							
[NASA-CASE-GSC-13356-2]	c 37	N93-17625					

Floating baffle to improve efficiency of liquid transfer from tanks  
[NASA-CASE-KSC-10639] c 15 N73-26472

Zero gravity liquid transfer screen  
[NASA-CASE-KSC-10626] c 14 N73-27378

Television multiplexing system  
[NASA-CASE-KSC-10654-1] c 07 N73-30115

Lightning tracking system  
[NASA-CASE-KSC-10729-1] c 09 N73-32110

Rocket borne instrument to measure electric fields inside electrified clouds  
[NASA-CASE-KSC-10730-1] c 14 N73-32318

Electric field measuring and display system  
[NASA-CASE-KSC-10731-1] c 33 N74-27862

Digital servo controller  
[NASA-CASE-KSC-10769-1] c 33 N74-29556

Signal conditioner test set  
[NASA-CASE-KSC-10750-1] c 35 N75-12270

Variable resistance constant tension and lubrication device  
[NASA-CASE-KSC-10723-1] c 37 N75-13265

Voltage monitoring system  
[NASA-CASE-KSC-10736-1] c 33 N75-19521

Lightning current measuring systems  
[NASA-CASE-KSC-10807-1] c 33 N75-26246

Dual digital video switcher  
[NASA-CASE-KSC-10782-1] c 33 N75-30431

Compact bi-phase pulse coded modulation decoder  
[NASA-CASE-KSC-10834-1] c 33 N76-14371

Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c 52 N77-14738

Magnetic electrical connectors for biomedical percutaneous implants  
[NASA-CASE-KSC-11030-1] c 52 N77-25772

Rotational joint assembly for the prosthetic leg  
[NASA-CASE-KSC-11004-1] c 54 N77-30749

Fiber optic multiplex optical transmission system  
[NASA-CASE-KSC-11047-1] c 74 N78-14889

Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c 35 N78-28411

Ocean thermal plant  
[NASA-CASE-KSC-11034-1] c 44 N78-32542

Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c 33 N79-10337

Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c 33 N79-11315

Illumination control apparatus for compensating solar light  
[NASA-CASE-KSC-11010-1] c 74 N79-12890

Lightning current detector  
[NASA-CASE-KSC-11057-1] c 33 N79-14305

Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c 33 N79-18193

Digital automatic gain amplifier  
[NASA-CASE-KSC-11008-1] c 33 N79-22373

Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c 32 N79-23310

Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c 52 N79-26772

Fire extinguishing apparatus having a slideable mass for a penetrator nozzle  
[NASA-CASE-KSC-11064-1] c 31 N81-14137

System for sterilizing objects  
[NASA-CASE-KSC-11085-1] c 54 N81-24724

Common data buffer system  
[NASA-CASE-KSC-11048-1] c 62 N81-24779

System and method for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-2] c 02 N81-26073

Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c 33 N81-26359

Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c 34 N81-26402

Lightning discharge identification system  
[NASA-CASE-KSC-11099-1] c 47 N82-24779

Method for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-1] c 09 N82-29330

Method for repair of thin glass coatings  
[NASA-CASE-KSC-11097-1] c 27 N82-33520

Serial data correlator/code translator  
[NASA-CASE-KSC-11025-1] c 32 N83-13323

Fiber optic crossbar switch for automatically patching optical signals  
[NASA-CASE-KSC-11104-1] c 74 N83-29032

Automatic level control circuit  
[NASA-CASE-KSC-11170-1] c 33 N83-36356

Inflight IFR procedures simulator  
[NASA-CASE-KSC-11218-1] c 09 N85-19990

Video processor for air traffic control beacon system  
[NASA-CASE-KSC-11155-1] c 04 N86-19304

Method and apparatus for operating on companded PCM voice data  
[NASA-CASE-KSC-11285-1] c 32 N86-27513

Personnel emergency carrier vehicle  
[NASA-CASE-KSC-11282-1] c 85 N87-21755

Quick-disconnect inflatable seal assembly  
[NASA-CASE-KSC-11368-1] c 37 N89-13786

Multi-adjustable headband  
[NASA-CASE-KSC-11322-1] c 54 N89-29953

Vortex motion phase separator for zero gravity liquid transfer  
[NASA-CASE-KSC-11387-1] c 29 N90-20236

Induction-type metal detector with increased scanning area capability  
[NASA-CASE-KSC-11386-1] c 35 N90-22023

Optical shutter switching matrix  
[NASA-CASE-KSC-11392-1] c 74 N90-22383

Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-2] c 28 N91-14495

**National Aeronautics and Space Administration,  
Lyndon B. Johnson Space Center, Houston, TX.**

Coupling device  
[NASA-CASE-XMS-07846-1] c 09 N69-21927

Flow test device  
[NASA-CASE-XMS-04917] c 14 N69-24257

Visual target for retrofire attitude control  
[NASA-CASE-XMS-12158-1] c 31 N69-27499

System for monitoring signal amplitude ranges  
[NASA-CASE-XMS-04061-1] c 09 N69-39885

Amplifier drift tester  
[NASA-CASE-XMS-05562-1] c 09 N69-39986

System for improving signal-to-noise ratio of a communication signal Patent Application  
[NASA-CASE-XMS-12259-1] c 07 N70-12616

Two-step rocket engine bipropellant valve Patent  
[NASA-CASE-XMS-04890-1] c 15 N70-22192

Heat shield Patent  
[NASA-CASE-XMS-00486] c 33 N70-33344

Life raft Patent  
[NASA-CASE-XMS-00863] c 05 N70-34857

Shock absorbing support and restraint means Patent  
[NASA-CASE-XMS-01240] c 05 N70-35152

Energy absorbing structure Patent Application  
[NASA-CASE-XMS-12279-1] c 15 N70-35679

Bonded solid lubricant coating Patent  
[NASA-CASE-XMS-00259] c 18 N70-36400

Life preserver Patent  
[NASA-CASE-XMS-00864] c 05 N70-36493

Resuscitation apparatus Patent  
[NASA-CASE-XMS-01115] c 05 N70-39922

Inflatable radar reflector unit Patent  
[NASA-CASE-XMS-00893] c 07 N70-40063

Measuring device Patent  
[NASA-CASE-XMS-01546] c 14 N70-40233

Liquid-gas separator for zero gravity environment Patent  
[NASA-CASE-XMS-01492] c 05 N70-41297

Instrument for use in performing a controlled Valsalva maneuver Patent  
[NASA-CASE-XMS-01615] c 05 N70-41329

Radial module space station Patent  
[NASA-CASE-XMS-01906] c 31 N70-41373

Hypersonic reentry vehicle Patent  
[NASA-CASE-XMS-04142] c 31 N70-41631

Angular accelerometer Patent  
[NASA-CASE-XMS-05936] c 14 N70-41682

Indexed keyed connection Patent  
[NASA-CASE-XMS-02532] c 15 N70-41808

Discrete local altitude sensing device Patent  
[NASA-CASE-XMS-03792] c 14 N70-41812

Cryogenic storage system Patent  
[NASA-CASE-XMS-04390] c 31 N70-41871

Mass measuring system Patent  
[NASA-CASE-XMS-03371] c 05 N70-42000

Line cutter Patent  
[NASA-CASE-XMS-04072] c 15 N70-42017

Transpirationally cooled heat ablation system Patent  
[NASA-CASE-XMS-02677] c 31 N70-42075

Voltage-current characteristic simulator Patent  
[NASA-CASE-XMS-01554] c 10 N71-10578

Training vehicle for controlling attitude Patent  
[NASA-CASE-XMS-02977] c 11 N71-10746

Gravity stabilized flying vehicle Patent  
[NASA-CASE-XMS-12111-1] c 02 N71-11039

Helmet assembly and latch means therefor Patent  
[NASA-CASE-XMS-04935] c 05 N71-11190

Pressure suit tie-down mechanism Patent  
[NASA-CASE-XMS-00784] c 05 N71-12335

Hand-held self-manuevering unit Patent  
[NASA-CASE-XMS-05304] c 05 N71-12336

Pressure garment joint Patent  
[NASA-CASE-XMS-09636] c 05 N71-12344

Emergency escape system Patent  
[NASA-CASE-XMS-12086-1] c 05 N71-12345

Dynamic Doppler simulator Patent  
[NASA-CASE-XMS-05454-1] c 07 N71-12391

Electrical load protection device Patent  
[NASA-CASE-XMS-12135-1] c 09 N71-12526

High voltage pulse generator Patent  
[NASA-CASE-XMS-12178-1] c 09 N71-13518

Process for conditioning tanned sharkskin and articles made therefrom Patent  
[NASA-CASE-XMS-09691-1] c 18 N71-15545

Ablation structures Patent  
[NASA-CASE-XMS-01816] c 33 N71-15623

Fluid power transmission Patent  
[NASA-CASE-XMS-01445] c 12 N71-16031

Spacecraft radiator cover Patent  
[NASA-CASE-XMS-12049] c 31 N71-16080

Method of improving heat transfer characteristics in a nucleate boiling process Patent  
[NASA-CASE-XMS-04268] c 33 N71-16277

Heated element fluid flow sensor Patent  
[NASA-CASE-XMS-12084-1] c 12 N71-17569

Biological isolation garment Patent  
[NASA-CASE-XMS-12206-1] c 05 N71-17599

Metal valve pintle with encapsulated elastomeric body Patent  
[NASA-CASE-XMS-12116-1] c 15 N71-17648

Method for forming plastic materials Patent  
[NASA-CASE-XMS-05516] c 15 N71-17803

Flexible blade antenna Patent  
[NASA-CASE-XMS-12101] c 09 N71-18720

Space suit heat exchanger Patent  
[NASA-CASE-XMS-09571] c 05 N71-19439

Light intensity modulator controller Patent  
[NASA-CASE-XMS-04300] c 09 N71-19479

Solar optical telescope dome control system Patent  
[NASA-CASE-XMS-10966] c 14 N71-19568

Subgravity simulator Patent  
[NASA-CASE-XMS-04798] c 11 N71-21474

Shock absorber Patent  
[NASA-CASE-XMS-03722] c 15 N71-21530

Apparatus for machining geometric cones Patent  
[NASA-CASE-XMS-04292] c 15 N71-22722

Rescue litter flotation assembly Patent  
[NASA-CASE-XMS-04170] c 05 N71-22748

Aligning and positioning device Patent  
[NASA-CASE-XMS-04178] c 15 N71-22798

Tension measurement device Patent  
[NASA-CASE-XMS-04545] c 15 N71-22878

Amplitude modulated laser transmitter Patent  
[NASA-CASE-XMS-04269] c 16 N71-22895

Digital cardiachometer system Patent  
[NASA-CASE-XMS-02399] c 05 N71-22896

Phonocardiograph transducer Patent  
[NASA-CASE-XMS-05365] c 14 N71-22993

Multiple environment materials test chamber having a multiple port X-ray tube for irradiating a plurality of samples Patent  
[NASA-CASE-XMS-02930] c 11 N71-23042

Soft frame adjustable eyeglasses Patent  
[NASA-CASE-XMS-06064] c 05 N71-23096

Blood pressure measuring system for separating and separately recording dc signal and an ac signal Patent  
[NASA-CASE-XMS-06061] c 05 N71-23317

Signal ratio system utilizing voltage controlled oscillators Patent  
[NASA-CASE-XMS-04367] c 09 N71-23545

Winch having cable position and load indicators Patent  
[NASA-CASE-XMS-12052-1] c 15 N71-24599

Radar antenna system for acquisition and tracking Patent  
[NASA-CASE-XMS-09610] c 07 N71-24625

Extravehicular tunnel suit system Patent  
[NASA-CASE-XMS-12243-1] c 05 N71-24728

Broadband modified turnstile antenna Patent  
[NASA-CASE-XMS-12209] c 09 N71-24842

Quick release hook tape Patent  
[NASA-CASE-XMS-10660-1] c 15 N71-25975

Plated electrodes Patent  
[NASA-CASE-XMS-04213-1] c 09 N71-26002

Audio signal processor Patent  
[NASA-CASE-XMS-12223-1] c 07 N71-26181

Fabric for micrometeoroid protection garment Patent  
[NASA-CASE-XMS-12109] c 18 N71-26285

Antenna array phase quadrature tracking system Patent  
[NASA-CASE-XMS-12205-1] c 07 N71-27056

Radiometric temperature reference Patent  
[NASA-CASE-XMS-13276-1] c 14 N71-27058

Pneumatic amplifier Patent  
[NASA-CASE-XMS-12121-1] c 15 N71-27147

Orbital escape device Patent  
[NASA-CASE-XMS-06162] c 31 N71-28851

Inflatable tether Patent  
[NASA-CASE-XMS-10993] c 15 N71-28936

Ion-exchange membrane with platinum electrode assembly Patent  
[NASA-CASE-XMS-02063] c 03 N71-29044

Color television system  
[NASA-CASE-XMS-12146-1] c 07 N72-17109

Current dependent filter inductance [NASA-CASE-ERC-10139]	c 09	N72-17154	Four phase logic systems [NASA-CASE-MSC-14240-1]	c 33	N75-14957	System for producing chroma signals [NASA-CASE-MSC-14683-1]	c 74	N77-18893
Low onset rate energy absorber [NASA-CASE-MSC-12279]	c 15	N72-17450	Peak holding circuit for extremely narrow pulses [NASA-CASE-MSC-14129-1]	c 33	N75-18479	Fluid mass sensor for a zero gravity environment [NASA-CASE-MSC-14653-1]	c 35	N77-19385
Stand-off type ablative heat shield [NASA-CASE-MSC-12143-1]	c 33	N72-17947	Random pulse generator [NASA-CASE-MSC-14131-1]	c 33	N75-19515	Mechanical sequencer [NASA-CASE-MSC-19536-1]	c 37	N77-22482
Optical range finder having nonoverlapping complete images [NASA-CASE-MSC-12105-1]	c 14	N72-21409	Grain refinement control in TIG arc welding [NASA-CASE-MSC-19095-1]	c 37	N75-19683	Unbalanced quadriphase demodulator [NASA-CASE-MSC-14840-1]	c 32	N77-24331
Open type urine receptacle [NASA-CASE-MSC-12324-1]	c 05	N72-22093	Condensate removal device for heat exchanger [NASA-CASE-MSC-14143-1]	c 77	N75-20139	Open loop digital frequency multiplier [NASA-CASE-MSC-12709-1]	c 33	N77-24375
Family of frequency to amplitude converters [NASA-CASE-MSC-12395]	c 09	N72-25257	Television noise reduction device [NASA-CASE-MSC-12607-1]	c 32	N75-21485	Platinum resistance thermometer circuit [NASA-CASE-MSC-12327-1]	c 35	N77-27368
Foldable construction block [NASA-CASE-MSC-12233-1]	c 15	N72-25454	Digital transmitter for data bus communications system [NASA-CASE-MSC-14558-1]	c 32	N75-21486	Surface finishing [NASA-CASE-MSC-12631-1]	c 24	N77-28225
Method and apparatus for detecting surface ions on silicon diodes and transistors [NASA-CASE-ERC-10325]	c 15	N72-25457	Insulated electrocardiographic electrodes [NASA-CASE-MSC-14339-1]	c 05	N75-24716	Pressure modulating valve [NASA-CASE-MSC-14905-1]	c 37	N77-28487
Scientific experiment flexible mount [NASA-CASE-MSC-12372-1]	c 31	N72-25842	Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system [NASA-CASE-MSC-14245-1]	c 18	N75-27041	Snap-in compressible biomedical electrode [NASA-CASE-MSC-14623-1]	c 52	N77-28717
Burn rate testing apparatus [NASA-CASE-XMS-09690]	c 33	N72-25913	Multiple circuit protector device [NASA-CASE-XMS-02744]	c 33	N75-27249	Load regulating latch [NASA-CASE-MSC-19535-1]	c 37	N77-32499
System for improving signal-to-noise ratio of a communication signal [NASA-CASE-MSC-12259-2]	c 07	N72-33146	Apparatus for welding sheet material [NASA-CASE-XMS-01330]	c 37	N75-27376	Regenerable device for scrubbing breathable air of CO <sub>2</sub> and moisture without special heat exchanger equipment [NASA-CASE-MSC-14771-1]	c 54	N77-32722
Altitude measuring system [NASA-CASE-ERC-10412-1]	c 09	N73-12211	Multiparameter vision testing apparatus [NASA-CASE-MSC-13601-2]	c 54	N75-27759	Process of forming catalytic surfaces for wet oxidation reactions [NASA-CASE-MSC-14831-1]	c 25	N78-10225
A method of delivering a vehicle to earth orbit and returning the reusable portion thereof to earth [NASA-CASE-MSC-12391]	c 30	N73-12884	Thrust measurement [NASA-CASE-XMS-05731]	c 35	N75-29382	Hearing aid malfunction detection system [NASA-CASE-MSC-14916-1]	c 33	N78-10375
Multispectral imaging system [NASA-CASE-MSC-12404-1]	c 23	N73-13661	Fault tolerant clock apparatus utilizing a controlled minority of clock elements [NASA-CASE-MSC-12531-1]	c 35	N75-30504	Gas compression apparatus [NASA-CASE-MSC-14757-1]	c 35	N78-10428
Foldable construction block [NASA-CASE-MSC-12233-2]	c 32	N73-13921	Filter regeneration systems [NASA-CASE-MSC-14273-1]	c 34	N75-33342	Low gravity phase separator [NASA-CASE-MSC-14773-1]	c 35	N78-12390
Space shuttle vehicle and system [NASA-CASE-MSC-12433]	c 31	N73-14854	Spacecraft docking and alignment system [NASA-CASE-MSC-12559-1]	c 18	N76-14186	Iodine generator for reclaimed water purification [NASA-CASE-MSC-14632-1]	c 54	N78-14784
Apparatus for statistical time-series analysis of electrical signals [NASA-CASE-MSC-12428-1]	c 10	N73-25240	Reconstituted asbestos matrix [NASA-CASE-MSC-12568-1]	c 24	N76-14204	Flame retardant spandex type polyurethanes [NASA-CASE-MSC-14331-2]	c 27	N78-17213
Life raft stabilizer [NASA-CASE-MSC-12393-1]	c 02	N73-26006	Strain arrestor plate for fused silica tile [NASA-CASE-MSC-14182-1]	c 27	N76-14264	Temperature compensated current source [NASA-CASE-MSC-11235]	c 33	N78-17294
On-film optical recording of camera lens settings [NASA-CASE-MSC-12363-1]	c 14	N73-26431	Medical subject monitoring systems [NASA-CASE-MSC-14180-1]	c 52	N76-14757	Microbalance [NASA-CASE-MSC-11242]	c 35	N78-17358
Powerplexer [NASA-CASE-MSC-12396-1]	c 03	N73-31988	Automatic biowaste sampling [NASA-CASE-MSC-14640-1]	c 54	N76-14804	Adjustable securing base [NASA-CASE-MSC-19666-1]	c 37	N78-17383
Foot pedal operated fluid type exercising device [NASA-CASE-MSC-11561-1]	c 05	N73-32014	Method for manufacturing mirrors in zero gravity environment [NASA-CASE-MSC-12611-1]	c 12	N76-15189	Restraining mechanism [NASA-CASE-MSC-13054]	c 54	N78-17677
Digital to analog conversion apparatus [NASA-CASE-MSC-12458-1]	c 08	N73-32081	Cosmic dust analyzer [NASA-CASE-MSC-13802-2]	c 35	N76-15431	Helmet latching and attaching ring [NASA-CASE-XMS-04670]	c 54	N78-17678
Solid state controller three axes controller [NASA-CASE-MSC-12394-1]	c 08	N74-10942	Low distortion receiver for bi-level baseband PCM waveforms [NASA-CASE-MSC-14557-1]	c 32	N76-16249	Protective garment ventilation system [NASA-CASE-XMS-04928]	c 54	N78-17679
Method for obtaining oxygen from lunar or similar soil [NASA-CASE-MSC-12408-1]	c 46	N74-13011	Frequency measurement by coincidence detection with standard frequency [NASA-CASE-MSC-14649-1]	c 33	N76-16331	Helmet feedport [NASA-CASE-XMS-09653]	c 54	N78-17680
Adaptive voting computer system [NASA-CASE-MSC-13932-1]	c 62	N74-14920	Space vehicle system [NASA-CASE-MSC-12561-1]	c 18	N76-17185	Optical conversion method [NASA-CASE-MSC-12618-1]	c 74	N78-17865
Phase protection system for ac power lines [NASA-CASE-MSC-17832-1]	c 33	N74-14956	Method of fluxless brazing and diffusion bonding of aluminum containing components [NASA-CASE-MSC-14435-1]	c 37	N76-18455	Emergency space-suit helmet [NASA-CASE-MSC-10954-1]	c 54	N78-18761
Optical instruments [NASA-CASE-MSC-14096-1]	c 74	N74-15095	Auger attachment method for insulation [NASA-CASE-MSC-12615-1]	c 37	N76-19437	Method of producing complex aluminum alloy parts of high temper, and products thereof [NASA-CASE-MSC-19693-1]	c 26	N78-24333
Multifunction audio digitizer [NASA-CASE-MSC-13855-1]	c 35	N74-17885	Position determination systems [NASA-CASE-MSC-12593-1]	c 17	N76-21250	Stator rotor tools [NASA-CASE-MSC-16000-1]	c 37	N78-24544
Method and apparatus for stable silicon dioxide layers on silicon grown in silicon nitride ambient [NASA-CASE-ERC-10073-1]	c 24	N74-19769	Two-component ceramic coating for silica insulation [NASA-CASE-MSC-14270-1]	c 27	N76-22377	Flexible pile thermal barrier insulator [NASA-CASE-MSC-19568-1]	c 34	N78-25350
Pulse code modulated signal synchronizer [NASA-CASE-MSC-12462-1]	c 32	N74-20809	Three-component ceramic coating for silica insulation [NASA-CASE-MSC-14270-2]	c 27	N76-23426	Fluid valve assembly [NASA-CASE-MSC-12731-1]	c 37	N78-25426
Pulse code modulated signal synchronizer [NASA-CASE-MSC-12494-1]	c 32	N74-20810	Binary concatenated coding system [NASA-CASE-MSC-14082-1]	c 60	N76-23850	Variable contour securing system [NASA-CASE-MSC-16270-1]	c 37	N78-27423
Apparatus and method for processing Korotkov sounds [NASA-CASE-MSC-13999-1]	c 52	N74-26626	Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant [NASA-CASE-MSC-14331-1]	c 27	N76-24405	Multi-purpose wind tunnel reaction control model block [NASA-CASE-MSC-19706-1]	c 09	N78-31129
Differential phase shift keyed communication system [NASA-CASE-MSC-14065-1]	c 32	N74-26654	Self-contained breathing apparatus [NASA-CASE-MSC-14733-1]	c 54	N76-24900	Heat resistant polymers of oxidized styrylphosphine [NASA-CASE-MSC-14903-1]	c 27	N78-32256
Technique for recovery of voice data from heat damaged magnetic tape [NASA-CASE-MSC-14219-1]	c 32	N74-27612	Sun angle calculator [NASA-CASE-MSC-12617-1]	c 35	N76-29552	Condition sensor system and method [NASA-CASE-MSC-14805-1]	c 54	N78-32720
Differential phase shift keyed signal resolver [NASA-CASE-MSC-14066-1]	c 33	N74-27705	Meteoroid capture cell construction [NASA-CASE-MSC-12423-1]	c 91	N76-30131	Bit error rate measurement above and below bit rate tracking threshold [NASA-CASE-MSC-12743-1]	c 32	N79-10263
Specific wavelength colorimeter [NASA-CASE-MSC-14081-1]	c 35	N74-27860	Flanged major modular assembly jig [NASA-CASE-MSC-19372-1]	c 39	N76-31562	Phased array antenna control [NASA-CASE-MSC-14939-1]	c 32	N79-11264
Latch mechanism [NASA-CASE-MSC-12549-1]	c 37	N74-27903	Optical noise suppression device and method [NASA-CASE-MSC-12640-1]	c 74	N76-31998	Apparatus and method for stabilized phase detection for binary signal tracking loops [NASA-CASE-MSC-16461-1]	c 33	N79-11313
Digital communication system [NASA-CASE-MSC-13912-1]	c 32	N74-30524	Optical process for producing classification maps from multispectral data [NASA-CASE-MSC-14472-1]	c 43	N77-10584	Positive isolation disconnect [NASA-CASE-MSC-16043-1]	c 37	N79-11402
Flexible joint for pressurizable garment [NASA-CASE-MSC-11072]	c 54	N74-32546	Window defect planar mapping technique [NASA-CASE-MSC-19442-1]	c 74	N77-10899	Thermal insulation attaching means [NASA-CASE-MSC-12619-2]	c 27	N79-12221
Method and apparatus for decoding compatible convolutional codes [NASA-CASE-MSC-14070-1]	c 32	N74-32598	Differential pulse code modulation [NASA-CASE-MSC-12506-1]	c 32	N77-12239	Lightweight electrically-powered flexible thermal laminate [NASA-CASE-MSC-12662-1]	c 33	N79-12331
Pulse stretcher for narrow pulses [NASA-CASE-MSC-14130-1]	c 33	N74-32711	Method and system for in vivo measurement of bone tissue using a two level energy source [NASA-CASE-MSC-14276-1]	c 52	N77-14737	Simultaneous treatment of SO <sub>2</sub> containing stack gases and waste water [NASA-CASE-MSC-16258-1]	c 45	N79-12584
Method and device for detection of surface discontinuities or defects [NASA-CASE-MSC-14187-1]	c 35	N74-32879	Analysis of volatile organic compounds [NASA-CASE-MSC-14428-1]	c 23	N77-17161	Length mode piezoelectric ultrasonic transducer for inspection of solid objects [NASA-CASE-MSC-19672-1]	c 38	N79-14398
Anti-fog composition [NASA-CASE-MSC-13530-2]	c 23	N75-14834				Interactive color display for multispectral imagery using correlation clustering [NASA-CASE-MSC-16253-1]	c 32	N79-20297

Sequencing device utilizing planetary gear set [NASA-CASE-MSC-19514-1]	c 37	N79-20377	Reusable captive blind fastener [NASA-CASE-MSC-18742-1]	c 37	N82-26673	Light transmitting window assembly [NASA-CASE-MSC-18417-1]	c 74	N85-29750
Water separator [NASA-CASE-XMS-01295-1]	c 37	N79-21345	Spiral slotted phased antenna array [NASA-CASE-MSC-18532-1]	c 32	N82-27558	Slide release mechanism [NASA-CASE-MSC-20080-1]	c 37	N85-30334
Metabolic rate meter and method [NASA-CASE-MSC-12239-1]	c 52	N79-21750	Thermal garment [NASA-CASE-XMS-03694-1]	c 54	N82-29002	Liquid crystal light valve structures [NASA-CASE-MSC-20036-1]	c 76	N85-33826
Fluid sample collection and distribution system [NASA-CASE-MSC-16841-1]	c 34	N79-24285	Reconfiguring redundancy management [NASA-CASE-MSC-18498-1]	c 60	N82-29013	Reactant pressure differential control for fuel cell gases [NASA-CASE-MSC-20127-2]	c 37	N85-34403
Thermal insulation protection means [NASA-CASE-MSC-12737-1]	c 24	N79-25142	Absorbent product to absorb fluids [NASA-CASE-MSC-18223-1]	c 24	N82-29362	Fluid leak indicator [NASA-CASE-MSC-20783-1]	c 35	N86-20756
System for automatically switching transformer coupled lines [NASA-CASE-MSC-16697-1]	c 33	N79-28415	Attachment system for silica tiles [NASA-CASE-MSC-18741-1]	c 27	N82-29456	Spillage detector for liquid chromatography systems [NASA-CASE-MSC-20206-1]	c 25	N86-27431
Fused switch [NASA-CASE-XMS-01244-1]	c 33	N79-33393	Optical crystal temperature gauge with fiber optic connections [NASA-CASE-MSC-18627-1]	c 74	N82-30071	Multi-leg heat pipe evaporator [NASA-CASE-MSC-20812-1]	c 34	N86-27593
Chassis unit insert tightening-extract device [NASA-CASE-XMS-01077-1]	c 37	N79-33467	Random digital encryption secure communication system [NASA-CASE-MSC-16462-1]	c 32	N82-31583	Foldable self-erecting joint [NASA-CASE-MSC-20635-1]	c 18	N87-14373
Compound oxidized styrylphosphine [NASA-CASE-MSC-14903-2]	c 27	N80-10358	CAM controlled retractable door latch [NASA-CASE-MSC-20304-1]	c 37	N82-31690	Real-time garbage collection for list processing [NASA-CASE-MSC-20964-1]	c 60	N87-14863
Portable breathing system [NASA-CASE-MSC-16182-1]	c 54	N80-10799	Densification of porous refractory substrates [NASA-CASE-MSC-18737-1]	c 24	N83-13171	Infusion extractor [NASA-CASE-MSC-20761-1]	c 37	N87-15465
Method and apparatus for eliminating luminol interference material [NASA-CASE-MSC-16260-1]	c 51	N80-16714	Method of repairing surface damage to porous refractory substrates [NASA-CASE-MSC-18736-1]	c 24	N83-13172	Self-contained, single-use hose and tubing cleaning module [NASA-CASE-MSC-20857-1]	c 37	N87-17035
Pressure limiting propellant actuating system [NASA-CASE-MSC-18179-1]	c 20	N80-18097	Gas-to-hydraulic power converter [NASA-CASE-MSC-18794-1]	c 44	N83-14693	Sun shield [NASA-CASE-MSC-20162-1]	c 37	N87-17036
Floating nut retention system [NASA-CASE-MSC-16938-1]	c 37	N80-23653	High temperature silicon carbide impregnated insulating fabrics [NASA-CASE-MSC-18832-1]	c 27	N83-18908	Method and apparatus for measuring frequency and phase difference [NASA-CASE-MSC-20865-1]	c 32	N87-18692
Heat resistant polymers of oxidized styrylphosphine [NASA-CASE-MSC-14903-3]	c 27	N80-24438	Kinesimetric method and apparatus [NASA-CASE-MSC-18929-1]	c 39	N83-20280	Multi-path peristaltic pump [NASA-CASE-MSC-20907-1]	c 37	N87-18818
Vitro-violet process for producing flame resistant polyamides and products produced thereby [NASA-CASE-MSC-16074-1]	c 27	N80-26446	Compression test apparatus [NASA-CASE-MSC-18723-1]	c 35	N83-21312	Pumped two-phase heat transfer loop [NASA-CASE-MSC-20841-1]	c 34	N87-22950
Method and automated apparatus for detecting coliform organisms [NASA-CASE-MSC-16777-1]	c 51	N80-27067	Bio-medical flow sensor [NASA-CASE-MSC-18761-1]	c 52	N83-27577	Apparatus and method of capturing an orbiting spacecraft [NASA-CASE-MSC-20979-1]	c 37	N87-22985
Multiple band circularly polarized microstrip antenna [NASA-CASE-MSC-18334-1]	c 32	N80-32604	Apparatus for determining changes in limb volume [NASA-CASE-MSC-18759-1]	c 52	N83-27578	Method of making a flexible diaphragm [NASA-CASE-MSC-20797-1]	c 37	N87-23981
Multispectral scanner optical system [NASA-CASE-MSC-18255-1]	c 74	N80-33210	Degassifying and mixing apparatus for liquids [NASA-CASE-MSC-18936-1]	c 35	N83-29652	Method and apparatus for telemetry adaptive bandwidth compression [NASA-CASE-MSC-20821-1]	c 17	N87-25348
Surface finishing [NASA-CASE-MSC-12631-3]	c 27	N81-14077	Apparatus for accurately preloading auger attachment means for frangible protective material [NASA-CASE-MSC-18791-1]	c 37	N83-36482	Improved method and apparatus for waste collection and storage [NASA-CASE-MSC-21025-1]	c 31	N87-25495
Coaxial phased array antenna [NASA-CASE-MSC-16800-1]	c 32	N81-14187	Automatic compression adjusting mechanism for internal combustion engines [NASA-CASE-MSC-18807-1]	c 37	N83-36483	Processing circuit with asymmetry corrector and convolutional encoder for digital data [NASA-CASE-MSC-20187-1]	c 33	N87-25531
Installing fiber insulation [NASA-CASE-MSC-16973-1]	c 37	N81-14317	Absorbent product and articles made therefrom [NASA-CASE-MSC-18223-2]	c 54	N84-11758	Four-terminal electrical testing device [NASA-CASE-MSC-21166-1]	c 35	N87-25555
Pseudonoise code tracking loop [NASA-CASE-MSC-18035-1]	c 32	N81-15179	Method and technique for installing light-weight, fragile, high-temperature fiber insulation [NASA-CASE-MSC-16934-3]	c 24	N84-16262	Preloadable vector sensitive latch [NASA-CASE-MSC-20910-1]	c 37	N87-25582
Thermal barrier pressure seal [NASA-CASE-MSC-18134-1]	c 37	N81-15363	Method and apparatus for simulating gravitational forces on a living organism [NASA-CASE-MSC-20202-1]	c 54	N84-16803	Monogroove cold plate [NASA-CASE-MSC-20946-1]	c 34	N87-28867
Digital numerically controlled oscillator [NASA-CASE-MSC-16747-1]	c 33	N81-17349	Pre-stressed thermal protection systems [NASA-CASE-MSC-20254-1]	c 16	N84-22601	Tapered, tubular polyester fabric [NASA-CASE-MSC-21082-1]	c 27	N87-29672
Self-calibrating threshold detector [NASA-CASE-MSC-16370-1]	c 35	N81-19427	Apparatus for releasably connecting first and second objects in predetermined space relationship [NASA-CASE-MSC-18969-1]	c 18	N84-22605	Locking hinge [NASA-CASE-MSC-21056-1]	c 18	N88-23827
Cell and method for electrolysis of water and anode [NASA-CASE-MSC-16394-1]	c 28	N81-24280	Tanker orbit transfer vehicle and method [NASA-CASE-MSC-20543-1]	c 18	N84-22610	Hermetically sealable package for hybrid solid-state electronic devices and the like [NASA-CASE-MSC-20181-1]	c 33	N88-23941
Urine collection device [NASA-CASE-MSC-16433-1]	c 52	N81-24711	Doppler radar having phase modulation of both transmitted and reflected return signals [NASA-CASE-MSC-18675-1]	c 32	N84-22820	Pumped two-phase heat transfer loop [NASA-CASE-MSC-20841-2]	c 34	N88-23958
Method for applying photographic resists to otherwise incompatible substrates [NASA-CASE-MSC-18107-1]	c 27	N81-25209	Heat resistant protective hand covering [NASA-CASE-MSC-20261-2]	c 54	N84-23113	Acoustic emission frequency discrimination [NASA-CASE-MSC-20467-1]	c 35	N88-23966
Structural members, method and apparatus [NASA-CASE-MSC-16217-1]	c 31	N81-27323	Method and apparatus for receiving and tracking phase modulated signals [NASA-CASE-MSC-16170-2]	c 32	N84-27952	Magnetic drive coupling [NASA-CASE-MSC-21171-1]	c 37	N88-23973
Shielded conductor cable system [NASA-CASE-MSC-12745-1]	c 33	N81-27397	Heat resistant protective hand covering [NASA-CASE-MSC-20261-1]	c 54	N84-28484	Payload deployment method and system [NASA-CASE-MSC-21330-1]	c 16	N88-24660
Urine collection apparatus [NASA-CASE-MSC-18381-1]	c 52	N81-28740	Digital interface for bi-directional communication between a computer and a peripheral device [NASA-CASE-MSC-20258-1]	c 60	N84-28492	Nozzle fabrication technique [NASA-CASE-MSC-21299-1]	c 20	N88-24684
Reciprocating engines [NASA-CASE-MSC-16239-1]	c 37	N81-32510	Slow opening valve [NASA-CASE-MSC-20112-1]	c 37	N85-20338	Linear force device [NASA-CASE-MSC-20549-2]	c 35	N88-24927
Cavity-backed, micro-strip dipole antenna array [NASA-CASE-MSC-18606-1]	c 32	N82-11336	Television camera video level control system [NASA-CASE-MSC-18578-1]	c 32	N85-21427	Electrostatic discharge test apparatus [NASA-CASE-MSC-21094-1]	c 35	N88-24941
Low temperature latching solenoid [NASA-CASE-MSC-18106-1]	c 33	N82-11357	Self-charging metering and dispensing device for fluids [NASA-CASE-MSC-20275-1]	c 35	N85-21595	Range and range rate system [NASA-CASE-MSC-20867-1]	c 36	N88-24958
Logic-controlled occlusive cuff system [NASA-CASE-MSC-14836-1]	c 52	N82-11770	Connection system [NASA-CASE-MSC-20319-1]	c 37	N85-21649	Toggle release [NASA-CASE-MSC-21354-1]	c 37	N88-24969
Electrophotolysis oxidation system for measurement of organic concentration in water [NASA-CASE-MSC-16497-1]	c 25	N82-12166	Monogroove heat pipe design: Insulated liquid channel with bridging wick [NASA-CASE-MSC-20497-1]	c 34	N85-29180	Mobile remote manipulator system for a tetrahedral truss [NASA-CASE-MSC-20985-1]	c 18	N88-26398
Heat sealable, flame and abrasion resistant coated fabric [NASA-CASE-MSC-18382-1]	c 27	N82-16238	Moisture content and gas sampling device [NASA-CASE-MSC-18866-1]	c 35	N85-29213	Method and apparatus for measuring distance [NASA-CASE-MSC-20912-1]	c 32	N88-26568
Surface conforming thermal/pressure seal [NASA-CASE-MSC-18422-1]	c 37	N82-16408	Low gravity exothermic heating/cooling apparatus [NASA-CASE-MSC-25707-1]	c 35	N85-29214	Expandable pallet for space station interface attachments [NASA-CASE-MSC-21117-1]	c 18	N88-28958
Direct current ballast circuit for metal halide lamp [NASA-CASE-MSC-18407-1]	c 33	N82-24427	Spray applicator for spraying coatings and other fluids in space [NASA-CASE-MSC-18852-1]	c 37	N85-29283	Method of forming dynamic membrane on stainless steel support [NASA-CASE-MSC-18172-3]	c 31	N88-29052
Precision heat forming of tetrafluoroethylene tubing [NASA-CASE-MSC-18430-1]	c 37	N82-24491	Linear motion valve [NASA-CASE-MSC-20148-1]	c 37	N85-29284	High effectiveness contour matching contact heat exchanger [NASA-CASE-MSC-20840-1]	c 34	N88-29132
High temperature penetrator assembly with bayonet plug and ramp-activated lock [NASA-CASE-MSC-18526-1]	c 37	N82-24494				Collet lock joint for space station truss [NASA-CASE-MSC-21207-1]	c 37	N88-29180
A method and technique for installing light-weight fragile, high-temperature fiber insulation [NASA-CASE-MSC-18934-3]	c 24	N82-26387				Preloaded brake disc [NASA-CASE-MSC-21132-1]	c 37	N88-29181
Open ended tubing cutters [NASA-CASE-MSC-18538-1]	c 37	N82-26672						

- ARC length control for plasma welding  
[NASA-CASE-MSC-20900-1] c 37 N88-30131
- Switched steerable multiple beam antenna system  
[NASA-CASE-MSC-20873-1-SB] c 32 N89-11961
- Space station erectable manipulator placement system  
[NASA-CASE-MSC-21096-1] c 18 N89-12621
- Improved docking alignment system  
[NASA-CASE-MSC-21372-1] c 35 N89-12842
- Magnetic attachment mechanism  
[NASA-CASE-MSC-21095-1] c 37 N89-12866
- Don/doff support stand for use with rear entry space suits  
[NASA-CASE-MSC-21364-1] c 54 N89-13889
- Fluidic momentum controller  
[NASA-CASE-MSC-20906-2] c 35 N89-15379
- Hybrid plume plasma rocket  
[NASA-CASE-MSC-20476-2] c 20 N89-25279
- Space module assembly apparatus with docking alignment flexibility and restraint  
[NASA-CASE-MSC-21211-1] c 18 N89-28553
- Expandable pallet for space station interface attachments  
[NASA-CASE-MSC-21117-2] c 18 N89-28554
- Method of controlling a resin curing process  
[NASA-CASE-MSC-21169-1] c 27 N89-29539
- Docking system for spacecraft  
[NASA-CASE-MSC-21327-1] c 18 N90-11798
- Hatch cover  
[NASA-CASE-MSC-21356-1] c 18 N90-19278
- Docking mechanism for spacecraft  
[NASA-CASE-MSC-21386-1] c 18 N90-20126
- System for venting gas from a liquid storage tank  
[NASA-CASE-MSC-21253-1] c 31 N90-20254
- Doppler radar with multiphase modulation of transmitted and reflected signal  
[NASA-CASE-MSC-18808-1] c 32 N90-20280
- Gripping device  
[NASA-CASE-MSC-21365-1] c 37 N90-20408
- Double swivel toggle release  
[NASA-CASE-MSC-21436-1] c 37 N90-21390
- Pressurized bellows flat contact heat exchanger interface  
[NASA-CASE-MSC-21271-1] c 34 N90-21999
- Lightweight ceramic insulation and method  
[NASA-CASE-MSC-20782-1] c 27 N90-23566
- Hazards protection for space suits and spacecraft  
[NASA-CASE-MSC-21366-1] c 54 N90-25498
- Generation of animation sequences of three dimensional models  
[NASA-CASE-MSC-21379-1-SB] c 61 N90-27340
- EMU helmet mounted display  
[NASA-CASE-MSC-21460-1] c 54 N91-13879
- Programmable remapper with single flow architecture  
[NASA-CASE-MSC-21481-1] c 60 N91-13890
- General method of pattern classification using the two-domain theory  
[NASA-CASE-MSC-21737-1] c 61 N91-13911
- System and method for a general purpose architecture for intelligent computer-aided training  
[NASA-CASE-MSC-21381-1] c 63 N91-13944
- Adaptive data acquisition multiplexing system and method  
[NASA-CASE-MSC-21170-1] c 17 N91-14371
- Smart tunnel: Docking mechanism  
[NASA-CASE-MSC-21360-1] c 18 N91-14374
- Thermal switch disc for short circuit protection of batteries  
[NASA-CASE-MSC-21428-1] c 33 N91-14537
- Vibration analyzer  
[NASA-CASE-MSC-21408-1] c 37 N91-14607
- Quick connect coupling  
[NASA-CASE-MSC-21539-1] c 37 N91-14610
- Bio-reactor chamber  
[NASA-CASE-MSC-20929-1] c 51 N91-14703
- Dual physiological rate measurement instrument  
[NASA-CASE-MSC-20078-3] c 52 N91-14709
- Valve for waste collection and storage  
[NASA-CASE-MSC-21025-4] c 54 N91-14723
- Method for waste collection and storage  
[NASA-CASE-MSC-21025-2] c 54 N91-14724
- Discrete event simulation tool for analysis of qualitative models of continuous processing systems  
[NASA-CASE-MSC-21465-1] c 61 N91-14741
- Method of up-front load balancing for local memory parallel processors  
[NASA-CASE-MSC-21348-1] c 62 N91-14769
- Emergency egress fixed rocket package  
[NASA-CASE-MSC-21332-1] c 03 N91-15142
- Tank gauging apparatus and method  
[NASA-CASE-MSC-21059-2] c 35 N91-15511
- High-pressure promoted combustion chamber  
[NASA-CASE-MSC-21470-1] c 09 N91-21157
- Overcenter collet space station truss fastener  
[NASA-CASE-MSC-21504-1] c 18 N91-21221
- Orbital debris sweeper and method  
[NASA-CASE-MSC-21534-1] c 18 N91-21222
- Volumetric measurement of tank volume  
[NASA-CASE-MSC-21500-1] c 35 N91-21493
- Flexible diaphragm-extreme temperature usage  
[NASA-CASE-MSC-20797-2] c 35 N91-21494
- Tank gauging apparatus and method  
[NASA-CASE-MSC-21059-3] c 35 N91-21495
- Method and apparatus for positioning a robotic end effector  
[NASA-CASE-MSC-21476-1] c 37 N91-21542
- Alignment positioning mechanism  
[NASA-CASE-MSC-21502-1] c 37 N91-21543
- Rotating bio-reactor cell culture apparatus  
[NASA-CASE-MSC-21293-1] c 51 N91-21700
- Spiral vane bioreactor  
[NASA-CASE-MSC-21361-1] c 51 N91-21701
- Static feed water electrolysis subsystem development  
[NASA-CASE-MSC-21577-1-SB] c 25 N91-23271
- Dual diaphragm tank with telltale drain  
[NASA-CASE-MSC-21703-1] c 31 N91-25305
- Method and apparatus for sensor fusion  
[NASA-CASE-MSC-21334-1] c 32 N91-25317
- Optical joint correlator for real-time image tracking and retinal surgery  
[NASA-CASE-MSC-21509-1] c 74 N91-25840
- Method and apparatus for waste collection and storage  
[NASA-CASE-MSC-21025-3] c 54 N91-26747
- Variable orifice flow regulator  
[NASA-CASE-MSC-21549-1] c 34 N91-27504
- Thermally activated retainer means  
[NASA-CASE-MSC-21793-1] c 16 N91-28186
- Horizontally rotated cell culture system with a coaxial tubular oxygenator  
[NASA-CASE-MSC-21294-1] c 51 N91-30667
- Power saw  
[NASA-CASE-MSC-21469-1] c 37 N91-31655
- Biofilm monitoring coupon system and method of use  
[NASA-CASE-MSC-21585-1] c 51 N91-31755
- Method and apparatus for bio-regenerative life support system  
[NASA-CASE-MSC-21629-1] c 54 N91-31803
- Two fault tolerant toggle-hook release  
[NASA-CASE-MSC-21671-1] c 37 N91-32498
- Nozzle fabrication technique  
[NASA-CASE-MSC-21299-2] c 37 N91-32508
- Bidirectional drive and brake mechanism  
[NASA-CASE-MSC-21540-1] c 37 N91-32514
- Three dimensional moire pattern alignment  
[NASA-CASE-MSC-21416-1] c 74 N91-32922
- Method for anisotropic etching in the manufacture of semiconductor devices  
[NASA-CASE-MSC-21631-1] c 75 N91-32947
- Helmet of a laminate construction of polycarbonate and polysulfone polymeric material  
[NASA-CASE-MSC-21503-1] c 27 N92-10091
- Mechanized fluid connector and assembly tool system with ball detents  
[NASA-CASE-MSC-21434-1] c 37 N92-10197
- Reconfigurable fuzzy cell  
[NASA-CASE-MSC-21613-1] c 61 N92-10331
- Extra-corporeal blood access, sensing, and radiation methods and apparatuses  
[NASA-CASE-MSC-21775-1] c 52 N92-11627
- Intranasal scopolamine preparation and method  
[NASA-CASE-MSC-21858-1] c 52 N92-11628
- Hypervelocity impact shield  
[NASA-CASE-MSC-21420-1] c 18 N92-15114
- Method for providing real-time control of a gaseous propellant rocket propulsion system  
[NASA-CASE-MSC-21542-1] c 20 N92-15122
- Load limiting energy absorbing lightweight debris catcher  
[NASA-CASE-MSC-21562-1] c 16 N92-16007
- Method and apparatus for releasably connecting first and second objects  
[NASA-CASE-MSC-21517-1] c 31 N92-16161
- High velocity gas particulate sampling system  
[NASA-CASE-MSC-21729-1] c 34 N92-16241
- Atmospheric pressure flow reactor: Gas phase chemical kinetics under tropospheric conditions without wall effects  
[NASA-CASE-MSC-21384-1] c 34 N92-16243
- End effector with astronaut foot restraint  
[NASA-CASE-MSC-21721-1] c 54 N92-16559
- Programmable remapper for image processing  
[NASA-CASE-MSC-21350-1] c 60 N92-16563
- Closed-loop motor control using high-speed fiber optics  
[NASA-CASE-MSC-21806-1] c 74 N92-17863
- Treadmill for space flight  
[NASA-CASE-MSC-21752-1] c 54 N92-17910
- Lunar radiator shade  
[NASA-CASE-MSC-21868-1] c 54 N92-21589
- Metallic threaded composite fastener  
[NASA-CASE-MSC-21580-1] c 37 N92-21726
- Pressure vessel flex joint  
[NASA-CASE-MSC-21748-1] c 37 N92-21727
- Assured crew return vehicle  
[NASA-CASE-MSC-21536-1] c 18 N92-21999
- Two dimensional vernier  
[NASA-CASE-MSC-21700-1] c 35 N92-22039
- Robot-friendly connector  
[NASA-CASE-MSC-21864-1] c 37 N92-23544
- Smart accelerometer  
[NASA-CASE-MSC-21951-1] c 35 N92-23545
- Quick-connect fasteners for assembling devices in space  
[NASA-CASE-MSC-21648-1] c 37 N92-24051
- Three-dimensional cultured glioma cell lines  
[NASA-CASE-MSC-21843-1-NP] c 51 N92-24052
- Payload retention device  
[NASA-CASE-MSC-21906-1] c 37 N92-28727
- Portable dynamic fundus instrument  
[NASA-CASE-MSC-21675-1] c 52 N92-28755
- Water electrolysis  
[NASA-CASE-MSC-21572-1-SB] c 25 N92-28756
- Whole body cleaning agent containing N-acetyltaurate  
[NASA-CASE-MSC-21589-1] c 54 N92-29137
- Quick application/release nut with engagement indicator  
[NASA-CASE-MSC-21799-1] c 37 N92-29150
- Accelerometer method and apparatus for integral display and control functions  
[NASA-CASE-MSC-21961-1] c 35 N92-29952
- Fingered bola body, bola with same, and methods of use  
[NASA-CASE-MSC-21967-1] c 37 N92-30026
- Polarization perception device  
[NASA-CASE-MSC-21915-1] c 74 N92-30027
- A method for making biocompatible polymer articles using atomic oxygen  
[NASA-CASE-MSC-21529-1] c 27 N92-30100
- Check valve with poppet damping mechanism  
[NASA-CASE-MSC-21903-1] c 37 N92-30101
- A space-time neural network for processing both spacial and temporal data  
[NASA-CASE-MSC-21874-1] c 63 N92-30314
- Space station trash removal system  
[NASA-CASE-MSC-21723-1] c 18 N92-30315
- Method and apparatus for preloading a joint by remotely operable means  
[NASA-CASE-MSC-21940-1] c 37 N92-30540
- Microporous structure with layered interstitial surface treatment, and method and apparatus for preparation thereof  
[NASA-CASE-MSC-21487-1] c 25 N92-33009
- Electromagnetic attachment mechanism  
[NASA-CASE-MSC-21463-1] c 37 N92-33018
- Purification system  
[NASA-CASE-MSC-21584-1] c 25 N92-33029
- Sharps container  
[NASA-CASE-MSC-21776-1] c 31 N92-33612
- Glove attachment  
[NASA-CASE-MSC-21632-1] c 54 N92-34210
- Three-dimensional co-culture process  
[NASA-CASE-MSC-21560-1] c 51 N92-34229
- Three-dimensional cell to tissue assembly process  
[NASA-CASE-MSC-21559-1] c 51 N92-34231
- High aspect reactor vessel and method of use  
[NASA-CASE-MSC-21662-1] c 51 N92-34232
- Check valve with poppet dashpot/frictional damping mechanism  
[NASA-CASE-MSC-21950-1] c 37 N92-34242
- Method for culturing mammalian cells in a perfused bioreactor  
[NASA-CASE-MSC-21293-2] c 51 N93-10109
- Method for culturing mammalian cells in a horizontally rotated bioreactor  
[NASA-CASE-MSC-21294-2] c 51 N93-10110
- Preloaded latching device  
[NASA-CASE-MSC-21730-1] c 37 N93-13417
- Fastening apparatus having shape memory alloy actuator  
[NASA-CASE-MSC-21935-1] c 37 N93-13423
- Thruster sealing system and apparatus  
[NASA-CASE-MSC-21898-1] c 37 N93-14702
- System for memorizing maximum values  
[NASA-CASE-MSC-21922-1] c 35 N93-14841
- Extra-vehicular activity translation tool  
[NASA-CASE-MSC-21955-1] c 37 N93-14842
- High-temperature, high-pressure oxygen metering valve  
[NASA-CASE-MSC-21823-1] c 37 N93-14843
- Bearing servicing tool  
[NASA-CASE-MSC-21881-1] c 37 N93-14871
- Kinetic tetrazolium microtiter assay  
[NASA-CASE-MSC-21979-1] c 51 N93-17049
- Measurand transient signal suppressor  
[NASA-CASE-MSC-22027-1] c 63 N93-17056



**C-29**

Recovery of potable water from human wastes in below-G conditions Patent					
[NASA-CASE-XLA-03213]	c 05	N71-11207			
Process for interfacial polymerization of pyromellitic dianhydride and 1,2,4, 5-tetraamino-benzene Patent					
[NASA-CASE-XLA-03104]	c 06	N71-11235			
Imidazopyrrolone/imide copolymers Patent					
[NASA-CASE-XLA-08802]	c 06	N71-11238			
Adaptive compression of communication signals Patent					
[NASA-CASE-XLA-03076]	c 07	N71-11266			
Reentry communication by material addition Patent					
[NASA-CASE-XLA-01552]	c 07	N71-11284			
Cooperative Doppler radar system Patent					
[NASA-CASE-LAR-10403]	c 21	N71-11766			
Supersonic aircraft Patent					
[NASA-CASE-XLA-04451]	c 02	N71-12243			
Umbilical disconnect Patent					
[NASA-CASE-XLA-00711]	c 03	N71-12258			
Remote controlled tubular disconnect Patent					
[NASA-CASE-XLA-01396]	c 03	N71-12259			
Backpack carrier Patent					
[NASA-CASE-LAR-10056]	c 05	N71-12351			
Optical communications system Patent					
[NASA-CASE-XLA-01090]	c 07	N71-12389			
Analog to digital converter Patent					
[NASA-CASE-XLA-00670]	c 08	N71-12501			
Integrated time shared instrumentation display Patent					
[NASA-CASE-XLA-01952]	c 08	N71-12507			
SCR blocking pulse gate amplifier Patent					
[NASA-CASE-XLA-07497]	c 09	N71-12514			
Minimum induced drag airfoil body Patent					
[NASA-CASE-XLA-00755]	c 01	N71-13410			
Minimum induced drag airfoil body Patent					
[NASA-CASE-XLA-05828]	c 01	N71-13411			
Mechanical stability augmentation system Patent					
[NASA-CASE-XLA-06339]	c 02	N71-13422			
Automatic balancing device Patent					
[NASA-CASE-LAR-10774]	c 10	N71-13545			
Quick release connector Patent					
[NASA-CASE-XLA-01141]	c 15	N71-13789			
Spacecraft experiment pointing and attitude control system Patent					
[NASA-CASE-XLA-05464]	c 21	N71-14132			
Pressurized cell micrometeoroid detector Patent					
[NASA-CASE-XLA-00936]	c 14	N71-14996			
Crossed-field MHD plasma generator/ accelerator Patent					
[NASA-CASE-XLA-03374]	c 25	N71-15562			
Adjustable attitude guide device Patent					
[NASA-CASE-XLA-07911]	c 15	N71-15571			
Control system for rocket vehicles Patent					
[NASA-CASE-XLA-01163]	c 21	N71-15582			
Excessive temperature warning system Patent					
[NASA-CASE-XLA-01926]	c 14	N71-15620			
Alleviation of divergence during rocket launch Patent					
[NASA-CASE-XLA-00256]	c 31	N71-15663			
Space capsule Patent					
[NASA-CASE-XLA-01332]	c 31	N71-15664			
Variable geometry manned orbital vehicle Patent					
[NASA-CASE-XLA-03691]	c 31	N71-15674			
Payload/burned-out motor case separation system Patent					
[NASA-CASE-XLA-05369]	c 31	N71-15687			
Velocity package Patent					
[NASA-CASE-XLA-01339]	c 31	N71-15692			
File card marker Patent					
[NASA-CASE-XLA-02705]	c 08	N71-15908			
Hypersonic test facility Patent					
[NASA-CASE-XLA-00378]	c 11	N71-15925			
Test unit free-flight suspension system Patent					
[NASA-CASE-XLA-00939]	c 11	N71-15926			
Reduced gravity simulator Patent					
[NASA-CASE-XLA-01787]	c 11	N71-16028			
Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent					
[NASA-CASE-XLA-00284]	c 15	N71-16075			
Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent					
[NASA-CASE-XLA-00302]	c 15	N71-16077			
Separator Patent					
[NASA-CASE-XLA-00415]	c 15	N71-16079			
Omnidirectional multiple impact landing system Patent					
[NASA-CASE-XLA-09881]	c 31	N71-16085			
Flexible ring slosh damping baffle Patent					
[NASA-CASE-LAR-10317-1]	c 32	N71-16103			
Buoyant anti-slosh system Patent					
[NASA-CASE-XLA-04605]	c 32	N71-16106			
Detector panels-micrometeoroid impact Patent					
[NASA-CASE-XLA-05906]	c 31	N71-16221			
Wind velocity probing device and method Patent					
[NASA-CASE-XLA-02081]	c 20	N71-16281			
Vibrating structure displacement measuring instrument Patent					
[NASA-CASE-XLA-03135]	c 32	N71-16428			
Viscous-pendulum-damper Patent					
[NASA-CASE-XLA-02079]	c 12	N71-16894			
Leak detector Patent					
[NASA-CASE-LAR-10323-1]	c 12	N71-17573			
Logic AND gate for fluid circuits Patent					
[NASA-CASE-XLA-07391]	c 12	N71-17579			
Contour surveying system Patent					
[NASA-CASE-XLA-08646]	c 14	N71-17586			
Cable arrangement for rigid tethering Patent					
[NASA-CASE-XLA-02332]	c 32	N71-17609			
Thermal pump-compressor for space use Patent					
[NASA-CASE-XLA-00377]	c 33	N71-17610			
Viscous pendulum damper Patent					
[NASA-CASE-LAR-10274-1]	c 14	N71-17626			
Self supporting space vehicle Patent					
[NASA-CASE-XLA-00117]	c 31	N71-17680			
Technique for control of free-flight rocket vehicles Patent					
[NASA-CASE-XLA-00937]	c 31	N71-17691			
Hydraulic grip Patent					
[NASA-CASE-XLA-05100]	c 15	N71-17696			
Heat protection apparatus Patent					
[NASA-CASE-XLA-00892]	c 33	N71-17897			
Thermopile vacuum gage tube simulator Patent					
[NASA-CASE-XLA-02758]	c 14	N71-18481			
Ionization vacuum gauge with all but the end of the ion collector shielded Patent					
[NASA-CASE-XLA-07424]	c 14	N71-18482			
Safe-arm initiator Patent					
[NASA-CASE-LAR-10372]	c 09	N71-18599			
Controlled glass bead peening Patent					
[NASA-CASE-XLA-07390]	c 15	N71-18616			
Exclusive-Or digital logic module Patent					
[NASA-CASE-XLA-07732]	c 08	N71-18751			
Slosh alleviator Patent					
[NASA-CASE-XLA-05749]	c 15	N71-19569			
G conditioning suit Patent					
[NASA-CASE-XLA-02898]	c 05	N71-20268			
Dosimeter for high levels of absorbed radiation Patent					
[NASA-CASE-XLA-03645]	c 14	N71-20430			
Flow field simulation Patent					
[NASA-CASE-LAR-11138]	c 12	N71-20436			
Variable pulse width multiplier Patent					
[NASA-CASE-XLA-02850]	c 09	N71-20447			
Means for measuring the electron density gradients of the plasma sheath formed around a space vehicle Patent					
[NASA-CASE-XLA-06232]	c 25	N71-20563			
Null device for hand controller Patent					
[NASA-CASE-XLA-01808]	c 15	N71-20740			
Event recorder Patent					
[NASA-CASE-XLA-01832]	c 14	N71-21006			
Inflatable support structure Patent					
[NASA-CASE-XLA-01731]	c 32	N71-21045			
Fast opening diaphragm Patent					
[NASA-CASE-XLA-03660]	c 15	N71-21060			
Ellipsograph for pantograph Patent					
[NASA-CASE-XLA-03102]	c 14	N71-21079			
Random function tracer Patent					
[NASA-CASE-XLA-01401]	c 15	N71-21179			
Method and apparatus for bonding a plastics sleeve onto a metallic body Patent					
[NASA-CASE-XLA-01262]	c 15	N71-21404			
Hypersonic test facility Patent					
[NASA-CASE-XLA-05378]	c 11	N71-21475			
Multilegged support system Patent					
[NASA-CASE-XLA-01328]	c 11	N71-21481			
Nacelle afterbody for jet engines Patent					
[NASA-CASE-XLA-10450]	c 28	N71-21493			
Canister closing device Patent					
[NASA-CASE-XLA-01446]	c 15	N71-21528			
Ablation sensor Patent					
[NASA-CASE-XLA-01794]	c 33	N71-21586			
Self-repeating plasma generator having communicating annular and linear arc discharge passages Patent					
[NASA-CASE-XLA-03103]	c 25	N71-21693			
Attitude control and damping system for spacecraft Patent					
[NASA-CASE-XLA-02551]	c 21	N71-21708			
Method of making inflatable honeycomb Patent					
[NASA-CASE-XLA-03492]	c 15	N71-22713			
Lunar penetrometer Patent					
[NASA-CASE-XLA-00934]	c 14	N71-22765			
Thermal control wall panel Patent					
[NASA-CASE-XLA-01243]	c 33	N71-22792			
Attitude sensor for space vehicles Patent					
[NASA-CASE-XLA-00793]	c 21	N71-22880			
Omnidirectional microwave spacecraft antenna Patent					
[NASA-CASE-XLA-03114]	c 09	N71-22888			
Thermal control panel Patent					
[NASA-CASE-XLA-07728]	c 33	N71-22890			
Spacecraft airlock Patent					
[NASA-CASE-XLA-02050]	c 31	N71-22968			
Station keeping of a gravity gradient stabilized satellite Patent					
[NASA-CASE-XLA-03132]	c 31	N71-22969			
Semi-linear ball bearing Patent					
[NASA-CASE-XLA-02809]	c 15	N71-22982			
Heat sensing instrument Patent					
[NASA-CASE-XLA-01551]	c 14	N71-22989			
Ablation sensor Patent					
[NASA-CASE-XLA-01791]	c 14	N71-22991			
Self-calibrating displacement transducer Patent					
[NASA-CASE-XLA-00781]	c 09	N71-22999			
Lateral displacement system for separated rocket stages Patent					
[NASA-CASE-XLA-04804]	c 31	N71-23008			
Thermal control coating Patent					
[NASA-CASE-XLA-01995]	c 18	N71-23047			
Method of making an inflatable panel Patent					
[NASA-CASE-XLA-03497]	c 15	N71-23052			
Variable duration pulse integrator Patent					
[NASA-CASE-XLA-01219]	c 10	N71-23084			
Impact energy absorber Patent					
[NASA-CASE-XLA-01530]	c 14	N71-23092			
Micrometeoroid penetration measuring device Patent					
[NASA-CASE-XLA-00941]	c 14	N71-23240			
Combined optical attitude and altitude indicating instrument Patent					
[NASA-CASE-XLA-01907]	c 14	N71-23268			
Solar sensor having coarse and fine sensing with matched preirradiated cells and method of selecting cells Patent					
[NASA-CASE-XLA-01584]	c 14	N71-23269			
Variable width pulse integrator Patent					
[NASA-CASE-XLA-03356]	c 10	N71-23315			
Leading edge curvature based on convective heating Patent					
[NASA-CASE-XLA-01486]	c 01	N71-23497			
Measurement of time differences between luminous events Patent					
[NASA-CASE-XLA-01987]	c 23	N71-23976			
Method for measuring the characteristics of a gas Patent					
[NASA-CASE-XLA-03375]	c 16	N71-24074			
Laser grating interferometer Patent					
[NASA-CASE-XLA-04295]	c 16	N71-24170			
Automatic fatigue test temperature programmer Patent					
[NASA-CASE-XLA-02059]	c 33	N71-24276			
Ring wing tension vehicle Patent					
[NASA-CASE-XLA-04901]	c 31	N71-24315			
Process for applying black coating to metals Patent					
[NASA-CASE-XLA-06199]	c 15	N71-24875			
Velocity limiting safety system Patent					
[NASA-CASE-XLA-07473]	c 15	N71-24895			
Strain coupled servo control system Patent					
[NASA-CASE-XLA-08530]	c 32	N71-25360			
Method of temperature compensating semiconductor strain gages Patent					
[NASA-CASE-XLA-04555-1]	c 14	N71-25892			
Method for improving the signal-to-noise ratio of the Wheatstone bridge type bolometer Patent					
[NASA-CASE-XLA-02810]	c 14	N71-25901			
Method of plating copper on aluminum Patent					
[NASA-CASE-XLA-08966-1]	c 17	N71-25903			
Laser calibrator Patent					
[NASA-CASE-XLA-03410]	c 16	N71-25914			
Thermal protection ablation spray system Patent					
[NASA-CASE-XLA-04251]	c 18	N71-26100			
Direct lift control system Patent					
[NASA-CASE-LAR-10249-1]	c 02	N71-26110			
Light shield and infrared reflector for fatigue testing Patent					
[NASA-CASE-XLA-01782]	c 14	N71-26136			
Dual resonant cavity absorption cell Patent					
[NASA-CASE-LAR-10305]	c 14	N71-26137			
Resilience testing device Patent					
[NASA-CASE-XLA-08254]	c 14	N71-26161			
Precipitation detector Patent					
[NASA-CASE-XLA-02619]	c 10	N71-26334			
Instrument for measuring the dynamic behavior of liquids Patent					
[NASA-CASE-XLA-05541]	c 12	N71-26387			
Arbitrarily shaped model survey system Patent					
[NASA-CASE-LAR-10098]	c 32	N71-26681			
Dielectric molding apparatus Patent					
[NASA-CASE-LAR-10121-1]	c 15	N71-26721			
Method of making a solid propellant rocket motor Patent					
[NASA-CASE-XLA-04126]	c 28	N71-26779			
Dynamic vibration absorber Patent					
[NASA-CASE-XLA-10083-1]	c 15	N71-27006			
Rate augmented digital to analog converter Patent					
[NASA-CASE-XLA-07828]	c 08	N71-27057			
High speed flight vehicle control Patent					
[NASA-CASE-XLA-08967]	c 02	N71-27088			
Suspended mass impact damper Patent					
[NASA-CASE-LAR-10193-1]	c 15	N71-27146			

Active vibration isolator for flexible bodies Patent [NASA-CASE-LAR-10106-1]	c 15	N71-27169	Variable angle tube holder [NASA-CASE-LAR-10507-1]	c 11	N72-25284	Lyophilized spore dispenser [NASA-CASE-LAR-10544-1]	c 37	N74-13178
Soldering device Patent [NASA-CASE-XLA-08911]	c 15	N71-27214	Low mass truss structure [NASA-CASE-LAR-10546-1]	c 11	N72-25287	Transmitting and reflecting diffuser [NASA-CASE-LAR-10385-2]	c 70	N74-13436
Fringe counter for interferometers Patent [NASA-CASE-LAR-10204]	c 14	N71-27215	Liquid waste feed system [NASA-CASE-LAR-10365-1]	c 05	N72-27102	Evacuated displacement compression molding [NASA-CASE-LAR-10782-1]	c 31	N74-14133
Wideband VCO with high phase stability Patent [NASA-CASE-XLA-03893]	c 10	N71-27271	Microcircuit negative cutter [NASA-CASE-XLA-09843]	c 15	N72-27485	Modification of one man life raft [NASA-CASE-LAR-10241-1]	c 54	N74-14845
Plural position switch status and operativeness checker Patent [NASA-CASE-XLA-08799]	c 10	N71-27272	Light regulator [NASA-CASE-LAR-10836-1]	c 26	N72-27784	Attitude sensor [NASA-CASE-LAR-10586-1]	c 19	N74-15089
Angular displacement indicating gas bearing support system Patent [NASA-CASE-XLA-09346]	c 15	N71-28740	Linear explosive comparison [NASA-CASE-LAR-10800-1]	c 33	N72-27959	Mossbauer spectrometer radiation detector [NASA-CASE-LAR-11155-1]	c 35	N74-15091
Solid state thermal control polymer coating Patent [NASA-CASE-XLA-01745]	c 33	N71-28903	Spherical measurement device [NASA-CASE-XLA-06683]	c 14	N72-28436	In situ transfer standard for ultrahigh vacuum gage calibration [NASA-CASE-LAR-10862-1]	c 35	N74-15092
Specialized halogen generator for purification of water Patent [NASA-CASE-XLA-08913]	c 14	N71-28933	Method of making semiconductor p-n junction stress and strain sensor [NASA-CASE-XLA-04980-2]	c 14	N72-28438	Dual measurement ablation sensor [NASA-CASE-LAR-10105-1]	c 34	N74-15652
Antenna design for surface wave suppression Patent [NASA-CASE-XLA-10772]	c 07	N71-28980	Screened circuit capacitors [NASA-CASE-LAR-10294-1]	c 26	N72-28762	Ejectable underwater sound source recovery assembly [NASA-CASE-LAR-10595-1]	c 35	N74-16135
Analog to digital converter tester Patent [NASA-CASE-XLA-06713]	c 14	N71-28991	Deposition apparatus [NASA-CASE-LAR-10541-1]	c 15	N72-32487	Wind tunnel model and method [NASA-CASE-LAR-10812-1]	c 09	N74-17955
Method of making pressurized panel Patent [NASA-CASE-XLA-08916]	c 15	N71-29018	Lift balancing device [NASA-CASE-LAR-10348-1]	c 11	N73-12264	High field CdS detector for infrared radiation [NASA-CASE-LAR-11027-1]	c 35	N74-18088
Maksutov spectrograph Patent [NASA-CASE-XLA-10402]	c 14	N71-29041	Air removal device [NASA-CASE-XLA-08914]	c 15	N73-12492	Method of fabricating an article with cavities [NASA-CASE-LAR-10318-1]	c 31	N74-18089
Two component bearing Patent [NASA-CASE-XLA-00013]	c 15	N71-29136	Nondestructive spot test method for titanium and titanium alloys [NASA-CASE-LAR-10539-1]	c 17	N73-12547	Apparatus for remote handling of materials [NASA-CASE-LAR-10634-1]	c 37	N74-18123
Digital pulse width selection circuit Patent [NASA-CASE-XLA-07788]	c 09	N71-29139	Logical function generator [NASA-CASE-XLA-05099]	c 09	N73-13209	Method for compression molding of thermosetting plastics utilizing a temperature gradient across the plastic to cure the article [NASA-CASE-LAR-10489-1]	c 31	N74-18124
Magnetically controlled plasma accelerator Patent [NASA-CASE-XLA-00327]	c 25	N71-29184	Ferry system [NASA-CASE-LAR-10574-1]	c 11	N73-13257	Method for determining thermo-physical properties of specimens [NASA-CASE-LAR-11053-1]	c 25	N74-18551
Boring bar drive mechanism Patent [NASA-CASE-XLA-03661]	c 15	N71-33518	Flow velocity and directional instrument [NASA-CASE-LAR-10855-1]	c 14	N73-13415	Anti-buckling fatigue test assembly [NASA-CASE-LAR-10426-1]	c 09	N74-19528
Wind tunnel model damper Patent [NASA-CASE-XLA-09480]	c 11	N71-33612	Vortex breech high pressure gas generator [NASA-CASE-LAR-10549-1]	c 31	N73-13898	Reefing system [NASA-CASE-LAR-10129-2]	c 37	N74-20063
Variable geometry rotor system [NASA-CASE-LAR-10557]	c 02	N72-11018	Butt welder for fine gauge tungsten/rhenium thermocouple wire [NASA-CASE-LAR-10103-1]	c 15	N73-14468	A synchronous binary array divider [NASA-CASE-ERC-10180-1]	c 60	N74-20836
Flared tube strainer [NASA-CASE-XLA-05056]	c 15	N72-11389	Method of detecting oxygen in a gas [NASA-CASE-LAR-10668-1]	c 06	N73-16106	Orbital and entry tracking accessory for globes [NASA-CASE-LAR-10626-1]	c 19	N74-21015
Impact measuring technique [NASA-CASE-LAR-10913]	c 14	N72-16282	Combustion detector [NASA-CASE-LAR-10739-1]	c 14	N73-16484	Digital controller for a Baum folding machine [NASA-CASE-LAR-10688-1]	c 37	N74-21056
Technique of duplicating fragile core [NASA-CASE-XLA-07829]	c 15	N72-16329	Laser communication system for controlling several functions at a location remote to the laser [NASA-CASE-LAR-10311-1]	c 16	N73-16536	Totally confined explosive welding [NASA-CASE-LAR-10941-1]	c 37	N74-21057
Tube fabricating process [NASA-CASE-LAR-10203-1]	c 15	N72-16330	Apparatus for photographing meteors [NASA-CASE-LAR-10226-1]	c 14	N73-19419	Method of fabricating an object with a thin wall having a precisely shaped slit [NASA-CASE-LAR-10409-1]	c 31	N74-21059
Air bearing [NASA-CASE-WLP-10002]	c 15	N72-17451	Zero gravity liquid mixer [NASA-CASE-LAR-10195-1]	c 15	N73-19458	Deployable pressurized cell structure for a micrometeoroid detector [NASA-CASE-LAR-10295-1]	c 35	N74-21062
Extensometer frame [NASA-CASE-XLA-10322]	c 15	N72-17452	Rate data encoder [NASA-CASE-LAR-10128-1]	c 08	N73-20217	Means for accommodating large overstrain in lead wires [NASA-CASE-LAR-10168-1]	c 33	N74-22865
Split range transducer [NASA-CASE-XLA-11189]	c 10	N72-20222	Function generator for synthesizing complex vibration mode patterns [NASA-CASE-LAR-10310-1]	c 10	N73-20253	Bonded joint and method [NASA-CASE-LAR-10900-1]	c 37	N74-23064
Stereo photomicrography system [NASA-CASE-LAR-10176-1]	c 14	N72-20380	Infrared horizon locator [NASA-CASE-LAR-10726-1]	c 14	N73-20475	Light shield and cooling apparatus [NASA-CASE-LAR-10089-1]	c 34	N74-23066
Radar calibration sphere [NASA-CASE-XLA-11154]	c 07	N72-21117	Light intensity strain analysis [NASA-CASE-LAR-10765-1]	c 32	N73-20740	Method of laminating structural members [NASA-CASE-XLA-11028-1]	c 24	N74-27035
Recorder using selective noise filter [NASA-CASE-ERC-10112]	c 07	N72-21119	Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds [NASA-CASE-LAR-10578-1]	c 12	N73-25262	Rocket having barium release system to create ion clouds in the upper atmosphere [NASA-CASE-LAR-10670-2]	c 15	N74-27360
Stacked array of omnidirectional antennas [NASA-CASE-LAR-10545-1]	c 09	N72-21244	Cable restraint [NASA-CASE-LAR-10129-1]	c 15	N73-25512	Apparatus for inserting and removing specimens from high temperature vacuum furnaces [NASA-CASE-LAR-10841-1]	c 31	N74-27900
Electro-mechanical sine/cosine generator [NASA-CASE-LAR-10503-1]	c 09	N72-21248	Electronic strain-level counter [NASA-CASE-LAR-10756-1]	c 32	N73-26910	Grinding arrangement for ball nose milling cutters [NASA-CASE-LAR-10450-1]	c 37	N74-27905
Lathe tool bit and holder for machining fiberglass materials [NASA-CASE-XLA-10470]	c 15	N72-21489	Nondestructive spot test method for magnesium and magnesium alloys [NASA-CASE-LAR-10953-1]	c 17	N73-27446	Method of repairing discontinuity in fiberglass structures [NASA-CASE-LAR-10416-1]	c 24	N74-30001
Pressure operated electrical switch responsive to a pressure decrease after a pressure increase [NASA-CASE-LAR-10137-1]	c 09	N72-22204	Ablation article and method [NASA-CASE-LAR-10439-1]	c 33	N73-27796	Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft [NASA-CASE-LAR-10753-1]	c 08	N74-30421
Variable geometry wind tunnels [NASA-CASE-XLA-07430]	c 11	N72-22246	Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds [NASA-CASE-LAR-10612-1]	c 12	N73-28144	Apparatus for applying simulator g-forces to an arm of an aircraft simulator pilot [NASA-CASE-LAR-10550-1]	c 09	N74-30597
Magnifying scratch gage force transducer [NASA-CASE-LAR-10496-1]	c 14	N72-22437	Pressurized panel [NASA-CASE-XLA-08916-2]	c 14	N73-28487	Centrifugal lyophobic separator [NASA-CASE-LAR-10194-1]	c 34	N74-30608
Star image motion compensator [NASA-CASE-LAR-10523-1]	c 14	N72-22444	Apparatus for aiding a pilot in avoiding a midair collision between aircraft [NASA-CASE-LAR-10717-1]	c 21	N73-30641	Variably positioned guide vanes for aerodynamic choking [NASA-CASE-LAR-10642-1]	c 07	N74-31270
Absolute focus lock for microscopes [NASA-CASE-LAR-10184]	c 14	N72-22445	Exposure interlock for oscilloscope cameras [NASA-CASE-LAR-10319-1]	c 14	N73-32322	Noise suppressor [NASA-CASE-LAR-11141-1]	c 07	N74-32418
Cryogenic feedthrough [NASA-CASE-LAR-10031]	c 15	N72-22484	Meteoroid detector [NASA-CASE-LAR-10483-1]	c 14	N73-32327	Measuring probe position recorder [NASA-CASE-LAR-10806-1]	c 35	N74-32877
A technique for breaking ice in the path of a ship [NASA-CASE-LAR-10815-1]	c 16	N72-22520	Lightweight, variable solidity knitted parachute fabric [NASA-CASE-LAR-10776-1]	c 02	N74-10034	Stagnation pressure probe [NASA-CASE-LAR-11139-1]	c 35	N74-32878
One hand backpack harness [NASA-CASE-LAR-10102-1]	c 05	N72-23085	Technique for extending the frequency range of digital dividers [NASA-CASE-LAR-10730-1]	c 33	N74-10223	Molding apparatus [NASA-CASE-LAR-10489-2]	c 31	N74-32920
Method and apparatus for mapping the sensitivity of the face of a photodetector specifically a PMT [NASA-CASE-LAR-10320-1]	c 09	N72-23172	Fluid pressure amplifier and system [NASA-CASE-LAR-10868-1]	c 33	N74-11050	Remote fire stack igniter [NASA-CASE-MFS-21675-1]	c 25	N74-33378
Omnidirectional slot antenna for mounting on cylindrical space vehicle [NASA-CASE-LAR-10163-1]	c 09	N72-25247	Method of making pressure tight seal for super alloy [NASA-CASE-LAR-10170-1]	c 37	N74-11301	Open tube guideway for high speed air cushioned vehicles [NASA-CASE-LAR-10256-1]	c 85	N74-34672
Hall effect transducer [NASA-CASE-LAR-10620-1]	c 09	N72-25255	System for calibrating pressure transducer [NASA-CASE-LAR-10910-1]	c 35	N74-13132			
Radio frequency filter device [NASA-CASE-XLA-02609]	c 09	N72-25256	Molding process for imidazopyrrolone polymers [NASA-CASE-LAR-10547-1]	c 31	N74-13177			
Parametric amplifiers with idler circuit feedback [NASA-CASE-LAR-10253-1]	c 09	N72-25258						

**C-32**

Heat treat fixture and method of heat treating	[NASA-CASE-LAR-11821-1]	c 26	N80-28492
Dual acting slit control mechanism	[NASA-CASE-LAR-11370-1]	c 35	N80-28686
Visible and infrared polarization ratio spectrophotometer	[NASA-CASE-LAR-12285-1]	c 35	N80-28687
Collapsible corrugated horn antenna	[NASA-CASE-LAR-11745-1]	c 32	N80-29539
Natural turbulence electrical power generator	[NASA-CASE-LAR-11551-1]	c 44	N80-29834
Partial interlaminar separation system for composites	[NASA-CASE-LAR-12065-1]	c 24	N81-14000
Method for preparing additive type polyimide prepregs	[NASA-CASE-LAR-12054-2]	c 27	N81-14078
Method and tool for machining a transverse slot about a bore	[NASA-CASE-LAR-11855-1]	c 37	N81-14319
Aerodynamic side-force alleviator means	[NASA-CASE-LAR-12326-1]	c 02	N81-14968
Compensating linkage for main rotor control	[NASA-CASE-LAR-11797-1]	c 05	N81-19087
Thrust augmented spin recovery device	[NASA-CASE-LAR-11970-2]	c 08	N81-19130
Velocity vector control system augmented with direct lift control	[NASA-CASE-LAR-12268-1]	c 08	N81-24106
Direction sensitive laser velocimeter	[NASA-CASE-LAR-12177-1]	c 36	N81-24422
Tire/wheel concept	[NASA-CASE-LAR-11695-2]	c 37	N81-24443
Lightweight structural columns	[NASA-CASE-LAR-12095-1]	c 31	N81-25258
Foldable beam	[NASA-CASE-LAR-12077-1]	c 31	N81-25259
Cooling system for high speed aircraft	[NASA-CASE-LAR-12406-1]	c 05	N81-26114
Pitch attitude stabilization system utilizing engine pressure ratio feedback signals	[NASA-CASE-LAR-12562-1]	c 08	N81-26152
Oribiter/launch system	[NASA-CASE-LAR-12250-1]	c 14	N81-26161
Adaptive polarization separation	[NASA-CASE-LAR-12196-1]	c 33	N81-26358
Telescoping columns	[NASA-CASE-LAR-12195-1]	c 31	N81-27324
Helmet weight simulator	[NASA-CASE-LAR-12320-1]	c 54	N81-27806
Indirect microbial detection	[NASA-CASE-LAR-12520-1]	c 51	N81-28698
Rim inertial measuring system	[NASA-CASE-LAR-12052-1]	c 18	N81-29152
Tackifier for addition polyimides containing monoethylphthalate	[NASA-CASE-LAR-12642-1]	c 27	N81-29229
Automated syringe sampler	[NASA-CASE-LAR-12308-1]	c 35	N81-29407
Method of making a partial interlaminar separation composite system	[NASA-CASE-LAR-12065-2]	c 24	N81-33235
Wind tunnel supplementary Mach number minimum section insert	[NASA-CASE-LAR-12532-1]	c 09	N82-11088
Aluminum ion-containing polyimide adhesives	[NASA-CASE-LAR-12640-1]	c 27	N82-11206
Small conductive particle sensor	[NASA-CASE-LAR-12552-1]	c 35	N82-11431
Large volume multiple-path nuclear pumped laser	[NASA-CASE-LAR-12592-1]	c 36	N82-13415
Moving body velocity arresting line	[NASA-CASE-LAR-12372-1]	c 37	N82-18601
Air removal device	[NASA-CASE-LAR-12372-1]	c 37	N82-18601
Metric half-span model support system	[NASA-CASE-LAR-12441-1]	c 09	N82-23254
Hydraulic actuator mechanism to control aircraft spoiler movements through dual input commands	[NASA-CASE-LAR-12412-1]	c 08	N82-24205
Image readout device with electronically variable spatial resolution	[NASA-CASE-LAR-12633-1]	c 33	N82-24416
Hot foil transducer skin friction sensor	[NASA-CASE-LAR-12321-1]	c 35	N82-24470
Continuous self-locking spiral wound seal	[NASA-CASE-LAR-12315-1]	c 37	N82-24490
Solar engine	[NASA-CASE-LAR-12148-1]	c 44	N82-24640
Fuselage structure using advanced technology fiber reinforced composites	[NASA-CASE-LAR-11688-1]	c 24	N82-26384
Electrically conductive palladium containing polyimide films	[NASA-CASE-LAR-12705-1]	c 25	N82-26396
Digital demodulator	[NASA-CASE-LAR-12659-1]	c 33	N82-26570
One-step dual purpose joining technique	[NASA-CASE-LAR-12595-1]	c 33	N82-26571
Liquid-immersible electrostatic ultrasonic transducer	[NASA-CASE-LAR-12465-1]	c 33	N82-26572
Film advance indicator	[NASA-CASE-LAR-12474-1]	c 35	N82-26628
Means for controlling aerodynamically induced twist	[NASA-CASE-LAR-12175-1]	c 05	N82-28279
Apparatus and process for microbial detection and enumeration	[NASA-CASE-LAR-12709-1]	c 35	N82-28604
Method for forming pyrrone molding powders and products of said method	[NASA-CASE-LAR-10423-1]	c 23	N82-29358
Acoustic tooth cleaner	[NASA-CASE-LAR-12471-1]	c 52	N82-29862
Pyroelectric detector arrays	[NASA-CASE-LAR-12363-1]	c 35	N82-31659
Decoupler pylon: wing/store flutter suppressor	[NASA-CASE-LAR-12468-1]	c 08	N82-32373
Multilayer thermal protection system	[NASA-CASE-LAR-12620-1]	c 24	N82-32417
Scanning afocal laser velocimeter projection lens system	[NASA-CASE-LAR-12328-1]	c 36	N82-32712
Mechanical end joint system for structural column elements	[NASA-CASE-LAR-12482-1]	c 37	N82-32732
Photocapacitive image converter	[NASA-CASE-LAR-12513-1]	c 44	N82-32841
Pulsed phase locked loop strain monitor	[NASA-CASE-LAR-12772-1]	c 33	N83-16626
Ampoule sealing apparatus and process	[NASA-CASE-LAR-12847-1]	c 33	N83-16633
Sound shield	[NASA-CASE-LAR-12883-1]	c 71	N83-17235
Modified spiral wound retaining ring	[NASA-CASE-LAR-12361-1]	c 37	N83-19091
Miniature spectrally selective dosimeter	[NASA-CASE-LAR-12469-1]	c 35	N83-21311
Aeroelastic instability stoppers for wind tunnel models	[NASA-CASE-LAR-12458-1]	c 44	N83-21503
Aeroelastic instability stoppers for wind tunnel models	[NASA-CASE-LAR-12720-1]	c 44	N83-21504
Pyroelectric detector arrays	[NASA-CASE-LAR-12363-2]	c 33	N83-24763
Elastomer toughened polyimide adhesives	[NASA-CASE-LAR-12775-1]	c 27	N83-28240
Solar driven liquid metal MHD power generator	[NASA-CASE-LAR-12495-1]	c 44	N83-28573
Stirling cycle cryogenic cooler	[US-PATENT-4,389,849]	c 44	N83-28574
Instrument for determining coincidence and elapse time between independent sources of random sequential events	[NASA-CASE-LAR-12531-1]	c 35	N83-29651
Flow resistivity instrument	[NASA-CASE-LAR-13053-1]	c 43	N83-29783
Vibration isolation and pressure compensation apparatus for sensitive instrumentation	[NASA-CASE-LAR-12728-1]	c 35	N83-32026
Fixture for environmental exposure of structural materials under compression load	[NASA-CASE-LAR-12602-1]	c 39	N83-32081
Polyphenylquinoxalines containing pendant phenylethynyl and ethynyl groups	[NASA-CASE-LAR-12838-1]	c 27	N83-34040
Solvent resistant thermoplastic aromatic poly(imidesulfone) and process for preparing same	[NASA-CASE-LAR-12858-1]	c 27	N83-34041
Heating and cooling system	[NASA-CASE-LAR-12393-1]	c 34	N83-34221
Variable anodic thermal control coating	[NASA-CASE-LAR-12719-1]	c 44	N83-34449
Explosively activated egress area	[NASA-CASE-LAR-12624-1]	c 01	N83-35992
Error correction method and apparatus for electronic timepieces	[NASA-CASE-LAR-12654-1]	c 33	N83-36357
Family of airfoil shapes for rotating blades	[NASA-CASE-LAR-12843-1]	c 02	N84-11136
Metal matrix composite structural panel construction	[NASA-CASE-LAR-12807-1]	c 24	N84-11214
Solar powered aircraft	[NASA-CASE-LAR-12615-1]	c 05	N84-12154
Low energy electron magnetometer using a monoenergetic electron beam	[NASA-CASE-LAR-12706-1]	c 35	N84-12444
Ride quality meter	[NASA-CASE-LAR-12882-1]	c 35	N84-12445
Vertical shaft windmill	[NASA-CASE-LAR-12923-1]	c 37	N84-12493
Magnetic heading reference	[NASA-CASE-LAR-12638-1]	c 04	N84-14132
Hot melt recharge system	[NASA-CASE-LAR-12881-1]	c 27	N84-14323
Self-correcting electronically scanned pressure sensor	[NASA-CASE-LAR-12686-1]	c 35	N84-14491
Apparatus and method for jet noise suppression	[NASA-CASE-LAR-11903-2]	c 71	N84-14873
Missile rolling tail brake torque system	[NASA-CASE-LAR-12751-1]	c 15	N84-16231
Rotary target V-block	[NASA-CASE-LAR-12007-3]	c 35	N84-16523
Solar pumped laser	[NASA-CASE-LAR-12870-1]	c 36	N84-16542
Powder fed sheared dispersal particle generator	[NASA-CASE-LAR-12785-1]	c 37	N84-16561
Slotted variable camber flap	[NASA-CASE-LAR-12541-1]	c 05	N84-22551
Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups	[NASA-CASE-LAR-12723-2]	c 27	N84-22746
Ethynyl and substituted ethynyl-terminated polysulfones	[NASA-CASE-LAR-12931-1]	c 27	N84-22747
Polyphenylene ethers with imide linking groups	[NASA-CASE-LAR-12980-1]	c 27	N84-22749
Ultrasonic transducer with Gaussian radial pressure distribution	[NASA-CASE-LAR-12967-1]	c 35	N84-22932
Acoustic ground impedance meter	[NASA-CASE-LAR-12995-1]	c 35	N84-22933
Photoelectrochemical cells including chalcogenophosphate photoelectrodes	[NASA-CASE-LAR-12958-1]	c 44	N84-23019
Heads up display	[NASA-CASE-LAR-12630-1]	c 06	N84-27733
Shell tile thermal protection system	[NASA-CASE-LAR-12862-1]	c 27	N84-27886
Strain gage calibration	[NASA-CASE-LAR-12743-1]	c 35	N84-28019
Directional gear ratio transmissions	[NASA-CASE-LAR-12644-1]	c 37	N84-28084
Tubing and cable cutting tool	[NASA-CASE-LAR-12786-1]	c 37	N84-28085
Radionuclide counting technique for measuring wind velocity and direction	[NASA-CASE-LAR-12971-1]	c 47	N84-28292
Medical clip	[NASA-CASE-LAR-12650-1]	c 52	N84-28388
Process of making medical clip	[NASA-CASE-LAR-12650-2]	c 52	N84-28389
Shapes for rotating airfoils	[NASA-CASE-LAR-12396-1]	c 02	N84-28732
A system for controlling the oxygen content of a gas produced by combustion	[NASA-CASE-LAR-13257-1]	c 25	N84-32447
Helicopter anti-torque system using strakes	[NASA-CASE-LAR-13233-1]	c 05	N84-33400
Curved cap corrugated sheet	[NASA-CASE-LAR-12884-1]	c 18	N84-33450
Model mount system for testing flutter	[NASA-CASE-LAR-12950-1]	c 09	N84-34448
Process for improving mechanical properties of epoxy resins by addition of cobalt ions	[NASA-CASE-LAR-12330-1]	c 24	N84-34571
Leading edge flap system for aircraft control augmentation	[NASA-CASE-LAR-12787-2]	c 08	N85-19985
Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups	[NASA-CASE-LAR-12723-1]	c 27	N85-20123
Process for preparing solvent resistant, thermoplastic aromatic poly(imidesulfone)	[NASA-CASE-LAR-12858-2]	c 27	N85-20124
Hot melt adhesive attachment pad	[NASA-CASE-LAR-12894-1]	c 27	N85-20125
Miniature electrooptical air flow sensor	[NASA-CASE-LAR-13065-1]	c 35	N85-20295
Extended moment arm anti-spin device	[NASA-CASE-LAR-12979-1]	c 05	N85-21147
Continuous laminar smoke generator	[NASA-CASE-LAR-13014-1]	c 09	N85-21178
Elastomer toughened polyimide adhesives	[NASA-CASE-LAR-12775-2]	c 27	N85-21349
Heat pipe cooled probe	[NASA-CASE-LAR-12588-1]	c 34	N85-21568
Reusable thermal cycling clamp	[NASA-CASE-LAR-12868-1]	c 37	N85-21651
Phenoxo resins containing pendant ethynyl groups and cured resins obtained therefrom	[NASA-CASE-LAR-13262-1]	c 23	N85-28973
Induction heating gun	[NASA-CASE-LAR-13181-1]	c 31	N85-29083
Daze fasteners	[NASA-CASE-LAR-13009-1]	c 37	N85-29285
Precision manipulator heating and cooling apparatus for use in UHV systems with sample transfer capability	[NASA-CASE-LAR-13040-1]	c 37	N85-29286
Dual differential interferometer	[NASA-CASE-LAR-12966-1]	c 35	N85-30282

- Mechanical fastener  
[NASA-CASE-LAR-12738-2] c 37 N85-30335
- Self-locking mechanical center joint  
[NASA-CASE-LAR-12864-1] c 37 N85-30336
- Method for thermal monitoring subcutaneous tissue  
[NASA-CASE-LAR-13028-1] c 52 N85-30618
- Method for determining the point of zero zeta potential of semiconductor  
[NASA-CASE-LAR-12893-1] c 76 N85-30923
- Process for improving moisture resistance of epoxy resins by addition of chromium ions  
[NASA-CASE-LAR-13226-1] c 27 N85-34282
- Tensile testing apparatus  
[NASA-CASE-LAR-13243-1] c 35 N85-34375
- Wingtip vortex propeller  
[NASA-CASE-LAR-13019-1] c 07 N85-35194
- Dual towline spin-recovery device  
[NASA-CASE-LAR-13076-1] c 08 N85-35200
- Technique for measuring gas conversion factors  
[NASA-CASE-LAR-13220-1] c 34 N86-12547
- Aerospace vehicle  
[NASA-CASE-LAR-13155-1] c 05 N86-19310
- Process of end-capping a polyimide system  
[NASA-CASE-LAR-13135-1] c 27 N86-19456
- Sequentially deployable maneuverable tetrahedral beam  
[NASA-CASE-LAR-13098-1] c 31 N86-19479
- High temperature polyimide film laminates and process for preparation thereof  
[NASA-CASE-LAR-13384-1] c 27 N86-20561
- Auto covariance computer  
[NASA-CASE-LAR-12968-1] c 60 N86-21154
- Ultrasonic angle beam standard reflector  
[NASA-CASE-LAR-13153-1] c 71 N86-21276
- Ethynyl and substituted ethynyl-terminated polysulfones  
[NASA-CASE-LAR-12931-2] c 27 N86-21675
- Drop foot corrective device  
[NASA-CASE-LAR-12259-2] c 54 N86-22112
- Poly(carbonate-mide) polymer  
[NASA-CASE-LAR-13292-1] c 27 N86-24841
- Synchronously deployable truss structure  
[NASA-CASE-LAR-13117-1] c 37 N86-25789
- Latching mechanism for deployable/re-stowable columns useful in satellite construction  
[NASA-CASE-LAR-13169-1] c 37 N86-25791
- Aircraft lifter  
[NASA-CASE-LAR-12518-1] c 06 N86-27280
- Sulfone-ester polymers containing pendent ethynyl groups  
[NASA-CASE-LAR-13316-1] c 27 N86-27450
- Optimized bolted joint  
[NASA-CASE-LAR-13250-1] c 37 N86-27630
- Process for preparing essentially colorless polyimide film containing phenoxy-linked diamines  
[NASA-CASE-LAR-13353-1] c 27 N86-29039
- Nebulization reflux concentrator  
[NASA-CASE-LAR-13254-1CU] c 35 N86-29174
- Long gain length solar pumped box laser  
[NASA-CASE-LAR-13256-1] c 36 N86-29204
- Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-31727
- Polyarylene ethers with improved properties  
[NASA-CASE-LAR-13555-1] c 23 N86-32526
- Remotely controllable mixing system  
[NASA-CASE-MFS-28153-1] c 31 N86-32589
- Two-axis, self-nulling skin friction balance  
[NASA-CASE-LAR-13294-1] c 35 N86-32696
- Deployable M-braced truss structure  
[NASA-CASE-LAR-13081-1] c 37 N86-32737
- Remote pivot decoupler pylon: Wing/store flutter suppressor  
[NASA-CASE-LAR-13173-1] c 05 N87-14314
- The 5-(4-Ethynylphenoxy) isophthalic chloride  
[NASA-CASE-LAR-13316-2] c 27 N87-14515
- Acetylene (ethynyl) terminated polyimide siloxane and process for preparation thereof  
[NASA-CASE-LAR-13318-1] c 27 N87-14516
- Double reference pulsed phase locked loop  
[NASA-CASE-LAR-13310-1] c 32 N87-14559
- Vibration-free Raman Doppler velocimeter  
[NASA-CASE-LAR-13268-1] c 35 N87-14669
- Geometries for roughness shapes in laminar flow  
[NASA-CASE-LAR-13255-1] c 02 N87-16793
- Over-the-wing propeller  
[NASA-CASE-LAR-13134-2] c 07 N87-16828
- Single frequency multitransmitter telemetry  
[NASA-CASE-LAR-13006-1] c 17 N87-16863
- Ethynyl terminated ester oligomers and polymers therefrom  
[NASA-CASE-LAR-13118-2] c 27 N87-16907
- Airplane automatic control force trimming device for asymmetric engine failures  
[NASA-CASE-LAR-13280-1] c 08 N87-20999
- Measurement apparatus and procedure for the determination of surface emissivities  
[NASA-CASE-LAR-13455-1] c 32 N87-21206
- Comparator with noise suppression  
[NASA-CASE-LAR-13151-1] c 33 N87-21235
- Acoustic guide for noise-transmission testing of aircraft  
[NASA-CASE-LAR-13111-1-CU] c 71 N87-21652
- Acoustic radiation stress measurement  
[NASA-CASE-LAR-13440-1] c 71 N87-21653
- Aircraft control position indicator  
[NASA-CASE-LAR-12984-1] c 06 N87-22678
- Polyenamines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-1-CU] c 27 N87-22847
- Process for crosslinking and extending conjugated diene-containing polymers  
[NASA-CASE-LAR-13452-1] c 27 N87-22848
- Daze fasteners  
[NASA-CASE-LAR-13009-2] c 37 N87-22976
- Apparatus and procedure to detect a liquid-solid interface during crystal growth in a bridgman furnace  
[NASA-CASE-LAR-13597-1-CU] c 25 N87-23713
- Rapid quantification of an internal property  
[NASA-CASE-LAR-13689-1-NP] c 35 N87-23941
- Adjustable mount for electro-optic transducers in an evacuated cryogenic system  
[NASA-CASE-LAR-13100-1] c 37 N87-23982
- Fully redundant mechanical release actuator  
[NASA-CASE-LAR-13198-1] c 37 N87-23983
- Polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-13633-1] c 27 N87-24575
- Airfoil flutter model suspension system  
[NASA-CASE-LAR-13522-1-SB] c 09 N87-25334
- Oxygen diffusion barrier coating  
[NASA-CASE-LAR-13474-1-SB] c 26 N87-25455
- Process for developing crystallinity in linear aromatic polyimides  
[NASA-CASE-LAR-13732-1] c 27 N87-25474
- Deployable geodesic truss structure  
[NASA-CASE-LAR-13113-1] c 31 N87-25492
- Miniature remote dead weight calibrator  
[NASA-CASE-LAR-13564-1] c 35 N87-25558
- Vapor fragrances  
[NASA-CASE-LAR-13680-1] c 35 N87-25561
- Preloaded space structural coupling joints  
[NASA-CASE-LAR-13489-1] c 18 N87-27713
- Lightweight piston  
[NASA-CASE-LAR-13150-1] c 24 N87-27742
- Semi-2-interpenetrating networks of high temperature systems  
[NASA-CASE-LAR-13450-1] c 27 N87-28657
- Flat-panel, full-color, electroluminescent display  
[NASA-CASE-LAR-13407-1] c 33 N87-28831
- Device for quick changeover between wind tunnel force and pressure testing  
[NASA-CASE-LAR-13512-1] c 35 N87-28884
- Mobile remote manipulator vehicle system  
[NASA-CASE-LAR-13393-1] c 54 N87-29118
- Procedure to prepare transparent silica gels  
[NASA-CASE-LAR-13476-1-CU] c 76 N87-29360
- Braille reading system  
[NASA-CASE-LAR-13306-1] c 82 N87-29372
- Space vehicle thermal rejection system  
[NASA-CASE-LAR-13738-1] c 18 N87-29586
- Elevated temperature aluminum alloys  
[NASA-CASE-LAR-13632-1] c 26 N87-29650
- Combined riblet and lebu drag reduction system  
[NASA-CASE-LAR-13286-1] c 02 N88-14071
- Lightning discharge protection rod  
[NASA-CASE-LAR-13470-1] c 03 N88-14083
- Tool and process for miniature explosive joining of tubes  
[NASA-CASE-LAR-13662-1] c 37 N88-14359
- Device for measuring hole elongation in a bolted joint  
[NASA-CASE-LAR-13453-1] c 37 N88-14361
- Polyether-polyester graft copolymer  
[NASA-CASE-LAR-13447-1] c 27 N88-18725
- Crossflow vorticity sensor  
[NASA-CASE-LAR-13436-1-CU] c 02 N88-23759
- Multi-body aircraft with an all-movable center fuselage actively controlling fuselage pressure drag  
[NASA-CASE-LAR-13511-1] c 05 N88-23765
- Helicopter anti-torque system using fuselage strakes  
[NASA-CASE-LAR-13630-1] c 08 N88-23809
- Space spider crane  
[NASA-CASE-LAR-13411-1-SB] c 18 N88-23828
- Arc lamp power supply using a voltage multiplier  
[NASA-CASE-LAR-13202-1] c 33 N88-23942
- Mining volume measurement system  
[NASA-CASE-LAR-13519-1] c 35 N88-23963
- Bearing-bypass material system test  
[NASA-CASE-LAR-13458-1] c 35 N88-23967
- Composite piston  
[NASA-CASE-LAR-13435-1] c 37 N88-23981
- Variable response load limiting device  
[NASA-CASE-LAR-12801-1] c 37 N88-23982
- Radio Frequency (RF) strain monitor  
[NASA-CASE-LAR-13705-1] c 39 N88-25011
- Phase length optical phase-locked-loop sensor  
[NASA-CASE-LAR-13387-1] c 74 N88-25302
- Method and device for determining heats of combustion of gaseous hydrocarbons  
[NASA-CASE-LAR-13528-1] c 25 N88-29002
- Ice detector  
[NASA-CASE-LAR-13776-1] c 35 N88-29149
- Liquid thickness gauge  
[NASA-CASE-LAR-13826-1] c 35 N88-29150
- Method of attaching strain gauges to various materials  
[NASA-CASE-LAR-13797-1] c 35 N88-30108
- Ultrasonic method and apparatus for determining crack opening load  
[NASA-CASE-LAR-13889-1] c 39 N88-30160
- Control surface actuator  
[NASA-CASE-LAR-12852-1] c 05 N89-11738
- Polyphenylquinoxalines via aromatic nucleophilic displacement  
[NASA-CASE-LAR-13988-1] c 23 N89-11814
- Method for laminar boundary layer transition visualization in flight  
[NASA-CASE-LAR-13554-1] c 02 N89-12551
- Polyenamines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-2-CU] c 23 N89-12667
- Cryogenic insulation system  
[NASA-CASE-LAR-13506-1] c 27 N89-12741
- Truss-core corrugation for compressive loads  
[NASA-CASE-LAR-13438-1] c 31 N89-12786
- Porous plug for reducing orifice induced pressure error in airfoils  
[NASA-CASE-LAR-13569-1] c 35 N89-12841
- Pultrusion die assembly  
[NASA-CASE-LAR-13719-1] c 37 N89-12867
- High lift, low pitching moment airfoils  
[NASA-CASE-LAR-13215-1] c 02 N89-14224
- Polyphenylquinoxalines containing alkylendioxy groups  
[NASA-CASE-LAR-13601-1-CU] c 27 N89-14337
- Frequency domain laser velocimeter signal processor  
[NASA-CASE-LAR-13552-1-CU] c 33 N89-14385
- Ultrasonic depth gauge for liquids under high pressure  
[NASA-CASE-LAR-13300-1-CU] c 35 N89-14407
- Pressure measuring probe  
[NASA-CASE-LAR-13853-1] c 35 N89-14423
- Method and system for monitoring and displaying engine performance parameters  
[NASA-CASE-LAR-14049-1] c 07 N89-23466
- Antenna surface contour control system  
[NASA-CASE-LAR-13798-1] c 32 N89-25363
- Aluminum alloy  
[NASA-CASE-LAR-13924-1-CU] c 26 N89-28621
- Almond test body  
[NASA-CASE-LAR-13747-1-CU] c 32 N89-28672
- Method and circuit for shaping laser output pulses  
[NASA-CASE-LAR-14203-1] c 36 N89-28817
- Novel polyimide compositions based on 4,4': Isophthaloyldiphthalic anhydride (IDPA)  
[NASA-CASE-LAR-14194-1] c 24 N90-15148
- Ignitability test method and apparatus  
[NASA-CASE-LAR-13996-1-SB] c 25 N90-15161
- Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14162-1] c 27 N90-15259
- A two-stage earth-to-orbit transport with translating oblique wings for booster recovery  
[NASA-CASE-LAR-14156-1] c 16 N90-16781
- Copolyimide with a combination of flexibilizing groups  
[NASA-CASE-LAR-13821-1] c 27 N90-16950
- Skin friction balance  
[NASA-CASE-LAR-13710-1] c 35 N90-17117
- Dual-fuel, dual-mode rocket engine  
[NASA-CASE-LAR-13773-1] c 20 N90-19298
- Method for maintaining precise suction strip porosities  
[NASA-CASE-LAR-13638-1] c 31 N90-19427
- Method and apparatus for detecting laminar flow separation and reattachment  
[NASA-CASE-LAR-13952-1-SB] c 34 N90-19534
- Compression pylon  
[NASA-CASE-LAR-13777-1] c 05 N90-20078
- Passive venting technique for shallow cavities  
[NASA-CASE-LAR-14031-1] c 05 N90-20079
- Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13734-1-CU] c 09 N90-20096
- Isotope exchange in oxide-containing catalyst  
[NASA-CASE-LAR-13542-2-SB] c 25 N90-20154
- Process for making a noble metal on tin oxide catalyst  
[NASA-CASE-LAR-13741-1-SB] c 25 N90-20180
- Electronic precipitator control  
[NASA-CASE-LAR-13273-2] c 33 N90-20320



- Reusable high-temperature heat pipes and heat pipe panels  
[NASA-CASE-LAR-13761-1] c 34 N90-20323
- Tensile film clamps and mounting block for the rheovibron and autovibron viscoelastometer  
[NASA-CASE-LAR-13696-1] c 37 N90-20409
- Bis(4-(3,4-dimethylenepyrrolidyl)-phenyl) methane  
[NASA-CASE-LAR-13965-1-CU] c 23 N90-21118
- Magneto acoustic emission apparatus for testing materials for embrittlement  
[NASA-CASE-LAR-13817-1] c 26 N90-21170
- Process for crosslinking methylene-containing aromatic polymers with ionizing radiation  
[NASA-CASE-LAR-13448-1] c 27 N90-21198
- Pressure rig for repetitive casting  
[NASA-CASE-LAR-14050-1] c 31 N90-21216
- Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-1-NP] c 52 N90-21519
- Impact tolerant material  
[NASA-CASE-LAR-12887-3] c 24 N90-21822
- Device for quickly sensing the amount of O<sub>2</sub> in a combustion product gas  
[NASA-CASE-LAR-13816-1] c 35 N90-22025
- Lightweight piston architecture  
[NASA-CASE-LAR-13926-1] c 37 N90-22042
- Earth-to-orbit vehicle providing a reusable orbital stage  
[NASA-CASE-LAR-13486-1] c 16 N90-22584
- Quantitative surface temperature measurement using two-color thermographic phosphors and video equipment  
[NASA-CASE-LAR-13740-1] c 35 N90-22770
- Actuated forebody strakes  
[NASA-CASE-LAR-13983-1] c 05 N90-23390
- Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-1-SB] c 25 N90-23517
- Nonintrusive method and apparatus for monitoring the cure of polymeric materials  
[NASA-CASE-LAR-13465-1] c 27 N90-23544
- Acetylene terminated aspartimides and resins therefrom  
[NASA-CASE-LAR-14188-1] c 27 N90-23545
- Process for lowering the dielectric constant of polyimides using diamine acid additives  
[NASA-CASE-LAR-13902-1] c 27 N90-23546
- Circumferential pressure probe  
[NASA-CASE-LAR-13775-1] c 35 N90-23706
- Miniaturization of flight deflection measurement system  
[NASA-CASE-LAR-13628-1] c 35 N90-23707
- Real-time simulation clock  
[NASA-CASE-LAR-14056-1] c 35 N90-23713
- Cable suspended windmill  
[NASA-CASE-LAR-13434-1] c 37 N90-23742
- Method of radiographic inspection of wooden members  
[NASA-CASE-LAR-13724-1] c 38 N90-23756
- Method and apparatus for determining optical absorption and emission characteristics of a crystal or non-crystalline fiber  
[NASA-CASE-LAR-13963-1] c 76 N90-24150
- Method of forming a multiple layer dielectric and a hot film sensor therewith  
[NASA-CASE-LAR-13678-1] c 76 N90-24168
- Seamless metal-clad fiber-reinforced organic matrix composite structures and process for their manufacture  
[NASA-CASE-LAR-13562-1] c 24 N90-25196
- Method of inseting predesigned disbond areas into composite laminates  
[NASA-CASE-LAR-13225-1] c 24 N90-25197
- A tough performance simultaneous semi-interpenetrating polymer network  
[NASA-CASE-LAR-14339-1] c 27 N90-26955
- Aromatic polyimides containing a dimethylsilane-linked dianhydride  
[NASA-CASE-LAR-14198-1] c 27 N90-26956
- Hydrodynamic skin-friction reduction  
[NASA-CASE-LAR-14078-1-CU] c 34 N90-27071
- Suspension mechanism and method  
[NASA-CASE-LAR-14142-1] c 37 N90-27116
- Polymer/riblet combination for hydrodynamic skin friction reduction  
[NASA-CASE-LAR-14271-1-CU] c 27 N91-13558
- Tissue simulating gel for medical research  
[NASA-CASE-LAR-14036-1] c 27 N91-13562
- Real-time dynamic holographic image storage device  
[NASA-CASE-LAR-13989-1] c 35 N91-13694
- Wingtip vortex turbine  
[NASA-CASE-LAR-14116-1] c 05 N91-14345
- Electro-optical spin measurement system  
[NASA-CASE-LAR-13629-1] c 09 N91-14356
- Method and apparatus for determining time, direction, and composition of impacting space particles  
[NASA-CASE-LAR-13392-1-CU] c 19 N91-14412
- Bis (4-(3,4-dimethylene-pyrrolidyl)-phenyl) methane  
[NASA-CASE-LAR-13965-2-CU] c 23 N91-14418
- N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14188-2] c 23 N91-14419
- Delamination test apparatus and method  
[NASA-CASE-LAR-13985-1] c 24 N91-14430
- Active control of boundary layer transition and turbulence  
[NASA-CASE-LAR-13532-1] c 34 N91-14562
- Thermal compensating mount  
[NASA-CASE-LAR-14207-1] c 35 N91-14590
- Mechanical end joint system for connecting structural column elements  
[NASA-CASE-LAR-14465-1] c 37 N91-14614
- Spiral lead platen robotic end effector  
[NASA-CASE-LAR-13855-1] c 37 N91-14615
- Continuous fiber thermoplastic prepreg  
[NASA-CASE-LAR-14459-1] c 24 N91-15334
- Processable polyimide adhesive and matrix composite resin  
[NASA-CASE-LAR-14101-1] c 27 N91-15403
- Clevis joint for deployable space structures  
[NASA-CASE-LAR-13898-1] c 37 N91-15544
- Torsional suspension system for testing space structures  
[NASA-CASE-LAR-14149-1-SB] c 14 N91-21176
- Catalyst for carbon monoxide oxidation  
[NASA-CASE-LAR-14155-2-SB] c 25 N91-21270
- Heat tube device  
[NASA-CASE-LAR-13951-1-CU] c 34 N91-21473
- Single element magnetic suspension actuator  
[NASA-CASE-LAR-13981-1] c 37 N91-21539
- Mechanical strain isolator mount  
[NASA-CASE-LAR-13580-1] c 37 N91-21541
- Permanent magnet flux-biased magnetic actuator with flux feedback  
[NASA-CASE-LAR-13785-1] c 70 N91-21824
- Enhanced single layer multi-color or luminescent display with coactivators  
[NASA-CASE-LAR-14181-1] c 76 N91-21911
- Passive laminar flow control of crossflow vorticity  
[NASA-CASE-LAR-13563-1] c 34 N91-23410
- Process for the manufacture of seamless metal-clad fiber-reinforced organic matrix composite structures  
[NASA-CASE-LAR-13562-2] c 24 N91-25199
- Preparing composite materials from matrices of processable aromatic polyimide thermoplastic blends  
[NASA-CASE-LAR-14107-1] c 24 N91-25200
- Synchronous strobe apparatus for flow visualization  
[NASA-CASE-LAR-14556-1] c 36 N91-25392
- Selectable towline spin chute system  
[NASA-CASE-LAR-14322-1] c 02 N91-27139
- Passive venting technique for shallow cavities  
[NASA-CASE-LAR-13875-1] c 05 N91-27156
- Synchronously deployable double fold beam and planar truss structure  
[NASA-CASE-LAR-13490-1] c 18 N91-27199
- Low dielectric fluorinated poly(phenylene ether ketone) film and coating  
[NASA-CASE-LAR-13992-1-CU] c 23 N91-27220
- Wet spinning of solid polyamic acid fibers  
[NASA-CASE-LAR-14489-1] c 37 N91-27562
- Sound attenuation apparatus  
[NASA-CASE-LAR-13968-1] c 71 N91-27913
- Method and apparatus for characterizing reflected ultrasonic pulses  
[NASA-CASE-LAR-13966-1] c 71 N91-27914
- Slow positron beam generator for lifetime studies  
[NASA-CASE-LAR-14250-1-SB] c 72 N91-27936
- Improved method and apparatus for Mach number change in wind tunnel  
[NASA-CASE-LAR-13548-1] c 09 N91-28175
- Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N91-28184
- Method of preforming and assembling superconducting circuit elements  
[NASA-CASE-LAR-14395-1-CU] c 33 N91-28490
- Airplane takeoff and landing performance monitoring system  
[NASA-CASE-LAR-13854-1-CU] c 04 N91-31120
- Rotatable non-circular forebody flow controller  
[NASA-CASE-LAR-14212-1-CU] c 05 N91-31140
- Ethynyl terminated imidothioethers and resins therefrom  
[NASA-CASE-LAR-13910-2-CU] c 27 N91-31307
- Apparatus and method for explosive bonding to edge of flyer plate  
[NASA-CASE-LAR-14096-1] c 31 N91-31476
- Method and apparatus for detecting laminar flow separation and reattachment  
[NASA-CASE-LAR-13952-2-SB] c 34 N91-31596
- Single layer multi-color luminescent display  
[NASA-CASE-LAR-13616-1] c 74 N91-31950
- Ignitability test method and apparatus  
[NASA-CASE-LAR-14454-1] c 25 N91-32196
- Shuttle orbiter with telescoping main propulsion unit and payload  
[NASA-CASE-LAR-13586-1] c 16 N92-10035
- Poly 1, 2, 4-triazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14440-1] c 23 N92-10066
- Process for application of powder particles to filamentary materials  
[NASA-CASE-LAR-14231-1] c 24 N92-10070
- A process for preparing 1,3-diamino-5-pentafluorosulfanybenzene and polymers therefrom  
[NASA-CASE-LAR-14773-1-CU] c 27 N92-10105
- Dual strain gage balance system for measuring light loads  
[NASA-CASE-LAR-14419-1] c 35 N92-10185
- A process for preparing an assembly of an article and a polyimide which resists dimensional change, delamination, and debonding when exposed to changes in temperature  
[NASA-CASE-LAR-14538-1] c 27 N92-11201
- Schlieren system for visualizing the flow within a pipe of circular cross-section  
[NASA-CASE-LAR-13944-1] c 35 N92-11336
- Method of recertifying a loaded bearing member using a phase point  
[NASA-CASE-LAR-14741-1] c 39 N92-11384
- Rapidly quantifying the relative distention of a human bladder  
[NASA-CASE-LAR-13901-2] c 52 N92-11621
- A process for preparing an assembly of an article and a soluble polyimide which resists dimensional change, delamination, and debonding when exposed to changes in temperature  
[NASA-CASE-LAR-14763-1] c 27 N92-12121
- Processing for maximizing the level of crystallinity in linear aromatic polyimides  
[NASA-CASE-LAR-14481-1] c 25 N92-16043
- Permanent wire splicing by an explosive joining process  
[NASA-CASE-LAR-13825-1] c 31 N92-16162
- Birefringent filter design  
[NASA-CASE-LAR-13887-1] c 36 N92-16290
- Polyimides containing amide and perfluoroisopropyl connecting groups  
[NASA-CASE-LAR-14608-1] c 27 N92-17676
- Substantially oxygen-free contact tube  
[NASA-CASE-LAR-14169-1] c 37 N92-17677
- A method and apparatus for indicating disbands in joint regions  
[NASA-CASE-LAR-14626-1] c 38 N92-17859
- Passive control of pressure loads using porosity  
[NASA-CASE-LAR-14547-1] c 34 N92-17909
- Water cooled static pressure probe  
[NASA-CASE-LAR-14340-1-CU] c 35 N92-21586
- Serrated trailing edges for improving lift and drag characteristics of lifting surfaces  
[NASA-CASE-LAR-13870-1-CU] c 05 N92-21587
- Multi-colored layers for visualizing aerodynamic flow effects  
[NASA-CASE-LAR-13742-1] c 02 N92-21588
- Thermal remote anemometer system  
[NASA-CASE-LAR-13508-1] c 35 N92-21710
- Semi-interpenetrating polymer network for tougher and more microcracking resistant high temperature polymers  
[NASA-CASE-LAR-13925-1] c 27 N92-21711
- Tough, high performance, addition-type thermoplastic polymers  
[NASA-CASE-LAR-14346-1] c 27 N92-22044
- Natural flow wing  
[NASA-CASE-LAR-14281-1] c 02 N92-28729
- Polyimideazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14145-1] c 27 N92-28751
- Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-1] c 34 N92-28752
- Method and apparatus for using magneto-acoustic remanence to determine embrittlement  
[NASA-CASE-LAR-13817-5] c 39 N92-28757
- Pressure transducer and system for cryogenic environments  
[NASA-CASE-LAR-14579-1] c 35 N92-29097
- Magnetic remanence method and apparatus to test materials for embrittlement  
[NASA-CASE-LAR-13817-4] c 39 N92-29101
- Non-mechanical optical path switching and its application to dual beam spectroscopy including gas filter correlation radiometry  
[NASA-CASE-LAR-14588-1-CU] c 74 N92-29117
- Poly(1,3,4-oxadiazoles) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14427-1] c 23 N92-29141
- Magneto acoustic emission method for testing materials for embrittlement  
[NASA-CASE-LAR-13817-2] c 39 N92-29155
- Polyimide processing additives  
[NASA-CASE-LAR-13669-1] c 27 N92-29157
- Single layer multi-color luminescent display and method of making  
[NASA-CASE-LAR-13616-3] c 74 N92-29158

Method and apparatus for thermographically and quantitatively analyzing a structure for disbands and/or inclusions  
[NASA-CASE-LAR-14559-1] c 38 N92-29829

Aerodynamic design optimization using sensitivity analysis and computational fluid dynamics  
[NASA-CASE-LAR-14815-1-CU] c 34 N92-29830

Multiresponse imager and imaging process for improved resolution  
[NASA-CASE-LAR-14779-1] c 74 N92-29951

Polybenzimidazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14643-1] c 27 N92-29953

Active thermal isolation for temperature responsive sensors  
[NASA-CASE-LAR-14612-1] c 34 N92-29954

Heat exchanger with oscillating flow  
[NASA-CASE-LAR-14033-2] c 34 N92-30024

Combined load test apparatus for flat panels  
[NASA-CASE-LAR-14698-1] c 39 N92-30028

Optical fiber sensor having an active core  
[NASA-CASE-LAR-14607-1SB] c 74 N92-30029

Calibration apparatus for recess mounted pressure transducers  
[NASA-CASE-LAR-14724-1] c 35 N92-30030

Shaft mount for data coupler system  
[NASA-CASE-LAR-13805-1] c 37 N92-30097

Converting a CO<sub>2</sub> atmosphere to a high-purity O<sub>2</sub> supply  
[NASA-CASE-LAR-14398-1] c 25 N92-30098

Apparatus for elevated temperature compression or tension testing of specimens  
[NASA-CASE-LAR-14775-1] c 39 N92-30099

Storage control system  
[NASA-CASE-LAR-14651-1] c 82 N92-30386

Control and augmentation of passive porosity through transpiration control  
[NASA-CASE-LAR-14682-1] c 34 N92-30387

Method for remotely powering a device such as a lunar rover  
[NASA-CASE-LAR-14789-1] c 37 N92-30388

A method of making a single layer multi-color luminescent display  
[NASA-CASE-LAR-14811-1] c 33 N92-30389

Printer port interface  
[NASA-CASE-LAR-13950-1] c 60 N92-30541

Flexible heating head for induction heating apparatus and method  
[NASA-CASE-LAR-14679-2] c 32 N92-31150

Flexible heating head for induction heating apparatus and method  
[NASA-CASE-LAR-14418-1] c 32 N92-31257

Method and circuit for controlling the evolution time interval of a laser output pulse  
[NASA-CASE-LAR-13772-1] c 36 N92-31788

Imide/arylene ether copolymers  
[NASA-CASE-LAR-14159-1-CU] c 27 N92-31792

Polyimides with carbonyl and ether connecting groups between the aromatic rings  
[NASA-CASE-LAR-14001-1] c 27 N92-33008

Integrated launch and emergency vehicle system  
[NASA-CASE-LAR-13780-1] c 18 N92-33013

Polyimide molding powder, coating, adhesive, and matrix resin  
[NASA-CASE-LAR-14163-1] c 27 N92-33014

Methyl substituted polyimides containing carbonyl and ether connecting groups  
[NASA-CASE-LAR-14351-1] c 27 N92-33015

Passive fetal monitoring sensor  
[NASA-CASE-LAR-14088-1-CU] c 35 N92-33016

High temperature fiber optic microphone having a pressure-sensing reflective membrane under tensile stress  
[NASA-CASE-LAR-14402-1-CU] c 74 N92-33017

Flush mounting of thin film sensors  
[NASA-CASE-LAR-14446-1] c 31 N92-33020

Vacuum-isolation vessel and method for measurement of thermal noise in microphones  
[NASA-CASE-LAR-14567-1-CU] c 33 N92-33021

Noncircular rolling joints for vibrational reduction in slewing maneuvers  
[NASA-CASE-LAR-14515-1-CU] c 37 N92-33031

Acoustophoresis method and apparatus  
[NASA-CASE-LAR-13388-1] c 25 N92-33611

Vaporizing particle velocimeter  
[NASA-CASE-LAR-14685-1] c 02 N92-34172

Linear mass actuator  
[NASA-CASE-LAR-14352-1] c 37 N92-34173

Method of recertifying a loaded bearing member  
[NASA-CASE-LAR-14168-1] c 39 N92-34174

Counter-balanced, multiple cable construction crane  
[NASA-CASE-LAR-14565-1-CU] c 37 N92-34212

Pilot-pressure probe for measuring pressure in a hypersonic wind tunnel  
[NASA-CASE-LAR-14232-1] c 09 N92-34213

Low pressure process for continuous fiber reinforced polyamic acid resin matrix composite laminates  
[NASA-CASE-LAR-14954-1] c 24 N92-34214

Method of remotely characterizing thermal properties of a sample  
[NASA-CASE-LAR-13508-3-CU] c 09 N92-11057

Semi-interpenetrating polymer network for tougher and more microcracking resistant high temperature polymers  
[NASA-CASE-LAR-13925-2] c 27 N92-11059

Boundary layer relaminarization device  
[NASA-CASE-LAR-14470-1] c 02 N92-11876

Multi-layer light-weight protective coating and method for application  
[NASA-CASE-LAR-14448-1] c 27 N92-11912

Method and apparatus for evaluating multilayer objects for imperfections  
[NASA-CASE-LAR-14581-1-SB] c 38 N92-12204

Compensated high temperature strain gage  
[NASA-CASE-LAR-14776-1] c 35 N92-12205

A tough high performance composite matrix  
[NASA-CASE-LAR-14338-1] c 24 N92-13416

Method and apparatus for minimizing multiple degree of freedom vibration transmission between two regions of a structure  
[NASA-CASE-LAR-14508-1-CU] c 39 N92-13420

Method of characterizing residual stress in ferromagnetic materials using a pulse histogram of acoustic emission signals  
[NASA-CASE-LAR-14239-1] c 26 N92-14705

Low toxicity high temperature PMR polyimide  
[NASA-CASE-LAR-14639-1] c 27 N92-14709

Method of forming a multiple layer dielectric and a hot film sensor therewith  
[NASA-CASE-LAR-13678-3] c 35 N92-14714

System for determining the angle of impact of an object on a structure  
[NASA-CASE-LAR-14817-1] c 35 N92-17041

Rapid detection and quantification of features such as damage or flaws in composite and metallic structures  
[NASA-CASE-LAR-14850-1-CU] c 38 N92-17048

An interferometer having fused optical fibers, and apparatus and method using the interferometer  
[NASA-CASE-LAR-14640-1-CU] c 74 N92-17052

Performance of blasting caps  
[NASA-CASE-LAR-13832-1] c 28 N92-18274

Reflection type skin friction meter  
[NASA-CASE-LAR-14520-1-SB] c 02 N92-18275

Poly(1,2,4-triazole) via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14440-1] c 23 N92-18283

Integral fill yarn insertion and beatup method using inflatable membrane  
[NASA-CASE-LAR-14046-1] c 31 N92-18857

Stall departure resistance enhancer  
[NASA-CASE-LAR-14221-1] c 06 N92-19023

Numerical control fabrication technique for dynamic composite models  
[NASA-CASE-LAR-14004-1] c 63 N92-19024

Method and apparatus for three dimensional braiding  
[NASA-CASE-LAR-14047-1] c 31 N92-19038

Process for applying a superconductive powder to a wide variety of substrates  
[NASA-CASE-LAR-14729-1-CU] c 33 N92-19051

Fault-tolerant fiber optic backplane  
[NASA-CASE-LAR-14785-1] c 74 N92-19052

Underwing compression vortex attenuation device  
[NASA-CASE-LAR-14744-1] c 02 N92-19053

High temperature polymer from maleimide-acetylene terminated monomers  
[NASA-CASE-LAR-14475-1] c 27 N92-19327

Flow rate logging seepage meter  
[NASA-CASE-LAR-14835-1] c 35 N92-19328

High speed thin plate fatigue crack monitor  
[NASA-CASE-LAR-14816-1-SB] c 39 N92-19329

Method and apparatus for detection and control of preloading in a Q-switched laser  
[NASA-CASE-LAR-14790-1] c 36 N92-19373

Optical fiber strain sensor with improved linearity  
[NASA-CASE-LAR-14857-1-SB] c 74 N92-19374

Crosslinked polyimides prepared from N-(3-ethynylphenyl)maleimide  
[NASA-CASE-LAR-14774-1] c 27 N92-19388

Discrete optical fiber strain sensor  
[NASA-CASE-LAR-14810-1-SB] c 35 N92-19492

Multiple layer dielectrics, hot film sensors, and methods of producing same  
[NASA-CASE-LAR-14591-1] c 35 N92-19493

Apparatus and method for improving spin recovery on aircraft  
[NASA-CASE-LAR-14747-1] c 08 N92-20039

Improved ceramic slip casting technique  
[NASA-CASE-LAR-14471-1] c 27 N92-20041

Shuttle orbiter with telescoping main propulsion unit and payload  
[NASA-CASE-LAR-13586-1] c 16 N92-20115

A method of making a single layer multi-color luminescent display  
[NASA-CASE-LAR-14811-1] c 33 N92-20119

Imide/arylene ether copolymers containing phosphine oxide groups  
[NASA-CASE-LAR-14925-1] c 27 N92-20567

System for determining the angle of impact of an object on a structure  
[NASA-CASE-LAR-14817-1] c 35 N92-20569

Acoustophoresis separation method  
[NASA-CASE-LAR-13388-2] c 25 N92-20570

Optical fiber fluorosensor  
[NASA-CASE-LAR-14525-1-CU] c 74 N92-22008

Swept wing attachment line contamination fence  
[NASA-CASE-LAR-13400-1] c 02 N92-22015

Polyimide from bis(isoprenyl)s of aryl diamides  
[NASA-CASE-LAR-14330-2-CU] c 27 N92-22033

Method and apparatus for cleaning rubber deposits from airport runways and roadways  
[NASA-CASE-LAR-14483-1] c 31 N92-22035

Off-surface infrared flow visualization  
[NASA-CASE-LAR-14568-1] c 74 N92-22037

Transversely polarized source cladding for an optical fiber  
[NASA-CASE-LAR-14652-1-SB] c 74 N92-22039

Blind fastening apparatus  
[NASA-CASE-LAR-14542-1] c 37 N92-22384

Polybenzoxazoles via aromatic nucleophilic displacement  
[NASA-CASE-LAR-14606-1-CU] c 23 N92-23077

Continuous fiber thermoplastic prepreg  
[NASA-CASE-LAR-14459-1] c 24 N92-24597

Suspension device for low-frequency structures  
[NASA-CASE-LAR-14272-1-CU] c 14 N92-24598

Fiber optic microphone having a pressure sensing reflective membrane and a voltage source for calibration purpose  
[NASA-CASE-LAR-14402-2-CU] c 71 N92-24602

Process for bonding elastomers to metals  
[NASA-CASE-LAR-13645-1] c 27 N92-25995

Nozzle diffuser for use with an open test section of a wind tunnel  
[NASA-CASE-LAR-14424-1-SB] c 09 N92-25996

Polyimides with improved compression moldability  
[NASA-CASE-LAR-14457-1] c 27 N92-25997

Helicopter low-speed yaw control  
[NASA-CASE-LAR-14219-1] c 08 N92-25998

Polyimides containing the cyclobutene-3,4-dione moiety  
[NASA-CASE-LAR-14753-1] c 27 N92-25999

Method of measuring cross-flow vortices by use of an array of hot-film sensors  
[NASA-CASE-LAR-14824-1-SB] c 34 N92-26000

Vacuum powder injector and method of impregnating fiber with powder  
[NASA-CASE-LAR-14179-1] c 31 N92-26101

Methods of determining loads and fiber orientations in anisotropic non-crystalline materials using energy flux deviation  
[NASA-CASE-LAR-14399-1] c 39 N92-26102

Method of encouraging attention by correlating video game difficulty with attention level  
[NASA-CASE-LAR-15022-1] c 53 N92-28128

Polyimides prepared from 3,5-diamino benzo trifluoride  
[NASA-CASE-LAR-14206-1] c 27 N92-29083

Constant frequency pulsed phase-locked loop measuring device  
[NASA-CASE-LAR-13823-1] c 35 N92-29084

Diphenylmethane-containing dianhydride and polyimides prepared therefrom  
[NASA-CASE-LAR-14487-1] c 27 N92-29085

Heating head for induction heating apparatus  
[NASA-CASE-LAR-14429-1] c 33 N92-29173

Single acting translation/rotational brake  
[NASA-CASE-LAR-14738-1] c 37 N92-29175

Process to prepare 1,3-diamino-5-pentafluorosulfanybenzene  
[NASA-CASE-LAR-14773-2-CU] c 25 N92-29506

Method and apparatus for weaving a woven angle ply fabric  
[NASA-CASE-LAR-14048-1] c 31 N92-29611

Method of continuously determining crack length  
[NASA-CASE-LAR-14480-1-CU] c 39 N92-29612

Shear sensitive monomer-polymer laminate structure and method of using same  
[NASA-CASE-LAR-14654-1-CU] c 39 N92-29613

A quality monitor and monitoring technique employing optically stimulated electron emission  
[NASA-CASE-LAR-15063-1] c 38 N92-30414

Reusable cryogenic liquid rocket propellant tank  
[NASA-CASE-LAR-14172-1] c 20 N92-31295

Two-stage gas measurement system  
[NASA-CASE-LAR-14791-1] c 35 N92-31297

Phenylethynyl endcapping reagents and reactive diluents  
[NASA-CASE-LAR-14796-1] c 25 N92-31459

[NASA-CASE-XLE-05130]	c 15	N69-21362
Fluid jet amplifier		
[NASA-CASE-XLE-03512]	c 12	N69-21466
Electrode and insulator with shielded dielectric junction		
[NASA-CASE-XLE-03778]	c 09	N69-21542
Thin window, drifted silicon, charged particle detector		
[NASA-CASE-XLE-10529]	c 14	N69-23191
Probes having ring and primary sensor at same potential to prevent collection of stray wall currents in ionized gases		
[NASA-CASE-XLE-00690]	c 25	N69-39884
Ion thruster cathode		
[NASA-CASE-XLE-07087]	c 06	N69-39889
Superconducting alternator		
[NASA-CASE-XLE-02824]	c 03	N69-39890
Triode thermionic energy converter		
[NASA-CASE-XLE-01015]	c 03	N69-39898
Slug flow magnetohydrodynamic generator		
[NASA-CASE-XLE-02083]	c 03	N69-39983
Reduced gravity liquid configuration simulator		
[NASA-CASE-XLE-02624]	c 12	N69-39988
Transpiration cooled turbine blade manufactured from wires Patent		
[NASA-CASE-XLE-00020]	c 15	N70-33226
Rocket propellant injector Patent		
[NASA-CASE-XLE-00103]	c 28	N70-33241
Modification and improvements to cooled blades Patent		
[NASA-CASE-XLE-00092]	c 15	N70-33264
Colloid propulsion method and apparatus Patent		
[NASA-CASE-XLE-00817]	c 28	N70-33265
High-vacuum condenser tank for ion rocket tests Patent		
[NASA-CASE-XLE-00168]	c 11	N70-33278
High temperature nickel-base alloy Patent		
[NASA-CASE-XLE-00151]	c 17	N70-33283
Annular rocket motor and nozzle configuration Patent		
[NASA-CASE-XLE-00078]	c 28	N70-33284
Reinforced metallic composites Patent		
[NASA-CASE-XLE-02428]	c 17	N70-33288
Process for applying a protective coating for salt bath brazing Patent		
[NASA-CASE-XLE-00046]	c 15	N70-33311
Wire grid forming apparatus Patent		
[NASA-CASE-XLE-00023]	c 15	N70-33330
Electro-thermal rocket Patent		
[NASA-CASE-XLE-00267]	c 28	N70-33356
External liquid-spray cooling of turbine blades Patent		
[NASA-CASE-XLE-00037]	c 28	N70-33372
Apparatus for igniting solid propellants Patent		
[NASA-CASE-XLE-00207]	c 28	N70-33375
Flexible seal for valves Patent		
[NASA-CASE-XLE-00101]	c 15	N70-33376
Apparatus for making a metal slurry product Patent		
[NASA-CASE-XLE-00010]	c 15	N70-33382
Energy conversion apparatus Patent		
[NASA-CASE-XLE-00212]	c 03	N70-34134
Enthalpy and stagnation temperature determination of a high temperature laminar flow gas stream Patent		
[NASA-CASE-XLE-00266]	c 14	N70-34156
Electrothermal rockets having improved heat exchangers Patent		
[NASA-CASE-XLE-01783]	c 28	N70-34175
Venting vapor apparatus Patent		
[NASA-CASE-XLE-00288]	c 15	N70-34247
Thrust vector control apparatus Patent		
[NASA-CASE-XLE-00208]	c 28	N70-34294
High temperature heat source Patent		
[NASA-CASE-XLE-00490]	c 33	N70-34545
Inlet deflector for jet engines Patent		
[NASA-CASE-XLE-00388]	c 28	N70-34788
Radiant heater having formed filaments Patent		
[NASA-CASE-XLE-00387]	c 33	N70-34812
Optical torquemeter Patent		
[NASA-CASE-XLE-00503]	c 14	N70-34818
Electric propulsion engine test chamber Patent		
[NASA-CASE-XLE-00252]	c 11	N70-34844
Conical valve plug Patent		
[NASA-CASE-XLE-00715]	c 15	N70-34859
Channel-type shell construction for rocket engines and the like Patent		
[NASA-CASE-XLE-00144]	c 28	N70-34860
Non-reusable kinetic energy absorber Patent		
[NASA-CASE-XLE-00810]	c 15	N70-34861
High temperature testing apparatus Patent		
[NASA-CASE-XLE-00335]	c 14	N70-35368
Ion thruster cathode Patent Application		
[NASA-CASE-LEW-10814-1]	c 28	N70-35422
Formed metal ribbon wrap Patent		
[NASA-CASE-XLE-00164]	c 15	N70-36411
Multistage multiple-reentry turbine Patent		
[NASA-CASE-XLE-00170]	c 15	N70-36412

Molecular beam velocity selector	Patent		
[NASA-CASE-XLE-01533]	c 11	N71-10777	
Meteoroid sensing apparatus having a coincidence network connected to a pair of capacitors	Patent		
[NASA-CASE-XLE-01246]	c 14	N71-10797	
Capacitor and method of making same	Patent		
[NASA-CASE-LEW-10364-1]	c 09	N71-13522	
Capillary radiator	Patent		
[NASA-CASE-XLE-03307]	c 33	N71-14035	
Electrostatic ion engine having a permanent magnetic circuit	Patent		
[NASA-CASE-XLE-01124]	c 28	N71-14043	
Split welding chamber	Patent		
[NASA-CASE-LEW-11531]	c 15	N71-14932	
Method and apparatus for making curved reflectors	Patent		
[NASA-CASE-XLE-08917]	c 15	N71-15597	
Method of making a diffusion bonded refractory coating	Patent		
[NASA-CASE-XLE-01604-2]	c 15	N71-15610	
Black-body furnace	Patent		
[NASA-CASE-XLE-01399]	c 33	N71-15625	
Method of igniting solid propellants	Patent		
[NASA-CASE-XLE-01988]	c 27	N71-15634	
Fluid dispensing apparatus and method	Patent		
[NASA-CASE-XLE-01182]	c 27	N71-15635	
Automatically deploying nozzle exit cone extension	Patent		
[NASA-CASE-XLE-01640]	c 31	N71-15637	
High temperature cobalt-base alloy	Patent		
[NASA-CASE-XLE-00726]	c 17	N71-15644	
Method of making a rocket motor casing	Patent		
[NASA-CASE-XLE-00409]	c 28	N71-15658	
Rocket motor casing	Patent		
[NASA-CASE-XLE-05689]	c 28	N71-15659	
Electrostatic ion rocket engine	Patent		
[NASA-CASE-XLE-02066]	c 28	N71-15661	
High temperature cobalt-base alloy	Patent		
[NASA-CASE-XLE-02991]	c 17	N71-16025	
Nickel-base alloy containing Mo-W-Al-Cr- Ta-Zr-C-Nb-B	Patent		
[NASA-CASE-XLE-02082]	c 17	N71-16026	
Method of improving the reliability of a rolling element system	Patent		
[NASA-CASE-XLE-02999]	c 15	N71-16052	
Process of casting heavy slips	Patent		
[NASA-CASE-XLE-00106]	c 15	N71-16076	
Boiler for generating high quality vapor	Patent		
[NASA-CASE-XLE-00785]	c 33	N71-16104	
Method of making self lubricating fluoride- metal composite materials	Patent		
[NASA-CASE-XLE-08511-2]	c 18	N71-16105	
Thrust and direction control apparatus	Patent		
[NASA-CASE-XLE-03583]	c 31	N71-17629	
Linear magnetic brake with two windings	Patent		
[NASA-CASE-XLE-05079]	c 15	N71-17652	
Method of lubricating rolling element bearings	Patent		
[NASA-CASE-XLE-09527]	c 15	N71-17688	
Hot wire liquid level detector for cryogenic fluids	Patent		
[NASA-CASE-XLE-00454]	c 23	N71-17802	
Pulsed differential comparator circuit	Patent		
[NASA-CASE-XLE-03804]	c 10	N71-19471	
Foil seal	Patent		
[NASA-CASE-XLE-05130-2]	c 15	N71-19570	
Generator for a space power system	Patent		
[NASA-CASE-XLE-04250]	c 09	N71-20446	
Method of making electrical contact on silicon solar cell and resultant product	Patent		
[NASA-CASE-XLE-04787]	c 03	N71-20492	
Small plasma probe	Patent		
[NASA-CASE-XLE-02578]	c 25	N71-20747	
Combined electrolysis device and fuel cell and method of operation	Patent		
[NASA-CASE-XLE-01645]	c 03	N71-20904	
Pressure monitoring with a plurality of ionization gauges controlled at a central location	Patent		
[NASA-CASE-XLE-00787]	c 14	N71-21090	
Control of transverse instability in rocket combustors	Patent		
[NASA-CASE-XLE-04603]	c 33	N71-21507	
High voltage divider system	Patent		
[NASA-CASE-XLE-02008]	c 09	N71-21583	
Plasma device feed system	Patent		
[NASA-CASE-XLE-02902]	c 25	N71-21694	
Burning rate control of solid propellants	Patent		
[NASA-CASE-XLE-03494]	c 27	N71-21819	
Protective device for machine and metalworking tools	Patent		
[NASA-CASE-XLE-01092]	c 15	N71-22797	
Cryogenic insulation system	Patent		
[NASA-CASE-XLE-04222]	c 23	N71-22881	
Method for producing fiber reinforced metallic composites	Patent		
[NASA-CASE-XLE-03925]	c 18	N71-22894	

Thermal shock apparatus Patent [NASA-CASE-XLE-02024]	c 14	N71-22964	Cyclic switch Patent [NASA-CASE-LEW-10155-1]	c 09	N71-29035	Twisted multifilament superconductor [NASA-CASE-LEW-11726-1]	c 26	N73-26752
Arc electrode of graphite with ball tip Patent [NASA-CASE-XLE-04788]	c 09	N71-22987	Temperature reducing coating for metals subject to flame exposure Patent [NASA-CASE-XLE-00035]	c 33	N71-29151	Ophthalmic method and apparatus [NASA-CASE-LEW-11669-1]	c 05	N73-27062
Gas purged dry box glove Patent [NASA-CASE-XLE-02531]	c 05	N71-23080	Liquid spray cooling method Patent [NASA-CASE-XLE-00027]	c 33	N71-29152	Single grid accelerator for an ion thruster [NASA-CASE-XLE-10453-2]	c 28	N73-27699
Automatic recording McLeod gauge Patent [NASA-CASE-XLE-03280]	c 14	N71-23093	Turbo-machine blade vibration damper Patent [NASA-CASE-XLE-00155]	c 28	N71-29154	Preparation of polyimides from mixtures of monomeric diamines and esters of polycarboxylic acids [NASA-CASE-LEW-11325-1]	c 06	N73-27980
Electronic cathode having a brush-like structure and a relatively thick oxide emissive coating Patent [NASA-CASE-XLE-04501]	c 09	N71-23190	Corrosion resistant beryllium Patent [NASA-CASE-LEW-10327]	c 17	N71-33408	Method and apparatus for measuring electromagnetic radiation [NASA-CASE-LEW-11159-1]	c 14	N73-28488
High temperature ferromagnetic cobalt-base alloy Patent [NASA-CASE-XLE-03629]	c 17	N71-23248	Integrated thermoelectric generator/space antenna combination [NASA-CASE-XER-09521]	c 09	N72-12136	Welding blades to rotors [NASA-CASE-LEW-10533-1]	c 15	N73-28515
Induction furnace with perforated tungsten foil shielding Patent [NASA-CASE-XLE-04026]	c 14	N71-23267	Sensing probe [NASA-CASE-LEW-10281-1]	c 14	N72-17327	Low mass rolling element for bearings [NASA-CASE-LEW-11087-1]	c 15	N73-30458
Gd or Sm doped silicon semiconductor composition Patent [NASA-CASE-XLE-10715]	c 26	N71-23292	Method of making emf cell [NASA-CASE-LEW-11359-2]	c 03	N72-20034	Swirl can primary combustor [NASA-CASE-LEW-11326-1]	c 23	N73-30665
Protection of serially connected solar cells against open circuits by the use of shunting diode Patent [NASA-CASE-XLE-04535]	c 03	N71-23354	Gaseous control system for nuclear reactors [NASA-CASE-XLE-04599]	c 22	N72-20597	Enhanced diffusion welding [NASA-CASE-LEW-11388-1]	c 15	N73-32358
Superconducting alternator Patent [NASA-CASE-XLE-02823]	c 09	N71-23443	Switching regulator [NASA-CASE-LEW-11005-1]	c 09	N72-21243	High speed hybrid bearing comprising a fluid bearing and a rolling bearing connected in series [NASA-CASE-LEW-11152-1]	c 15	N73-32359
Silicon solar cell with cover glass bonded to cell by metal pattern Patent [NASA-CASE-XLE-08569]	c 03	N71-23449	Saturation current protection apparatus for saturable core transformers [NASA-CASE-LEW-10075-2]	c 09	N72-22196	Nickel aluminide coated low alloy stainless steel [NASA-CASE-LEW-11267-1]	c 17	N73-32414
Analytical test apparatus and method for determining oxide content of alkali metal Patent [NASA-CASE-XLE-01997]	c 06	N71-23527	Pulse coupling circuit [NASA-CASE-LEW-10433-1]	c 09	N72-22197	Cobalt-base alloy [NASA-CASE-LEW-10436-1]	c 17	N73-32415
Thermionic converter with current augmented by self induced magnetic field Patent [NASA-CASE-XLE-01903]	c 22	N71-23599	Solid state remote circuit selector switch [NASA-CASE-LEW-10387]	c 09	N72-22201	Nuclear fuel elements [NASA-CASE-XLE-00209]	c 22	N73-32528
Semiconductor material and method of making same Patent [NASA-CASE-XLE-02798]	c 26	N71-23654	Load-insensitive electrical device [NASA-CASE-XER-11046]	c 09	N72-22203	Method of fabricating a twisted composite superconductor [NASA-CASE-LEW-11015]	c 26	N73-32571
Insulation system Patent [NASA-CASE-XLE-02647]	c 18	N71-23658	High speed rolling element bearing [NASA-CASE-LEW-10856-1]	c 15	N72-22490	Space vehicle with artificial gravity and earth-like environment [NASA-CASE-LEW-11101-1]	c 31	N73-32750
Self-lubricating fluoride metal composite materials Patent [NASA-CASE-XLE-08511]	c 18	N71-23710	Production of metal powders [NASA-CASE-XLE-06461]	c 17	N72-22530	Production of hollow components for rolling element bearings by diffusion welding [NASA-CASE-LEW-11026-1]	c 15	N73-33383
Alloys for bearings Patent [NASA-CASE-XLE-05033]	c 15	N71-23810	Nickel base alloy [NASA-CASE-LEW-10874-1]	c 17	N72-22535	Electron beam controller [NASA-CASE-LEW-11617-1]	c 33	N74-10195
Extrusion die for refractory metals Patent [NASA-CASE-XLE-06773]	c 15	N71-23817	Ion thruster magnetic field control [NASA-CASE-LEW-10835-1]	c 28	N72-22771	Spiral groove seal [NASA-CASE-LEW-10326-3]	c 37	N74-10474
Combustion chamber Patent [NASA-CASE-XLE-04857]	c 28	N71-23968	Electrically conductive fluorocarbon polymer [NASA-CASE-XLE-06774-2]	c 06	N72-25150	Method of heat treating a formed powder product material [NASA-CASE-LEW-10805-3]	c 26	N74-10521
Metallic film diffusion for boundary lubrication Patent [NASA-CASE-XLE-10337]	c 15	N71-24046	Analog Signal to Discrete Time Interval Converter (ASDTIC) [NASA-CASE-ERC-10048]	c 09	N72-25251	Apparatus for welding blades to rotors [NASA-CASE-LEW-10533-2]	c 37	N74-11300
Process for producing dispersion strengthened nickel with aluminum Patent [NASA-CASE-XLE-06969]	c 17	N71-24142	Controllable load insensitive power converters [NASA-CASE-ERC-10268]	c 09	N72-25252	High powered arc electrodes [NASA-CASE-LEW-11162-1]	c 33	N74-12913
Thermal radiation shielding Patent [NASA-CASE-XLE-03432]	c 33	N71-24145	Angular velocity and acceleration measuring apparatus [NASA-CASE-ERC-10292]	c 14	N72-25410	Method of forming articles of manufacture from superalloy powders [NASA-CASE-LEW-10805-2]	c 37	N74-13179
Method of attaching a cover glass to a silicon solar cell Patent [NASA-CASE-XLE-08569-2]	c 03	N71-24681	Electrical insulating layer process [NASA-CASE-LEW-10489-1]	c 15	N72-25447	Deposition of alloy films [NASA-CASE-LEW-11262-1]	c 27	N74-13270
Rocket engine injector Patent [NASA-CASE-XLE-03157]	c 28	N71-24736	Method for producing dispersion strengthened alloys by converting metal to a halide, comminuting, reducing the metal halide to the metal and sintering [NASA-CASE-LEW-10450-1]	c 15	N72-25448	Supersonic-combustion rocket [NASA-CASE-LEW-11058-1]	c 20	N74-13502
Multialarm summary alarm Patent [NASA-CASE-XLE-03061-1]	c 10	N71-24798	Selective nickel deposition [NASA-CASE-LEW-10965-1]	c 15	N72-25452	Method of making silicon solar cell array [NASA-CASE-LEW-11069-1]	c 44	N74-14784
Apparatus for making curved reflectors Patent [NASA-CASE-XLE-08917-2]	c 15	N71-24836	Method of making fiber composites [NASA-CASE-LEW-10424-2-2]	c 18	N72-25539	Spiral groove seal [NASA-CASE-XLE-10326-4]	c 37	N74-15125
Flow angle sensor and read out system Patent [NASA-CASE-XLE-04503]	c 14	N71-24864	Electricity measurement devices employing liquid crystalline materials [NASA-CASE-ERC-10275]	c 26	N72-25680	Method of making rolling element bearings [NASA-CASE-LEW-11087-2]	c 37	N74-15128
Shock tube powder dispersing apparatus Patent [NASA-CASE-XLE-04946]	c 17	N71-24911	Ablative system [NASA-CASE-LEW-10359]	c 33	N72-25911	Gas turbine exhaust nozzle [NASA-CASE-LEW-11569-1]	c 07	N74-15453
Pneumatic oscillator Patent [NASA-CASE-LEW-10345-1]	c 10	N71-25899	Inductance device with vacuum insulation [NASA-CASE-LEW-10330-1]	c 09	N72-27226	Demodulator for carrier transducers [NASA-CASE-NUC-10107-1]	c 33	N74-17930
Heat activated cell with alkali anode and alkali salt electrolyte Patent [NASA-CASE-LEW-11358]	c 03	N71-26084	Apparatus for sensing temperature [NASA-CASE-XLE-05230]	c 14	N72-27410	Diffusion welding in air [NASA-CASE-LEW-11387-1]	c 37	N74-18128
Method of producing refractory composites containing tantalum carbide, hafnium carbide, and hafnium boride Patent [NASA-CASE-XLE-03940]	c 18	N71-26153	Apparatus for producing metal powders [NASA-CASE-XLE-06461-2]	c 17	N72-28535	Airflow control system for supersonic inlets [NASA-CASE-LEW-11188-1]	c 02	N74-20646
Ion beam deflector Patent [NASA-CASE-LEW-10689-1]	c 28	N71-26173	Refractory metal base alloy composites [NASA-CASE-XLE-03940-2]	c 17	N72-28536	Rapidly pulsed, high intensity, incoherent light source [NASA-CASE-XLE-2529-3]	c 33	N74-20859
Rolling element bearings Patent [NASA-CASE-XLE-09527-2]	c 15	N71-26189	Spiral groove seal [NASA-CASE-XLE-10326-2]	c 15	N72-29488	Electromagnetic flow rate meter [NASA-CASE-LEW-10981-1]	c 35	N74-21018
Ion thruster accelerator system Patent [NASA-CASE-LEW-10106-1]	c 28	N71-26642	Production of high purity I-123 [NASA-CASE-LEW-10518-1]	c 24	N72-33681	Diffusion welding [NASA-CASE-LEW-11388-2]	c 37	N74-21055
Propellant feed isolator Patent [NASA-CASE-LEW-10210-1]	c 28	N71-26781	Electrostatic collector for charged particles [NASA-CASE-LEW-11192-1]	c 09	N73-13208	Journal bearings [NASA-CASE-LEW-11076-1]	c 37	N74-21061
Heat activated cell Patent [NASA-CASE-LEW-11359]	c 03	N71-28579	Method of making apparatus for sensing temperature [NASA-CASE-XLE-05230-2]	c 14	N73-13417	Glass-to-metal seals comprising relatively high expansion metals [NASA-CASE-LEW-10698-1]	c 37	N74-21063
Process for glass coating an ion accelerator grid Patent [NASA-CASE-LEW-10278-1]	c 15	N71-28582	Method of forming superalloys [NASA-CASE-LEW-10805-1]	c 15	N73-13465	Hollow rolling element bearings [NASA-CASE-LEW-11087-3]	c 37	N74-21064
Fluid jet amplifier Patent [NASA-CASE-XLE-09341]	c 12	N71-28741	Rocket thrust throttling system [NASA-CASE-LEW-10374-1]	c 28	N73-13773	Low level signal limiter [NASA-CASE-XLE-04791]	c 32	N74-22096
Gas core nuclear reactor Patent [NASA-CASE-LEW-10250-1]	c 22	N71-28759	Gas turbine engine fuel control [NASA-CASE-LEW-11187-1]	c 28	N73-19793	Load insensitive electrical device [NASA-CASE-XER-11046-2]	c 33	N74-22864
Gas turbine combustor Patent [NASA-CASE-LEW-10286-1]	c 28	N71-28915	Thermocouple tape [NASA-CASE-LEW-11072-1]	c 14	N73-24472	Reinforced structural plastics [NASA-CASE-LEW-10199-1]	c 27	N74-23125
			Method and apparatus for sputtering utilizing an apertured electrode and a pulsed substrate bias [NASA-CASE-LEW-10920-1]	c 17	N73-24569	Jet exhaust noise suppressor [NASA-CASE-LEW-11286-1]	c 07	N74-27490
			Magneto-plasma-dynamic arc thruster [NASA-CASE-LEW-11180-1]	c 25	N73-25760	High current electrical lead [NASA-CASE-LEW-10950-1]	c 33	N74-27683
			Ablative system [NASA-CASE-LEW-10359-2]	c 33	N73-25952	Magnetocaloric pump [NASA-CASE-LEW-11672-1]	c 37	N74-27904
			Parasitic suppressing circuit [NASA-CASE-ERC-10403-1]	c 10	N73-26228			

**C-39**

In situ self cross-linking of polyvinyl alcohol battery separators  
[NASA-CASE-LEW-12972-1] c 44 N79-25481  
Electrochemical cell for rebalancing REDOX flow system  
[NASA-CASE-LEW-13150-1] c 44 N79-26474  
Catalytic trimerization of aromatic nitriles and triaryl-s-triazine ring cross-linked high temperature resistant polymers and copolymers made thereby  
[NASA-CASE-LEW-12053-2] c 27 N79-28307  
Supercharged topping rocket propellant feed system  
[NASA-CASE-XLE-02082-1] c 20 N80-14188  
Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12586-1] c 44 N80-14472  
Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12955-1] c 52 N80-14684  
Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c 07 N80-18039  
Gas path seal  
[NASA-CASE-NPO-12131-3] c 37 N80-18400  
Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12723-1] c 52 N80-18690  
Atomic hydrogen storage  
[NASA-CASE-LEW-12081-2] c 28 N80-20402  
Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c 33 N80-20487  
Modification of the electrical and optical properties of polymers  
[NASA-CASE-LEW-13027-1] c 27 N80-24437  
Heat exchanger and method of making  
[NASA-CASE-LEW-12441-2] c 34 N80-24573  
Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c 37 N80-26658  
Circumferential shaft seal  
[NASA-CASE-LEW-12119-1] c 37 N80-28711  
Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c 37 N80-31790  
High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c 26 N80-32484  
Method of cross-linking polyvinyl alcohol and other water soluble resins  
[NASA-CASE-LEW-13103-1] c 27 N80-32516  
Hydrogen hollow cathode ion source  
[NASA-CASE-LEW-12940-1] c 72 N80-33186  
Method of making bearing material  
[NASA-CASE-LEW-11930-3] c 24 N80-33482  
Solar cell system having alternating current output  
[NASA-CASE-LEW-12806-2] c 44 N81-12542  
Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c 28 N81-14103  
Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c 07 N81-14999  
Improved refractory coatings  
[NASA-CASE-LEW-23169-2] c 26 N81-16209  
Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-1] c 24 N81-17170  
Curing agent for polyepoxides and epoxy resins and composites cured therewith  
[NASA-CASE-LEW-13226-1] c 27 N81-17260  
Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c 07 N81-19115  
Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c 07 N81-19116  
Composition and method for making polyimide resin-reinforced fabric  
[NASA-CASE-LEW-12933-1] c 27 N81-19296  
Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c 37 N81-19455  
Multiple plate hydrostatic viscous damper  
[NASA-CASE-LEW-12445-1] c 37 N81-22360  
In-situ cross linking of polyvinyl alcohol  
[NASA-CASE-LEW-13135-2] c 27 N81-24257  
Self-stabilizing radial face seal  
[NASA-CASE-LEW-12991-1] c 37 N81-24442  
Heat exchanger and method of making  
[NASA-CASE-LEW-12441-3] c 44 N81-24519  
Toroidal cell and battery  
[NASA-CASE-LEW-12918-1] c 44 N81-24521  
Corrosion resistant thermal barrier coating  
[NASA-CASE-LEW-13088-1] c 26 N81-25188  
Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c 24 N81-26179  
Circumferential shaft seal  
[NASA-CASE-LEW-12119-2] c 37 N81-26447  
Polyvinyl alcohol battery separator containing inert filler  
[NASA-CASE-LEW-13556-1] c 44 N81-27615  
Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c 07 N81-29129

Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13101-2] c 23 N81-29160  
Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c 44 N81-29524  
High thermal power density heat transfer  
[NASA-CASE-LEW-12950-1] c 34 N82-11399  
Modified face seal for positive film stiffness  
[NASA-CASE-LEW-12989-1] c 37 N82-12442  
Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-3] c 37 N82-19540  
Method of making formulated plastic separators for soluble electrode cells  
[NASA-CASE-LEW-12358-2] c 25 N82-21268  
Multistage depressed collector for dual mode operation  
[NASA-CASE-LEW-13282-1] c 33 N82-24415  
Thrust reverser for a long duct fan engine  
[NASA-CASE-LEW-13199-1] c 07 N82-26293  
Coupled cavity traveling wave tube with velocity tapering  
[NASA-CASE-LEW-12296-1] c 33 N82-26568  
Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-2] c 37 N82-26674  
Texturing polymer surfaces by transfer casting  
[NASA-CASE-LEW-13120-1] c 27 N82-28440  
Method of protecting a surface with a silicon-slurry/aluminide coating  
[NASA-CASE-LEW-13343-1] c 27 N82-28441  
Refractory coatings and method of producing the same  
[NASA-CASE-LEW-13169-1] c 26 N82-29415  
Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c 27 N82-29453  
Advanced inorganic separators for alkaline batteries  
[NASA-CASE-LEW-13171-1] c 44 N82-29708  
Method of making a high voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c 44 N82-29709  
Refractory coatings  
[NASA-CASE-LEW-13169-2] c 26 N82-30371  
Nical ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LEW-13339-1] c 26 N82-31505  
High voltage planar multijunction solar cell  
[NASA-CASE-LEW-13400-1] c 44 N82-31764  
Active clearance control system for a turbomachine  
[NASA-CASE-LEW-12938-1] c 07 N82-32366  
Surface texturing of fluoropolymers  
[NASA-CASE-LEW-13028-1] c 27 N82-33521  
Ion sputter textured graphite  
[NASA-CASE-LEW-12919-1] c 24 N83-10117  
Mechanical bonding of metal method  
[NASA-CASE-LEW-12941-1] c 26 N83-10170  
Method for depositing an oxide coating  
[NASA-CASE-LEW-13131-1] c 44 N83-10494  
Polyvinyl alcohol cross-linked with two aldehydes  
[NASA-CASE-LEW-13504-1] c 25 N83-13188  
Solar cell having improved back surface reflector  
[NASA-CASE-LEW-13620-1] c 44 N83-13579  
Heat transparent high intensity high efficiency solar cell  
[NASA-CASE-LEW-12892-1] c 44 N83-14692  
Heat pipes containing alkali metal working fluid  
[NASA-CASE-LEW-12253-1] c 74 N83-19596  
Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c 18 N83-20996  
Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-1] c 52 N83-21785  
Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c 34 N83-27144  
Zirconium carbide as an electrocatalyst for the chromous-chromic redox couple  
[NASA-CASE-LEW-13246-1] c 44 N83-27344  
Method of forming oxide coatings  
[NASA-CASE-LEW-13132-1] c 27 N83-29388  
Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-2] c 27 N83-29392  
Magnetic heat pumping  
[NASA-CASE-LEW-12508-3] c 34 N83-29625  
Control means for a gas turbine engine  
[NASA-CASE-LEW-14586-1] c 07 N83-31603  
Silicon-slurry/aluminide coating  
[NASA-CASE-LEW-13343] c 26 N83-31795  
Thermal barrier coating system having improved adhesion  
[NASA-CASE-LEW-133590-1] c 27 N83-31855  
Gyrotron transmitting tube  
[NASA-CASE-LEW-13429-1] c 33 N83-31952  
Thermionic energy converters  
[NASA-CASE-LEW-12443-1] c 44 N83-32175

Advanced inorganic separators for alkaline batteries and method of making the same  
[NASA-CASE-LEW-13171-2] c 44 N83-32176  
High voltage v-groove solar cell  
[NASA-CASE-LEW-13401-2] c 44 N83-32177  
Piezoelectric composite materials  
[NASA-CASE-LEW-12582-1] c 76 N83-34796  
Covering solid, film cooled surfaces with a duplex thermal barrier coating  
[NASA-CASE-LEW-13450-1] c 31 N83-35177  
Joining lead wires to thin platinum alloy films  
[NASA-CASE-LEW-13934-1] c 35 N83-35338  
Apparatus for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-1] c 07 N83-36029  
Additive for zinc electrodes  
[NASA-CASE-LEW-13286-1] c 33 N84-14422  
Micronized coal burner facility  
[NASA-CASE-LEW-13426-1] c 25 N84-16276  
Ladder supported ring bar circuit  
[NASA-CASE-LEW-13570-1] c 33 N84-16452  
Real time pressure signal system for a rotary engine  
[NASA-CASE-LEW-13622-1] c 07 N84-22559  
Tip cap for a rotor blade  
[NASA-CASE-LEW-13654-1] c 07 N84-22560  
Diamondlike flake composites  
[NASA-CASE-LEW-13837-1] c 24 N84-22695  
Method of making a light weight battery plaque  
[NASA-CASE-LEW-13349-1] c 26 N84-22734  
Multicolor printing plate joining  
[NASA-CASE-LEW-13598-1] c 35 N84-22930  
Method and apparatus for coating substrates using a laser  
[NASA-CASE-LEW-13526-1] c 36 N84-22944  
Method of fabricating an abrasible gas path seal  
[NASA-CASE-LEW-13269-2] c 37 N84-22957  
Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c 37 N84-22958  
Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095  
Combustor liner construction  
[NASA-CASE-LEW-14035-1] c 07 N84-24577  
Method and apparatus for gripping uniaxial fibrous composite materials  
[NASA-CASE-LEW-13758-1] c 24 N84-27829  
Coating with overlay metallic-cermet alloy systems  
[NASA-CASE-LEW-13639-2] c 26 N84-27855  
Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-1] c 27 N84-27885  
Dielectric based submillimeter backward wave oscillator circuit  
[NASA-CASE-LEW-13736-1] c 33 N84-27974  
Chromium electrodes for REDOX cells  
[NASA-CASE-LEW-13653-1] c 44 N84-28205  
Ion sputter textured graphite electrode plates  
[NASA-CASE-LEW-12919-2] c 70 N84-28565  
Air modulation apparatus  
[NASA-CASE-LEW-13524-1] c 07 N84-33410  
Overlay metallic-cermet alloy coating systems  
[NASA-CASE-LEW-13639-1] c 26 N84-33555  
Simplified dc to dc converter  
[NASA-CASE-LEW-13495-1] c 33 N84-33663  
Diesel engine catalytic combustor system  
[NASA-CASE-LEW-12995-1] c 37 N84-33808  
Deposition of diamondlike carbon films  
[NASA-CASE-LEW-14080-1] c 31 N85-20153  
Screen printed interdigitated back contact solar cell  
[NASA-CASE-LEW-13414-1] c 44 N85-20530  
Ring-cusp ion thruster with shell anode  
[NASA-CASE-LEW-13881-1] c 20 N85-21256  
Thermal barrier coating system  
[NASA-CASE-LEW-13324-2] c 24 N85-21266  
Diamondlike flakes  
[NASA-CASE-LEW-13837-2] c 24 N85-21267  
Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-3] c 27 N85-21350  
Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-4] c 27 N85-21351  
Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-5] c 27 N85-21352  
Inelastic tunnel diodes  
[NASA-CASE-LEW-13833-1] c 33 N85-21492  
Solar energy converter using surface plasma waves  
[NASA-CASE-LEW-13827-1] c 44 N85-21768  
Chemical control of nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-2] c 25 N85-28982  
Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c 33 N85-29144



- High thermal power density heat transfer apparatus providing electrical isolation at high temperature using heat pipes  
[NASA-CASE-LEW-12950-2] c 34 N85-29179  
Arc spray fabrication of metal matrix composite monolayer  
[NASA-CASE-LEW-13828-1] c 24 N85-30027  
Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-6] c 25 N85-30039  
Variable force, eddy-current or magnetic damper  
[NASA-CASE-LEW-13717-1] c 37 N85-30333  
Vortex generating flow passage design for increased film cooling effectiveness  
[NASA-CASE-LEW-14039-1] c 34 N85-33433  
Multistage spent particle collector and a method for making same  
[NASA-CASE-LEW-13914-1] c 37 N85-33489  
Dual clearance squeeze film damper  
[NASA-CASE-LEW-13506-1] c 37 N85-33490  
Thermionic photovoltaic energy converter  
[NASA-CASE-LEW-14077-1] c 44 N85-34441  
Flow modifying device  
[NASA-CASE-LEW-13562-2] c 07 N85-35195  
Thermal barrier coating system  
[NASA-CASE-LEW-14057-1] c 24 N85-35233  
Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267  
High temperature resistant polyimide from tetra ester, diamine, diester and N-arylnadimide  
[NASA-CASE-LEW-13864-1] c 27 N86-19457  
Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-1] c 27 N86-19458  
Compliant hydrodynamic fluid journal bearing  
[NASA-CASE-LEW-13670-1] c 37 N86-19606  
Negative electrode catalyst for the iron chromium redox energy storage system  
[NASA-CASE-LEW-14028-1] c 44 N86-19721  
Method for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-2] c 07 N86-20389  
Piezoelectric deicing device  
[NASA-CASE-LEW-13773-2] c 33 N86-20671  
Hybrid power semiconductor  
[NASA-CASE-LEW-13922-1] c 33 N86-20672  
Method and apparatus for rebalancing a REDOX flow cell system  
[NASA-CASE-LEW-14127-1] c 33 N86-20680  
Linearized traveling wave amplifier with hard limiter characteristics  
[NASA-CASE-LEW-13981-2] c 33 N86-21742  
Variable friction secondary seal for face seals  
[NASA-CASE-LEW-14170-1] c 37 N86-25790  
Oxygen recombination in individual pressure vessel nickel-hydrogen batteries  
[NASA-CASE-LEW-13822-1] c 44 N86-25874  
Apparatus for producing oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-2] c 27 N86-32569  
Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587  
Lithium counterdoped silicon solar cell  
[NASA-CASE-LEW-14177-1] c 44 N86-32875  
Nickel base coating alloy  
[NASA-CASE-LEW-13834-1] c 26 N87-14482  
Heat exchanger for electrothermal devices  
[NASA-CASE-LEW-14037-1] c 20 N87-16875  
Ion beam sputter etching  
[NASA-CASE-LEW-13899-1] c 31 N87-21160  
Precision tunable resonant microwave cavity  
[NASA-CASE-LEW-13935-1] c 33 N87-21234  
Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N87-23736  
Carbide-fluoride-silver self-lubricating composite  
[NASA-CASE-LEW-14196-2] c 37 N87-25585  
Heat treatment for superalloy  
[NASA-CASE-LEW-14262-1] c 26 N87-28647  
Method of preparing fiber reinforced ceramic material  
[NASA-CASE-LEW-14392-1] c 27 N87-28656  
Apparatus for mounting a field emission cathode  
[NASA-CASE-LEW-14108-1] c 33 N87-28832  
Ion-beam nitriding of steels  
[NASA-CASE-LEW-14104-2] c 26 N88-14179  
Thermal stress minimized, two component, turbine shroud seal  
[NASA-CASE-LEW-14212-1] c 37 N88-23978  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-1] c 23 N88-26404  
Arcjet power supply and start circuit  
[NASA-CASE-LEW-14374-1] c 09 N88-28939  
Gas particle radiator  
[NASA-CASE-LEW-14297-1] c 35 N89-12048  
Castable hot corrosion resistant alloy  
[NASA-CASE-LEW-14134-2] c 26 N89-14303
- Light weight polymer matrix composite material  
[NASA-CASE-LEW-14734-1] c 24 N89-23623  
Fiber reinforced ceramic material  
[NASA-CASE-LEW-14392-2] c 27 N89-29538  
Steam cooled rich-burn combustor liner  
[NASA-CASE-LEW-13609-1] c 25 N90-11824  
Method of forming low cost, formable High T(subc) superconducting wire  
[NASA-CASE-LEW-14676-2] c 76 N90-17454  
New Condensation polyimides containing 1,1,1-triaryl-2,2,2-trifluoroethane structures  
[NASA-CASE-LEW-14346-1] c 23 N90-19300  
Zero-G phase detector and separator  
[NASA-CASE-LEW-14844-1] c 35 N90-22024  
Miniature traveling wave tube and method of making  
[NASA-CASE-LEW-14520-1] c 33 N90-22724  
One step HIP canning of powder metallurgy composites  
[NASA-CASE-LEW-14719-1] c 24 N90-23493  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-2] c 25 N90-23497  
Fatigue testing apparatus  
[NASA-CASE-LEW-14124-1] c 35 N90-23712  
High temperature flexible seal  
[NASA-CASE-LEW-14695-1] c 37 N90-23751  
Method of making single crystal fibers  
[NASA-CASE-LEW-14921-1] c 24 N91-13502  
Vinyl capped addition polyimides  
[NASA-CASE-LEW-15027-1] c 27 N91-13566  
Real-time data compression of broadcast video signals  
[NASA-CASE-LEW-14945-1] c 32 N91-13598  
Heat transfer device and method of making the same  
[NASA-CASE-LEW-14162-1] c 34 N91-13668  
Probe insertion apparatus with inflatable seal  
[NASA-CASE-LEW-14965-1] c 37 N91-13732  
Universal nondestructive mm-wave integrated circuit test fixture  
[NASA-CASE-LEW-14746-1] c 33 N91-14552  
Post clamp  
[NASA-CASE-LEW-14862-1] c 37 N91-14617  
Graphite fluoride fiber polymer composite material  
[NASA-CASE-LEW-14472-1] c 24 N91-15320  
Ladder polymers for use as high temperature stable resins or coatings  
[NASA-CASE-LEW-14203-1] c 27 N91-15402  
Metallic seal for thermal barrier coating systems  
[NASA-CASE-LEW-15020-1] c 27 N91-15412  
Liquid sheet radiator apparatus  
[NASA-CASE-LEW-14295-1] c 31 N91-15424  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-3] c 23 N91-17141  
Process for HIP canning of composites  
[NASA-CASE-LEW-14990-1-CU] c 24 N91-17145  
Fully articulated four-point-bend loading fixture  
[NASA-CASE-LEW-14776-1] c 37 N91-21540  
Fiber optic sensing system  
[NASA-CASE-LEW-14795-1] c 74 N91-21871  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-4] c 23 N91-25185  
Arc-textured high emittance radiator surfaces  
[NASA-CASE-LEW-14679-1] c 27 N91-25296  
Ceramic coatings on smooth surfaces  
[NASA-CASE-LEW-15164-1] c 27 N91-25298  
Plasma gun with coaxial powder feed and adjustable cathode  
[NASA-CASE-LEW-14901-1] c 75 N91-25875  
Method of injecting fluid propellants into a rocket combustion chamber  
[NASA-CASE-LEW-14846-2] c 20 N91-26200  
Process for the controlled growth of single-crystal films of silicon carbide polytypes on silicon carbide wafers  
[NASA-CASE-LEW-15222-1] c 76 N91-26966  
Process for the homoepitaxial growth of single-crystal silicon carbide films on silicon carbide wafers  
[NASA-CASE-LEW-15223-1] c 76 N91-26967  
Furnace for tensile/fatigue testing  
[NASA-CASE-LEW-14848-1] c 14 N91-27175  
Method of making carbide/fluoride/silver composites  
[NASA-CASE-LEW-14902-1] c 24 N91-27244  
High-temperature, flexible, thermal barrier seal  
[NASA-CASE-LEW-14672-1] c 37 N91-27560  
Quick action clamp  
[NASA-CASE-LEW-14887-1] c 37 N91-27561  
Thin solar cell and lightweight array  
[NASA-CASE-LEW-14959-1] c 44 N91-27614  
Pretreatment of lubricated surfaces with sputtered cadmium oxide  
[NASA-CASE-LEW-14474-1] c 27 N91-28423  
Low cost, formable, high T(sub c) superconducting wire  
[NASA-CASE-LEW-14676-1] c 33 N91-31529
- Plug-type heat flux gauge  
[NASA-CASE-LEW-14967-1] c 35 N91-31608  
Addition polyimides with enhanced processability  
[NASA-CASE-LEW-15043-1] c 27 N91-32230  
Extended temperature range rocket injector  
[NASA-CASE-LEW-14846-1] c 20 N92-10054  
Brominated graphitized carbon fibers  
[NASA-CASE-LEW-14698-2] c 27 N92-10090  
Real-time data compression of broadcast video signals  
[NASA-CASE-LEW-14945-2] c 32 N92-10128  
Solid lubricants on pretreated surfaces  
[NASA-CASE-LEW-14474-2] c 27 N92-11186  
Method of intercalating large quantities of fibrous structures  
[NASA-CASE-LEW-15077-1] c 24 N92-16025  
Method of making contamination-free ceramic bodies  
[NASA-CASE-LEW-14984-1] c 27 N92-16122  
High temperature, flexible pressure-actuated, brush seal  
[NASA-CASE-LEW-15086-1] c 37 N92-16318  
Three point lead screw positioning apparatus  
[NASA-CASE-LEW-15216-1] c 37 N92-17678  
Intercalated hybrid graphite fiber composite  
[NASA-CASE-LEW-15241-1] c 24 N92-17861  
Substituted 1,1,1-triaryl-2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-6] c 23 N92-17882  
Adjustable depth gauge  
[NASA-CASE-LEW-14880-1] c 35 N92-21723  
Composite thermal barrier coating  
[NASA-CASE-LEW-14999-1] c 24 N92-21725  
Selective emitters  
[NASA-CASE-LEW-14731-1] c 44 N92-22037  
Method of producing a plug-type heat flux gauge  
[NASA-CASE-LEW-14967-2] c 35 N92-22038  
High temperature, flexible, fiber-preform seal  
[NASA-CASE-LEW-15085-1] c 37 N92-22043  
Guanidine based vehicle/binders for use with oxides, metals, and ceramics  
[NASA-CASE-LEW-15314-1] c 27 N92-23461  
Vinyl capped addition polyimides  
[NASA-CASE-LEW-15027-2] c 27 N92-24053  
Self-deploying photovoltaic power system  
[NASA-CASE-LEW-15308-1] c 44 N92-24057  
Monolithic mm-wave phase shifter using optically activated superconducting switches  
[NASA-CASE-LEW-14878-1] c 74 N92-28571  
Oxidation resistant coating for titanium alloys and titanium alloy matrix composites  
[NASA-CASE-LEW-15155-1] c 27 N92-29090  
Removable hand hold  
[NASA-CASE-LEW-15196-1] c 37 N92-29092  
Pulse thermal energy transport/storage system  
[NASA-CASE-LEW-15235-1] c 34 N92-29125  
Solar thermal energy receiver  
[NASA-CASE-LEW-14949-1] c 44 N92-29143  
Graphite fluoride from iodine intercalated graphitized carbon  
[NASA-CASE-LEW-15360-1] c 25 N92-34206  
Method of reducing drag in aerodynamic systems  
[NASA-CASE-LEW-14791-1] c 02 N92-34243  
Phase-stepping fiber-optic projected fringe system for surface topography measurements  
[NASA-CASE-LEW-14996-1] c 74 N93-11058  
System and method for cancelling expansion waves in a wave rotor  
[NASA-CASE-LEW-15218-1] c 34 N93-11172  
Silicon carbide fiber reinforced strontium aluminosilicate glass-ceramic matrix composite  
[NASA-CASE-LEW-15263-1] c 24 N93-11543  
Automatic system for installation and replacement of Space Station components  
[NASA-CASE-LEW-14906-1] c 37 N93-12203  
Method and apparatus for gripping test specimens  
[NASA-CASE-LEW-15345-1] c 37 N93-12327  
Method of applying a thermal barrier coating system to a substrate  
[NASA-CASE-LEW-15020-2] c 24 N93-14706  
Apparatus for checking threaded hole perpendicularity  
[NASA-CASE-LEW-15444-1] c 35 N93-14840  
Consecutive plate acoustic suppressor apparatus and methods  
[NASA-CASE-LEW-15430-1] c 71 N93-17051  
Multiwavelength pyrometer for gray and non-gray surfaces in the presence of interfering radiation  
[NASA-CASE-LEW-15250-1] c 35 N93-17060  
Sintering silicon nitride  
[NASA-CASE-LEW-15489-1] c 27 N93-17062  
Substituted 1,1,1-triaryl 2,2,2-trifluoroethanes and processes for their synthesis  
[NASA-CASE-LEW-14345-7] c 23 N93-17412  
Process for the controlled growth of single-crystal films of silicon carbide polytypes on silicon carbide wafers  
[NASA-CASE-LEW-15222-3] c 76 N93-17413

Spectroscopic wear detector [NASA-CASE-LEW-15200-1] c 20 N93-18856	Recoverable rocket vehicle Patent [NASA-CASE-XMF-00389] c 31 N70-34176	Hybrid holographic system using reflected and transmitted object beams simultaneously Patent [NASA-CASE-MFS-20074] c 16 N71-15565
Method and apparatus for producing a thermal atomic oxygen beam [NASA-CASE-LEW-15614-1] c 72 N93-19026	Electrical discharge apparatus for forming Patent [NASA-CASE-XMF-00375] c 15 N70-34249	Reactance control system Patent [NASA-CASE-XMF-01598] c 21 N71-15583
High-temperature, bellows hybrid seal [NASA-CASE-LEW-15570-1] c 37 N93-19027	Optical inspection apparatus Patent [NASA-CASE-XMF-00462] c 14 N70-34298	Apparatus for welding torch angle and seam tracking control Patent [NASA-CASE-XMF-03287] c 15 N71-15607
Oxidation resistant overlay coatings for low expansion substrates [NASA-CASE-LEW-15154-1] c 27 N93-19332	Relay binary circuit Patent [NASA-CASE-XMF-00421] c 09 N70-34502	Multiway vortex valve system Patent [NASA-CASE-XMF-04709] c 15 N71-15609
Fiber-reinforced monoclinic celsian matrix composite material [NASA-CASE-LEW-15269-1] c 24 N93-20040	Attitude and propellant flow control system and method Patent [NASA-CASE-XMF-00185] c 21 N70-34539	Injector assembly for liquid fueled rocket engines Patent [NASA-CASE-XMF-00968] c 28 N71-15660
Atomic oxygen protective coating with resistance to undercutting at defect sites [NASA-CASE-LEW-15306-1] c 27 N93-20566	Electrical connector for flat cables Patent [NASA-CASE-XMF-00324] c 09 N70-34596	Space capsule ejection assembly Patent [NASA-CASE-XMF-03169] c 31 N71-15675
Heat transfer device [NASA-CASE-LEW-14162-4] c 24 N93-20568	Externally pressurized fluid bearing Patent [NASA-CASE-XMF-00515] c 15 N70-34664	Air cushion lift pad Patent [NASA-CASE-MFS-14685] c 31 N71-15689
Multi-heat addition turbine engine [NASA-CASE-LEW-15094-1] c 07 N93-22034	Force measuring instrument Patent [NASA-CASE-XMF-00456] c 14 N70-34705	Method of making a molded connector Patent [NASA-CASE-XMF-03498] c 15 N71-15986
Ceramic fiber reinforced glass-ceramic matrix composite [NASA-CASE-LEW-15262-1] c 24 N93-26100	Seismic displacement transducer Patent [NASA-CASE-XMF-00479] c 14 N70-34794	Regenerative braking system Patent [NASA-CASE-XMF-01096] c 10 N71-16030
An apparatus for gripping test specimens [NASA-CASE-LEW-15345-2] c 37 N93-28127	Electric arc welding Patent [NASA-CASE-XMF-00392] c 15 N70-34814	Condition and condition duration indicator Patent [NASA-CASE-XMF-01097] c 10 N71-16058
Picture data compression coder using subband/transform coding with a Lempel-Ziv-based coder [NASA-CASE-LEW-15700-1] c 82 N93-28130	Assembly for recovering a capsule Patent [NASA-CASE-XMF-00641] c 31 N70-36410	Method and apparatus for securing to a spacecraft Patent [NASA-CASE-MFS-11133] c 31 N71-16222
Guanidine based vehicle/binders for use with oxides, metals, and ceramics [NASA-CASE-LEW-15314-2] c 27 N93-28423	Printed cable connector Patent [NASA-CASE-XMF-00369] c 09 N70-36494	Method and apparatus of simulating zero gravity conditions Patent [NASA-CASE-MFS-12750] c 27 N71-16223
Method for retarding oxidation of an organic substrate [NASA-CASE-LEW-15306-2] c 27 N93-28425	Landing pad assembly for aerospace vehicles Patent [NASA-CASE-XMF-02853] c 31 N70-36654	Passive optical wind and turbulence detection system Patent [NASA-CASE-XMF-14032] c 20 N71-16340
Jet mixer noise suppressor using acoustic feedback [NASA-CASE-LEW-15170-1] c 71 N93-28953	Electric arc driven wind tunnel Patent [NASA-CASE-XMF-00411] c 11 N70-36913	Serpentuator Patent [NASA-CASE-XMF-05344] c 31 N71-16345
Alkali metal carbon dioxide electrochemical system for energy storage and/or conversion of carbon dioxide to oxygen [NASA-CASE-LEW-14973-1] c 44 N93-28974	Gravity device Patent [NASA-CASE-XMF-00424] c 11 N70-38196	Gravimeter Patent [NASA-CASE-XMF-05844] c 14 N71-17587
High temperature creep and oxidation resistant chromium silicide matrix alloy containing molybdenum [NASA-CASE-LEW-15697-1] c 26 N93-29172	Injector for bipropellant rocket engines Patent [NASA-CASE-XMF-00148] c 28 N70-38710	High pressure gas filter system Patent [NASA-CASE-MFS-12806] c 14 N71-17588
Apparatus for intercalating large quantities of fibrous structures [NASA-CASE-LEW-15077-2] c 24 N93-29609	Electronic motor control system Patent [NASA-CASE-XMF-01129] c 09 N70-38712	Burst diaphragm flow initiator Patent [NASA-CASE-MFS-12915] c 11 N71-17600
Semiconductor cooling apparatus [NASA-CASE-LEW-14162-3] c 24 N93-29614	Slosh suppressing device and method Patent [NASA-CASE-XMF-00658] c 12 N70-38997	Vacuum deposition apparatus Patent [NASA-CASE-XMF-01667] c 15 N71-17647
SiC fiber-reinforced Celsian glass-ceramic matrix composite [NASA-CASE-LEW-15264-1] c 24 N93-31293	Air bearing Patent [NASA-CASE-XMF-00339] c 15 N70-39896	Quick disconnect latch and handle combination Patent [NASA-CASE-MFS-11132] c 15 N71-17649
Plasma sprayed ceramic thermal barrier coating for NiAl-based intermetallic alloys [NASA-CASE-LEW-15535-1] c 26 N93-31294	Instrument support with precise lateral adjustment Patent [NASA-CASE-XMF-00480] c 14 N70-39898	Method and apparatus for precision sizing and joining of large diameter tubes Patent [NASA-CASE-XMF-05114] c 15 N71-17650
Method for producing hybrid graphite composite [NASA-CASE-LEW-15241-2] c 24 N93-31296	Segmented back-up bar Patent [NASA-CASE-XMF-00640] c 15 N70-39924	Low temperature flexure fatigue cryostat Patent [NASA-CASE-XMF-02964] c 14 N71-17659
High temperature, oxidation resistant noble metal-Al alloy thermocouple [NASA-CASE-LEW-15515-1] c 35 N93-31298	Collapsible loop antenna for space vehicle Patent [NASA-CASE-XMF-00437] c 07 N70-40202	Precision stepping drive Patent [NASA-CASE-MFS-14772] c 15 N71-17692
Method of producing a ceramic fiber-reinforced glass-ceramic matrix composite [NASA-CASE-LEW-15264-2] c 24 N93-31299	Flexible back-up bar Patent [NASA-CASE-XMF-00722] c 15 N70-40204	Multi-mission module Patent [NASA-CASE-XMF-01543] c 31 N71-17730
Oxidation resistant overlay coatings for low expansion substrates [NASA-CASE-LEW-15154-2] c 27 N93-31300	Electro-optical alignment control system Patent [NASA-CASE-XMF-00908] c 14 N70-40238	Ratchet mechanism Patent [NASA-CASE-MFS-12805] c 15 N71-17805
Service equipment for use in hostile environments [NASA-CASE-LEW-14906-2] c 37 N93-31314	Missile launch release system Patent [NASA-CASE-XMF-03198] c 30 N70-40353	Method of making impurity-type semiconductor electrical contacts Patent [NASA-CASE-XMF-01016] c 26 N71-17818
Ion exchange polymers and method for making [NASA-CASE-LEW-15576-1] c 27 N93-31316	Double-acting shock absorber Patent [NASA-CASE-XMF-01045] c 15 N70-40354	Apparatus for the determination of the existence or non-existence of a bonding between two members Patent [NASA-CASE-MFS-13686] c 15 N71-18132
<b>National Aeronautics and Space Administration.</b>		
<b>Manned Spacecraft Center, Cape Canaveral, FL.</b>		
Electrode for biological recording [NASA-CASE-XMS-02872] c 05 N69-21925	Portable alignment tool Patent [NASA-CASE-XMF-01452] c 15 N70-41371	Static inverters which sum a plurality of waves Patent [NASA-CASE-XMF-00663] c 08 N71-18752
<b>National Aeronautics and Space Administration.</b>		
<b>Manned Spacecraft Center, Langley Station, VA.</b>		
Plural recorder system [NASA-CASE-XMS-06949] c 09 N69-21467	Device for suppressing sound and heat produced by high-velocity exhaust jets Patent [NASA-CASE-XMF-01813] c 28 N70-41582	Space environmental work simulator Patent [NASA-CASE-XMF-07488] c 11 N71-18773
<b>National Aeronautics and Space Administration.</b>		
<b>Marshall Space Flight Center, Huntsville, AL.</b>		
Electrical feed-through connection for printed circuit boards and printed cable [NASA-CASE-XMF-01483] c 14 N69-27431	Unfired-ceramic flame-resistant insulation and method of making the same Patent [NASA-CASE-XMF-01030] c 18 N70-41583	Space manufacturing machine Patent [NASA-CASE-MFS-20410] c 15 N71-19214
Method for detecting hydrogen gas [NASA-CASE-XMF-03873] c 06 N69-39733	Pulse counting circuit which simultaneously indicates the occurrence of the nth pulse Patent [NASA-CASE-XMF-00906] c 09 N70-41655	Extensometer Patent [NASA-CASE-XMF-04680] c 15 N71-19489
Electrical connector Patent Application [NASA-CASE-MFS-14741] c 09 N70-20737	Support apparatus for dynamic testing Patent [NASA-CASE-XMF-01772] c 11 N70-41677	Mechanical simulator of low gravity conditions Patent [NASA-CASE-MFS-10555] c 11 N71-19494
Angular measurement system Patent [NASA-CASE-XMF-00447] c 14 N70-33179	Locking device with rolling detents Patent [NASA-CASE-XMF-01371] c 15 N70-41829	Weld control system using thermocouple wire Patent [NASA-CASE-MFS-06074] c 15 N71-20393
Insulating structure Patent [NASA-CASE-XMF-00341] c 15 N70-33323	Tank construction for space vehicles Patent [NASA-CASE-XMF-01899] c 31 N70-41948	Evaporant source for vapor deposition Patent [NASA-CASE-XMF-06065] c 15 N71-20395
Space vehicle electrical system Patent [NASA-CASE-XMF-00517] c 03 N70-34157	Positive displacement flowmeter Patent [NASA-CASE-XMF-02822] c 14 N70-41994	Satellite despin device Patent [NASA-CASE-XMF-08523] c 31 N71-20396
Pivotal shock absorbing pad assembly Patent [NASA-CASE-XMF-03856] c 31 N70-34159	Hydraulic support for dynamic testing Patent [NASA-CASE-XMF-03248] c 11 N71-10604	Method of coating circuit paths on printed circuit boards with solder Patent [NASA-CASE-XMF-01599] c 09 N71-20705
Gimbaled, partially submerged rocket nozzle Patent [NASA-CASE-XMF-01544] c 28 N70-34162	Fiber optic vibration transducer and analyzer Patent [NASA-CASE-XMF-02433] c 14 N71-10616	Elastomeric silazane polymers and process for preparing the same Patent [NASA-CASE-XMF-04133] c 06 N71-20717
	Method and means for damping nutation in a satellite Patent [NASA-CASE-XMF-00442] c 31 N71-10747	Method of producing alternating ether siloxane copolymers Patent [NASA-CASE-XMF-02584] c 06 N71-20905
	Heat pipe thermionic diode power system Patent [NASA-CASE-XMF-05843] c 03 N71-11055	Honeycomb panel and method of making same Patent [NASA-CASE-XMF-01402] c 18 N71-21651
	Synthesis of siloxane-containing epoxy polymers Patent [NASA-CASE-MFS-13994-1] c 06 N71-11240	Portable milling tool Patent [NASA-CASE-XMF-03511] c 15 N71-22799
	Bi-carrier demodulator with modulation Patent [NASA-CASE-XMF-01160] c 07 N71-11298	Energy absorbing device Patent [NASA-CASE-XMF-10040] c 15 N71-22877
	Harness assembly Patent [NASA-CASE-MFS-14671] c 05 N71-12341	Continuous detonation reaction engine Patent [NASA-CASE-XMF-06926] c 28 N71-22983
	Magnetic matrix memory system Patent [NASA-CASE-XMF-05835] c 08 N71-12504	
	Pulse amplitude and width detector Patent [NASA-CASE-XMF-06519] c 09 N71-12519	
	Microwave power receiving antenna Patent [NASA-CASE-MFS-20333] c 09 N71-13486	

Adaptive tracking notch filter system Patent [NASA-CASE-XMF-01892]	c 10	N71-22986	Cryogenic thermal insulation Patent [NASA-CASE-XMF-05046]	c 33	N71-28892	Device and method for determining X ray reflection efficiency of optical surfaces [NASA-CASE-MFS-20243]	c 23	N73-13662
Meteorological balloon Patent [NASA-CASE-XMF-04163]	c 02	N71-23007	Method of coating through-holes Patent [NASA-CASE-XMF-05999]	c 15	N71-29032	Process for making diamonds [NASA-CASE-MFS-20698-2]	c 15	N73-19457
Continuous turning slip ring assembly Patent [NASA-CASE-XMF-01049]	c 15	N71-23049	Response analyzers for sensors Patent [NASA-CASE-MFS-11204]	c 14	N71-29134	Test stand system for vacuum chambers [NASA-CASE-MFS-21362]	c 11	N73-20267
Automatic welding speed controller Patent [NASA-CASE-XMF-01730]	c 15	N71-23050	Current regulating voltage divider [NASA-CASE-MFS-20935]	c 09	N71-34212	Material fatigue testing system [NASA-CASE-MFS-20673]	c 14	N73-20476
Positive dc to positive dc converter Patent [NASA-CASE-XMF-14301]	c 09	N71-23188	Nuclear mass flowmeter [NASA-CASE-MFS-20485]	c 14	N72-11365	Rateometer [NASA-CASE-MFS-20418]	c 14	N73-24473
Zero gravity apparatus Patent [NASA-CASE-XMF-06515]	c 14	N71-23227	Fine adjustment mount [NASA-CASE-MFS-20249]	c 15	N72-11386	Underwater space suit pressure control regulator [NASA-CASE-MFS-20332-2]	c 05	N73-25125
Positive dc to negative dc converter Patent [NASA-CASE-XMF-08217]	c 03	N71-23239	Method of making foamed materials in zero gravity [NASA-CASE-XMF-09902]	c 15	N72-11387	Maxometers (peak wind speed anemometers) [NASA-CASE-MFS-20916]	c 14	N73-25460
Evacuation port seal Patent [NASA-CASE-XMF-03290]	c 15	N71-23256	Air bearing assembly for curved surfaces [NASA-CASE-MFS-20423]	c 15	N72-11388	Monitoring deposition of films [NASA-CASE-MFS-20675]	c 26	N73-26751
Azimuth laying system Patent [NASA-CASE-XMF-01669]	c 21	N71-23289	Stud-bonding gun [NASA-CASE-MFS-20299]	c 15	N72-11392	Docking structure for spacecraft [NASA-CASE-MFS-20863]	c 31	N73-26876
Electron beam instrument for measuring electric fields Patent [NASA-CASE-XMF-10289]	c 14	N71-23699	Apparatus for obtaining isotropic irradiation of a specimen [NASA-CASE-MFS-20095]	c 24	N72-11595	Wide temperature range electronic device with lead attachment [NASA-CASE-ERC-10224-2]	c 09	N73-27150
Anemometer with braking mechanism Patent [NASA-CASE-XMF-05224]	c 14	N71-23726	Wind tunnel test section [NASA-CASE-MFS-20509]	c 11	N72-17183	Restraint system for ergometer [NASA-CASE-MFS-21046-1]	c 14	N73-27377
Apparatus for testing a pressure responsive instrument Patent [NASA-CASE-XMF-04134]	c 14	N71-23755	Multiple image storing system for high speed projectile holography [NASA-CASE-MFS-20596]	c 14	N72-17324	Apparatus and method for skin packaging articles [NASA-CASE-MFS-20855]	c 15	N73-27405
Electric welding torch Patent [NASA-CASE-XMF-02330]	c 15	N71-23798	Method of manufacturing semiconductor devices using refractory dielectrics [NASA-CASE-XER-08476-1]	c 26	N72-17820	Ergometer [NASA-CASE-MFS-21109-1]	c 05	N73-27941
Swivel support for gas bearings Patent [NASA-CASE-XMF-07808]	c 15	N71-23812	Underwater space suit pressure control regulator [NASA-CASE-MFS-20332]	c 05	N72-20097	Tilting table for ergometer and for other biomedical devices [NASA-CASE-MFS-21010-1]	c 05	N73-30078
Welding skate with computerized control Patent [NASA-CASE-XMF-07069]	c 15	N71-23815	Apparatus for making diamonds [NASA-CASE-MFS-20698]	c 15	N72-20446	Measurement system [NASA-CASE-MFS-20658-1]	c 14	N73-30386
Docking structure for spacecraft Patent [NASA-CASE-XMF-05941]	c 31	N71-23912	An airlock [NASA-CASE-MFS-20922]	c 31	N72-20840	Collimator of multiple plates with axially aligned identical random arrays of apertures [NASA-CASE-MFS-20546-2]	c 14	N73-30389
High pressure helium purifier Patent [NASA-CASE-XMF-06888]	c 15	N71-24044	Photoetching of metal-oxide layers [NASA-CASE-ERC-10108]	c 06	N72-21094	Holographic thin film analyzer [NASA-CASE-MFS-20823-1]	c 16	N73-30476
Horizontal cryostat for fatigue testing Patent [NASA-CASE-XMF-10968]	c 14	N71-24234	Liquid aerosol dispenser [NASA-CASE-MFS-20829]	c 12	N72-21310	Semiconductor surface protection material [NASA-CASE-ERC-10339-1]	c 18	N73-30532
Method for leakage testing of tanks Patent [NASA-CASE-XMF-02392]	c 32	N71-24285	Optical probing of supersonic flows with statistical correlation [NASA-CASE-MFS-20642]	c 14	N72-21407	Polymerizable disilanol having in-chain perfluoroalkyl groups [NASA-CASE-MFS-20979-2]	c 06	N73-32030
Internal flare angle gauge Patent [NASA-CASE-XMF-04415]	c 14	N71-24693	Mechanically actuated triggered hand [NASA-CASE-MFS-20413]	c 15	N72-21463	Redundant speed control for brushless Hall effect motor [NASA-CASE-MFS-20207-1]	c 09	N73-32107
Pulse rise time and amplitude detector Patent [NASA-CASE-XMF-08804]	c 09	N71-24717	Hermetically sealed elbow actuator [NASA-CASE-MFS-14710]	c 09	N72-22195	Induction motor control system with voltage controlled oscillator circuit [NASA-CASE-MFS-21465-1]	c 10	N73-32145
System for maintaining a motor at a predetermined speed utilizing digital feedback means Patent [NASA-CASE-XMF-06892]	c 09	N71-24805	Shielded flat cable [NASA-CASE-MFS-13687-2]	c 09	N72-22198	Synthesis of superconducting compounds by explosive compaction of powders [NASA-CASE-MFS-20861-1]	c 18	N73-32437
Power system with heat pipe liquid coolant lines Patent [NASA-CASE-MFS-14114-2]	c 09	N71-24807	Shock wave convergence apparatus [NASA-CASE-MFS-20890]	c 14	N72-22439	Ultrasonic scanner for radial and flat panels [NASA-CASE-MFS-20335-1]	c 35	N74-10415
Magnetomotive metal working device Patent [NASA-CASE-XMF-03793]	c 15	N71-24833	Bonding of reinforced Teflon to metals [NASA-CASE-MFS-20482]	c 15	N72-22492	Digital computing cardiachometer [NASA-CASE-MFS-20284-1]	c 52	N74-12778
Apparatus for determining the deflection of an electron beam impinging on a target Patent [NASA-CASE-XMF-06617]	c 09	N71-24843	Inorganic thermal control coatings [NASA-CASE-MFS-20011]	c 18	N72-22566	Integrated circuit package with lead structure and method of preparing the same [NASA-CASE-MFS-21374-1]	c 33	N74-12951
Transistor servo system including a unique differential amplifier circuit Patent [NASA-CASE-XMF-05195]	c 10	N71-24861	High temperature furnace for melting materials in space [NASA-CASE-MFS-20710]	c 11	N72-23215	Vee-notching device [NASA-CASE-MFS-20730-1]	c 39	N74-13131
RC rate generator for slow speed measurement Patent [NASA-CASE-XMF-02966]	c 10	N71-24863	Siloxane containing epoxide compounds [NASA-CASE-MFS-13994-2]	c 06	N72-25148	Ultrasonic scanning system for in-place inspection of brazed tube joints [NASA-CASE-MFS-20767-1]	c 38	N74-15130
Method and apparatus for precision sizing and joining of large diameter tubes Patent [NASA-CASE-XMF-05114-3]	c 15	N71-24865	Silphenylenesiloxane polymers having in-chain perfluoroalkyl groups [NASA-CASE-MFS-20979]	c 06	N72-25151	Method and apparatus for checking the stability of a setup for making reflection type holograms [NASA-CASE-MFS-21455-1]	c 35	N74-15146
Duct coupling for single-handed operation Patent [NASA-CASE-MFS-20395]	c 15	N71-24903	Emergency lunar communications system [NASA-CASE-MFS-21042]	c 07	N72-25171	Method and apparatus for nondestructive testing [NASA-CASE-MFS-21233-1]	c 38	N74-15395
Brushless direct current tachometer Patent [NASA-CASE-MFS-20385]	c 09	N71-24904	Lead attachment to high temperature devices [NASA-CASE-ERC-10224]	c 09	N72-25261	Real time moving scene holographic camera system [NASA-CASE-MFS-21087-1]	c 35	N74-17153
Self-lubricating gears and other mechanical parts Patent [NASA-CASE-MFS-14971]	c 15	N71-24984	Device for measuring bearing preload [NASA-CASE-MFS-20434]	c 11	N72-25288	Nonflammable coating compositions [NASA-CASE-MFS-20486-2]	c 27	N74-17283
Pulse width inverter Patent [NASA-CASE-MFS-10068]	c 10	N71-25139	Altitude simulation chamber for rocket engine testing [NASA-CASE-MFS-20620]	c 11	N72-27262	Metering gun for dispensing precisely measured charges of fluid [NASA-CASE-MFS-21163-1]	c 54	N74-17853
Isothermal cover with thermal reservoirs Patent [NASA-CASE-MFS-20355]	c 33	N71-25353	Fixture for supporting articles during vibration tests [NASA-CASE-MFS-20523]	c 14	N72-27412	Omnidirectional wheel [NASA-CASE-MFS-21309-1]	c 37	N74-18125
Storage container for electronic devices Patent [NASA-CASE-MFS-20075]	c 09	N71-26133	Electrical connector [NASA-CASE-MFS-20757]	c 09	N72-28225	Reinforced polyquinoxaline gasket and method of preparing the same [NASA-CASE-MFS-21364-1]	c 37	N74-18126
Method and apparatus for precision sizing and joining of large diameter tubes Patent [NASA-CASE-XMF-05114-2]	c 15	N71-26148	Remote control manipulator for zero gravity environment [NASA-CASE-MFS-14405]	c 15	N72-28495	Manual actuator [NASA-CASE-MFS-21481-1]	c 37	N74-18127
Filter system for control of outgas contamination in vacuum Patent [NASA-CASE-MFS-14711]	c 15	N71-26185	Thermal compensating structural member [NASA-CASE-MFS-20433]	c 15	N72-28496	Cryogenic gyroscope housing [NASA-CASE-MFS-21136-1]	c 35	N74-18323
Image magnification adapter for cameras Patent [NASA-CASE-XMF-03844-1]	c 14	N71-26474	Semiconductor transducer device [NASA-CASE-ERC-10087-2]	c 14	N72-31446	Automatic frequency control for FM transmitter [NASA-CASE-MFS-21540-1]	c 32	N74-19790
Thickness measuring and injection device Patent [NASA-CASE-MFS-20261]	c 14	N71-27005	Coaxial high density, hypervelocity plasma generator and accelerator with ionizable metal disc [NASA-CASE-MFS-20589]	c 25	N72-32688	Microwave power transmission system wherein level of transmitted power is controlled by reflections from receiver [NASA-CASE-MFS-21470-1]	c 44	N74-19870
Personal propulsion unit Patent [NASA-CASE-MFS-20130]	c 28	N71-27585	Process for the preparation of brushite crystals [NASA-CASE-ERC-10338]	c 04	N72-33072	Reduced gravity fecal collector seat and urinal [NASA-CASE-MFS-22102-1]	c 54	N74-20725
Power system with heat pipe liquid coolant lines Patent [NASA-CASE-MFS-14114]	c 33	N71-27862	Adjustable force probe [NASA-CASE-MFS-20760]	c 14	N72-33377	Metabolic analyzer [NASA-CASE-MFS-21415-1]	c 52	N74-20728
Method of making shielded flat cable Patent [NASA-CASE-MFS-13687]	c 09	N71-28691	Polyimide resin-fiberglass cloth laminates for printed circuit boards [NASA-CASE-MFS-20408]	c 18	N73-12604			
A dc motor speed control system Patent [NASA-CASE-MFS-14610]	c 09	N71-28886	Differential pressure control [NASA-CASE-MFS-14216]	c 14	N73-13418			
			Redundant hydraulic control system for actuators [NASA-CASE-MFS-20944]	c 15	N73-13466			

Automatic quadrature control and measuring system [NASA-CASE-MFS-21660-1]	c 35	N74-21017	Apparatus for calibrating an image dissector tube [NASA-CASE-MFS-22208-1]	c 33	N75-26244	Solar energy trap [NASA-CASE-MFS-22744-1]	c 44	N76-24696
Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids [NASA-CASE-MFS-22411-1]	c 37	N74-21058	Method of determining bond quality of power transistors attached to substrates [NASA-CASE-MFS-21931-1]	c 37	N75-26372	Failure detection and control means for improved drift performance of a gimbaled platform system [NASA-CASE-MFS-23551-1]	c 04	N76-26175
Airlock [NASA-CASE-MFS-20922-1]	c 18	N74-22136	Anti-gravity device [NASA-CASE-MFS-22758-1]	c 70	N75-26789	Lead-oxygen dc power supply system having a closed loop oxygen and water system [NASA-CASE-MFS-23059-1]	c 44	N76-27664
Low distortion automatic phase control circuit [NASA-CASE-MFS-21671-1]	c 33	N74-22885	Brazing alloy binder [NASA-CASE-MFS-22758-1]	c 26	N75-27125	Thermal energy storage system [NASA-CASE-MFS-23167-1]	c 44	N76-31667
Two speed drive system [NASA-CASE-MFS-20645-1]	c 37	N74-23070	Brazing alloy composition [NASA-CASE-MFS-22758-1]	c 26	N75-27126	Aircraft-mounted crash-activated transmitter device [NASA-CASE-MFS-16609-3]	c 03	N76-32140
Insert facing tool [NASA-CASE-MFS-21485-1]	c 37	N74-25968	Refractory porcelain enamel passive control coating for high temperature alloys [NASA-CASE-MFS-22324-1]	c 27	N75-27160	Multiple in-line docking capability for rotating space stations [NASA-CASE-MFS-20855-1]	c 15	N77-10112
LC-oscillator with automatic stabilized amplitude via bias current control [NASA-CASE-MFS-21698-1]	c 33	N74-26732	Real time, large volume, moving scene holographic camera system [NASA-CASE-MFS-22537-1]	c 35	N75-27328	Attitude control system [NASA-CASE-MFS-22787-1]	c 15	N77-10113
Device for monitoring a change in mass in varying gravimetric environments [NASA-CASE-MFS-21556-1]	c 35	N74-26945	Method and apparatus for vibration analysis utilizing the Mossbauer effect [NASA-CASE-MFS-22537-1]	c 35	N75-27329	Heat exchanger [NASA-CASE-MFS-22991-1]	c 34	N77-10463
Holography utilizing surface plasmon resonances [NASA-CASE-MFS-22040-1]	c 35	N74-26946	Method of preparing graphite reinforced aluminum composite [NASA-CASE-MFS-21077-1]	c 24	N75-28135	Focused laser Doppler velocimeter [NASA-CASE-MFS-23178-1]	c 35	N77-10493
Electrophoretic sample insertion [NASA-CASE-MFS-21395-1]	c 25	N74-26948	Carbon monoxide monitor [NASA-CASE-MFS-22060-1]	c 35	N75-29380	Photovoltaic cell array [NASA-CASE-MFS-22458-1]	c 44	N77-10635
Sprag solenoid brake [NASA-CASE-MFS-21846-1]	c 37	N74-26976	Perfluoro alkylene dioxy-bis-(4-phthalic anhydrides and oxy-bis-perfluoroalkyleneoxyphthalic anhydrides) [NASA-CASE-MFS-22356-1]	c 23	N75-30256	Wind measurement system [NASA-CASE-MFS-23362-1]	c 47	N77-10753
Device for configuring multiple leads [NASA-CASE-MFS-22133-1]	c 33	N74-26977	Integrable power gyrator [NASA-CASE-MFS-22342-1]	c 33	N75-30428	Mechanical thermal motor [NASA-CASE-MFS-23062-1]	c 37	N77-12402
Thrust-isolating mounting [NASA-CASE-MFS-21680-1]	c 18	N74-27397	Isolated output system for a class D switching-mode amplifier [NASA-CASE-MFS-21616-1]	c 33	N75-30429	Solid-state current transformer [NASA-CASE-MFS-22560-1]	c 33	N77-14335
Battery testing device [NASA-CASE-MFS-20761-1]	c 44	N74-27519	Solar energy power system [NASA-CASE-MFS-21628-1]	c 44	N75-32581	Actuator device for artificial leg [NASA-CASE-MFS-23225-1]	c 52	N77-14735
Apparatus for establishing flow of a fluid mass having a known velocity [NASA-CASE-MFS-21424-1]	c 34	N74-27730	System for enhancing tool-exchange capabilities of a portable wrench [NASA-CASE-MFS-22283-1]	c 37	N75-33395	Frequency modulated oscillator [NASA-CASE-MFS-23181-1]	c 33	N77-17351
Apparatus for conducting flow electrophoresis in the substantial absence of gravity [NASA-CASE-MFS-21394-1]	c 34	N74-27744	Externally supported internally stabilized flexible duct joint [NASA-CASE-MFS-19194-1]	c 37	N76-14460	Method of and means for testing a tape record/playback system [NASA-CASE-MFS-22671-2]	c 35	N77-17426
Steady state thermal radiometers [NASA-CASE-MFS-21108-1]	c 34	N74-27861	Quick disconnect filter coupling [NASA-CASE-MFS-22323-1]	c 37	N76-14463	Notch filter [NASA-CASE-MFS-23303-1]	c 32	N77-18307
Conductive elastomeric extensometer [NASA-CASE-MFS-21049-1]	c 52	N74-27864	Panel for selectively absorbing solar thermal energy and the method of producing said panel [NASA-CASE-MFS-22562-1]	c 44	N76-14595	Guide for a typewriter [NASA-CASE-MFS-15218-1]	c 37	N77-19457
Device for measuring tensile forces [NASA-CASE-MFS-21728-1]	c 35	N74-27865	Rapid activation and checkout device for batteries [NASA-CASE-MFS-22749-1]	c 44	N76-14601	Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking [NASA-CASE-MFS-23267-1]	c 35	N77-20401
Three mirror glancing incidence system for X-ray telescope [NASA-CASE-MFS-21372-1]	c 74	N74-27866	Two stage-light gas-plasma projectile accelerator [NASA-CASE-MFS-22287-1]	c 75	N76-14931	Emergency descent device [NASA-CASE-MFS-23074-1]	c 54	N77-21844
Flame detector operable in presence of proton radiation [NASA-CASE-MFS-21577-1]	c 19	N74-29410	Polyimides of ether-linked aryl tetracarboxylic dianhydrides [NASA-CASE-MFS-22355-1]	c 23	N76-15268	Device for tensioning test specimens within an hermetically sealed chamber [NASA-CASE-MFS-23281-1]	c 35	N77-22450
Integrated P-channel MOS gyrator [NASA-CASE-MFS-22343-1]	c 33	N74-34638	Remotely operable articulated manipulator [NASA-CASE-MFS-22707-1]	c 37	N76-15457	Combined docking and grasping device [NASA-CASE-MFS-23088-1]	c 37	N77-23483
System for depositing thin films [NASA-CASE-MFS-20775-1]	c 31	N75-12161	Remote manipulator system [NASA-CASE-MFS-22022-1]	c 37	N76-15460	Method of growing composites of the type exhibiting the Soret effect [NASA-CASE-MFS-22926-1]	c 24	N77-27187
Ultrasonic bone densitometer [NASA-CASE-MFS-20994-1]	c 35	N75-12271	Thermoelectric power system [NASA-CASE-MFS-22002-1]	c 44	N76-16612	Method for measuring biaxial stress in a body subjected to stress inducing loads [NASA-CASE-MFS-23299-1]	c 39	N77-28511
Strain gauge ambiguity sensor for segmented mirror active optical system [NASA-CASE-MFS-20506-1]	c 35	N75-12273	Self-energized plasma compressor [NASA-CASE-MFS-22145-2]	c 75	N76-17951	Method for attaching a fused-quartz mirror to a conductive metal substrate [NASA-CASE-MFS-23405-1]	c 26	N77-29260
Orthotic arm joint [NASA-CASE-MFS-21611-1]	c 54	N75-12616	Device for measuring the ferrite content in an austenitic stainless-steel weld [NASA-CASE-MFS-22907-1]	c 26	N76-18257	Method of preparing zinc orthotitanate pigment [NASA-CASE-MFS-23345-1]	c 27	N77-30237
Automatically operable self-leveling load table [NASA-CASE-MFS-22039-1]	c 09	N75-12968	Heat transfer device [NASA-CASE-MFS-22938-1]	c 34	N76-18374	Accumulator [NASA-CASE-MFS-19287-1]	c 34	N77-30399
Phase-locked servo system [NASA-CASE-MFS-22073-1]	c 33	N75-13139	Holographic motion picture camera with Doppler shift compensation [NASA-CASE-MFS-22517-1]	c 35	N76-18402	Tachometer [NASA-CASE-MFS-23175-1]	c 35	N77-30436
Self-energized plasma compressor [NASA-CASE-MFS-22145-1]	c 75	N75-13625	Method of peening and portable peening gun [NASA-CASE-MFS-23047-1]	c 37	N76-18454	Real time reflectometer [NASA-CASE-MFS-23118-1]	c 35	N77-31465
Clear air turbulence detector [NASA-CASE-MFS-21244-1]	c 36	N75-15028	Mixing insert for foam dispensing apparatus [NASA-CASE-MFS-20607-1]	c 37	N76-19436	Method of crystallization [NASA-CASE-MFS-23001-1]	c 76	N77-32919
Variable frequency inverter for ac induction motors with torque, speed and braking control [NASA-CASE-MFS-22088-1]	c 33	N75-15874	Traffic survey system [NASA-CASE-MFS-22631-1]	c 66	N76-19888	Power factor control system for AC induction motors [NASA-CASE-MFS-23280-1]	c 33	N78-10376
Leak detector [NASA-CASE-MFS-21761-1]	c 35	N75-15931	Electronic optical transfer function analyzer [NASA-CASE-MFS-21672-1]	c 74	N76-19935	Germanium coated microbridge and method [NASA-CASE-MFS-23274-1]	c 33	N78-13320
Ergometer calibrator [NASA-CASE-MFS-21045-1]	c 35	N75-15932	System for imposing directional stability on a rocket-propelled vehicle [NASA-CASE-MFS-21311-1]	c 20	N76-21275	Laser extensometer [NASA-CASE-MFS-19259-1]	c 36	N78-14380
Space vehicle [NASA-CASE-MFS-22734-1]	c 18	N75-19329	Filtering device [NASA-CASE-MFS-22729-1]	c 32	N76-21366	Method of and means for testing a glancing-incidence mirror system of an X-ray telescope [NASA-CASE-MFS-22409-2]	c 74	N78-15880
Meter for use in detecting tension in straps having predetermined elastic characteristics [NASA-CASE-MFS-22189-1]	c 35	N75-19615	Translatory shock absorber for attitude sensors [NASA-CASE-MFS-22905-1]	c 19	N76-22284	Projection system for display of parallax and perspective [NASA-CASE-MFS-23194-1]	c 35	N78-17357
Multiplate focusing collimator [NASA-CASE-MFS-20932-1]	c 35	N75-19616	Device for installing rocket engines [NASA-CASE-MFS-19220-1]	c 20	N76-22296	Gas ion laser construction for electrically isolating the pressure gauge thereof [NASA-CASE-MFS-22597]	c 36	N78-17366
Latching device [NASA-CASE-MFS-21606-1]	c 37	N75-19685	Deployable flexible tunnel [NASA-CASE-MFS-22636-1]	c 37	N76-22540	Wrist joint assembly [NASA-CASE-MFS-23311-1]	c 54	N78-17676
Internally supported flexible duct joint [NASA-CASE-MFS-19193-1]	c 37	N75-19686	Solar energy absorber [NASA-CASE-MFS-22743-1]	c 44	N76-22657	Semiconductor projectile impact detector [NASA-CASE-MFS-23008-1]	c 35	N78-18390
Pseudo-noise test set for communication system evaluation [NASA-CASE-MFS-22671-1]	c 35	N75-21582	Apparatus for reducing aerodynamic noise in a wind tunnel [NASA-CASE-MFS-23099-1]	c 09	N76-23273	Sprayable low density ablator and application process [NASA-CASE-MFS-23506-1]	c 24	N78-24290
Device for use in loading tension members [NASA-CASE-MFS-21488-1]	c 14	N75-24794	Solar energy power system [NASA-CASE-MFS-21628-2]	c 44	N76-23675	Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction [NASA-CASE-MFS-23315-1]	c 76	N78-24950
Holographic system for nondestructive testing [NASA-CASE-MFS-21704-1]	c 35	N75-25124				Tetherline system for orbiting satellites [NASA-CASE-MFS-23564-1]	c 15	N78-25119
Hole cutter [NASA-CASE-MFS-22649-1]	c 37	N75-25186						

Method and apparatus for conditioning of nickel-cadmium batteries					
[NASA-CASE-MFS-23270-1]	c 44	N78-25531			
Passive propellant system					
[NASA-CASE-MFS-23642-2]	c 20	N78-27176			
Field effect transistor and method of construction thereof					
[NASA-CASE-MFS-23312-1]	c 33	N78-27326			
Plasma cleaning device					
[NASA-CASE-MFS-22906-1]	c 75	N78-27913			
Process for spinning flame retardant elastomeric compositions					
[NASA-CASE-MSC-14331-3]	c 27	N78-32262			
Velocity measurement system					
[NASA-CASE-MFS-23363-1]	c 35	N78-32396			
Hybrid holographic non-destructive test system					
[NASA-CASE-MFS-23114-1]	c 38	N78-32447			
FM/CW radar system					
[NASA-CASE-MFS-22234-1]	c 32	N79-10264			
Method of obtaining intensified image from developed photographic films and plates					
[NASA-CASE-MFS-23461-1]	c 35	N79-10389			
Computerized system for translating a torch head					
[NASA-CASE-MFS-23620-1]	c 37	N79-10421			
Rotatable mass for a flywheel					
[NASA-CASE-MFS-23051-1]	c 37	N79-10422			
Water system virus detection					
[NASA-CASE-MSC-16098-1]	c 51	N79-10693			
Anastigmatic three-mirror telescope					
[NASA-CASE-MFS-23675-1]	c 89	N79-10969			
Apparatus for assembling space structure					
[NASA-CASE-MFS-23579-1]	c 18	N79-11108			
Spherical bearing					
[NASA-CASE-MFS-23447-1]	c 37	N79-11404			
Method for making an aluminum or copper substrate panel for selective absorption of solar energy					
[NASA-CASE-MFS-23518-1]	c 44	N79-11469			
System for the measurement of ultra-low stray light levels					
[NASA-CASE-MFS-23513-1]	c 74	N79-11865			
Simulator method and apparatus for practicing the mating of an observer-controlled object with a target					
[NASA-CASE-MFS-23052-2]	c 74	N79-13855			
Multilevel metallization method for fabricating a metal oxide semiconductor device					
[NASA-CASE-MFS-23541-1]	c 76	N79-14906			
Direct current transformer					
[NASA-CASE-MFS-23659-1]	c 33	N79-17133			
Method of making a rocket nozzle					
[NASA-CASE-XMF-06884-1]	c 20	N79-21123			
Fluid thrust control system					
[NASA-CASE-XMF-05964-1]	c 20	N79-21124			
Rocket injector head					
[NASA-CASE-XMF-04592-1]	c 20	N79-21125			
Infusible silazane polymer and process for producing same					
[NASA-CASE-XMF-02526-1]	c 27	N79-21190			
Fluorine-containing polyformals					
[NASA-CASE-XMF-06900-1]	c 27	N79-21191			
Method and apparatus for preparing multiconductor cable with flat conductors					
[NASA-CASE-MFS-10946-1]	c 31	N79-21226			
Edge coating of flat wires					
[NASA-CASE-XMF-05757-1]	c 31	N79-21227			
Stable superconducting magnet					
[NASA-CASE-XMF-05373-1]	c 33	N79-21264			
Retractable environmental seal					
[NASA-CASE-MFS-23646-1]	c 37	N79-22474			
Horizontally mounted solar collector					
[NASA-CASE-MFS-23349-1]	c 44	N79-23481			
Coal-shale interface detection					
[NASA-CASE-MFS-23720-3]	c 43	N79-25443			
General purpose rocket furnace					
[NASA-CASE-MFS-23460-1]	c 12	N79-26075			
Contour measurement system					
[NASA-CASE-MFS-23726-1]	c 43	N79-26439			
Method of construction of a multi-cell solar array					
[NASA-CASE-MFS-23540-1]	c 44	N79-26475			
Thickness measurement system					
[NASA-CASE-MFS-23721-1]	c 31	N79-28370			
Coal-rock interface detector					
[NASA-CASE-MFS-23725-1]	c 43	N79-31706			
Calibrating pressure switch					
[NASA-CASE-XMF-04494-1]	c 33	N79-33392			
Passive propellant system					
[NASA-CASE-MFS-23642-1]	c 20	N80-10278			
Electrophoretic fractional elution apparatus employing a rotational seal fraction collector					
[NASA-CASE-MFS-23284-1]	c 37	N80-14397			
Coal-shale interface detection system					
[NASA-CASE-MFS-23720-2]	c 43	N80-14423			
Solar concentrator					
[NASA-CASE-MFS-23727-1]	c 44	N80-14473			
Aluminum or copper substrate panel for selective absorption of solar energy					
[NASA-CASE-MFS-23518-3]	c 44	N80-16452			
Method for separating biological cells					
[NASA-CASE-MFS-23883-1]	c 51	N80-16715			
Oceanic wave measurement system					
[NASA-CASE-MFS-23862-1]	c 48	N80-18667			
Wind wheel electric power generator					
[NASA-CASE-MFS-23515-1]	c 44	N80-21828			
Preparation of monotectic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown					
[NASA-CASE-MFS-23816-1]	c 26	N80-23419			
Coal-shale interface detector					
[NASA-CASE-MFS-23720-1]	c 43	N80-23711			
Cork-resin ablative insulation for complex surfaces and method for applying the same					
[NASA-CASE-MFS-23626-1]	c 24	N80-26388			
Redundant motor drive system					
[NASA-CASE-MFS-23777-1]	c 37	N80-32716			
Three phase power factor controller					
[NASA-CASE-MFS-25535-1]	c 33	N81-12330			
Method and apparatus for shaping and enhancing acoustical levitation forces					
[NASA-CASE-MFS-25050-1]	c 71	N81-15767			
Microwave integrated circuit for Josephson voltage standards					
[NASA-CASE-MFS-23845-1]	c 33	N81-17348			
Process for preparation of large-particle-size monodisperse latexes					
[NASA-CASE-MFS-25000-1]	c 25	N81-19242			
Containerless high temperature calorimeter apparatus					
[NASA-CASE-MFS-23923-1]	c 35	N81-19426			
Electrical power generating system					
[NASA-CASE-MFS-24368-3]	c 33	N81-22280			
Solar tracking system					
[NASA-CASE-MFS-23999-1]	c 44	N81-24520			
Prosthetic urinary sphincter					
[NASA-CASE-MFS-23717-1]	c 52	N81-25660			
Pneumatic inflatable end effector					
[NASA-CASE-MFS-23696-1]	c 54	N81-26718			
Power factor control system for ac induction motors					
[NASA-CASE-MFS-23988-1]	c 33	N81-27395			
Method of manufacture of bonded fiber flywheel					
[NASA-CASE-MFS-23674-1]	c 24	N81-29163			
Biocentrifuge system capable of exchanging specimen cages while in operational mode					
[NASA-CASE-MFS-23825-1]	c 51	N81-32829			
Motor power factor controller with a reduced voltage starter					
[NASA-CASE-MFS-25586-1]	c 33	N82-11360			
Method for retarding dye fading during archival storage of developed color photographic film					
[NASA-CASE-MFS-23250-1]	c 35	N82-11432			
Liquid immersion apparatus for minute articles					
[NASA-CASE-MFS-25363-1]	c 37	N82-12441			
Controlled overspray spray nozzle					
[NASA-CASE-MFS-25139-1]	c 34	N82-13376			
Multi-channel temperature measurement amplification system					
[NASA-CASE-MFS-23775-1]	c 44	N82-16474			
Solar energy control system					
[NASA-CASE-MFS-25287-1]	c 44	N82-18686			
Method of bonding plasticized elastomer to metal and articles produced thereby					
[NASA-CASE-MFS-25181-1]	c 27	N82-24340			
Amplified wind turbine apparatus					
[NASA-CASE-MFS-23830-1]	c 44	N82-24639			
Magnetic field control					
[NASA-CASE-MFS-23828-1]	c 33	N82-26569			
Exothermic furnace module					
[NASA-CASE-MFS-25707-1]	c 35	N82-26631			
Photoelectric detection system					
[NASA-CASE-MFS-23776-1]	c 33	N82-28545			
Apparatus for sequentially transporting containers					
[NASA-CASE-MFS-23846-1]	c 37	N82-32731			
Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber					
[NASA-CASE-MFS-15670-1]	c 33	N82-33634			
Electrophoresis device					
[NASA-CASE-MFS-25426-1]	c 25	N83-10126			
Combinational logic for generating gate drive signals for phase control rectifiers					
[NASA-CASE-MFS-25208-1]	c 33	N83-10345			
Static continuous electrophoresis device					
[NASA-CASE-MFS-25306-1]	c 25	N83-13187			
Collimated beam manifold with the number of output beams variable at a given output angle					
[NASA-CASE-MFS-25312-1]	c 74	N83-17305			
Method and apparatus for suppressing ignition overpressure in solid rocket propulsion systems					
[NASA-CASE-MFS-25843-1]	c 20	N83-17588			
Extended range X-ray telescope					
[NASA-CASE-MFS-25282-1]	c 34	N83-19015			
Automatic weld torch guidance control system					
[NASA-CASE-MFS-25807]	c 37	N83-20154			
Electrical rotary joint apparatus for large space structures					
[NASA-CASE-MFS-23981-1]	c 07	N83-20944			
Gas levitator having fixed levitation node for containerless processing					
[NASA-CASE-MFS-25509-1]	c 35	N83-24828			
Electrical power generating system					
[NASA-CASE-MFS-25302-1]	c 33	N83-28319			
Satellite retrieval system					
[NASA-CASE-MFS-25403-1]	c 18	N83-29303			
Method and apparatus for supercooling and solidifying substances					
[NASA-CASE-MFS-25242-1]	c 35	N83-29650			
Dual laser optical system and method for studying fluid flow					
[NASA-CASE-MFS-25315-1]	c 36	N83-29680			
Beam connector apparatus and assembly					
[NASA-CASE-MFS-25134-1]	c 31	N83-31895			
Adaptive reference voltage generator for firing angle control of line-commutated inverters					
[NASA-CASE-MFS-25215-1]	c 33	N83-31953			
Triac failure detector					
[NASA-CASE-MFS-25607-1]	c 33	N83-34190			
Adaptive control system for line-commutated inverters					
[NASA-CASE-MFS-25209-1]	c 33	N83-35227			
Apparatus and method for heating a material in a transparent ampoule					
[NASA-CASE-MFS-25436-1]	c 27	N83-36220			
Resilient seal ring assembly with spring means applying force to wedge member					
[NASA-CASE-MFS-25678-1]	c 37	N84-11497			
Prosthetic occlusive device for an internal passageway					
[NASA-CASE-MFS-25740-1]	c 52	N84-11744			
Constant-output atomizer					
[NASA-CASE-MFS-25631-1]	c 34	N84-12406			
Heat sealable, flame and abrasion resistant coated fabric					
[NASA-CASE-MSC-18382-2]	c 27	N84-14324			
Electrical self-aligning connector					
[NASA-CASE-MFS-25211-2]	c 33	N84-14423			
Control system for an induction motor with energy recovery					
[NASA-CASE-MFS-25477-1]	c 33	N84-14424			
A dc to dc converter					
[NASA-CASE-MFS-25430-1]	c 33	N84-16453			
Pulsed thyristor trigger control circuit					
[NASA-CASE-MFS-25616-1]	c 33	N84-16455			
Clamp-mount device					
[NASA-CASE-MFS-25510-1]	c 37	N84-16560			
Space probe/satellite ejection apparatus for spacecraft					
[NASA-CASE-MFS-15429-1]	c 18	N84-22609			
Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber					
[NASA-CASE-MFS-256704-1]	c 33	N84-22884			
Three phase power factor controller					
[NASA-CASE-MFS-25535-2]	c 33	N84-22885			
Motor power control circuit for ac induction motors					
[NASA-CASE-MFS-25323-1]	c 33	N84-22886			
Two-dimensional scanner apparatus					
[NASA-CASE-MFS-25687-1]	c 35	N84-22928			
Method of and apparatus for double-exposure holographic interferometry					
[NASA-CASE-MFS-25405-1]	c 35	N84-22929			
Diffuser/ejector system for a very high vacuum environment					
[NASA-CASE-MFS-25791-1]	c 09	N84-27749			
Space Shuttle with rail system and aft thrust structure securing solid rocket boosters to external tank					
[NASA-CASE-MFS-25853-1]	c 16	N84-27784			
Three stage rocket vehicle with parallel staging					
[NASA-CASE-MFS-25878-1]	c 18	N84-27787			
Phase detector for three-phase power factor controller					
[NASA-CASE-MFS-25854-1]	c 33	N84-27975			
Device for determining frost depth and density					
[NASA-CASE-MFS-25754-1]	c 35	N84-28018			
Sonic levitation apparatus					
[NASA-CASE-MFS-25828-1]	c 71	N84-28568			
Apparatus for measuring charged particle beam					
[NASA-CASE-MFS-25641-1]	c 72	N84-28575			
Coupling an induction motor type generator to ac power lines					
[NASA-CASE-MFS-25302-2]	c 33	N84-33660			
Three-phase power factor controller with induced EMF sensing					
[NASA-CASE-MFS-25852-1]	c 33	N84-33661			
Longwall shearer tracking system					
[NASA-CASE-MFS-25717-1]	c 35	N84-33768			
Impacting device for testing insulation					
[NASA-CASE-MFS-25862-2]	c 37	N84-33807			
Insulation bonding test system					
[NASA-CASE-MFS-25862-1]	c 27	N85-20126			
Adjustable indicating device for load position					
[NASA-CASE-MFS-28008-1]	c 35	N85-20300			
Process for producing tris (n-methylamino) methylsilane					
[NASA-CASE-MFS-25721-1]	c 25	N85-21280			

- Solar powered actuator with continuously variable auxiliary power control  
[NASA-CASE-MFS-25637-1] c 44 N85-21769
- Power control for ac motor  
[NASA-CASE-MFS-25861-1] c 33 N85-22877
- Hemispherical latching apparatus  
[NASA-CASE-MFS-25837-1] c 18 N85-29991
- Method of and apparatus for generating an interstitial point in a data stream having an even number of data points  
[NASA-CASE-MFS-25319-1] c 60 N85-33701
- Variable length strut with longitudinal compliance and locking capability  
[NASA-CASE-MFS-25907-1] c 37 N85-34401
- Device and method for frictionally testing materials for ignitability  
[NASA-CASE-MSC-20622-1] c 25 N86-19413
- Portable 90 degree proof loading device  
[NASA-CASE-MSC-20250-1] c 35 N86-19581
- Apparatus for adapting an end effector device remotely controlled manipulator arm  
[NASA-CASE-MFS-25949-1] c 37 N86-19603
- Spectral slicing X-ray telescope with variable magnification  
[NASA-CASE-MFS-25942-1] c 74 N86-20124
- X-ray determination of parts alignment  
[NASA-CASE-MSC-20418-1] c 74 N86-20126
- Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-25429-1] c 18 N86-20469
- Wind dynamic range video camera  
[NASA-CASE-MFS-25750-1] c 32 N86-20647
- Amplifier for measuring low-level signals in the presence of high common mode voltage  
[NASA-CASE-MFS-25868-1] c 33 N86-20670
- High gradient directional solidification furnace  
[NASA-CASE-MFS-25963-1] c 35 N86-20750
- Damping seal for turbomachinery  
[NASA-CASE-MFS-25842-2] c 37 N86-20788
- Self-locking telescoping manipulator arm  
[NASA-CASE-MFS-25906-1] c 37 N86-20789
- Cryogenic insulation strength and bond tester  
[NASA-CASE-MFS-25910-1] c 39 N86-20841
- Optical stereo video signal processor  
[NASA-CASE-MFS-25752-1] c 74 N86-21348
- Containerless high purity pulling process and apparatus for glass fiber  
[NASA-CASE-MFS-25905-2] c 31 N86-21718
- Automated weld torch guidance control system  
[NASA-CASE-MFS-25807-2] c 37 N86-21850
- Multispectral glancing incidence X-ray telescope  
[NASA-CASE-MFS-28013-1] c 89 N86-22459
- Shuttle-launch triangular space station  
[NASA-CASE-MSC-20676-1] c 18 N86-24729
- Fluid flow meter for measuring the rate of fluid flow in a conduit  
[NASA-CASE-MFS-28030-1] c 35 N86-25752
- Magnetic spin reduction system for free spinning objects  
[NASA-CASE-MFS-25966-1] c 16 N86-26352
- Propulsion apparatus and method using boil-off gas from a cryogenic liquid  
[NASA-CASE-MFS-25946-1] c 20 N86-26368
- Solid sorbent air sampler  
[NASA-CASE-MSC-20653-1] c 35 N86-26595
- Planar oscillatory stirring apparatus  
[NASA-CASE-MFS-26002-1-CU] c 35 N86-26598
- Angular measurement system  
[NASA-CASE-MFS-25825-1] c 31 N86-29055
- Apparatus and method for inspecting a bearing ball  
[NASA-CASE-MFS-25833-1] c 35 N86-32698
- Method of repairing hidden leaks in tubes  
[NASA-CASE-MFS-19796-1] c 37 N86-32736
- Remotely operable peristaltic pump  
[NASA-CASE-MFS-28059-1] c 37 N86-32738
- Double window viewing chamber assembly  
[NASA-CASE-MFS-28057-1] c 09 N87-14355
- Low loss injector for liquid propellant rocket engines  
[NASA-CASE-MFS-25989-1] c 20 N87-14420
- Emitted vibration measurement device and method  
[NASA-CASE-MFS-25981-1] c 35 N87-14670
- High-temperature, high-pressure optical cell  
[NASA-CASE-MFS-26000-1] c 74 N87-14971
- Non-backdrivable free wheeling coupling  
[NASA-CASE-MSC-20475-1] c 37 N87-17037
- Welding torch with arc light reflector  
[NASA-CASE-MFS-29134-1] c 74 N87-17493
- Space ultra-vacuum facility and method of operation  
[NASA-CASE-MFS-28139-1] c 29 N87-18679
- Orbital maneuvering end effectors  
[NASA-CASE-MFS-28161-1] c 37 N87-18817
- Quasi-containerless glass formation method and apparatus  
[NASA-CASE-MFS-28090-1] c 27 N87-21111
- Four quadrant control circuit for a brushless three-phase dc motor  
[NASA-CASE-MFS-28080-1] c 33 N87-21233
- Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N87-21332
- Self indexing latch system  
[NASA-CASE-MFS-25956-1] c 37 N87-21333
- Bidirectional control system for energy flow in solar powered flywheel  
[NASA-CASE-MFS-25978-1] c 44 N87-21410
- Tube coupling device  
[NASA-CASE-MFS-25964-2] c 37 N87-22977
- Apparatus and method for quiescent containerless processing of high temperature metals and alloys in low gravity  
[NASA-CASE-MFS-28087-1] c 35 N87-23944
- Remotely controlled spray gun  
[NASA-CASE-MFS-28110-1] c 37 N87-24689
- Photorefractor ocular screening system  
[NASA-CASE-MFS-26011-1-SB] c 52 N87-24874
- Method for machining holes in composite materials  
[NASA-CASE-MFS-28044-1] c 31 N87-25491
- Fatigue testing a plurality of test specimens and method  
[NASA-CASE-MFS-28118-1] c 39 N87-25601
- Self-clamping arc light reflector for welding torch  
[NASA-CASE-MFS-29207-1] c 74 N87-25843
- Laser schlieren crystal monitor  
[NASA-CASE-MFS-28060-1] c 76 N87-25862
- Alignment and assembly tool for very large diameter cylinders  
[NASA-CASE-MFS-28001-2] c 37 N88-14360
- Welding monitoring system  
[NASA-CASE-MFS-29177-1] c 37 N88-14362
- Method for investigating the formation of crystals in a transparent material  
[NASA-CASE-MFS-26008-1-CU] c 76 N88-14835
- Moving wall, continuous flow electrophoresis apparatus  
[NASA-CASE-MFS-28142-1] c 25 N88-23845
- Cylindrical surface profile and diameter measuring tool and method  
[NASA-CASE-MFS-28287-1] c 35 N88-23959
- Rotor self-lubricating axial stop  
[NASA-CASE-MFS-28273-1] c 37 N88-23974
- Bi-stem gripping apparatus  
[NASA-CASE-MFS-28185-1] c 37 N88-23979
- Welding torch gas cup extension  
[NASA-CASE-MFS-29252-1] c 37 N88-23980
- Reconfigurable work station for a video display unit and keyboard  
[NASA-CASE-MFS-26009-1-SB] c 54 N88-24163
- Ion generator and ion application system  
[NASA-CASE-MFS-28122-1] c 72 N88-24253
- Method and apparatus for growing crystals  
[NASA-CASE-MFS-28137-1] c 76 N88-24544
- Liquid encapsulated float zone process and apparatus  
[NASA-CASE-MFS-28144-1] c 76 N88-24545
- Low temperature storage container for transporting perishables to space station  
[NASA-CASE-MFS-28248-1] c 31 N88-24817
- Planar thin film SQUID with integral flux concentrator  
[NASA-CASE-MFS-28282-1] c 76 N88-29602
- Optically controlled welding system  
[NASA-CASE-MFS-29291-1] c 37 N89-12868
- A reference standard for bidirectional reflection distribution function and bidirectional transmission distribution function measurement  
[NASA-CASE-MFS-28183-1] c 74 N89-13253
- Capillary heat transport and fluid management device  
[NASA-CASE-MFS-28217-1] c 34 N89-14392
- Warm fog dissipation using large volume water sprays  
[NASA-CASE-MFS-25962-1] c 09 N89-25242
- Optical pressure sealing coupling apparatus  
[NASA-CASE-MFS-29348-1] c 74 N89-25689
- Dual wavelength holographic interferometry system  
[NASA-CASE-MFS-28242-1] c 35 N89-26202
- Spacecraft component heater control system  
[NASA-CASE-MFS-28327-1] c 18 N89-28556
- Controlled method of reducing electrophoretic mobility of various substances  
[NASA-CASE-MFS-26049-1-NP] c 25 N89-28603
- Universal precision sine bar attachment  
[NASA-CASE-MFS-28253-1] c 37 N89-28831
- Turbomachinery shaft insert  
[NASA-CASE-MFS-28345-2] c 37 N89-28842
- Method and apparatus for maintaining thermal control in plasma conditions  
[NASA-CASE-MFS-28368-1] c 75 N90-10717
- Releasable clamping apparatus  
[NASA-CASE-MFS-28192-1] c 37 N90-17154
- A digitally controlled system for effecting and presenting a selected electrical resistance  
[NASA-CASE-MFS-29149-1] c 33 N90-19492
- Trailer shield assembly for a welding torch  
[NASA-CASE-MFS-29260-1] c 37 N90-19602
- Human serum albumin crystals and method of preparation  
[NASA-CASE-MFS-28234-1] c 52 N90-20616
- Method of preparing radially homogeneous mercury cadmium telluride crystals  
[NASA-CASE-MFS-25786-2] c 76 N90-20896
- Apparatus for mixing solutions in low gravity environments  
[NASA-CASE-MFS-26047-1] c 29 N90-21209
- Hanging drop crystal growth apparatus and method  
[NASA-CASE-MFS-28206-1-SB] c 76 N90-23242
- High temperature electric arc furnace and method  
[NASA-CASE-MFS-28281-1] c 09 N90-23415
- High temperature insulation barrier composite  
[NASA-CASE-MFS-29241-1] c 24 N90-23480
- Internal wire guide for GTAW welding  
[NASA-CASE-MFS-29489-1] c 31 N90-23586
- Crystal growth apparatus  
[NASA-CASE-MFS-28182-1] c 76 N90-24169
- Electrode carrying wire for GTAW welding  
[NASA-CASE-MFS-29491-1] c 31 N90-26168
- Solidification processing of alloys using an applied electric field  
[NASA-CASE-MFS-26083-1-CU] c 26 N90-26940
- Cryogenic anti-friction bearing with inner race  
[NASA-CASE-MFS-28384-1] c 37 N90-27112
- Variable magnification variable dispersion glancing incidence imaging x ray spectroscopic telescope  
[NASA-CASE-MFS-28013-3] c 89 N90-27594
- Solder dross removal apparatus  
[NASA-CASE-MFS-28406-1] c 37 N91-13729
- Cantilever clamp fitting  
[NASA-CASE-MFS-28328-1] c 37 N91-13731
- Wide acceptance angle, high concentration ratio, optical collector  
[NASA-CASE-MFS-28295-1] c 74 N91-13999
- Variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-2] c 89 N91-14096
- Directional solidification of superalloys  
[NASA-CASE-MFS-28314-1] c 26 N91-14462
- Electrostatically suspended rotor for angular encoder  
[NASA-CASE-MFS-28294-1] c 31 N91-14508
- Low-noise nozzle valve  
[NASA-CASE-MFS-28383-1] c 31 N91-14563
- Turbomachinery rotor support with damping  
[NASA-CASE-MFS-28345-1] c 37 N91-14608
- System for connecting fluid couplings  
[NASA-CASE-MFS-26042-1-SB] c 37 N91-14613
- X ray sensitive area detection device  
[NASA-CASE-MFS-28232-1] c 74 N91-14835
- Piezoelectrostatic generator  
[NASA-CASE-MFS-28298-1] c 76 N91-14872
- Method of fabricating composite structures  
[NASA-CASE-MFS-28390-1] c 24 N91-15333
- Method and apparatus for determining return stroke polarity of distant lightning  
[NASA-CASE-MFS-26102-1-CU] c 47 N91-15661
- Hanging drop crystal growth apparatus  
[NASA-CASE-MFS-26061-1] c 76 N91-16815
- Drop deployment system for crystal growth apparatus  
[NASA-CASE-MFS-28422-1] c 29 N91-17250
- O-ring gasket test fixture  
[NASA-CASE-MFS-28376-1] c 14 N91-21175
- Wet atmospheric generation apparatus  
[NASA-CASE-MFS-28177-1] c 35 N91-21496
- Sample holder support for microscopes  
[NASA-CASE-MFS-28420-1] c 37 N91-21545
- Dynamic tester for rotor seals and bearings  
[NASA-CASE-MFS-28493-1] c 09 N91-25155
- Thermally isolated deployable shield for spacecraft  
[NASA-CASE-MFS-28524-1] c 18 N91-25167
- Apparatus for joining trusses  
[NASA-CASE-MFS-28545-1] c 31 N91-25306
- Radiation sensitive area detection device and method  
[NASA-CASE-MFS-28563-1] c 35 N91-25388
- Control circuitry using electronic emulation of a synchro signal for accurate control of position and rate of rotation for shafts  
[NASA-CASE-MFS-28458-1] c 33 N91-26459
- Double face sealing device  
[NASA-CASE-MFS-28521-1] c 37 N91-26542
- Standard remote manipulator system docking target augmentation for automated docking  
[NASA-CASE-MFS-28419-1] c 18 N91-27200
- Rotationally actuated prosthetic helping hand  
[NASA-CASE-MFS-28426-1] c 54 N91-32795
- Electromagnetic Meissner effect launcher  
[NASA-CASE-MFS-28323-1] c 14 N92-15081
- Sprayable lightweight ablative coating  
[NASA-CASE-MFS-28372-1] c 27 N92-16123
- Automatic locking orthotic knee device  
[NASA-CASE-MFS-28633-1] c 54 N92-17866
- Production of mullite fibers  
[NASA-CASE-MFS-28431-1] c 24 N92-17870



- Prosthetic helping hand  
[NASA-CASE-MFS-28430-1] c 54 N92-24044
- Induction boiler  
[NASA-CASE-MFS-28634-1] c 37 N92-24055
- Polymer-coated surfaces to control surface zeta potential  
[NASA-CASE-MFS-26050-1] c 27 N92-25397
- Macromolecular crystal growing system  
[NASA-CASE-MFS-26088-1-CU] c 76 N92-25398
- Metal etching composition  
[NASA-CASE-MFS-29576-1] c 25 N92-25399
- Controlled method of reducing electrophoretic mobility of macromolecules, particles, or cells  
[NASA-CASE-MFS-26049-2-NP] c 25 N92-28728
- Closed-loop autonomous docking system  
[NASA-CASE-MFS-28421-1] c 18 N92-28750
- Water window imaging x ray microscope  
[NASA-CASE-MFS-28485-1] c 35 N92-29135
- Bladder operated robotic joint  
[NASA-CASE-MFS-28682-1] c 27 N92-29831
- Hollow fiber clinostat for simulating microgravity in cell culture  
[NASA-CASE-MFS-28370-1] c 35 N92-31790
- Rotating-unbalanced-mass devices and methods for scanning balloon-borne-experiments, free-flying spacecraft, and space shuttle/space station attached experiments  
[NASA-CASE-MFS-28425-1] c 35 N92-33010
- Multispectral variable magnification glancing incidence x ray telescope  
[NASA-CASE-MFS-28013-4] c 89 N92-33012
- Arc/gas electrode  
[NASA-CASE-MFS-29766-1] c 33 N92-33030
- Protein crystal growth tray assembly  
[NASA-CASE-MFS-28507-1] c 76 N92-34171
- Gradient tempering process  
[NASA-CASE-MFS-28496-1] c 26 N92-34239
- Method and apparatus for determining return stroke polarity of distant lightning  
[NASA-CASE-MFS-26102-2-CU] c 47 N93-10108
- Crystal growth in a microgravity environment  
[NASA-CASE-MFS-28473-1] c 76 N93-14707
- X-ray monochromator  
[NASA-CASE-MFS-28492-1] c 74 N93-14711
- Bar-holding prosthetic limb  
[NASA-CASE-MFS-28481-1] c 54 N93-14870
- Fluid separator  
[NASA-CASE-MFS-28658-1] c 34 N93-17039
- Wheels for wheelchairs and the like  
[NASA-CASE-MFS-28632-1] c 54 N93-17042
- Method and apparatus for controlling protein crystallization  
[NASA-CASE-MFS-28688-1] c 76 N93-17043
- Portable seat lift  
[NASA-CASE-MFS-28610-1] c 54 N93-17045
- Saddle clamp assembly  
[NASA-CASE-MFS-28701-1] c 37 N93-17057
- Bright light delivery system  
[NASA-CASE-MFS-28723-1] c 52 N93-17058
- Pressure wall patch  
[NASA-CASE-MFS-28724-1] c 18 N93-17061
- Slip joint connector  
[NASA-CASE-MFS-28659-1] c 37 N93-17080
- Radial spline assembly for antifriction bearings  
[NASA-CASE-MFS-28629-1] c 37 N93-17084
- Sandwiched structural panel having a bi-directional core structure  
[NASA-CASE-MFS-28796-1] c 24 N93-19022
- Valve lock  
[NASA-CASE-MFS-29764-1] c 37 N93-19049
- Radial spline assembly for antifriction bearings  
[NASA-CASE-MFS-28629-1] c 37 N93-26001
- Rocket engine nozzle attenuator  
[NASA-CASE-MFS-28739-1] c 20 N93-28324
- Hybrid bearings for turbopumps and the like  
[NASA-CASE-MFS-28491-1] c 37 N93-28326
- Altitude compensating ablative stiffening band for rocket motor nozzles  
[NASA-CASE-MFS-28728-1] c 20 N93-28950
- Welding wire pressure sensor assembly  
[NASA-CASE-MFS-26216-1] c 37 N93-28951
- Amino acid sequences for the binding regions in serum albumin proteins  
[NASA-CASE-MFS-28402-1] c 51 N93-28952
- Process for selectively recovering algae and protozoa  
[NASA-CASE-MFS-26124-1-NPO] c 51 N93-29174
- Valve malfunction detection apparatus  
[NASA-CASE-MFS-29904-1] c 35 N93-29503
- System for testing bearings  
[NASA-CASE-MFS-28589-1] c 37 N93-29618
- Platform stair lift  
[NASA-CASE-MFS-28772-1] c 54 N93-29845
- Quick connect fastener  
[NASA-CASE-MFS-28833-1] c 37 N93-29846
- Liquid fuel injection elements for rocket engines  
[NASA-CASE-MFS-28547-1] c 20 N93-29847
- Method of fabricating a rocket engine combustion chamber  
[NASA-CASE-MFS-28569-1] c 27 N93-30565
- Prosthetic elbow joint  
[NASA-CASE-MFS-28707-1] c 54 N93-30566
- Mold bolt and means for achieving close tolerances between bolts and bolt holes  
[NASA-CASE-MFS-28720-1] c 37 N93-30567
- Gas arc constriction for plasma arc welding  
[NASA-CASE-MFS-28844-1] c 37 N93-31292
- Turntable mechanism  
[NASA-CASE-MFS-28522-1] c 37 N93-31313
- National Aeronautics and Space Administration.**  
**National Space Technology Labs., Bay Saint Louis, MS.**
- Method for treating wastewater using microorganisms and vascular aquatic plants  
[NASA-CASE-NSTL-10] c 45 N84-12654
- National Aeronautics and Space Administration.**  
**Pasadena Office, CA.**
- Phase control circuits using frequency multiplications for phased array antennas  
[NASA-CASE-ERC-10285] c 10 N73-16206
- Method of forming difunctional polyisobutylene  
[NASA-CASE-NPO-10893] c 27 N73-22710
- Radiation and particle detector and amplifier  
[NASA-CASE-NPO-12128-1] c 14 N73-32317
- Expandable space frames  
[NASA-CASE-ERC-10365-1] c 31 N73-32749
- Use of thin film light detector  
[NASA-CASE-NPO-11432-2] c 35 N74-15090
- Temperature compensated digital inertial sensor  
[NASA-CASE-NPO-13044-1] c 35 N74-15094
- Compact hydrogenator  
[NASA-CASE-NPO-11682-1] c 35 N74-15127
- Short range laser obstacle detector  
[NASA-CASE-NPO-11856-1] c 36 N74-15145
- System for stabilizing cable phase delay utilizing a coaxial cable under pressure  
[NASA-CASE-NPO-13138-1] c 33 N74-17927
- Banded transformer cores  
[NASA-CASE-NPO-11966-1] c 33 N74-17928
- Inverter ratio failure detector  
[NASA-CASE-NPO-13160-1] c 35 N74-18090
- Heat transfer device  
[NASA-CASE-NPO-11120-1] c 34 N74-18552
- Storage battery comprising negative plates of a wedge shaped configuration  
[NASA-CASE-NPO-11806-1] c 44 N74-19693
- Gated compressor, distortionless signal limiter  
[NASA-CASE-NPO-11820-1] c 32 N74-19788
- Apparatus for scanning the surface of a cylindrical body  
[NASA-CASE-NPO-11861-1] c 36 N74-20009
- Decision feedback loop for tracking a polyphase modulated carrier  
[NASA-CASE-NPO-13103-1] c 32 N74-20811
- Optically actuated two position mechanical mover  
[NASA-CASE-NPO-13105-1] c 37 N74-21060
- Flow control valve  
[NASA-CASE-NPO-11951-1] c 37 N74-21065
- Thin film gauge  
[NASA-CASE-NPO-10617-1] c 35 N74-22095
- High isolation RF signal selection switches  
[NASA-CASE-NPO-13081-1] c 33 N74-22814
- Single reflector interference spectrometer and drive system therefor  
[NASA-CASE-NPO-11932-1] c 35 N74-23040
- Scanning nozzle plating system  
[NASA-CASE-NPO-11758-1] c 31 N74-23065
- Rock sampling  
[NASA-CASE-XNP-10007-1] c 46 N74-23068
- Rock sampling  
[NASA-CASE-XNP-09755] c 46 N74-23069
- Miniature multichannel biotelemetry system  
[NASA-CASE-NPO-13065-1] c 52 N74-26625
- Dispensing targets for ion beam particle generators  
[NASA-CASE-NPO-13112-1] c 73 N74-26767
- Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c 28 N74-27425
- Coherent receiver employing nonlinear coherence detection for carrier tracking  
[NASA-CASE-NPO-11921-1] c 32 N74-30523
- Digital servo control of random sound test excitation  
[NASA-CASE-NPO-11623-1] c 71 N74-31148
- Capacitance multiplier and filter synthesizing network  
[NASA-CASE-NPO-11948-1] c 33 N74-32712
- Apparatus for forming drive belts  
[NASA-CASE-NPO-13205-1] c 31 N74-32917
- Tool for use in lifting pin supported objects  
[NASA-CASE-NPO-13157-1] c 37 N74-32918
- Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c 28 N74-33209
- Geneva mechanism  
[NASA-CASE-NPO-13281-1] c 37 N75-13266
- Amino acid analysis  
[NASA-CASE-NPO-12130-1] c 25 N75-14844
- Method of producing a storage bulb for an atomic hydrogen maser  
[NASA-CASE-NPO-13050-1] c 36 N75-15029
- Combined pressure regulator and shutoff valve  
[NASA-CASE-NPO-13201-1] c 37 N75-15050
- Reduction of blood serum cholesterol  
[NASA-CASE-NPO-12119-1] c 52 N75-15270
- Simultaneous acquisition of tracking data from two stations  
[NASA-CASE-NPO-13292-1] c 32 N75-15854
- Shock absorbing mount for electrical components  
[NASA-CASE-NPO-13253-1] c 37 N75-18573
- System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c 33 N75-19519
- Motor run-up system  
[NASA-CASE-NPO-13374-1] c 33 N75-19524
- Deep trap, laser activated image converting system  
[NASA-CASE-NPO-13131-1] c 36 N75-19652
- Multitarget sequential sputtering apparatus  
[NASA-CASE-NPO-13345-1] c 37 N75-19684
- Wide angle sun sensor  
[NASA-CASE-NPO-13327-1] c 35 N75-23910
- Material suspension within an acoustically excited resonant chamber  
[NASA-CASE-NPO-13263-1] c 12 N75-24774
- Heat operated cryogenic electrical generator  
[NASA-CASE-NPO-13303-1] c 20 N75-24837
- System for interference signal nulling by polarization adjustment  
[NASA-CASE-NPO-13140-1] c 62 N75-24982
- Heat detection and compositions and devices therefor  
[NASA-CASE-NPO-10764-2] c 35 N75-25122
- Servo-controlled intravital microscope system  
[NASA-CASE-NPO-13214-1] c 35 N75-25123
- Ultrasonically bonded valve assembly  
[NASA-CASE-NPO-13360-1] c 37 N75-25185
- Vehicle locating system utilizing AM broadcasting station carriers  
[NASA-CASE-NPO-13217-1] c 32 N75-26194
- Asynchronous, multiplexing, single line transmission and recovery data system  
[NASA-CASE-NPO-13321-1] c 32 N75-26195
- Brazing alloy  
[NASA-CASE-XNP-03878] c 26 N75-27127
- Very high intensity light source using a cathode ray tube  
[NASA-CASE-XNP-01296] c 33 N75-27250
- Fluorescence detector for monitoring atmospheric pollutants  
[NASA-CASE-NPO-13231-1] c 45 N75-27585
- Cooperative multiaxis sensor for teleoperation of article manipulating apparatus  
[NASA-CASE-NPO-13386-1] c 54 N75-27758
- Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c 54 N75-27761
- Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c 26 N75-29236
- Satellite aided vehicle avoidance system  
[NASA-CASE-ERC-10419-1] c 03 N75-30132
- Refrigerated coaxial coupling  
[NASA-CASE-NPO-13504-1] c 33 N75-30430
- Electric power generation system directory from laser power  
[NASA-CASE-NPO-13308-1] c 36 N75-30524
- Subminiature insertable force transducer  
[NASA-CASE-NPO-13423-1] c 33 N75-31329
- Symmetrical odd-modulus frequency divider  
[NASA-CASE-NPO-13426-1] c 33 N75-31330
- Stored charge transistor  
[NASA-CASE-NPO-11156-2] c 33 N75-31331
- Doped Josephson tunneling junction for use in a sensitive IR detector  
[NASA-CASE-NPO-13348-1] c 33 N75-31332
- Acoustically controlled distributed feedback laser  
[NASA-CASE-NPO-13175-1] c 36 N75-31427
- Inert gas metallic vapor laser  
[NASA-CASE-NPO-13449-1] c 36 N75-32441
- Prevention of hydrogen embrittlement of high strength steel by hydrazine compositions  
[NASA-CASE-NPO-12122-1] c 24 N76-14203
- Helium refrigerator  
[NASA-CASE-NPO-13435-1] c 31 N76-14284
- Nonlinear nonsingular feedback shift registers  
[NASA-CASE-NPO-13451-1] c 33 N76-14373
- Strain gage mounting assembly  
[NASA-CASE-NPO-13170-1] c 35 N76-14430
- Thermostatically controlled non-tracking type solar energy concentrator  
[NASA-CASE-NPO-13497-1] c 44 N76-14602
- Multi-computer multiple data path hardware exchange system  
[NASA-CASE-NPO-13422-1] c 60 N76-14818
- Cermet composition and method of fabrication  
[NASA-CASE-NPO-13120-1] c 27 N76-15311

- Dichroic plate  
[NASA-CASE-NPO-13506-1] c 35 N76-15435  
Utilization of oxygen difluoride for syntheses of fluoropolymers  
[NASA-CASE-NPO-12061-1] c 27 N76-16228  
Magnetometer using superconducting rotating body  
[NASA-CASE-NPO-13388-1] c 35 N76-16390  
Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c 35 N76-16391  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-1] c 37 N76-16446  
Automated system for identifying traces of organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c 25 N76-18245  
Analog to digital converter  
[NASA-CASE-NPO-13385-1] c 33 N76-18345  
Sampler of gas borne particles  
[NASA-CASE-NPO-13396-1] c 35 N76-18401  
Stark-effect modulation of CO<sub>2</sub> laser with NH<sub>2</sub>D  
[NASA-CASE-NPO-11945-1] c 36 N76-18427  
Diffused waveguiding capillary tube with distributed feedback for a gas laser  
[NASA-CASE-NPO-13544-1] c 36 N76-18428  
System for minimizing internal combustion engine pollution emission  
[NASA-CASE-NPO-13402-1] c 37 N76-18457  
Hydrogen-bromine secondary battery  
[NASA-CASE-NPO-13237-1] c 44 N76-18641  
Hydrogen-rich gas generator  
[NASA-CASE-NPO-13464-1] c 44 N76-18642  
Zinc-halide battery with molten electrolyte  
[NASA-CASE-NPO-11961-1] c 44 N76-18643  
Priority interrupt system  
[NASA-CASE-NPO-13067-1] c 60 N76-18800  
Miniature muscle displacement transducer  
[NASA-CASE-NPO-13519-1] c 33 N76-19338  
Zero torque gear head wrench  
[NASA-CASE-NPO-13059-1] c 37 N76-20480  
Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NPO-13443-1] c 76 N76-20994  
Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NPO-13568-1] c 32 N76-21365  
Indicator providing continuous indication of the presence of a specific pollutant in air  
[NASA-CASE-NPO-13474-1] c 45 N76-21742  
Shared memory for a fault-tolerant computer  
[NASA-CASE-NPO-13139-1] c 60 N76-21914  
Wind sensor  
[NASA-CASE-NPO-13462-1] c 35 N76-24524  
Fiber distributed feedback laser  
[NASA-CASE-NPO-13531-1] c 36 N76-24553  
Method of forming a wick for a heat pipe  
[NASA-CASE-NPO-13391-1] c 34 N76-27515  
Method and apparatus for nondestructive testing of pressure vessels  
[NASA-CASE-NPO-12142-1] c 38 N76-28563  
Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback  
[NASA-CASE-NPO-13346-1] c 36 N76-29575  
Stirling cycle engine and refrigeration systems  
[NASA-CASE-NPO-13613-1] c 37 N76-29590  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c 44 N76-29700  
Solar-powered pump  
[NASA-CASE-NPO-13567-1] c 44 N76-29701  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13464-2] c 44 N76-29704  
Myocardium wall thickness transducer and measuring method  
[NASA-CASE-NPO-13644-1] c 52 N76-29895  
Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NPO-13643-1] c 52 N76-29896  
Real time analysis of voiced sounds  
[NASA-CASE-NPO-13465-1] c 32 N76-31372  
III-V photocathode with nitrogen doping for increased quantum efficiency  
[NASA-CASE-NPO-12134-1] c 33 N76-31409  
High resolution Fourier interferometer-spectrophotopolarimeter  
[NASA-CASE-NPO-13604-1] c 35 N76-31490  
Reflected-wave maser  
[NASA-CASE-NPO-13490-1] c 36 N76-31512  
Method of making hollow elastomeric bodies  
[NASA-CASE-NPO-13535-1] c 37 N76-31524  
Solar cell grid patterns  
[NASA-CASE-NPO-13087-2] c 44 N76-31666  
Furlable antenna  
[NASA-CASE-NPO-13553-1] c 33 N76-32457  
Annular arc accelerator shock tube  
[NASA-CASE-NPO-13528-1] c 09 N77-10071  
Cryostat system for temperatures on the order of 2 deg K or less  
[NASA-CASE-NPO-13459-1] c 31 N77-10229  
The dc-to-dc converters employing staggered-phase power switches with two-loop control  
[NASA-CASE-NPO-13512-1] c 33 N77-10428  
Ion and electron detector for use in an ICR spectrometer  
[NASA-CASE-NPO-13479-1] c 35 N77-10492  
Hydrogen-rich gas generator  
[NASA-CASE-NPO-13560-1] c 44 N77-10636  
Space communication system for compressed data with a concatenated Reed-Solomon-Viterbi coding channel  
[NASA-CASE-NPO-13545-1] c 32 N77-12240  
Computer interface system  
[NASA-CASE-NPO-13428-1] c 60 N77-12721  
High temperature oxidation resistant cermet compositions  
[NASA-CASE-NPO-13666-1] c 27 N77-13217  
Frequency discriminator and phase detector circuit  
[NASA-CASE-NPO-11515-1] c 33 N77-13315  
Mass spectrometer with magnetic pole pieces providing the magnetic fields for both the magnetic sector and an ion-type vacuum pump  
[NASA-CASE-NPO-13663-1] c 35 N77-14406  
Thermocouple installation  
[NASA-CASE-NPO-13540-1] c 35 N77-14409  
Method and apparatus for background signal reduction in opto-acoustic absorption measurement  
[NASA-CASE-NPO-13683-1] c 35 N77-14411  
Nuclear thermionic converter  
[NASA-CASE-NPO-13121-1] c 73 N77-18891  
Continuous plasma laser  
[NASA-CASE-NPO-04167-3] c 36 N77-19416  
Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c 32 N77-20289  
Charge storage diode modulators and demodulators  
[NASA-CASE-NPO-10189-1] c 33 N77-21314  
Compact, high intensity arc lamp with internal magnetic field producing means  
[NASA-CASE-NPO-11510-1] c 33 N77-21315  
Depressurization of arc lamps  
[NASA-CASE-NPO-10790-1] c 33 N77-21316  
Electromagnetic transducer recording head having a laminated core section and tapered gap  
[NASA-CASE-NPO-10711-1] c 35 N77-21392  
Cryogenic liquid sensor  
[NASA-CASE-NPO-10619-1] c 35 N77-21393  
Uniform variable light source  
[NASA-CASE-NPO-11429-1] c 74 N77-21941  
Arc control in compact arc lamps  
[NASA-CASE-NPO-10870-1] c 33 N77-22386  
Hydraulic drain means for servo-systems  
[NASA-CASE-NPO-10316-1] c 37 N77-22479  
Automated multi-level vehicle parking system  
[NASA-CASE-NPO-13058-1] c 37 N77-22480  
Solar hydrogen generator  
[NASA-CASE-NPO-11361-1] c 44 N77-22607  
Sun direction detection system  
[NASA-CASE-NPO-13722-1] c 74 N77-22951  
Compact pulsed laser having improved heat conductance  
[NASA-CASE-NPO-13147-1] c 36 N77-25502  
Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c 36 N77-26477  
Distributed feedback acoustic surface wave oscillator  
[NASA-CASE-NPO-13673-1] c 71 N77-26919  
Penetrometer  
[NASA-CASE-NPO-11103-1] c 35 N77-27367  
Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c 74 N77-28933  
Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c 27 N77-30236  
Phase substitution of spare converter for a failed one of parallel phase staggered converters  
[NASA-CASE-NPO-13812-1] c 33 N77-30365  
Oil and fat absorbing polymers  
[NASA-CASE-NPO-11609-2] c 27 N77-31308  
Combustion engine  
[NASA-CASE-NPO-13671-1] c 37 N77-31497  
Apparatus for photon excited catalysis  
[NASA-CASE-NPO-13566-1] c 25 N77-32255  
Charge-coupled device data processor for an airborne imaging radar system  
[NASA-CASE-NPO-13587-1] c 32 N77-32342  
Direct reading inductance meter  
[NASA-CASE-NPO-13792-1] c 35 N77-32455  
Solar photolysis of water  
[NASA-CASE-NPO-13675-1] c 44 N77-32580  
Low to high temperature energy conversion system  
[NASA-CASE-NPO-13510-1] c 44 N77-32581  
Solar energy collection system  
[NASA-CASE-NPO-13810-1] c 44 N77-32582  
Three-dimensional tracking solar energy concentrator and method for making same  
[NASA-CASE-NPO-13736-1] c 44 N77-32583  
Overload protection system for power inverter  
[NASA-CASE-NPO-13872-1] c 33 N78-10377  
Photoelectron spectrometer with means for stabilizing sample surface potential  
[NASA-CASE-NPO-13772-1] c 35 N78-10429  
Machine for use in monitoring fatigue life for a plurality of elastomeric specimens  
[NASA-CASE-NPO-13731-1] c 39 N78-10493  
Portable linear-focused solar thermal energy collecting system  
[NASA-CASE-NPO-13734-1] c 44 N78-10554  
Acoustic energy shaping  
[NASA-CASE-NPO-13802-1] c 71 N78-10837  
High voltage, high current Schottky barrier solar cell  
[NASA-CASE-NPO-13482-1] c 44 N78-13526  
Durable antistatic coating for polymethylmethacrylate  
[NASA-CASE-NPO-13867-1] c 27 N78-14164  
Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c 32 N78-15323  
Selective image area control of X-ray film exposure density  
[NASA-CASE-NPO-13808-1] c 35 N78-15461  
Motion restraining device  
[NASA-CASE-NPO-13619-1] c 37 N78-16369  
Ruler for making navigational computations  
[NASA-CASE-NPO-01458] c 04 N78-17031  
Nuclear alkylated pyridine aldehyde polymers and conductive compositions thereof  
[NASA-CASE-NPO-10557] c 27 N78-17214  
Method of adhering bone to a rigid substrate using a graphite fiber reinforced bone cement  
[NASA-CASE-NPO-13764-1] c 27 N78-17215  
Purging means and method for Xenon arc lamps  
[NASA-CASE-NPO-11978] c 31 N78-17238  
Pressure transducer  
[NASA-CASE-NPO-11150] c 35 N78-17359  
Wobble gear drive mechanism  
[NASA-CASE-NPO-00625] c 37 N78-17385  
Apparatus for handling micron size range particulate material  
[NASA-CASE-NPO-10151] c 37 N78-17386  
Cross correlation anomaly detection system  
[NASA-CASE-NPO-13283] c 38 N78-17395  
Automatic visual inspection system for microelectronics  
[NASA-CASE-NPO-13282] c 38 N78-17396  
Low cost solar energy collection system  
[NASA-CASE-NPO-13579-1] c 44 N78-17460  
Differential optoacoustic absorption detector  
[NASA-CASE-NPO-13759-1] c 74 N78-17867  
Interferometer mirror tilt correcting system  
[NASA-CASE-NPO-13687-1] c 35 N78-18391  
Over-under double-pass interferometer  
[NASA-CASE-NPO-13999-1] c 35 N78-18395  
Independent gain and bandwidth control of a traveling wave maser  
[NASA-CASE-NPO-13801-1] c 36 N78-18410  
High temperature resistant cermet and ceramic compositions  
[NASA-CASE-NPO-13690-1] c 27 N78-19302  
Thin conformal antenna array for microwave power conversions  
[NASA-CASE-NPO-13886-1] c 32 N78-24391  
Multistation refrigeration system  
[NASA-CASE-NPO-13839-1] c 31 N78-25256  
Swept group delay measurement  
[NASA-CASE-NPO-13909-1] c 33 N78-25319  
Polymeric electrolytic hygrometer  
[NASA-CASE-NPO-13948-1] c 35 N78-25391  
Charge transfer reaction laser with preionization means  
[NASA-CASE-NPO-13945-1] c 36 N78-27402  
Hexagon solar power panel  
[NASA-CASE-NPO-12148-1] c 44 N78-27515  
RF beam center location method and apparatus for power transmission system  
[NASA-CASE-NPO-13821-1] c 44 N78-28594  
Control for nuclear thermionic power source  
[NASA-CASE-NPO-13114-2] c 73 N78-28913  
Magneto-optic detection system with noise cancellation  
[NASA-CASE-NPO-11954-1] c 35 N78-29421  
Nitramine propellants  
[NASA-CASE-NPO-14103-1] c 28 N78-31255  
Reflex feed system for dual frequency antenna with frequency cutoff means  
[NASA-CASE-NPO-14022-1] c 32 N78-31321  
Solar pond  
[NASA-CASE-NPO-13581-2] c 44 N78-31525  
Non-tracking solar energy collector system  
[NASA-CASE-NPO-13813-1] c 44 N78-31526  
Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c 44 N78-31527

Solid propellant motor					
[NASA-CASE-NPO-11458A]	c 20	N78-32179			
Thermoplastic rubber comprising ethylene-vinyl acetate copolymer, asphalt and fluxing oil					
[NASA-CASE-NPO-08835-1]	c 27	N78-33228			
Hydrogen-fueled engine					
[NASA-CASE-NPO-13763-1]	c 44	N78-33526			
Plural output optometric sample cell and analysis system					
[NASA-CASE-NPO-10233-1]	c 74	N78-33913			
Portable electrophoresis apparatus using minimum electrolyte					
[NASA-CASE-NPO-13274-1]	c 25	N79-10163			
Automatic communication signal monitoring system					
[NASA-CASE-NPO-13941-1]	c 32	N79-10262			
Surface roughness measuring system					
[NASA-CASE-NPO-13862-1]	c 35	N79-10391			
Vehicular impact absorption system					
[NASA-CASE-NPO-14014-1]	c 37	N79-10420			
Dual membrane hollow fiber fuel cell and method of operating same					
[NASA-CASE-NPO-13732-1]	c 44	N79-10513			
Combustor					
[NASA-CASE-NPO-13958-1]	c 25	N79-11151			
Surfactant-assisted liquefaction of particulate carbonaceous substances					
[NASA-CASE-NPO-13904-1]	c 25	N79-11152			
Electroexplosive device					
[NASA-CASE-NPO-13858-1]	c 28	N79-11231			
Space-charge-limited solid-state triode					
[NASA-CASE-NPO-13064-1]	c 33	N79-11314			
Plasma igniter for internal combustion engine					
[NASA-CASE-NPO-13828-1]	c 37	N79-11405			
Solar photolysis of water					
[NASA-CASE-NPO-14126-1]	c 44	N79-11470			
Non-tracking solar energy collector system					
[NASA-CASE-NPO-13817-1]	c 44	N79-11471			
Method of controlling defect orientation in silicon crystal ribbon growth					
[NASA-CASE-NPO-13918-1]	c 76	N79-11920			
Method and apparatus for measuring minority carrier lifetimes and bulk diffusion length in P-N junction solar cells					
[NASA-CASE-NPO-14100-1]	c 44	N79-12541			
Automated clinical system for chromosome analysis					
[NASA-CASE-NPO-13913-1]	c 52	N79-12694			
Conical scan tracking system employing a large antenna					
[NASA-CASE-NPO-14009-1]	c 32	N79-13214			
Stabilization of He2(a 3 Sigma u+ molecules in liquid helium by optical pumping for vacuum UV laser 6					
[NASA-CASE-NPO-13993-1]	c 72	N79-13826			
High temperature resistant cermet and ceramic compositions					
[NASA-CASE-NPO-13690-2]	c 27	N79-14213			
Inhibited solid propellant composition containing beryllium hydride					
[NASA-CASE-NPO-10866-1]	c 28	N79-14228			
Digital demodulator-correlator					
[NASA-CASE-NPO-13982-1]	c 32	N79-14267			
Azimuth correlator for real-time synthetic aperture radar image processing					
[NASA-CASE-NPO-14019-1]	c 32	N79-14268			
Apparatus for providing a servo drive signal in a high-speed stepping interferometer					
[NASA-CASE-NPO-13569-2]	c 35	N79-14348			
High-torque open-end wrench					
[NASA-CASE-NPO-13541-1]	c 37	N79-14383			
Sun tracking solar energy collector					
[NASA-CASE-NPO-13921-1]	c 44	N79-14526			
Primary reflector for solar energy collection systems					
[NASA-CASE-NPO-13579-4]	c 44	N79-14529			
Gas diffusion liquid storage bag and method of use for storing blood					
[NASA-CASE-NPO-13930-1]	c 52	N79-14749			
Coupling apparatus for ultrasonic medical diagnostic system					
[NASA-CASE-NPO-13935-1]	c 52	N79-14751			
Thermomagnetic recording and magnetic-optic playback system					
[NASA-CASE-NPO-10872-1]	c 35	N79-16246			
Manganese bismuth films with narrow transfer characteristics for Curie-point switching					
[NASA-CASE-NPO-11336-1]	c 76	N79-16678			
Multispectral imaging and analysis system					
[NASA-CASE-NPO-13691-1]	c 43	N79-17288			
Solar array strip and a method for forming the same					
[NASA-CASE-NPO-13652-1]	c 44	N79-17314			
Process for purification of waste water produced by a Kraft process pulp and paper mill					
[NASA-CASE-NPO-13847-2]	c 85	N79-17747			
Thermal energy transformer					
[NASA-CASE-NPO-14058-1]	c 44	N79-18443			
Electromagnetic radiation energy arrangement					
[NASA-CASE-WOO-00428-1]	c 32	N79-19186			
Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths					
[NASA-CASE-NPO-14525-1]	c 32	N79-19195			
Method and turbine for extracting kinetic energy from a stream of two-phase fluid					
[NASA-CASE-NPO-14130-1]	c 34	N79-20335			
Digital data reformatter/deserializer					
[NASA-CASE-NPO-13676-1]	c 60	N79-20751			
Acoustic driving of rotor					
[NASA-CASE-NPO-14005-1]	c 71	N79-20827			
System and method for obtaining wide screen Schlieren photographs					
[NASA-CASE-NPO-14174-1]	c 74	N79-20856			
Dynamic capacitor having a peripherally driven element and system incorporating the same					
[NASA-CASE-NPO-02899-1]	c 33	N79-21265			
Seismic vibration source					
[NASA-CASE-NPO-14112-1]	c 46	N79-22679			
Underwater seismic source					
[NASA-CASE-NPO-14255-1]	c 46	N79-23555			
Resolution enhanced sound detecting apparatus					
[NASA-CASE-NPO-14134-1]	c 71	N79-23753			
Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt					
[NASA-CASE-NPO-13969-1]	c 76	N79-23798			
Phase conjugation method and apparatus for an active retrodirective antenna array					
[NASA-CASE-NPO-13641-1]	c 32	N79-24210			
Module failure isolation circuit for paralleled inverters					
[NASA-CASE-NPO-14000-1]	c 33	N79-24254			
Circuit for automatic load sharing in parallel converter modules					
[NASA-CASE-NPO-14056-1]	c 33	N79-24257			
Bonding machine for forming a solar array strip					
[NASA-CASE-NPO-13652-2]	c 44	N79-24431			
Primary reflector for solar energy collection systems and method of making same					
[NASA-CASE-NPO-13579-3]	c 44	N79-24432			
Solar energy collection system					
[NASA-CASE-NPO-13579-2]	c 44	N79-24433			
Compact artificial hand					
[NASA-CASE-NPO-13906-1]	c 54	N79-24652			
Double-sided solar cell package					
[NASA-CASE-NPO-14199-1]	c 44	N79-25482			
Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means					
[NASA-CASE-NPO-13910-1]	c 52	N79-27836			
Chemical vapor deposition reactor					
[NASA-CASE-NPO-13650-1]	c 25	N79-28253			
High performance ammonium nitrate propellant					
[NASA-CASE-NPO-14260-1]	c 28	N79-28342			
Biocombustion and particulate detection system					
[NASA-CASE-NPO-13953-1]	c 35	N79-28527			
Solar cell with improved N-region contact and method of forming the same					
[NASA-CASE-NPO-14205-1]	c 44	N79-31752			
Solar cell module					
[NASA-CASE-NPO-14467-1]	c 44	N79-31753			
Multi-channel rotating optical interface for data transmission					
[NASA-CASE-NPO-14066-1]	c 74	N79-34011			
Start up system for hydrogen generator used with an internal combustion engine					
[NASA-CASE-NPO-13849-1]	c 28	N80-10374			
Sodium storage and injection system					
[NASA-CASE-NPO-14384-1]	c 37	N80-10494			
System for detecting substructure microfractures and method therefore					
[NASA-CASE-NPO-14192-1]	c 39	N80-10507			
Borehole geological assessment					
[NASA-CASE-NPO-14231-1]	c 46	N80-10709			
Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control					
[NASA-CASE-NPO-14474-1]	c 26	N80-14229			
Electromagnetic power absorber					
[NASA-CASE-NPO-13830-1]	c 32	N80-14281			
Multiple anode arc lamp system					
[NASA-CASE-NPO-10857-1]	c 33	N80-14330			
Method for analyzing radiation sensitivity of integrated circuits					
[NASA-CASE-NPO-14350-1]	c 33	N80-14332			
Apparatus for electrolytically tapered or contoured cavities					
[NASA-CASE-NPO-08835-1]	c 37	N80-14395			
Method for forming a solar array strip					
[NASA-CASE-NPO-13652-3]	c 44	N80-14474			
Ozonation of cooling tower waters					
[NASA-CASE-NPO-14340-1]	c 45	N80-14579			
System for real-time crustal deformation monitoring					
[NASA-CASE-NPO-14124-1]	c 46	N80-14603			
Dialysis system					
[NASA-CASE-NPO-14101-1]	c 52	N80-14687			
High resolution threshold photoelectron spectroscopy by electron attachment					
[NASA-CASE-NPO-14078-1]	c 72	N80-14877			
Strong thin membrane structure					
[NASA-CASE-NPO-14021-2]	c 27	N80-16163			
Antenna feed system for receiving circular polarization and transmitting linear polarization					
[NASA-CASE-NPO-14362-1]	c 32	N80-16261			
Apparatus for endoscopic examination					
[NASA-CASE-NPO-14092-1]	c 52	N80-16725			
Method of producing silicon					
[NASA-CASE-NPO-14382-1]	c 31	N80-18231			
High-speed data link for moderate distances and noisy environments					
[NASA-CASE-NPO-14152-1]	c 32	N80-18252			
Radio frequency arraying method for receivers					
[NASA-CASE-NPO-14328-1]	c 32	N80-18253			
High power RF coaxial switch					
[NASA-CASE-NPO-14229-1]	c 33	N80-18285			
Microwave power transmission beam safety system					
[NASA-CASE-NPO-14224-1]	c 33	N80-18287			
Viscosity measuring instrument					
[NASA-CASE-NPO-14501-1]	c 35	N80-18357			
Frequency-scanning particle size spectrometer					
[NASA-CASE-NPO-13606-2]	c 35	N80-18364			
Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures					
[NASA-CASE-NPO-14254-1]	c 36	N80-18372			
Method of fabricating a photovoltaic module of a substantially transparent construction					
[NASA-CASE-NPO-14303-1]	c 44	N80-18550			
Driver for solar cell I-V characteristic plots					
[NASA-CASE-NPO-14096-1]	c 44	N80-18551			
Method and means for helium/hydrogen ratio measurement by alpha scattering					
[NASA-CASE-NPO-14079-1]	c 25	N80-20334			
Satellite personal communications system					
[NASA-CASE-NPO-14480-1]	c 32	N80-20448			
Velocity servo for continuous scan Fourier interference spectrometer					
[NASA-CASE-NPO-14093-1]	c 35	N80-20563			
Portable heatable container					
[NASA-CASE-NPO-14237-1]	c 44	N80-20808			
Process for the leaching of AP from propellant					
[NASA-CASE-NPO-14109-1]	c 28	N80-23471			
Dual band combiner for horn antenna					
[NASA-CASE-NPO-14519-1]	c 32	N80-23524			
Passive intrusion detection system					
[NASA-CASE-NPO-13804-1]	c 33	N80-23559			
Quartz ball valve					
[NASA-CASE-NPO-14473-1]	c 37	N80-23654			
Method and apparatus for Doppler frequency modulation of radiation					
[NASA-CASE-NPO-14524-1]	c 32	N80-24510			
Method of mitigating titanium impurities effects in p-type silicon material for solar cells					
[NASA-CASE-NPO-14635-1]	c 44	N80-24741			
Geological assessment probe					
[NASA-CASE-NPO-14558-1]	c 46	N80-24906			
Cooled echelle grating spectrometer					
[NASA-CASE-NPO-14372-1]	c 35	N80-26635			
Simultaneous muscle force and displacement transducer					
[NASA-CASE-NPO-14212-1]	c 52	N80-27072			
Miniature cyclotron resonance ion source using small permanent magnet					
[NASA-CASE-NPO-14324-1]	c 72	N80-27163			
Silicone containing solid propellant					
[NASA-CASE-NPO-14477-1]	c 28	N80-28536			
System for slicing silicon wafers					
[NASA-CASE-NPO-14406-1]	c 37	N80-29703			
Induced junction solar cell and method of fabrication					
[NASA-CASE-NPO-13786-1]	c 44	N80-29835			
Means for growing ribbon crystals without subjecting the crystals to thermal shock-induced strains					
[NASA-CASE-NPO-14298-1]	c 76	N80-32244			
Method of growing a ribbon crystal particularly suited for facilitating automated control of ribbon width					
[NASA-CASE-NPO-14295-1]	c 76	N80-32245			
Interferometric locating system					
[NASA-CASE-NPO-14173-1]	c 04	N80-32359			
Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same					
[NASA-CASE-NPO-13137-1]	c 27	N80-32514			
Prepolymer dianhydrides					
[NASA-CASE-NPO-13899-1]	c 27	N80-32515			
System for plotting subsoil structure and method thereof					
[NASA-CASE-NPO-14191-1]	c 31	N80-32584			
Support assembly for cryogenically coolable low-noise choke waveguide					
[NASA-CASE-NPO-14253-1]	c 32	N80-32605			
Apparatus for measuring semiconductor device resistance					
[NASA-CASE-NPO-14424-1]	c 33	N80-32650			
Stark cell optoacoustic detection of constituent gases in sample					
[NASA-CASE-NPO-14143-1]	c 25	N81-14015			

- Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c 27 N81-14076
- Frequency translating phase conjugation circuit for active retrodirective antenna array  
[NASA-CASE-NPO-14536-1] c 32 N81-14185
- Precise RF timing signal distribution to remote stations  
[NASA-CASE-NPO-14749-1] c 32 N81-14186
- Base drive for paralleled inverter systems  
[NASA-CASE-NPO-14163-1] c 33 N81-14220
- Low cost cryostat  
[NASA-CASE-NPO-14513-1] c 35 N81-14287
- Power control for hot gas engines  
[NASA-CASE-NPO-14220-1] c 37 N81-14318
- Method and apparatus for fabricating improved solar cell modules  
[NASA-CASE-NPO-14416-1] c 44 N81-14389
- Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c 27 N81-15104
- Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c 28 N81-15119
- Continuous coal processing method  
[NASA-CASE-NPO-13758-2] c 31 N81-15154
- Method and apparatus for quadriphase-shift-key and linear phase modulation  
[NASA-CASE-NPO-14444-1] c 33 N81-15192
- Speed control device for a heavy duty shaft  
[NASA-CASE-NPO-14170-1] c 37 N81-15364
- Redundant operation of counter modules  
[NASA-CASE-NPO-14162-1] c 60 N81-15706
- Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
[NASA-CASE-NPO-13530-1] c 25 N81-17187
- Molten salt pyrolysis of latex  
[NASA-CASE-NPO-14315-1] c 27 N81-17261
- Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c 37 N81-17432
- Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c 44 N81-17518
- System for forming a quadrified image comprising angularly related fields of view of a three dimensional object  
[NASA-CASE-NPO-14219-1] c 74 N81-17886
- Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NPO-14657-1] c 74 N81-17887
- Interferometer  
[NASA-CASE-NPO-14502-1] c 74 N81-17888
- Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c 25 N81-19244
- Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c 33 N81-19389
- Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c 33 N81-19393
- Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NPO-14670-1] c 44 N81-19558
- System and method for character recognition  
[NASA-CASE-NPO-11337-1] c 74 N81-19896
- X-ray position detector  
[NASA-CASE-NPO-12087-1] c 74 N81-19898
- Controller for computer control of brushless dc motors  
[NASA-CASE-NPO-13970-1] c 33 N81-20352
- Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c 52 N81-20703
- Polymeric compositions and their method of manufacture  
[NASA-CASE-NPO-10424-1] c 27 N81-24258
- Low current linearization of magnetic amplifier for dc transducer  
[NASA-CASE-NPO-14617-1] c 33 N81-24338
- Stark effect spectrophone for continuous absorption spectra monitoring  
[NASA-CASE-NPO-15102-1] c 25 N81-25159
- Multifrequency broadband polarized horn antenna  
[NASA-CASE-NPO-14588-1] c 32 N81-25278
- Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c 37 N81-25370
- Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c 37 N81-25371
- Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c 39 N81-25400
- Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c 43 N81-26509
- CCD correlated quadruple sampling processor  
[NASA-CASE-NPO-14426-1] c 33 N81-27396
- Terminal guidance sensor system  
[NASA-CASE-NPO-14521-1] c 37 N81-27519
- Medical diagnosis system and method with multispectral imaging  
[NASA-CASE-NPO-14402-1] c 52 N81-27783
- High-speed multiplexing of keyboard data inputs  
[NASA-CASE-NPO-14554-1] c 60 N81-27814
- Baseband signal combiner for large aperture antenna array  
[NASA-CASE-NPO-14641-1] c 32 N81-29308
- Schottky barrier solar cell  
[NASA-CASE-NPO-13689-2] c 44 N81-29525
- Interferometer  
[NASA-CASE-NPO-14448-1] c 74 N81-29963
- Coal desulfurization  
[NASA-CASE-NPO-14272-1] c 25 N81-33246
- Method and apparatus for producing concentric hollow spheres  
[NASA-CASE-NPO-14596-1] c 31 N81-33319
- Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c 33 N81-33404
- PN lock indicator for dithered PN code tracking loop  
[NASA-CASE-NPO-14435-1] c 33 N81-33405
- Optical gyroscope system  
[NASA-CASE-NPO-14258-1] c 35 N81-33448
- Head for high speed spinner having a vacuum chuck  
[NASA-CASE-NPO-15227-1] c 37 N81-33482
- Fluidized bed coal combustion reactor  
[NASA-CASE-NPO-14273-1] c 25 N81-11144
- Scriber for silicon wafers  
[NASA-CASE-NPO-15539-1] c 37 N81-11469
- Sewage sludge additive  
[NASA-CASE-NPO-13877-1] c 45 N81-11634
- Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c 32 N81-12297
- Microwave limb sounder  
[NASA-CASE-NPO-14544-1] c 46 N81-12685
- Faraday rotation measurement method and apparatus  
[NASA-CASE-NPO-14839-1] c 35 N81-15381
- Solar heated fluidized bed gasification system  
[NASA-CASE-NPO-15071-1] c 44 N81-16475
- Method for shaping and aiming narrow beams  
[NASA-CASE-NPO-14632-1] c 32 N81-18443
- Fiber optic transmission line stabilization apparatus and method  
[NASA-CASE-NPO-15036-1] c 74 N81-19029
- Suspension system for a wheel rolling on a flat track  
[NASA-CASE-NPO-14395-1] c 37 N81-21587
- Crude oil desulfurization  
[NASA-CASE-NPO-14542-1] c 25 N81-23282
- Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c 32 N81-23376
- Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N81-24072
- Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c 33 N81-24418
- Hermetic seal for a shaft  
[NASA-CASE-NPO-15115-1] c 37 N81-24493
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-1] c 35 N81-25484
- Automotive absorption air conditioner utilizing solar and motor waste heat  
[NASA-CASE-NPO-15183-1] c 44 N81-26776
- Efficiency of silicon solar cells containing chromium  
[NASA-CASE-NPO-15179-1] c 44 N81-26777
- Acoustic levitation methods and apparatus  
[NASA-CASE-NPO-15562-1] c 71 N81-27086
- Thermochemical generation of hydrogen  
[NASA-CASE-NPO-15015-1] c 25 N81-28368
- Method of forming frozen spheres in a force-free drop tower  
[NASA-CASE-NPO-14845-1] c 27 N81-28442
- High power metallic halide laser  
[NASA-CASE-NPO-14782-1] c 36 N81-28616
- Method of Fabricating Schottky Barrier solar cell  
[NASA-CASE-NPO-13689-4] c 44 N81-28780
- Coal desulfurization by aqueous chlorination  
[NASA-CASE-NPO-14902-1] c 25 N81-29371
- Control means for a solid state crossbar switch  
[NASA-CASE-NPO-15066-1] c 33 N81-29538
- Discriminator aided phase lock acquisition for suppressed carrier signals  
[NASA-CASE-NPO-14311-1] c 33 N81-29539
- Coherently pulsed laser source  
[NASA-CASE-NPO-15111-1] c 36 N81-29589
- Solid electrolyte cell  
[NASA-CASE-NPO-15269-1] c 44 N81-29710
- Electromigration process for the purification of molten silicon during crystal growth  
[NASA-CASE-NPO-14831-1] c 76 N81-30105
- Hyperthermia heating apparatus  
[NASA-CASE-NPO-15459-2] c 52 N81-33996
- CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c 06 N81-10040
- Method and apparatus for convection control of metallic halide vapor density in a metallic halide laser  
[NASA-CASE-NPO-15021-1] c 36 N81-10417
- Thermal reactor  
[NASA-CASE-NPO-14369-1] c 44 N81-10501
- Enhancement of in vitro guayule propagation  
[NASA-CASE-NPO-15213-1] c 51 N81-17045
- Servomechanism for Doppler shift compensation in optical correlator for synthetic aperture radar  
[NASA-CASE-NPO-14998-1] c 32 N81-18975
- Synchronized voltage contrast display analysis system  
[NASA-CASE-NPO-14567-1] c 33 N81-18996
- Broadband optical radiation detector  
[US-PATENT-4,262,198] c 74 N81-19597
- Elastomer coated filler and composites thereof comprising at least 60% by weight of a hydrated filler and an elastomer containing an acid substituent  
[NASA-CASE-NPO-14857-1] c 27 N81-19900
- Thin wire pointing method  
[NASA-CASE-NPO-15789-1] c 31 N81-19947
- Clutter free synthetic aperture radar correlator  
[NASA-CASE-NPO-14035-1] c 32 N81-19968
- Controlled in situ etch-back  
[NASA-CASE-NPO-15625-1] c 76 N81-20789
- Stabilized lanthanum sulphur compounds  
[NASA-CASE-NPO-16135-1] c 25 N81-24572
- Mobile sampler for use in acquiring samples of terrestrial atmospheric gases  
[NASA-CASE-NPO-15220-1] c 45 N81-25217
- System and method for moving a probe to follow movements of tissue  
[NASA-CASE-NPO-15197-1] c 52 N81-25346
- Waveguide cooling system  
[NASA-CASE-NPO-15401-1] c 32 N81-27085
- Electronic system for high power load control  
[NASA-CASE-NPO-15358-1] c 33 N81-27126
- Particle analyzing method and apparatus  
[NASA-CASE-NPO-15292-1] c 35 N81-27184
- Hydrodesulfurization of chlorinated coal  
[NASA-CASE-NPO-15304-1] c 25 N81-31743
- Method and apparatus for producing gas-filled hollow spheres  
[NASA-CASE-NPO-14596-3] c 31 N81-31896
- Cycling Joule Thomson refrigerator  
[NASA-CASE-NPO-15251-1] c 31 N81-31897
- Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c 32 N81-31918
- Method and device for detection of a substance  
[NASA-CASE-NPO-14940-1] c 33 N81-31954
- System for monitoring physical characteristics of fluids  
[NASA-CASE-NPO-15400-1] c 34 N81-31993
- Cloud cover sensor  
[NASA-CASE-NPO-14936-1] c 47 N81-32232
- Distributed multipoint memory architecture  
[NASA-CASE-NPO-15342-1] c 60 N81-32342
- Acoustic system for material transport  
[NASA-CASE-NPO-15453-1] c 71 N81-32515
- System for controlled acoustic rotation of objects  
[NASA-CASE-NPO-15522-1] c 71 N81-32516
- Mixed polyvalent-monovalent metal coating for carbon-graphite fibers  
[NASA-CASE-NPO-14987-1] c 24 N81-33950
- Antenna grout replacement system  
[NASA-CASE-NPO-15202-1] c 27 N81-34043
- Sphere forming method and apparatus  
[NASA-CASE-NPO-15070-1] c 31 N81-35176
- Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c 36 N81-35350
- Acoustic bubble removal method  
[NASA-CASE-NPO-15334-1] c 71 N81-35781
- Method of increasing minority carrier lifetime in silicon web or the like  
[NASA-CASE-NPO-15530-1] c 76 N81-35888
- Acoustic suspension system  
[NASA-CASE-NPO-15435-1] c 71 N81-36846
- Optical fiber tactile sensor  
[NASA-CASE-NPO-15375-1] c 74 N81-11921
- Photoelectrochemical electrodes  
[NASA-CASE-NPO-15458-1] c 25 N81-12262
- Method and apparatus for minimizing convection during crystal growth from solution  
[NASA-CASE-NPO-15811-1] c 76 N81-12968
- Pressure letdown method and device for coal conversion systems  
[NASA-CASE-NPO-15100-1] c 44 N81-14583
- Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NPO-15767-1] c 23 N81-16255
- Electrodes for solid state devices  
[NASA-CASE-NPO-15161-1] c 33 N81-16456
- Contactless pellet fabrication  
[NASA-CASE-NPO-15592-1] c 71 N81-16940
- Ion beam accelerator system  
[NASA-CASE-NPO-15547-1] c 72 N81-16959
- Apparatus and method for destructive removal of particles contained in flowing fluid  
[NASA-CASE-NPO-15426-1] c 35 N81-17555
- Supercritical solvent coal extraction  
[NASA-CASE-NPO-15210-1] c 25 N81-22709
- Absorbable-susceptor joining of ceramic surfaces  
[NASA-CASE-NPO-15640-1] c 27 N81-22748

Radiative cooler [NASA-CASE-NPO-15465-1]	c 34	N84-22903	Optical system [NASA-CASE-NPO-15801-1]	c 74	N85-23396	Discharge cell for optogalvanic spectroscopy having orthogonal relationship between the probe laser and discharge axis [NASA-CASE-NPO-16271-1]	c 35	N86-25753
Method and apparatus for precision control of radiometer [NASA-CASE-NPO-15398-1]	c 35	N84-22931	Corrosion resistant coating [NASA-CASE-NPO-15928-1]	c 26	N85-29005	High dynamic global positioning system receiver [NASA-CASE-NPO-16171-1CU]	c 04	N86-27270
Spectrophone stabilized laser with line center offset frequency control [NASA-CASE-NPO-15516-1]	c 36	N84-22943	Stabilized unsaturated polyesters [NASA-CASE-NPO-16103-1]	c 27	N85-29043	Protective telescoping shield for solar concentrator [NASA-CASE-NPO-16236-1]	c 44	N86-27706
Oil shale extraction using super-critical extraction [NASA-CASE-NPO-15656-1]	c 43	N84-23012	Reciprocating magnetic refrigerator employing tandem porous matrices within a reciprocating displacer [NASA-CASE-NPO-16257-1]	c 31	N85-29082	Method of making macrocrystalline or single crystal semiconductor material [NASA-CASE-NPO-15904-1]	c 76	N86-28760
Wind and solar powered turbine [NASA-CASE-NPO-15496-1]	c 44	N84-23018	Retinally stabilized differential resolution television display [NASA-CASE-NPO-15432-1]	c 32	N85-29117	Apparatus for production of ultrapure amorphous metals utilizing acoustic cooling [NASA-CASE-NPO-15658-1]	c 26	N86-32551
Acoustic rotation control [NASA-CASE-NPO-15689-1]	c 71	N84-23233	Beam forming network [NASA-CASE-NPO-15743-1]	c 32	N85-29118	Fluidic angular velocity sensor [NASA-CASE-NPO-16479-1CU]	c 35	N86-32695
Programmable scan/read circuitry for charge coupled device imaging detectors [NASA-CASE-NPO-15345-1]	c 74	N84-23247	Closed loop electrostatic levitation system [NASA-CASE-NPO-15553-1]	c 33	N85-29142	Double photon excitation of high-Rydberg atoms as a long-lived submillimeter detector [NASA-CASE-NPO-16372-1]	c 72	N86-33127
Laser pulse detection method and apparatus [NASA-CASE-NPO-16030-1]	c 36	N84-25037	Maser cavity servo-tuning system [NASA-CASE-NPO-15890-1CU]	c 33	N85-29143	Compensation for primary reflector wavefront error [NASA-CASE-NPO-16869-1CU]	c 74	N86-33138
Low-frequency radio navigation system [NASA-CASE-NPO-15264-1]	c 04	N84-27713	Jet pump-drive system for heat removal [NASA-CASE-NPO-16494-1CU]	c 34	N85-29182	Cross-contact chain [NASA-CASE-NPO-16784-1]	c 33	N87-10231
Synthetic aperture radar target simulator [NASA-CASE-NPO-15024-1]	c 32	N84-27951	Trace water sensor [NASA-CASE-NPO-15722-1]	c 35	N85-29212	FET charge sensor and voltage probe [NASA-CASE-NPO-16045-1]	c 76	N87-13313
Ion mass spectrometer [NASA-CASE-NPO-15423-1]	c 35	N84-28016	Digital control of diode laser for atmospheric spectroscopy [NASA-CASE-NPO-16000-1]	c 36	N85-29264	Method of examining microcircuit patterns [NASA-CASE-NPO-16299-1]	c 33	N87-14594
Shaft transducer having dc output proportional to angular velocity [NASA-CASE-NPO-15706-1]	c 35	N84-28017	Method for driving two-phase turbines with enhanced efficiency [NASA-CASE-NPO-15037-2]	c 37	N85-29282	Active hold-down for heat treating [NASA-CASE-NPO-16892-1CU]	c 37	N87-14704
Centrifugal-reciprocating compressor [NASA-CASE-NPO-14597-2]	c 37	N84-28081	Gravity enhanced acoustic levitation method and apparatus [NASA-CASE-NPO-16147-1CU]	c 71	N85-29693	Ground plane interference elimination by passive element [NASA-CASE-NPO-16632-1CU]	c 32	N87-15390
Solar energy modulator [NASA-CASE-NPO-15388-1]	c 44	N84-28203	Optical fiber coupling method and apparatus [NASA-CASE-NPO-15464-1]	c 74	N85-29749	Large TV display system [NASA-CASE-NPO-16932-1CU]	c 33	N87-15413
Solar concentrator protective system [NASA-CASE-NPO-15662-1]	c 44	N84-28204	Method for growth of crystals by pressure reduction of supercritical or subcritical solution [NASA-CASE-NPO-15772-1]	c 76	N85-29800	Method for growing low defect, high purity crystalline layers utilizing lateral overgrowth of a patterned mask [NASA-CASE-NPO-15813-2]	c 76	N87-15882
Integrating IR detector imaging systems [NASA-CASE-NPO-15805-1]	c 74	N84-28590	Split-cross-bridge resistor for testing for proper fabrication of integrated circuits [NASA-CASE-NPO-16021-1]	c 33	N85-30187	Tank tread assemblies with track-linking mechanism [NASA-CASE-NPO-16321-1CU]	c 37	N87-17034
Glass heating panels and method for preparing the same from architectural reflective glass [NASA-CASE-NPO-15753-1]	c 27	N84-33589	Arrangement for damping the resonance in a laser diode [NASA-CASE-NPO-15980-1]	c 36	N85-30305	High band gap 2-6 and 3-5 tunneling junctions for silicon multijunction solar cells [NASA-CASE-NPO-16526-1CU]	c 44	N87-17399
Portable reflectance spectrometer [NASA-CASE-NPO-13555-1]	c 35	N84-33766	Stable density stratification solar pond [NASA-CASE-NPO-15419-2]	c 44	N85-30474	Ten degree Kelvin hydride refrigerator [NASA-CASE-NPO-16393-1CU]	c 31	N87-21159
Means and method for calibrating a photon detector utilizing electron-photon coincidence [NASA-CASE-NPO-15644-1]	c 35	N84-33767	Increased voltage photovoltaic cell [NASA-CASE-NPO-16155-1]	c 44	N85-30475	Synchronization tracking in pulse position modulation receiver [NASA-CASE-NPO-16256-1]	c 32	N87-21207
Phase sensitive guidance sensor for wire-following vehicles [NASA-CASE-NPO-15341-1]	c 35	N84-33769	Acoustic particle separation [NASA-CASE-NPO-15559-1]	c 71	N85-30765	Low noise lead screw positioner [NASA-CASE-NPO-15617-1]	c 35	N87-21304
System for indicating fuel-efficient aircraft altitude [NASA-CASE-NPO-15351-2]	c 06	N84-34443	Low defect, high purity crystalline layers grown by selective deposition [NASA-CASE-NPO-15813-1]	c 76	N85-30922	Method for forming hermetic seals [NASA-CASE-NPO-16423-1CU]	c 37	N87-21334
Pipelined digital SAR azimuth correlator using hybrid FFT-transversal filter [NASA-CASE-NPO-15519-1]	c 32	N84-34651	Method and apparatus for Delta Kappa synthetic aperture radar measurement of ocean current [NASA-CASE-NPO-15704-1]	c 32	N85-34327	Reed-Solomon decoder [NASA-CASE-NPO-15982-1]	c 60	N87-21591
Correlation spectrometer having high resolution and multiplexing capability [NASA-CASE-NPO-15558-1]	c 35	N84-34705	Method and apparatus for transfer function simulator for testing complex systems [NASA-CASE-NPO-15696-1]	c 33	N85-34333	Generation of intense negative ion beams [NASA-CASE-NPO-16061-1CU]	c 72	N87-21660
Saltless solar pond [NASA-CASE-NPO-15808-1]	c 44	N84-34792	Instrumentation for sensing moisture content of material using a transient thermal pulse [NAS 1.71:NPO-15494-2]	c 35	N85-34373	Variable energy, high flux, ground-state atomic oxygen source [NASA-CASE-NPO-16640-1CU]	c 72	N87-21661
Epitaxial thinning process [NASA-CASE-NPO-15786-1]	c 76	N84-35112	Ranging system which compares an object reflected component of a light beam to a reference component of the light beam [NASA-CASE-NPO-15865-1]	c 74	N85-34629	Method and apparatus for measuring minority carrier lifetime in a direct band-gap semiconductor [NASA-CASE-NPO-16337-1CU]	c 33	N87-22894
Process and apparatus for growing a crystal ribbon [NASA-CASE-NPO-15629-1]	c 76	N84-35113	Shuttle car loading system [NASA-CASE-NPO-15949-1]	c 85	N85-34722	Water-absorbing capacitor system for measuring relative humidity [NASA-CASE-NPO-16544-1CU]	c 35	N87-22953
Multicomputer communication system [NASA-CASE-NPO-15433-1]	c 32	N85-21428	Production of butanol by fermentation in the presence of cocultures of clostridium [NASA-CASE-NPO-16203-1]	c 23	N85-35227	Closed loop fiber optic rotation sensor [NASA-CASE-NPO-16558-1CU]	c 74	N87-23259
Hollow cathode apparatus [NASA-CASE-NPO-15560-1]	c 33	N85-21491	Fluidized bed desulfurization [NASA-CASE-NPO-15924-1]	c 25	N85-35253	Total immersion crystal growth [NASA-CASE-NPO-15800-2]	c 76	N87-23286
Method and apparatus for self-calibration and phasing of array antenna [NASA-CASE-NPO-15920-1]	c 33	N85-21493	Laser activated MTOS microwave device [NASA-CASE-NPO-16112-1]	c 33	N86-19516	Floating emitter solar cell [NASA-CASE-NPO-16467-1CU]	c 33	N87-23879
State-of-charge coulometer [NASA-CASE-NPO-15759-1]	c 35	N85-21596	Memory metal actuator [NASA-CASE-NPO-15960-1]	c 37	N86-19604	Means for phase locking the outputs of a surface emitting laser diode array [NASA-CASE-NPO-16542-1CU]	c 36	N87-23960
Carbon granule probe microphone for leak detection [NASA-CASE-NPO-16027-1]	c 35	N85-21597	Joint for deployable structures [NASA-CASE-NPO-16038-1]	c 37	N86-19605	Multiplex electric discharge gas laser system [NASA-CASE-NPO-16433-1]	c 36	N87-23961
Portable remote laser sensor for methane leak detection [NASA-CASE-NPO-15790-1]	c 36	N85-21631	Method and apparatus for contour mapping using synthetic aperture radar [NASA-CASE-NPO-15939-1]	c 43	N86-19711	Rotary stepping device with memory metal actuator [NASA-CASE-NPO-15482-1]	c 37	N87-23970
Ingot slicing machine and method [NASA-CASE-NPO-15483-1]	c 37	N85-21650	Brushless DC motor control system responsive to control signals generated by a computer or the like [NASA-CASE-NPO-16420-1]	c 33	N86-20681	Sample levitation and melt in microgravity [NASA-CASE-NPO-17022-1CU]	c 29	N87-25489
Apparatus and method to keep the walls of a free-space reactor free from deposits of solid materials [NASA-CASE-NPO-15851-1]	c 37	N85-21652	Vibrating-chamber levitation systems [NASA-CASE-NPO-16142-1CU]	c 35	N86-20752	Antimultipath communication by injecting tone into null in signal spectrum [NASA-CASE-NPO-16414-1CU]	c 32	N87-25511
Method of measuring sea surface water temperature with a satellite including wideband passive synthetic-aperture multichannel receiver [NASA-CASE-NPO-15651-1]	c 43	N85-21723	Self-locking double retention redundant full pin release [NASA-CASE-NPO-16233-1]	c 37	N86-20801	Method and means for generation of tunable laser sidebands in the far-infrared region [NASA-CASE-NPO-16497-1CU]	c 36	N87-25567
Method and apparatus for calibrating the ionosphere and application to surveillance of geophysical events [NASA-CASE-NPO-15430-1]	c 46	N85-21846	Neighborhood comparison operator [NASA-CASE-NPO-16464-1CU]	c 60	N86-24224	Hybrid analog-digital associative neural network [NASA-CASE-NPO-17058-1CU]	c 62	N87-25803
Automatic multi-banking of memory for microprocessors [NASA-CASE-NPO-15295-1]	c 60	N85-21992	Method of measuring field funneling and range straggling in semiconductor charge-collecting junctions [NASA-CASE-NPO-16584-1CU]	c 76	N86-25269	Method and apparatus for enhancing laser absorption sensitivity [NASA-CASE-NPO-16567-1CU]	c 36	N87-28006
Acoustic agglomeration methods and apparatus [NASA-CASE-NPO-15466-1]	c 71	N85-22104	Solar heated oil shale pyrolysis process [NASA-CASE-NPO-16392-1]	c 25	N86-25428	Coaxial cable connector [NASA-CASE-NPO-16764-1CU]	c 33	N88-14270
High temperature acoustic levitator [NASA-CASE-NPO-16022-1]	c 71	N85-22105				Tailorable infrared sensing device with strain layer superlattice structure [NASA-CASE-NPO-16607-1CU]	c 76	N88-14836
Focal plane array optical proximity sensor [NASA-CASE-NPO-15155-1]	c 74	N85-22139						

- Method of evaporation  
[NASA-CASE-NPO-15609-2] c 25 N88-23846  
Krypton based adsorption type cryogenic refrigerator  
[NASA-CASE-NPO-17334-1-CU] c 31 N88-23917  
Cryogenic regenerator including saran-carbon heat conduction matrix  
[NASA-CASE-NPO-17291-1-CU] c 34 N88-23946  
Real time pipelined system for forming the sum of products in the processing of video data  
[NASA-CASE-NPO-16462-1-CU] c 60 N88-24169  
Single mode levitation and translation  
[NASA-CASE-NPO-16675-1-CU] c 71 N88-24241  
Method of producing high T(subc) superconducting NBN films  
[NASA-CASE-NPO-16681-1-CU] c 76 N88-24543  
Isotope separation using tuned laser and electron beam  
[NASA-CASE-NPO-16907-1-CU] c 25 N88-24732  
Magnetically switched power supply system for lasers  
[NASA-CASE-NPO-16402-2] c 33 N88-24862  
Timing control system  
[NASA-CASE-NPO-16882-1-CU] c 33 N88-24863  
Noncontact temperature pattern measuring device  
[NASA-CASE-NPO-17024-1-CU] c 35 N88-24943  
Real-time optical multiple object recognition and tracking system and method  
[NASA-CASE-NPO-17139-1-CU] c 74 N88-25301  
Low-loss, high-isolation, fiber-optic isolator  
[NASA-CASE-NPO-17207-1-CU] c 74 N88-25304  
Real-time image difference detection using a polarization rotation spatial light modulator  
[NASA-CASE-NPO-17144-1-CU] c 74 N88-25305  
Data volume reduction for imaging radar polarimetry  
[NASA-CASE-NPO-17184-1-CU] c 32 N88-26541  
Low noise cryogenic dielectric resonator oscillator  
[NASA-CASE-NPO-17157-1-CU] c 33 N88-26596  
Method for Viterbi decoding of large constraint length convolutional codes  
[NASA-CASE-NPO-17310-1-CU] c 17 N88-28946  
Digital phase-lock loop having an estimator and predictor of error  
[NASA-CASE-NPO-17196-1-CU] c 32 N88-29076  
Power supply conditioning circuit  
[NASA-CASE-NPO-17233-1-CU] c 33 N88-29095  
Thermocouple for heating and cooling of memory metal actuators  
[NASA-CASE-NPO-17068-1-CU] c 35 N88-29151  
Nanosequencer digital logic controller  
[NASA-CASE-NPO-16116-2] c 60 N88-29310  
Self-actuating heat switches for redundant refrigeration systems  
[NASA-CASE-NPO-17085-1-CU] c 31 N88-12785  
Stabilization and oscillation of an acoustically levitated object  
[NASA-CASE-NPO-16896-1-CU] c 71 N88-13236  
Passively activated prehensile digit for a robotic end effector  
[NASA-CASE-NPO-16766-1-CU] c 37 N88-13785  
Dynamic range compression/expansion of light beams by photorefractive crystals  
[NASA-CASE-NPO-17140-1-CU] c 74 N88-14077  
Remotely controllable real-time optical processor  
[NASA-CASE-NPO-16750-1-CU] c 74 N88-14078  
Preparation of dilute magnetic semiconductor films by metalorganic chemical vapor deposition  
[NASA-CASE-NPO-17399-1-CU] c 76 N88-14120  
Joule Thomson refrigerator  
[NASA-CASE-NPO-17143-1-CU] c 31 N88-14351  
Controlled sample orientation and rotation in an acoustic levitator  
[NASA-CASE-NPO-17086-1-CU] c 35 N88-14422  
Programmable pipelined image processor  
[NASA-CASE-NPO-16461-1-CU] c 60 N88-26400  
Television monitor field shifter and an opto-electronic method for obtaining a stereo image of optimal depth resolution and reduced depth distortion on a single screen  
[NASA-CASE-NPO-17249-1-CU] c 32 N88-28676  
Systolic VLSI array for implementing the Kalman filter algorithm  
[NASA-CASE-NPO-17108-1-CU] c 33 N88-28713  
Reversal electron attachment ionizer for detection of trace species  
[NASA-CASE-NPO-17596-1-CU] c 35 N88-28795  
Robust high-performance control for robotic manipulators  
[NASA-CASE-NPO-17785-1-CU] c 37 N88-28846  
Trochoidal analysis of scattered electrons in a merged electron-ion beam geometry  
[NASA-CASE-NPO-16789-1-CU] c 72 N88-29169  
Two stage sorption type cryogenic refrigerator including heat regeneration system  
[NASA-CASE-NPO-17630-1-CU] c 31 N88-29577  
Integrated circuit reliability testing  
[NASA-CASE-NPO-17393-1-CU] c 33 N88-29679  
Low power consumption current transducer  
[NASA-CASE-NPO-16888-1-CU] c 33 N88-29681  
Distributed proximity sensor system  
[NASA-CASE-NPO-17275-1-CU] c 37 N88-29750  
Predictive aging of polymers  
[NASA-CASE-NPO-17524-1-CU] c 27 N90-10261  
Acoustic controlled rotation and orientation  
[NASA-CASE-NPO-16995-1-CU] c 71 N90-12289  
Stripline feed for a microstrip array of patch elements with teardrop shaped probes  
[NASA-CASE-NPO-17548-1-CU] c 32 N90-16104  
Apparatus for using a time interval counter to measure frequency stability  
[NASA-CASE-NPO-17325-1-CU] c 32 N90-17005  
Solid state electrical switch employing materials with reversible phase transistors  
[NASA-CASE-NPO-17621-1-CU] c 33 N90-17010  
Ballast system for maintaining constant pressure in a glove box  
[NASA-CASE-NPO-17786-1-CU] c 35 N90-17104  
Tailorable infrared sensing device with strain layer superlattice structure  
[NASA-CASE-NPO-16617-2-CU] c 35 N90-17118  
Noncontact temperature pattern measuring device  
[NASA-CASE-NPO-17824-1-CU] c 36 N90-17132  
Articulated suspension system  
[NASA-CASE-NPO-17354-1-CU] c 37 N90-17153  
Edge geometry superconducting tunnel junctions utilizing an NBN/MgO/NBN thin film structure  
[NASA-CASE-NPO-17812-1-CU] c 76 N90-17456  
High density tape casting system  
[NASA-CASE-NPO-16901-1-CU] c 31 N90-19425  
Local area network with fault-checking, priorities, and redundant backup  
[NASA-CASE-NPO-16949-1-CU] c 62 N90-19776  
Annealing group III-V compound doped silicon-germanium alloy for improved thermo-electric conversion efficiency  
[NASA-CASE-NPO-17259-1-CU] c 76 N90-19884  
Dual cathode system for electron beam instruments  
[NASA-CASE-NPO-16878-1-CU] c 35 N90-20351  
VLSI single-chip (255,223) Reed-Solomon encoder with interleaver  
[NASA-CASE-NPO-17280-1-CU] c 17 N90-21061  
Acoustic convective system  
[NASA-CASE-NPO-17278-1-CU] c 31 N90-21215  
Alternating gradient photodetector  
[NASA-CASE-NPO-17235-1-CU] c 35 N90-21358  
VLSI binary updown counter  
[NASA-CASE-NPO-17205-1-CU] c 60 N90-21525  
Fault tolerant hypercube computer system architecture  
[NASA-CASE-NPO-16859-1-CU] c 60 N90-21527  
Balanced bridge feedback control system  
[NASA-CASE-NPO-17430-1-CU] c 33 N90-21951  
Atmospheric autorotating imaging device  
[NASA-CASE-NPO-17390-1-CU] c 35 N90-22769  
Convergent strand array liquid pumping system  
[NASA-CASE-NPO-17301-1-CU] c 31 N90-23587  
Long period pseudo random number sequence generator  
[NASA-CASE-NPO-17241-1-CU] c 33 N90-23636  
Multi-element spherical shell generation  
[NASA-CASE-NPO-17203-1-CU] c 34 N90-23700  
Computer access security code system  
[NASA-CASE-NPO-17525-1-CU] c 60 N90-25583  
Improving the geometric fidelity of imaging systems employing sensor arrays  
[NASA-CASE-NPO-17970-1-CU] c 43 N90-26384  
MBE growth technology for high quality strained III-V layers  
[NASA-CASE-NPO-17723-1-CU] c 76 N90-26685  
Multistage estimation of received carrier signal parameters under very high dynamic conditions of the receiver  
[NASA-CASE-NPO-17911-1-CU] c 32 N90-27016  
Method of forming three-dimensional semiconductor structures  
[NASA-CASE-NPO-17835-1-CU] c 76 N90-27518  
Method for providing a polarization filter for processing synthetic aperture radar image data  
[NASA-CASE-NPO-17904-1-CU] c 32 N91-13594  
Pipeline synthetic aperture radar data compression utilizing systolic binary tree-searched architecture for vector quantization  
[NASA-CASE-NPO-17941-1-CU] c 32 N91-13595  
Detection of multiple-bit errors from single-ion tracks in integrated circuits  
[NASA-CASE-NPO-18075-1-CU] c 33 N91-13622  
Measurement of waves in flows across a surface  
[NASA-CASE-NPO-17479-1-CU] c 34 N91-13658  
Composite passive damping struts for large precision structures  
[NASA-CASE-NPO-17914-1-CU] c 39 N91-13767  
Motion detection, novelty filtering, and target tracking using an interferometric technique with a GaAs phase conjugate mirror  
[NASA-CASE-NPO-17784-1-CU] c 74 N91-13998  
Efficient detection and signal parameter estimation with application to high dynamic GPS receiver  
[NASA-CASE-NPO-17820-1-CU] c 04 N91-14321  
High temperature refractory member with radiation emissive overcoat  
[NASA-CASE-NPO-17122-1-CU] c 27 N91-14489  
Trellis coded modulation for transmission over fading mobile satellite channel  
[NASA-CASE-NPO-16904-2-CU] c 32 N91-14523  
Organic cathode for a secondary battery  
[NASA-CASE-NPO-17604-1-CU] c 33 N91-14536  
Copper chloride cathode for a secondary battery  
[NASA-CASE-NPO-17640-1-CU] c 33 N91-14538  
Improved high power/high frequency inductor  
[NASA-CASE-NPO-17830-1-CU] c 33 N91-14539  
Millimeter-wave monolithic diode-grid frequency multiplier  
[NASA-CASE-NPO-17258-1-CU] c 33 N91-14551  
Apparatus and method for characterizing the transmission efficiency of a mass spectrometer  
[NASA-CASE-NPO-16989-1-CU] c 35 N91-14587  
Field induced gap infrared detector  
[NASA-CASE-NPO-17526-1-CU] c 35 N91-14588  
Multi-fingered robotic hand  
[NASA-CASE-NPO-15959-2] c 37 N91-14616  
Method for detecting surface motions and mapping small terrestrial or planetary surface deformations with synthetic aperture radar  
[NASA-CASE-NPO-17831-1-CU] c 43 N91-14642  
Distributed computing system with dual independent communications paths between computers and employing split tokens  
[NASA-CASE-NPO-17185-1-CU] c 62 N91-14772  
Acoustic positioning and orientation prediction  
[NASA-CASE-NPO-17511-1-CU] c 71 N91-14807  
Acoustic transducer apparatus with reduced thermal conduction  
[NASA-CASE-NPO-17620-1-CU] c 71 N91-14808  
Surface modification using low energy ground state ion beams  
[NASA-CASE-NPO-17498-1-CU] c 72 N91-14813  
Energy efficient continuous flow ash lockhopper  
[NASA-CASE-NPO-16985-1-CU] c 31 N91-15423  
Remote object configuration/orientation determination  
[NASA-CASE-NPO-17436-1-CU] c 35 N91-15512  
Tm,Ho:YLF laser end-pumped by a semiconductor diode laser array  
[NASA-CASE-NPO-17282-1-CU] c 36 N91-15528  
Ribbon growing method and apparatus  
[NASA-CASE-NPO-16306-1-CU] c 76 N91-15898  
Torque sensor having a spoked sensor element support structure  
[NASA-CASE-NPO-17461-1-CU] c 35 N91-17350  
Cladding for transverse-pumped solid-state laser  
[NASA-CASE-NPO-17355-1-CU] c 36 N91-17360  
Laterally stacked Schottky diodes for infrared sensor applications  
[NASA-CASE-NPO-17426-1-CU] c 33 N91-21434  
Method and apparatus for configuration control of redundant robots  
[NASA-CASE-NPO-17801-1-CU] c 37 N91-21544  
System and method for measuring ocean surface currents at locations remote from land masses using synthetic aperture radar  
[NASA-CASE-NPO-17937-1-CU] c 43 N91-21621  
Doppler-corrected differential detection system  
[NASA-CASE-NPO-16987-1-CU] c 32 N91-25316  
Phase ambiguity resolution for offset QPSK modulation systems  
[NASA-CASE-NPO-17853-1-CU] c 32 N91-25318  
Fluid-loop reaction system  
[NASA-CASE-NPO-17204-1-CU] c 34 N91-25380  
Dynamic resource allocation scheme for distributed heterogeneous computer systems  
[NASA-CASE-NPO-17197-1-CU] c 62 N91-25693  
High-gain AlGaAs/GaAs double heterojunction Darlington phototransistors for optical neural networks  
[NASA-CASE-NPO-18101-1-CU] c 74 N91-25841  
Method and apparatus for second-rank tensor generation  
[NASA-CASE-NPO-17512-1-CU] c 74 N91-26918  
Molecules with enhanced electronic polarizabilities based on defect-like states in conjugated polymers  
[NASA-CASE-NPO-17633-1-CU] c 27 N91-27372  
Flexible thermal apparatus for mounting of thermoelectric cooler  
[NASA-CASE-NPO-17806-1-CU] c 31 N91-27385  
Multiple symbol differential detection  
[NASA-CASE-NPO-17896-1-CU] c 32 N91-27439  
Metal chloride cathode for a battery  
[NASA-CASE-NPO-17809-1-CU] c 33 N91-27478



- Fiber optic frequency transfer link  
[NASA-CASE-NPO-17703-1-CU] c 74 N91-27957
- Thermal treatment of silicon integrated circuit chips to prevent and heal voids in aluminum metallization  
[NASA-CASE-NPO-17678-1-CU] c 76 N91-28014
- Composite flexible blanket insulation  
[NASA-CASE-ARC-11907-1-NP] c 24 N91-31236
- A universal computer control system for motors  
[NASA-CASE-NPO-17134-1-CU] c 33 N91-31528
- Asymmetric soft-error resistant memory  
[NASA-CASE-NPO-17394-1-CU] c 60 N91-31810
- Synchronized computational architecture for generalized bilateral control of robot arms  
[NASA-CASE-NPO-17401-1-CU] c 63 N91-31885
- Method and apparatus for producing microshells  
[NASA-CASE-NPO-16635-1-CU] c 31 N91-32240
- Telerobot control system  
[NASA-CASE-NPO-18116-1-CU] c 37 N91-32509
- A generalized compliant motion primitive  
[NASA-CASE-NPO-18134-1-CU] c 37 N91-32510
- Highly parallel computer architecture for robotic computation  
[NASA-CASE-NPO-17632-1-CU] c 60 N91-32805
- Analog hardware for learning neural networks  
[NASA-CASE-NPO-17664-1-CU] c 62 N91-32852
- Feedback controlled optics with wavefront compensation  
[NASA-CASE-NPO-18194-1-CU] c 74 N91-32924
- Optoelectronic associative memory  
[NASA-CASE-NPO-18278-1-CU] c 74 N91-32925
- Regenerative Cu/La zeolite supported desulfurizing sorbents  
[NASA-CASE-NPO-17480-1-CU] c 25 N92-10073
- Composite video and graphics display for multiple camera viewing system in robotics and teleoperation  
[NASA-CASE-NPO-17836-1-CU] c 32 N92-10126
- Formation of self-aligned guard rings for monolithic Schottky-barrier diode arrays  
[NASA-CASE-NPO-17734-1-CU] c 33 N92-10146
- Passivation of high temperature superconductors  
[NASA-CASE-NPO-17949-1-CU] c 76 N92-10681
- Dual frequency optical carrier technique for transmission of reference frequencies in dispersive media  
[NASA-CASE-NPO-18007-1-CU] c 74 N92-11791
- Integrated, non-volatile, high-speed analog random access memory  
[NASA-CASE-NPO-17998-1-CU] c 60 N92-12438
- Multicomponent gas sorption Joule-Thomson refrigeration  
[NASA-CASE-NPO-17569-1-CU] c 31 N92-15203
- Network of dedicated processors for finding lowest-cost map path  
[NASA-CASE-NPO-17716-1-CU] c 62 N92-15620
- Silicon containing electroconductive polymers and structures made therefrom  
[NASA-CASE-NPO-17826-1-CU] c 27 N92-16121
- Method and apparatus for increasing resistance of bipolar buried layer integrated circuit devices to single-event upsets  
[NASA-CASE-NPO-17573-2-CU] c 33 N92-16196
- Thermal power transfer system using applied potential difference to sustain operating pressure difference  
[NASA-CASE-NPO-18034-1-CU] c 44 N92-16457
- Alloptical photoconic spatial light modulators based on photoinduced electron transfer in rigid matrices  
[NASA-CASE-NPO-17612-1-CU] c 74 N92-16808
- Stereoscopic camera and viewing systems with undistorted depth presentation and reduced or eliminated erroneous acceleration and deceleration perceptions, or with perceptions produced or enhanced for special effects  
[NASA-CASE-NPO-18028-1-CU] c 74 N92-16809
- Method for non-destructive estimation of waveguide directional coupler dimensions  
[NASA-CASE-NPO-18454-1-CU] c 33 N92-17865
- Neural-network dedicated processor for solving competitive assignment problems  
[NASA-CASE-NPO-17781-1-CU] c 60 N92-17884
- Wide field strip-imaging optical system  
[NASA-CASE-NPO-18146-1-CU] c 74 N92-17892
- High level language-based robotic control system  
[NASA-CASE-NPO-17918-2-CU] c 63 N92-17895
- Fabrication of nanometer single crystal metallic CoSi<sub>2</sub> structures on Si  
[NASA-CASE-NPO-17736-2-CU] c 24 N92-18561
- Device for mechanically stabilizing web ribbon buttons during growth initiation  
[NASA-CASE-NPO-17074-2-CU] c 76 N92-21499
- Digital carrier demodulator employing components working beyond normal limits  
[NASA-CASE-NPO-17628-1-CU] c 32 N92-21712
- Adjustable steam producing flexible orifice independent of fluid pressure  
[NASA-CASE-NPO-17625-1-CU] c 34 N92-21724
- Analog hardware for delta-backpropagation neural networks  
[NASA-CASE-NPO-17564-1-CU] c 32 N92-22033
- Equal path, phase shifting, sample point interferometer for monitoring the configuration of surfaces  
[NASA-CASE-NPO-17913-1-CU] c 74 N92-22034
- Growth of III-V films by control of MBE growth front stoichiometry  
[NASA-CASE-NPO-17724-1-CU] c 76 N92-22035
- Bilevel shared control for teleoperators  
[NASA-CASE-NPO-17800-1-CU] c 37 N92-22036
- Method for producing edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-2-CU] c 76 N92-22040
- Edge geometry superconducting tunnel junctions utilizing an NbN/MgO/NbN thin film structure  
[NASA-CASE-NPO-17812-3-CU] c 76 N92-22041
- Electrorepulsive actuator  
[NASA-CASE-NPO-17684-1-CU] c 33 N92-22042
- Planar varactor frequency multiplier devices with blocking barrier  
[NASA-CASE-NPO-18428-1-CU] c 33 N92-23464
- Optical inner product neural associative memory  
[NASA-CASE-NPO-18491-1-CU] c 60 N92-23546
- Electro-optic resonant phase modulator  
[NASA-CASE-NPO-18702-1-CU] c 74 N92-23551
- Configuration control of seven-degree-of-freedom arms  
[NASA-CASE-NPO-18607-1-CU] c 37 N92-23553
- Controlling flexible robot arms using a high speed dynamics process  
[NASA-CASE-NPO-18499-1-CU] c 37 N92-24042
- Controlling under-actuated robot arms using a high speed dynamics process  
[NASA-CASE-NPO-18498-1-CU] c 37 N92-24043
- Synchronous parallel system for emulation and discrete event simulation  
[NASA-CASE-NPO-18414-1-CU] c 62 N92-24045
- GaAs-based optoelectronic neurons  
[NASA-CASE-NPO-18497-1-CU] c 63 N92-24245
- An improved SNS superconducting junction with weak link barrier and method of producing  
[NASA-CASE-NPO-18552-1-CU] c 33 N92-24246
- Secondary Li battery incorporating 12-Crown-4 ether  
[NASA-CASE-NPO-17922-1-CU] c 33 N92-28753
- Method and apparatus for phasing segmented mirror arrays  
[NASA-CASE-NPO-18095-1-CU] c 74 N92-29122
- Method and apparatus for frequency spectrum analysis  
[NASA-CASE-NPO-17759-1-CU] c 32 N92-29124
- Method and apparatus for predicting the direction of movement in machine vision  
[NASA-CASE-NPO-17552-1-CU] c 54 N92-29129
- Precision measurement of magnetic characteristics of an article with nullification of external magnetic fields  
[NASA-CASE-NPO-18187-1-CU] c 70 N92-29130
- Microwave temperature profiler for clear air turbulence prediction  
[NASA-CASE-NPO-18115-1-CU] c 47 N92-29148
- Ultra-high temperature stability Joule-Thomson cooler with capability to accommodate pressure variations  
[NASA-CASE-NPO-18184-1-CU] c 35 N92-29156
- Position-error-based force reflection and compliance control  
[NASA-CASE-NPO-18668-1-CU] c 37 N92-29765
- Electronic neural network for solving traveling salesman and similar global optimization problems  
[NASA-CASE-NPO-17807-2-CU] c 63 N92-29955
- Sample positioning in microgravity  
[NASA-CASE-NPO-18448-1-CU] c 29 N92-30083
- Dynamic aperture fringe discriminator  
[NASA-CASE-NPO-18478-1-CU] c 74 N92-30084
- Fast temporal neural learning using teacher forcing  
[NASA-CASE-NPO-18553-1-CU] c 63 N92-30085
- Nonvolatile programmable neural network synaptic array  
[NASA-CASE-NPO-18578-1-CU] c 33 N92-30086
- Method of forming silicon structures with selectable optical characteristics  
[NASA-CASE-NPO-18625-1-CU] c 76 N92-30102
- Programmable hyperspectral image mapper with on-array processing  
[NASA-CASE-NPO-17794-1-CU] c 74 N92-30104
- Double-loop frequency-selected surfaces for multifrequency division multiplexing in a dual-reflector antenna  
[NASA-CASE-NPO-18701-1-CU] c 32 N92-30391
- Hybridization of detector array and integrated circuit for readout  
[NASA-CASE-NPO-18062-1-CU] c 33 N92-30542
- Encyclopedia of software components  
[NASA-CASE-NPO-18435-1-CU] c 61 N92-30543
- VLSI architecture for a Reed-Solomon decoder  
[NASA-CASE-NPO-17897-1-CU] c 33 N92-33011
- Obstacle avoidance for redundant robots using configuration control  
[NASA-CASE-NPO-17852-1-CU] c 63 N92-33019
- Real-time edge-enhanced optical correlator  
[NASA-CASE-NPO-18379-1-CU] c 74 N92-33022
- Real time pre-detection dynamic range compression  
[NASA-CASE-NPO-18098-1-CU] c 74 N92-33028
- Auto and hetero-associative memory using a 2-D optical logic gate  
[NASA-CASE-NPO-17997-1-CU] c 60 N92-33057
- Hazardous materials emergency response mobile robot  
[NASA-CASE-NPO-18690-1-CU] c 37 N92-34205
- Cascaded VLSI neural network architecture for on-line learning  
[NASA-CASE-NPO-18645-1-CU] c 63 N92-34240
- Alkali metal for ultraviolet band-pass filter  
[NASA-CASE-NPO-18433-1-CU] c 74 N92-34241
- INAS hole-immobilized doping superlattice long-wave-infrared detector  
[NASA-CASE-NPO-17880-1-CU] c 76 N93-11056
- The adaptive neuron model: An architecture for the rapid learning of nonlinear topological transformations  
[NASA-CASE-NPO-18579-1-CU] c 63 N93-11174
- Terminal slider control of nonlinear robotic systems  
[NASA-CASE-NPO-18584-1-CU] c 37 N93-11177
- Overcharge and overdischarge protection of ambient temperature secondary lithium cells  
[NASA-CASE-NPO-18343-1-CU] c 33 N93-11456
- Mappings between codewords of two distinct (N,K) Reed-Solomon codes over GF(2 sup J)  
[NASA-CASE-NPO-18771-1-CU] c 61 N93-11664
- Backward assembly planning with DFA analysis  
[NASA-CASE-NPO-18817-1-CU] c 31 N93-12202
- Quantum well, beam deflecting surface emitting lasers  
[NASA-CASE-NPO-18243-1-CU] c 36 N93-13418
- Integrated filter and detector array for spectral imaging  
[NASA-CASE-NPO-18317-1-CU] c 74 N93-13419
- Acoustic device and method for measuring gas densities  
[NASA-CASE-NPO-18155-1-CU] c 71 N93-13421
- Three-stage sorption type cryogenic refrigeration systems and methods employing heat regeneration  
[NASA-CASE-NPO-18366-1-CU] c 31 N93-13422
- Large area projection liquid-crystal video display system with inherent grid pattern optically removed  
[NASA-CASE-NPO-16932-2-CU] c 74 N93-13711
- Real-time edge-enhanced optical correlator  
[NASA-CASE-NPO-18521-1-CU] c 74 N93-14404
- Core design for use with precision composite reflectors  
[NASA-CASE-NPO-17858-1-CU] c 24 N93-14700
- Multiperiod-grating surface-emitting lasers  
[NASA-CASE-NPO-17763-1-CU] c 36 N93-14703
- High speed magneto-resistive random access memory  
[NASA-CASE-NPO-17954-1-CU] c 60 N93-14704
- Modified fast frequency acquisition via adaptive least squares algorithm  
[NASA-CASE-NPO-17845-2-CU] c 61 N93-14882
- Epitaxial heterojunctions of oxide semiconductors and metals on high temperature superconductors  
[NASA-CASE-NPO-18483-1-CU] c 76 N93-15151
- Near real-time stereo vision system  
[NASA-CASE-NPO-18593-1-CU] c 74 N93-18276
- Self-collimated unstable resonator semiconductor laser  
[NASA-CASE-NPO-18386-1-CU] c 36 N93-18277
- Cascaded transformerless DC-DC voltage amplifier with optically isolated switching devices  
[NASA-CASE-NPO-17994-1-CU] c 33 N93-18278
- Composite video and graphics display for camera viewing systems in robotics and teleoperation  
[NASA-CASE-NPO-17836-1-CU] c 32 N93-18284
- Method for non-destructive estimation of waveguide directional coupler dimensions  
[NASA-CASE-NPO-18454-1-CU] c 33 N93-18285
- High temperature sorbents for oxygen  
[NASA-CASE-NPO-18409-1-CU] c 25 N93-19025
- AMTEC vapor-vapor series connected cells  
[NASA-CASE-NPO-18667-1-CU] c 33 N93-19330
- Long wavelength infrared detector  
[NASA-CASE-NPO-17543-2-CU] c 35 N93-19387
- Neural-network dedicated processor for solving competitive assignment problems  
[NASA-CASE-NPO-17781-1-CU] c 60 N93-20116
- Self-checking on-line testable static RAM  
[NASA-CASE-NPO-17939-1-CU] c 60 N93-22032
- Force reflecting hand controller  
[NASA-CASE-NPO-17851-1-CU] c 37 N93-23078
- Composite passive damping struts for large precision structures  
[NASA-CASE-NPO-17914-1-CU] c 39 N93-24596
- GaAs-based optoelectronic neurons  
[NASA-CASE-NPO-18497-1-CU] c 63 N93-24599
- Sample positioning in microgravity  
[NASA-CASE-NPO-18448-1-CU] c 29 N93-24600

Motion measurement of acoustically levitated object  
[NASA-CASE-NPO-18191-1-CU] c 09 N93-24601

Pseudomonas screening assay  
[NASA-CASE-NPO-17653-1-CU] c 51 N93-25994

Multipath noise reduction spread spectrum signals  
[NASA-CASE-NPO-18970-1-CU] c 32 N93-28126

Extended task space control for robotic manipulators  
[NASA-CASE-NPO-18902-1-CU] c 37 N93-28129

Separation tool for multipin electrical connectors  
[NASA-CASE-NPO-18786-1-CU] c 37 N93-28131

Burst-by-burst laser frequency monitor  
[NASA-CASE-NPO-18596-1-CU] c 36 N93-28132

Motion-sensitive optical correlator  
[NASA-CASE-NPO-18769-1-CU] c 74 N93-28133

Correction-free pyrometry in radiant wall furnaces  
[NASA-CASE-NPO-18655-1-CU] c 35 N93-28322

Parallel and series fed microstrip array with high efficiency and low cross polarization  
[NASA-CASE-NPO-18678-1-CU] c 32 N93-28422

Three-grid accelerator system for an ion propulsion engine  
[NASA-CASE-NPO-18391-1-CU] c 20 N93-28424

Diamond composite films for protective coatings on metals and method of formation  
[NASA-CASE-NPO-18501-1-CU] c 27 N93-28426

Digital parallel processor array for optimum path planning  
[NASA-CASE-NPO-18727-1-CU] c 62 N93-28427

Aberration correction of unstable resonators  
[NASA-CASE-NPO-18662-1-CU] c 74 N93-28428

Dual arm generalized compliant motion with shared control  
[NASA-CASE-NPO-18738-1-CU] c 37 N93-28954

A satellite-tracking millimeter-wave reflector antenna system for mobile satellite-tracking  
[NASA-CASE-NPO-18772-1-CU] c 32 N93-28955

Improved real-time imaging spectrometer  
[NASA-CASE-NPO-18410-1-CU] c 74 N93-29086

Miniature modular microwave end-to-end receiver  
[NASA-CASE-NPO-18713-1-CU] c 32 N93-29087

Three-parameter tunable Tilt-Integral-Derivative (TID) controller  
[NASA-CASE-NPO-18492-1-CU] c 63 N93-29176

Parallel interfering method and apparatus for rule-based expert systems  
[NASA-CASE-NPO-18004-1-CU] c 60 N93-29504

Planar microstrip YAGI antenna array  
[NASA-CASE-NPO-17873-2-CU] c 32 N93-29507

Special purpose parallel computer architecture for real-time control and simulation in robotic applications  
[NASA-CASE-NPO-17629-1-CU] c 60 N93-29608

Wavelength-division multiplexed optical integrated circuit with vertical diffraction grating  
[NASA-CASE-NPO-18357-1-CU] c 74 N93-29848

Hidden Markov models for fault detection in dynamic systems  
[NASA-CASE-NPO-18982-1-CU] c 38 N93-30413

Tunable CW diode-pumped Tm,Ho:YLiF<sub>4</sub> laser operating at or near room temperature  
[NASA-CASE-NPO-18611-1-CU] c 36 N93-30415

Virtual reality flight control display with six-degree-of-freedom controller and spherical orientation overlay  
[NASA-CASE-NPO-18733-1-CU] c 06 N93-30416

**National Aeronautics and Space Administration.**  
**Wallops Flight Center, Wallops Island, VA.**

Thin film strain transducer  
[NASA-CASE-WLP-10055-1] c 35 N84-28015

Thin film strain transducer  
[NASA-CASE-WLP-10055-2] c 35 N85-21598

**National Aeronautics and Space Administration.**  
**Western Operations Office, Santa Monica, CA.**

Automatic pump Patent  
[NASA-CASE-XNP-04731] c 15 N71-24042

**National Bureau of Standards, Boulder, CO.**

Densitometer Patent  
[NASA-CASE-XLE-00688] c 14 N70-41330

**National Oceanic and Atmospheric Administration, Boulder, CO.**

Determining distance to lightning strokes from a single station  
[NASA-CASE-KSC-10698] c 07 N73-20175

**National Research Corp., Cambridge, MA.**

Gauge calibration by diffusion  
[NASA-CASE-XGS-07752] c 14 N73-30390

Ultrahigh vacuum measuring ionization gauge  
[NASA-CASE-XLA-05087] c 14 N73-30391

Apparatus for absolute pressure measurement  
[NASA-CASE-LAR-10000] c 14 N73-30394

Ultrahigh vacuum gauge having two collector electrodes  
[NASA-CASE-LAR-02743] c 14 N73-32324

Rock sampling  
[NASA-CASE-XNP-10007-1] c 46 N74-23068

Rock sampling  
[NASA-CASE-XNP-09755] c 46 N74-23069

**National Science Foundation, Washington, DC.**

Laser apparatus  
[NASA-CASE-GSC-12237-1] c 36 N80-14384

**Nevada Univ. System, Reno.**

Constant-output atomizer  
[NASA-CASE-MFS-25631-1] c 34 N84-12406

**New England Medical Center Hospitals, Boston, MA.**

Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c 52 N79-14750

**North American Aviation, Inc., Canoga Park, CA.**

Method of joining aluminum to stainless steel Patent  
[NASA-CASE-MFS-07369] c 15 N71-20443

Propellant mass distribution metering apparatus Patent  
[NASA-CASE-NPO-10185] c 10 N71-26339

Safety-type locking pin  
[NASA-CASE-MFS-18495] c 15 N72-11385

Hydrogen fire detection system with logic circuit to analyze the spectrum of temporal variations of the optical spectrum  
[NASA-CASE-MFS-13130] c 10 N72-17173

**North American Aviation, Inc., Downey, CA.**

Heat shield oven  
[NASA-CASE-XMS-04318] c 15 N69-27871

Extensible cable support Patent  
[NASA-CASE-XMF-07587] c 15 N71-18701

High pressure air valve Patent  
[NASA-CASE-MSC-11010] c 15 N71-19485

Load relieving device Patent  
[NASA-CASE-XMS-06329-1] c 15 N71-20441

Optical projector system Patent  
[NASA-CASE-XNP-03853] c 23 N71-21882

Brazing alloy Patent  
[NASA-CASE-XNP-03063] c 17 N71-23365

Vibrophonocardiograph Patent  
[NASA-CASE-XFR-07172] c 05 N71-27234

**North American Aviation, Inc., El Segundo, CA.**

Aerodynamic spike nozzle Patent  
[NASA-CASE-XGS-01143] c 31 N71-15647

Expanding center probe and drogue Patent  
[NASA-CASE-XMS-03613] c 31 N71-16346

Radio frequency shielded enclosure Patent  
[NASA-CASE-XMF-09422] c 07 N71-19436

High impedance measuring apparatus Patent  
[NASA-CASE-XMS-08589-1] c 09 N71-20569

Latching mechanism Patent  
[NASA-CASE-XMS-03745] c 15 N71-21076

Tube dimpling tool Patent  
[NASA-CASE-XMS-06876] c 15 N71-21536

Positive locking check valve Patent  
[NASA-CASE-XMS-09310] c 15 N71-22706

Etching of aluminum for bonding Patent  
[NASA-CASE-XMF-02303] c 17 N71-23828

Method and apparatus for varying thermal conductivity Patent  
[NASA-CASE-XNP-05524] c 33 N71-24876

Purge device for thrust engines Patent  
[NASA-CASE-XMS-04826] c 28 N71-28849

Method and construction for protecting heat sensitive bodies from thermal radiation and convective heat Patent  
[NASA-CASE-XNP-01310] c 33 N71-28852

Propellant tank pressurization system Patent  
[NASA-CASE-XNP-00650] c 27 N71-28929

Spherical shield Patent  
[NASA-CASE-XNP-01855] c 15 N71-28937

Universal restrainer and joint Patent  
[NASA-CASE-XNP-02278] c 15 N71-28951

Method and device for cooling Patent  
[NASA-CASE-HON-00938] c 33 N71-29053

**North American Aviation, Inc., Los Angeles, CA.**

Method and system for respiration analysis Patent  
[NASA-CASE-XFR-08403] c 05 N71-11202

**North American Aviation, Inc., Torrance, CA.**

Method and apparatus for detection and location of microleaks Patent  
[NASA-CASE-XMF-02307] c 14 N71-10779

**North American Aviation, Inc., Woodland Hills, CA.**

Fluid pressure balanced seal  
[NASA-CASE-XGS-01286-1] c 37 N79-33469

**North American Phillips Co., Inc., Briarcliff Manor, NY.**

Linear magnetic bearings  
[NASA-CASE-GSC-12582-2] c 37 N85-20337

**North American Rockwell Corp., Canoga Park, CA.**

Noncontaminating swabs  
[NASA-CASE-MFS-18100] c 15 N72-11390

Observation window for a gas confining chamber  
[NASA-CASE-NPO-10890] c 11 N73-12265

Droplet monitoring probe  
[NASA-CASE-NPO-10985] c 14 N73-20478

Circuit board package with wedge shaped covers  
[NASA-CASE-MFS-21919-1] c 10 N73-25243

Heat flow calorimeter  
[NASA-CASE-GSC-11434-1] c 34 N74-27859

**North American Rockwell Corp., Downey, CA.**

Spacecraft Patent  
[NASA-CASE-MSC-13047-1] c 31 N71-25434

Latching mechanism Patent  
[NASA-CASE-MSC-15474-1] c 15 N71-26162

Dye penetrant for surfaces subsequently contacted by liquid oxygen Patent  
[NASA-CASE-XMF-02221] c 18 N71-27170

Frangible link  
[NASA-CASE-MSC-11849-1] c 15 N72-22488

Impact monitoring apparatus  
[NASA-CASE-MSC-15626-1] c 14 N72-25411

Bonding or repairing process  
[NASA-CASE-MSC-12357] c 15 N73-12489

Self-cycling fluid heater  
[NASA-CASE-MSC-15567-1] c 33 N73-16918

Phase protection system for ac power lines  
[NASA-CASE-MSC-17832-1] c 33 N74-14956

Apparatus for remote handling of materials  
[NASA-CASE-LAR-10634-1] c 37 N74-18123

Grain refinement control in TIG arc welding  
[NASA-CASE-MSC-19095-1] c 37 N75-19683

**North American Rockwell Corp., El Segundo, CA.**

Apparatus for testing wiring harness by vibration generating means  
[NASA-CASE-MSC-15158-1] c 14 N72-17325

**North American Rockwell Corp., Los Angeles, CA.**

Tactile sensing means for prosthetic limbs  
[NASA-CASE-MFS-16570-1] c 05 N73-32013

**North Carolina State Univ., Raleigh.**

Thermal shock resistant hafnia ceramic material  
[NASA-CASE-LAR-10894-1] c 18 N73-14584

Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c 27 N78-17206

**Northeastern Univ., Boston, MA.**

Pulse-width modulation multiplier Patent  
[NASA-CASE-XER-09213] c 07 N71-12390

**Northrop Corp., Hawthorne, CA.**

Shock tube bypass piston tunnel  
[NASA-CASE-NPO-12109] c 11 N72-22245

Folding structure fabricated of rigid panels  
[NASA-CASE-XHQ-02146] c 18 N75-27040

**Northrop Northronics, Palos Verdes Peninsula, CA.**

Method of making dry electrodes  
[NASA-CASE-FRC-10029-2] c 05 N72-25121

Valve seat  
[NASA-CASE-NPO-10606] c 15 N72-25451

**Northrop Space Labs., Hawthorne, CA.**

Method of evaluating moisture barrier properties of encapsulating materials Patent  
[NASA-CASE-NPO-10051] c 18 N71-24934

**Northronics, Palos Verdes Peninsula, CA.**

Flexible conductive disc electrode Patent  
[NASA-CASE-FRC-10029] c 09 N71-24618

Gas low pressure low flow rate metering system Patent  
[NASA-CASE-FRC-10022] c 12 N71-26546

Method of removing insulated material from insulated wires  
[NASA-CASE-FRC-10038] c 15 N72-20444

**Notre Dame Univ., IN.**

Synthesis of polymeric schiff bases by schiff-base exchange reactions Patent  
[NASA-CASE-XMF-08651] c 06 N71-11236

Direct synthesis of polymeric schiff bases from two amines and two aldehydes Patent  
[NASA-CASE-XMF-08655] c 06 N71-11239

Azine polymers and process for preparing the same Patent  
[NASA-CASE-XMF-08656] c 06 N71-11242

Synthesis of polymeric schiff bases by reaction of acetals and amine compounds Patent  
[NASA-CASE-XMF-08652] c 06 N71-11243

Aromatic diamine-aromatic dialdehyde high molecular weight Schiff base polymers prepared in a monofunctional Schiff base Patent  
[NASA-CASE-XMF-03074] c 06 N71-24740

**Oakland Univ., Rochester, MI.**

Optical process for producing classification maps from multispectral data  
[NASA-CASE-MSC-14472-1] c 43 N77-10584

Interactive color display for multispectral imagery using correlation clustering  
[NASA-CASE-MSC-16253-1] c 32 N79-20297

**Occidental Research Corp., La Verne, CA.**

Process for preparing higher oxides of the alkali and alkaline earth metals  
[NASA-CASE-ARC-10992-1] c 26 N78-32229

**Ohio State Univ., Columbus.**

Horn antenna having V-shaped corrugated slots  
[NASA-CASE-LAR-11112-1] c 32 N76-15330

## Q

- Distributed-switch Dicke radiometers  
[NASA-CASE-GSC-12219-1] c 35 N80-18359
- Old Dominion Univ., Norfolk, VA.**  
Instrumentation for measuring aircraft noise and sonic boom  
[NASA-CASE-LAR-11476-1] c 07 N76-27232  
Differential sound level meter  
[NASA-CASE-LAR-12106-1] c 71 N78-14867  
High-temperature microphone system  
[NASA-CASE-LAR-12375-1] c 32 N79-24203  
Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c 02 N81-14968  
Leading edge flap system for aircraft control augmentation  
[NASA-CASE-LAR-12787-2] c 08 N85-19985
- Oregon Univ., Portland.**  
Method for separating biological cells  
[NASA-CASE-MFS-23883-1] c 51 N80-16715
- Organon Diagnostics, El Monte, CA.**  
Water system virus detection  
[NASA-CASE-MS-16098-1] c 51 N79-10693

## P

- Packard-Bell Electronics Corp., Newbury Park, CA.**  
Optical alignment system Patent  
[NASA-CASE-XNP-02029] c 14 N70-41955
- Panau Corp., Pennsauken, NJ.**  
Method of forming transparent films of ZnO  
[NASA-CASE-FRC-10019] c 15 N73-12487
- PCR, Inc., Gainesville, FL.**  
Perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c 25 N81-14016
- Peninsular ChemResearch, Inc., Gainesville, FL.**  
Hydroxy terminated perfluoro ethers Patent  
[NASA-CASE-NPO-10768] c 06 N71-27254  
Perfluoro polyether acyl fluorides  
[NASA-CASE-NPO-10765] c 06 N72-20121  
Polyurethane resins from hydroxy terminated perfluoro ethers  
[NASA-CASE-NPO-10768-2] c 06 N72-27144  
Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-2] c 06 N72-27151  
Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-1] c 06 N73-33076
- Pennsylvania State Univ., University Park.**  
Process for the preparation of polycarbonylphosphazenes  
[NASA-CASE-ARC-11176-2] c 27 N81-27271  
Carbonylchlorotriphosphazenes and their polymers  
[NASA-CASE-ARC-11176-1] c 27 N82-18389  
Carbonylmethylene-substituted phosphazenes and polymers thereof  
[NASA-CASE-ARC-11370-1] c 27 N84-22750
- Philco-Ford Corp., Houston, TX.**  
Frequency modulation demodulator threshold extension device Patent  
[NASA-CASE-MS-12165-1] c 07 N71-33696
- Philco-Ford Corp., Newport Beach, CA.**  
Mechanically extendible telescoping boom  
[NASA-CASE-NPO-11118] c 03 N72-25021
- Philco-Ford Corp., Palo Alto, CA.**  
Composite antenna feed  
[NASA-CASE-GSC-11046-1] c 07 N73-28013  
Amplitude steered array  
[NASA-CASE-GSC-11446-1] c 33 N74-20860
- Phoenix Corp., McLean, VA.**  
External bulb variable volume maser  
[NASA-CASE-GSC-12334-1] c 36 N79-14362  
Off-axis coherently pumped laser  
[NASA-CASE-GSC-12592-1] c 36 N84-28065
- Pittsburgh Univ., PA.**  
Method and device for the detection of phenol and related compounds  
[NASA-CASE-LEW-12513-1] c 25 N79-22235
- Planning Research Corp., McLean, VA.**  
Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c 32 N79-23310
- Pratt and Whitney Aircraft, East Hartford, CT.**  
Liquid-gas separation system Patent  
[NASA-CASE-XMS-01624] c 15 N70-40062  
Vibration damping system Patent  
[NASA-CASE-XMS-01620] c 23 N71-15673  
Vapor pressure measuring system and method Patent  
[NASA-CASE-XMS-01618] c 14 N71-20741  
Sealing member and combination thereof and method of producing said sealing member Patent  
[NASA-CASE-XMS-01625] c 15 N71-23022

- Quantum Dynamics Co., Inc., Tarzana, CA.**  
Respiratory analysis system and method  
[NASA-CASE-MS-13436-1] c 05 N73-32015

## R

- Radiation, Inc., Melbourne, FL.**  
Remote platform power conserving system  
[NASA-CASE-GSC-11182-1] c 15 N75-13007
- Radiation Instrument Development Lab., Inc., Melrose Park, IL.**  
High speed binary to decimal conversion system Patent  
[NASA-CASE-XGS-01230] c 08 N71-19544
- Radiation Systems, Inc., McLean, VA.**  
Monopulse tracking system Patent  
[NASA-CASE-XGS-01155] c 10 N71-21483
- Radio Corp. of America, Lancaster, PA.**  
Bonding graphite with fused silver chloride  
[NASA-CASE-XGS-00963] c 15 N69-39735
- Radio Corp. of America, New York, NY.**  
Water cooled contactor for anode in carbon arc mechanism  
[NASA-CASE-XMS-03700] c 15 N69-24266  
Apparatus for ballasting high frequency transistors  
[NASA-CASE-XGS-05003] c 09 N69-24318  
Helical coaxial resonator RF filter  
[NASA-CASE-XGS-02816] c 07 N69-24323  
Radiation resistant silicon semiconductor devices Patent  
[NASA-CASE-XGS-07801] c 09 N71-12513  
GaAs solar detector using manganese as a doping agent Patent  
[NASA-CASE-XNP-01328] c 26 N71-18064  
Thermocouple assembly Patent  
[NASA-CASE-XNP-01659] c 14 N71-23039  
Method of erasing target material of a vidicon tube or the like Patent  
[NASA-CASE-XNP-06028] c 09 N71-23189  
Transient augmentation circuit for pulse amplifiers Patent  
[NASA-CASE-XNP-01068] c 10 N71-28739
- Radio Corp. of America, Princeton, NJ.**  
Connector strips-positive, negative and T tabs  
[NASA-CASE-XGS-01395] c 03 N69-21539  
Solar cell including second surface mirrors Patent  
[NASA-CASE-NPO-10109] c 03 N71-11049  
Collapsible reflector Patent  
[NASA-CASE-XMS-03454] c 09 N71-20658  
Simple method of making photovoltaic junctions Patent  
[NASA-CASE-XNP-01960] c 09 N71-23027  
Method of electrolytically binding a layer of semiconductors together Patent  
[NASA-CASE-XNP-01959] c 26 N71-23043  
Method and apparatus for distillation of liquids Patent  
[NASA-CASE-XNP-08124] c 15 N71-27184  
Maximum power point tracker Patent  
[NASA-CASE-GSC-10376-1] c 14 N71-27407  
Method of changing the conductivity of vapor deposited gallium arsenide by the introduction of water into the vapor deposition atmosphere Patent  
[NASA-CASE-XNP-01961] c 26 N71-29156  
Radial heat flux transformer  
[NASA-CASE-NPO-10826] c 33 N72-17948  
Target acquisition antenna  
[NASA-CASE-GSC-10064-1] c 10 N72-22235  
Method for distillation of liquids  
[NASA-CASE-XNP-08124-2] c 06 N73-13129  
Hermetically sealed semiconductor  
[NASA-CASE-GSC-10791-1] c 15 N73-14469  
Thermal flux transfer system  
[NASA-CASE-NPO-12070-1] c 28 N73-32606  
Rotary solenoid shutter drive assembly and rotary inertia damper and stop plate assembly  
[NASA-CASE-GSC-11560-1] c 33 N74-20861  
Frequency measurement by coincidence detection with standard frequency  
[NASA-CASE-MS-14649-1] c 33 N76-16331  
Means for growing ribbon crystals without subjecting the crystals to thermal shock-induced strains  
[NASA-CASE-NPO-14298-1] c 76 N80-32244  
Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c 33 N81-19389  
Television camera video level control system  
[NASA-CASE-XMF-18578-1] c 32 N85-21427
- RAND Corp., Santa Monica, CA.**  
Satellite communication system Patent  
[NASA-CASE-XNP-02389] c 07 N71-28900
- Raymond Engineering Lab., Inc., Middletown, CT.**  
Synchronous servo loop control system Patent  
[NASA-CASE-XNP-03744] c 10 N71-20448

- Raytheon Co., Sudbury, MA.**  
Laser Doppler system for measuring three dimensional vector velocity Patent  
[NASA-CASE-MFS-20386] c 21 N71-19212  
Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c 36 N75-15028
- RCA Labs., Princeton, NJ.**  
Solar cell with improved N-region contact and method of forming the same  
[NASA-CASE-NPO-14205-1] c 44 N79-31752
- RCA Service Co., Inc., Camden, NJ.**  
Apparatus for inspecting microfilm Patent  
[NASA-CASE-MFS-20240] c 14 N71-26788
- Rensselaer Polytechnic Inst., Troy, NY.**  
Coincidence apparatus for detecting particles  
[NASA-CASE-XLA-07813] c 14 N72-17328  
Dual acting slit control mechanism  
[NASA-CASE-LAR-11370-1] c 35 N80-28686
- Research Triangle Inst., Durham, NC.**  
Semiconductor p-n junction stress and strain sensor  
[NASA-CASE-XLA-04980] c 09 N69-27422
- Rochester General Hospital, NY.**  
Prosthetic occlusive device for an internal passageway  
[NASA-CASE-MFS-25740-1] c 52 N84-11744
- Rochester Univ., NY.**  
Concave grating spectrometer Patent  
[NASA-CASE-XGS-01036] c 14 N70-40003
- Rockwell International Corp., Canoga Park, CA.**  
Frequency to analog converter Patent  
[NASA-CASE-XNP-07040] c 08 N71-12500  
Load cell protection device Patent  
[NASA-CASE-XMS-06782] c 32 N71-15974  
Thermobulb mount Patent  
[NASA-CASE-NPO-10158] c 33 N71-16356  
Laminar flow enhancement Patent  
[NASA-CASE-NPO-10122] c 12 N71-17631  
Temperature sensitive flow regulator Patent  
[NASA-CASE-MFS-14259] c 15 N71-19213  
Hydrogen leak detection device Patent  
[NASA-CASE-MFS-11537] c 14 N71-20442  
Technique of elbow bending small jacketed transfer lines Patent  
[NASA-CASE-XNP-10475] c 15 N71-24679  
Gas liquefaction and dispensing apparatus Patent  
[NASA-CASE-NPO-10070] c 15 N71-27372  
Locking device for turbine rotor blades Patent  
[NASA-CASE-XNP-00816] c 28 N71-28928  
Laser camera and diffusion filter therefore Patent  
[NASA-CASE-NPO-10417] c 16 N71-33410  
Hydrazinium nitroformate propellant stabilized with nitroguanidine  
[NASA-CASE-NPO-12000] c 27 N72-25699  
Hydrazinium nitroformate propellant with saturated polymeric hydrocarbon binder  
[NASA-CASE-NPO-12015] c 27 N73-16764  
Novel polymers and method of preparing same  
[NASA-CASE-NPO-10998-1] c 06 N73-32029  
Internally supported flexible duct joint  
[NASA-CASE-MFS-19193-1] c 37 N75-19686  
Brazing alloy binder  
[NASA-CASE-XMF-05868] c 26 N75-27125  
Brazing alloy composition  
[NASA-CASE-XMF-06053] c 26 N75-27126  
Brazing alloy  
[NASA-CASE-XNP-03878] c 26 N75-27127  
Method and apparatus for vibration analysis utilizing the Mossbauer effect  
[NASA-CASE-XMF-05882] c 35 N75-27329  
Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c 26 N75-29236  
Thrust measurement  
[NASA-CASE-XMS-05731] c 35 N75-29382  
Externally supported internally stabilized flexible duct joint  
[NASA-CASE-MFS-19194-1] c 37 N76-14460  
Device for installing rocket engines  
[NASA-CASE-MFS-19220-1] c 20 N76-22296  
Accumulator  
[NASA-CASE-MFS-19287-1] c 34 N77-30399  
Laser extensometer  
[NASA-CASE-MFS-19259-1] c 36 N78-14380  
Stable superconducting magnet  
[NASA-CASE-XMF-05373-1] c 33 N79-21264
- Rockwell International Corp., Downey, CA.**  
Apparatus for positioning modular components on a vertical or overhead surface  
[NASA-CASE-LAR-11465-1] c 37 N76-21554  
Flanged major modular assembly jig  
[NASA-CASE-MS-19372-1] c 39 N76-31562  
Aircraft-mounted crash-activated transmitter device  
[NASA-CASE-MFS-16609-3] c 03 N76-32140  
Window defect planar mapping technique  
[NASA-CASE-MS-19442-1] c 74 N77-10899  
Mechanical sequencer  
[NASA-CASE-MS-19536-1] c 37 N77-22482

- Load regulating latch  
[NASA-CASE-MSC-19535-1] c 37 N77-32499
- Adjustable securing base  
[NASA-CASE-MSC-19666-1] c 37 N78-17383
- Method of producing complex aluminum alloy parts of high temper. and products thereof  
[NASA-CASE-MSC-19693-1] c 26 N78-24333
- Flexible pile thermal barrier insulator  
[NASA-CASE-MSC-19568-1] c 34 N78-25350
- Variable contour securing system  
[NASA-CASE-MSC-16270-1] c 37 N78-27423
- Multi-purpose wind tunnel reaction control model block  
[NASA-CASE-MSC-19706-1] c 09 N78-31129
- Sequencing device utilizing planetary gear set  
[NASA-CASE-MSC-19514-1] c 37 N79-20377
- System for automatically switching transformer coupled lines  
[NASA-CASE-MSC-16697-1] c 33 N79-28415
- Pressure limiting propellant actuating system  
[NASA-CASE-MSC-18179-1] c 20 N80-18097
- Floating nut retention system  
[NASA-CASE-MSC-16938-1] c 37 N80-23653
- Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c 26 N80-28492
- Coaxial phased array antenna  
[NASA-CASE-MSC-16800-1] c 32 N81-14187
- Installing fiber insulation  
[NASA-CASE-MSC-16973-1] c 37 N81-14317
- Thermal barrier pressure seal  
[NASA-CASE-MSC-18134-1] c 37 N81-15363
- Cavity-backed, micro-strip dipole antenna array  
[NASA-CASE-MSC-18606-1] c 32 N82-11336
- Precision heat forming of tetrafluoroethylene tubing  
[NASA-CASE-MSC-18430-1] c 37 N82-24491
- High temperature penetrator assembly with bayonet plug and ramp-activated lock  
[NASA-CASE-MSC-18526-1] c 37 N82-24494
- A method and technique for installing light-weight fragile, high-temperature fiber insulation  
[NASA-CASE-MSC-18934-3] c 24 N82-26387
- Spiral slotted phased antenna array  
[NASA-CASE-MSC-18532-1] c 32 N82-27558
- Attachment system for silica tiles  
[NASA-CASE-MSC-18741-1] c 27 N82-29456
- Method for repair of thin glass coatings  
[NASA-CASE-KSC-11097-1] c 27 N82-33520
- Degassing and mixing apparatus for liquids  
[NASA-CASE-MSC-18936-1] c 35 N83-29652
- Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MSC-18791-1] c 37 N83-36482
- Method and technique for installing light-weight, fragile, high-temperature fiber insulation  
[NASA-CASE-MSC-16934-3] c 24 N84-16262
- Directional gear ratio transmissions  
[NASA-CASE-LAR-12644-1] c 37 N84-28084
- Portable 90 degree proof loading device  
[NASA-CASE-MSC-20250-1] c 35 N86-19581
- Rockwell International Corp., Houston, TX.**  
Reusable captive blind fastener  
[NASA-CASE-MSC-18742-1] c 37 N82-26673
- Rockwell International Corp., Los Angeles, CA.**  
Length mode piezoelectric ultrasonic transducer for inspection of solid objects  
[NASA-CASE-MSC-19672-1] c 38 N79-14398
- Rockwell International Corp., Pittsburgh, PA.**  
CAM controlled retractable door latch  
[NASA-CASE-MSC-20304-1] c 37 N82-31690
- Fluid leak indicator  
[NASA-CASE-MSC-20783-1] c 35 N86-20756
- Roph Corp., Chula Vista, CA.**  
Method of forming shapes from planar sheets of thermosetting materials  
[NASA-CASE-NPO-11036] c 15 N72-24522
- Royal Aircraft Establishment, Farnborough (England).**  
Garments for controlling the temperature of the body  
Patent  
[NASA-CASE-XMS-10269] c 05 N71-24147
- Ryan Aeronautical Co., San Diego, CA.**  
Wing deployment method and apparatus Patent  
[NASA-CASE-XMS-00907] c 02 N70-41630
- Masking device Patent  
[NASA-CASE-XNP-02092] c 15 N70-42033
- Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-1] c 52 N81-29764
- Use of glow discharge in fluidized beds  
[NASA-CASE-ARC-11245-1] c 28 N82-18401
- Preparation of crosslinked 1,2,4-oxadiazole polymer  
[NASA-CASE-ARC-11253-2] c 27 N82-24338
- Fire extinguishant materials  
[NASA-CASE-ARC-11252-1] c 25 N83-36118
- Fluoroether modified epoxy composites  
[NASA-CASE-ARC-11418-1] c 24 N84-11213
- Process for preparing perfluorotriazine elastomers and precursors thereof  
[NASA-CASE-ARC-11402-1] c 27 N84-22744
- Perfluoro (imidoylamidine) diamidines  
[NASA-CASE-ARC-11402-3] c 23 N86-21582
- Sanders Associates, Inc., Nashua, NH.**  
Increasing efficiency of switching type regulator circuits Patent  
[NASA-CASE-XMS-09352] c 09 N71-23316
- Sandia Labs., Albuquerque, NM.**  
Fluid sampling device  
[NASA-CASE-GSC-12143-1] c 35 N77-32456
- Santa Barbara Research Center, Goleta, CA.**  
Scanner  
[NASA-CASE-GSC-12032-2] c 43 N82-13465
- Santa Clara Univ., CA.**  
Reversed cowl flap inlet thrust augmentor  
[NASA-CASE-ARC-10754-1] c 07 N75-24736
- System for measuring Reynolds in a turbulently flowing fluid  
[NASA-CASE-ARC-10755-2] c 34 N76-27517
- System for measuring three fluctuating velocity components in a turbulently flowing fluid  
[NASA-CASE-ARC-10974-1] c 34 N77-27345
- Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c 07 N83-33884
- Schjeldahl (G. T.) Co., Northfield, MN.**  
Rotating mandrel for assembly of inflatable devices Patent  
[NASA-CASE-XLA-04143] c 15 N71-17687
- Traveling sealer for contoured table Patent  
[NASA-CASE-XLA-01494] c 15 N71-24164
- Science Applications, Inc., La Jolla, CA.**  
Ultra-violet process for producing flame resistant polyamides and products produced thereby  
[NASA-CASE-MSC-16074-1] c 27 N80-26446
- Scott Aviation Corp., Lancaster, NY.**  
Self-contained breathing apparatus  
[NASA-CASE-MSC-14733-1] c 54 N76-24900
- Serv-Air, Inc., Edwards, CA.**  
Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c 33 N80-26599
- Serv-Air, Inc., Houston, TX.**  
Stator rotor tools  
[NASA-CASE-MSC-16000-1] c 37 N78-24544
- Sheldahl Co., Northfield, MN.**  
Method and apparatus for preparing multiconductor cable with flat conductors  
[NASA-CASE-MFS-10946-1] c 31 N79-21226
- Edge coating of flat wires  
[NASA-CASE-XMF-05757-1] c 31 N79-21227
- Sikorsky Aircraft, Stratford, CT.**  
Locking redundant link  
[NASA-CASE-LAR-11900-1] c 37 N79-14382
- Aircraft rotor blade with passive tuned tab  
[NASA-CASE-ARC-11444-1] c 05 N85-29947
- Singer Co., Binghamton, NY.**  
Digital interface for bi-directional communication between a computer and a peripheral device  
[NASA-CASE-MSC-20258-1] c 60 N84-28492
- Singer-General Precision, Inc., Binghamton, NY.**  
CRT blanking and brightness control circuit  
[NASA-CASE-KSC-10647-1] c 10 N72-31273
- Smith (Stephen F.), Knoxville, TN.**  
Automatic oscillator frequency control system  
[NASA-CASE-GSC-12804-1] c 33 N86-20668
- Smith Electronics, Inc., Cleveland, OH.**  
Phase detector assembly Patent  
[NASA-CASE-XMF-00701] c 09 N70-40272
- Smithsonian Astrophysical Observatory, Cambridge, MA.**  
Atomic hydrogen maser with bulb temperature control to remove wall shift in maser output frequency  
[NASA-CASE-HQN-10654-1] c 16 N73-13489
- Tunable cavity resonator with ramp shaped supports  
[NASA-CASE-HQN-10790-1] c 36 N74-11313
- Solid State Radiations, Inc., Los Angeles, CA.**  
Biomedical radiation detecting probe Patent  
[NASA-CASE-XMS-01177] c 05 N71-19440
- Southern Methodist Univ., Dallas, TX.**  
Process for utilizing low-cost graphite substrates for polycrystalline solar cells  
[NASA-CASE-GSC-12022-2] c 44 N78-24609
- Southern Research Inst., Birmingham, AL.**  
Infusible silazane polymer and process for producing same  
[NASA-CASE-XMF-02526-1] c 27 N79-21190
- Southwest Research Inst., San Antonio, TX.**  
Thin film strain transducer  
[NASA-CASE-WLP-10055-1] c 35 N84-28015
- Thin film strain transducer  
[NASA-CASE-WLP-10055-2] c 35 N85-21598
- Space Sciences, Inc., Waltham, MA.**  
Doppler shift system  
[NASA-CASE-HQN-10740-1] c 72 N74-19310
- Space Technology Labs., Inc., Redondo Beach, CA.**  
AC logic flip-flop circuits Patent  
[NASA-CASE-XGS-00823] c 10 N71-15910
- Apparatus for field strength measurement of a space vehicle Patent  
[NASA-CASE-XLE-00820] c 14 N71-16014
- Hermetically sealed explosive release mechanism Patent  
[NASA-CASE-XGS-00824] c 15 N71-16078
- Apparatus for measuring electric field strength on the surface of a model vehicle Patent  
[NASA-CASE-XLE-02038] c 09 N71-16086
- Solar cell mounting Patent  
[NASA-CASE-XNP-00826] c 03 N71-20895
- Prestressed refractory structure Patent  
[NASA-CASE-XNP-02888] c 18 N71-21068
- Linear accelerator frequency control system Patent  
[NASA-CASE-XGS-05441] c 10 N71-22962
- Fluid lubricant system Patent  
[NASA-CASE-XNP-03972] c 15 N71-23048
- Compensating bandwidth switching transients in an amplifier circuit Patent  
[NASA-CASE-XNP-01107] c 10 N71-28859
- Spacelabs, Inc., Van Nuys, CA.**  
Peak polarity selector Patent  
[NASA-CASE-FRC-10010] c 10 N71-24862
- Respiration monitor  
[NASA-CASE-FRC-10012] c 14 N72-17329
- Spaco, Inc., Huntsville, AL.**  
Sight switch using an infrared source and sensor Patent  
[NASA-CASE-XMF-03934] c 09 N71-22985
- Method and device for detecting voids in low density material Patent  
[NASA-CASE-MFS-20044] c 14 N71-28993
- Spectra-Physics, Inc., Mountain View, CA.**  
Optically pumped resonance magnetometer for determining vectorial components in a spatial coordinate system Patent  
[NASA-CASE-XGS-04879] c 14 N71-20428
- Spectrolab, Inc., Sylmar, CA.**  
Ultraviolet filter  
[NASA-CASE-XNP-02340] c 23 N69-24332
- Central spar and module joint Patent  
[NASA-CASE-XNP-02341] c 15 N71-21531
- Apparatus for applying cover slides  
[NASA-CASE-NPO-10575] c 03 N72-25019
- Sperry Gyroscope Co., Great Neck, NY.**  
Automatic gain control system  
[NASA-CASE-XMS-05307] c 09 N69-24330
- Sperry Rand Corp., Blue Bell, PA.**  
Flipflop interrogator and bi-polar current driver Patent  
[NASA-CASE-XGS-03058] c 10 N71-19547
- Sperry Rand Corp., Huntsville, AL.**  
Optical tracking mount Patent  
[NASA-CASE-MFS-14017] c 14 N71-26627
- Collapsible antenna boom and transmission line Patent  
[NASA-CASE-MFS-20068] c 07 N71-27191
- Device for handling printed circuit cards Patent  
[NASA-CASE-MFS-20453] c 15 N71-29133
- Frequency division multiplex technique  
[NASA-CASE-KSC-10521] c 07 N73-20176
- Device for configuring multiple leads  
[NASA-CASE-MFS-22133-1] c 33 N74-26977
- System for enhancing tool-exchange capabilities of a portable wrench  
[NASA-CASE-MFS-22283-1] c 37 N75-33395
- Remotely operable articulated manipulator  
[NASA-CASE-MFS-22707-1] c 37 N76-15457
- Photovoltaic cell array  
[NASA-CASE-MFS-22458-1] c 44 N77-10635
- Notch filter  
[NASA-CASE-MFS-23303-1] c 32 N77-18307
- FM/CW radar system  
[NASA-CASE-MFS-22234-1] c 32 N79-10264
- Anastigmatic three-mirror telescope  
[NASA-CASE-MFS-23675-1] c 89 N79-10969
- Sperry Rand Corp., Phoenix, AZ.**  
Isolation coupling arrangement for a torque measuring system  
[NASA-CASE-XLA-04897] c 15 N72-22482

**Stanford Research Inst., Menlo Park, CA.**

Automatic fault correction system for parallel signal channels Patent  
[NASA-CASE-XNP-03263] c 09 N71-18843  
Mercury capillary interrupter Patent  
[NASA-CASE-XNP-02251] c 12 N71-20896  
Magnetic power switch Patent  
[NASA-CASE-NPO-10242] c 09 N71-24803  
Procedure and apparatus for determination of water in nitrogen tetroxide  
[NASA-CASE-NPO-10234] c 06 N72-17094

**Stanford Univ., CA.**

Active RC networks  
[NASA-CASE-ARC-10042-2] c 10 N72-11256  
Multiloop RC active filter apparatus having low parameter sensitivity with low amplifier gain  
[NASA-CASE-ARC-10192] c 09 N72-21245  
Spacecraft attitude control method and apparatus  
[NASA-CASE-HQN-10439] c 21 N72-21624  
Laser system with an antiresonant optical ring  
[NASA-CASE-HQN-10844-1] c 36 N75-19653  
Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility  
[NASA-CASE-HQN-10069] c 33 N75-27251  
Reaction cured glass and glass coatings  
[NASA-CASE-ARC-11051-1] c 27 N78-32260  
Fibrous refractory composite insulation  
[NASA-CASE-ARC-11169-1] c 24 N79-24062  
Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c 37 N79-28551  
High temperature glass thermal control structure and coating  
[NASA-CASE-ARC-11164-1] c 44 N83-34448  
Planar oscillatory stirring apparatus  
[NASA-CASE-MFS-26002-1-CU] c 35 N86-26598

**Stanford Univ., Palo Alto, CA.**

RC networks and amplifiers employing the same  
[NASA-CASE-XAC-05462-2] c 10 N72-17171

**State Univ. of Iowa, Iowa City.**

Mixture separation cell Patent  
[NASA-CASE-XMS-02952] c 18 N71-20742

**Sylvania Electronic Systems-Central, Williamsville, NY.**

Acquisition and tracking system for optical radar  
[NASA-CASE-MFS-20125] c 16 N72-13437  
Altitude sensing device  
[NASA-CASE-XMS-01994-1] c 14 N72-17326

**T****Taag Designs, Inc., College Park, MD.**

Recovery of radiation damaged solar cells through thermal annealing  
[NASA-CASE-XGS-04047-2] c 03 N72-11062  
Phototrophic composition of matter  
[NASA-CASE-XGS-03736] c 14 N72-22443

**Taft Broadcasting Corp., Houston, TX.**

Television noise reduction device  
[NASA-CASE-MSC-12607-1] c 32 N75-21485

**Tamarack Scientific Co., Inc., Orange, CA.**

Detector absorptivity measuring method and apparatus  
[NASA-CASE-LAR-10907-1] c 35 N76-29551

**Technicolor, Inc., Paramus, NJ.**

Automatic lightning detection and photographic system  
[NASA-CASE-KSC-10728-1] c 14 N73-32319

**Technidyne, Inc., West Chester, PA.**

Methods and apparatus employing vibratory energy for wrenching Patent  
[NASA-CASE-MFS-20586] c 15 N71-17686

**Technion - Israel Inst. of Tech., Haifa.**

Modified face seal for positive film stiffness  
[NASA-CASE-LEW-12989-1] c 37 N82-12442

**Technion Research and Development Foundation Ltd., Haifa (Israel).**

Self-stabilizing radial face seal  
[NASA-CASE-LEW-12991-1] c 37 N81-24442

**Technology, Inc., Houston, TX.**

Apparatus and method for processing Korotkov sounds  
[NASA-CASE-MSC-13999-1] c 52 N74-26626

**Technology, Inc., San Antonio, TX.**

Contourograph system for monitoring electrocardiograms  
[NASA-CASE-MSC-13407-1] c 10 N72-20225

Modification of the physical properties of freeze-dried rice  
[NASA-CASE-MSC-13540-1] c 05 N72-33096

**Telodyne Brown Engineering, Huntsville, AL.**

Self-recording portable soil penetrometer  
[NASA-CASE-MFS-20774] c 14 N73-19420

**Temple Univ. Research Inst., Philadelphia, PA.**

Barium release system  
[NASA-CASE-LAR-10670-1] c 06 N73-30097

Rocket having barium release system to create ion clouds in the upper atmosphere  
[NASA-CASE-LAR-10670-2] c 15 N74-27360

**Texas A&M Univ., College Station.**

Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction  
[NASA-CASE-MFS-23315-1] c 76 N78-24950

**Texas Instruments, Inc., Dallas.**

Integrated circuit including field effect transistor and cermet resistor  
[NASA-CASE-GSC-10835-1] c 09 N72-33205  
Apparatus for measuring semiconductor device resistance  
[NASA-CASE-NPO-14424-1] c 33 N80-32650

**Texas Technological Univ., Lubbock.**

Insulated electrocardiographic electrodes  
[NASA-CASE-MSC-14339-1] c 05 N75-24716

**Thiokol Chemical Corp., Bristol, PA.**

Casting propellant in rocket engine  
[NASA-CASE-LAR-11995-1] c 28 N77-10213

**Thiokol Corp., Brigham City, UT.**

Process for the leaching of AP from propellant  
[NASA-CASE-NPO-14109-1] c 28 N80-23471  
Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c 28 N81-15119

**Thompson Ramo Wooldridge, Inc., Cleveland, OH.**

Electromagnetic radiation energy arrangement  
[NASA-CASE-WOO-00428-1] c 32 N79-19186

**Tisdale (Henry F., Sr.), Treasure Island, FL.**

Velocity vector control system augmented with direct lift control  
[NASA-CASE-LAR-12268-1] c 08 N81-24106

**Trans-Sonics, Inc., Lexington, MA.**

Capacitive tank gaging apparatus being independent of liquid distribution  
[NASA-CASE-MFS-21629] c 14 N72-22442

**TransTechnology Corp., Canyon Country, CA.**

Slide release mechanism  
[NASA-CASE-MSC-20080-1] c 37 N85-30334

**Trident Engineering Associates, Inc., Annapolis, MD.**

Spectroscopic equipment using a slender cylindrical reflector as a substitute for a slit Patent  
[NASA-CASE-XGS-08269] c 23 N71-26206

**TRW, Inc., Redondo Beach, CA.**

Method of and device for determining the characteristics and flux distribution of micrometeorites  
[NASA-CASE-NPO-12127-1] c 91 N74-13130

Reinforced structural plastics  
[NASA-CASE-LEW-10199-1] c 27 N74-23125

Capillary flow weld-bonding  
[NASA-CASE-LAR-11726-1] c 37 N76-27568

Ruler for making navigational computations  
[NASA-CASE-XNP-01458] c 04 N78-17031

Particle parameter analyzing system  
[NASA-CASE-XLE-06094] c 33 N78-17293

Temperature compensated current source  
[NASA-CASE-MSC-11235] c 33 N78-17294

Shunt regulation electric power system  
[NASA-CASE-GSC-10135] c 33 N78-17296

Heat pipe with dual working fluids  
[NASA-CASE-ARC-10198] c 34 N78-17336

Multi-chamber controllable heat pipe  
[NASA-CASE-ARC-10199] c 34 N78-17337

Microbalance  
[NASA-CASE-MSC-11242] c 35 N78-17358

Gas ion laser construction for electrically isolating the pressure gauge thereof  
[NASA-CASE-MFS-22597] c 36 N78-17366

Wobble gear drive mechanism  
[NASA-CASE-WOO-00625] c 37 N78-17385

Apparatus for handling micron size range particulate material  
[NASA-CASE-NPO-10151] c 37 N78-17386

Solar cell module assembly jig  
[NASA-CASE-XGS-00829-1] c 44 N79-19447

Low thrust monopropellant engine  
[NASA-CASE-GSC-12194-2] c 20 N82-18314

Moisture content and gas sampling device  
[NASA-CASE-MSC-18866-1] c 35 N85-29213

**TRW Defense and Space Systems Group, Redondo Beach, CA.**

Optical crystal temperature gauge with fiber optic connections  
[NASA-CASE-MSC-18627-1] c 74 N82-30071

**TRW Equipment Labs., Cleveland, OH.**

Pulsed energy power system Patent  
[NASA-CASE-MSC-13112] c 03 N71-11057

**TRW Systems Group, Redondo Beach, CA.**

Electromechanical actuator  
[NASA-CASE-XNP-05975] c 15 N69-23185

Ablative resin Patent  
[NASA-CASE-XLE-05913] c 33 N71-14032

Control valve and co-axial variable injector Patent  
[NASA-CASE-XNP-09702] c 15 N71-17654

Multiple orifice throttle valve Patent  
[NASA-CASE-XNP-09698] c 15 N71-18580

Semitoroidal diaphragm cavitating valve Patent  
[NASA-CASE-XNP-09704] c 12 N71-18615

Passive caging mechanism Patent  
[NASA-CASE-GSC-10306-1] c 15 N71-24694

Multiple varactor frequency doubler Patent  
[NASA-CASE-XMF-04958-1] c 10 N71-26414

Electrohydrodynamic control valve Patent  
[NASA-CASE-NPO-10416] c 12 N71-27332

Booster tank system Patent  
[NASA-CASE-MSC-12390] c 27 N71-29155

Resonant infrasonic gauging apparatus  
[NASA-CASE-MSC-11847-1] c 14 N72-11363

Wide range analog-to-digital converter with a variable gain amplifier  
[NASA-CASE-NPO-11018] c 08 N72-21200

System for preconditioning a combustible vapor  
[NASA-CASE-NPO-12072] c 28 N72-22772

Failsafe multiple transformer circuit configuration  
[NASA-CASE-NPO-11078] c 09 N72-25262

Digital control and information system  
[NASA-CASE-NPO-11016] c 08 N72-31226

Ultrasonically bonded valve assembly  
[NASA-CASE-NPO-13360-1] c 37 N75-25185

Cosmic dust analyzer  
[NASA-CASE-MSC-13802-2] c 35 N76-15431

Weld-bonded titanium structures  
[NASA-CASE-LAR-11549-1] c 37 N77-11397

Flat-plate heat pipe  
[NASA-CASE-GSC-11998-1] c 34 N77-32413

Spatial filter for Q-switched lasers  
[NASA-CASE-LEW-12164-1] c 36 N77-32478

Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c 33 N81-17349

Self-calibrating threshold detector  
[NASA-CASE-MSC-16370-1] c 35 N81-19427

**Tyco Labs., Inc., Waltham, MA.**

Bonding thermoelectric elements to nonmagnetic refractory metal electrodes  
[NASA-CASE-XGS-04554] c 15 N69-39786

Segmenting lead telluride-silicon germanium thermoelements Patent  
[NASA-CASE-XGS-05718] c 26 N71-16037

Electrocatalyst for oxygen reduction  
[NASA-CASE-HQN-10537-1] c 06 N72-10138

**U****Ultrasystems, Inc., Irvine, CA.**

Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-1] c 27 N78-32256

Compound oxidized styrylphosphine  
[NASA-CASE-MSC-14903-2] c 27 N80-10358

Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-3] c 27 N80-24438

**Unified Science Associates, Inc., Pasadena, CA.**

Method of producing crystalline materials  
[NASA-CASE-NPO-10440] c 15 N72-21466

**Union Carbide Corp., New York, NY.**

Laser apparatus for removing material from rotating objects Patent  
[NASA-CASE-MFS-11279] c 16 N71-20400

**United Aircraft Corp., East Hartford, CT.**

Supporting and protecting device Patent  
[NASA-CASE-XMF-00580] c 11 N70-35383

Spherical tank gauge Patent  
[NASA-CASE-XMS-06236] c 14 N71-21007

Omnidirectional joint Patent  
[NASA-CASE-XMS-09635] c 05 N71-24623

Foreshortened convolute section for a pressurized suit Patent  
[NASA-CASE-XMS-09637-1] c 05 N71-24730

Tertiary flow injection thrust vectoring system Patent  
[NASA-CASE-MFS-20831] c 28 N71-29153

Restraint torso for a pressurized suit  
[NASA-CASE-MSC-12397-1] c 05 N72-25119

Transformer regulated self-stabilizing chopper  
[NASA-CASE-XGS-09186] c 33 N78-17295

Restraining mechanism  
[NASA-CASE-MSC-13054] c 54 N78-17677

Helmet latching and attaching ring  
[NASA-CASE-XMS-04670] c 54 N78-17678

Protective garment ventilation system  
[NASA-CASE-XMS-04928] c 54 N78-17679

Helmet feedport  
[NASA-CASE-XMS-09653] c 54 N78-17680

Emergency space-suit helmet  
[NASA-CASE-MSC-10954-1] c 54 N78-18761

Flow diverter valve and flow diversion method  
[NASA-CASE-HQN-00573-1] c 37 N79-33468

Thermal garment  
[NASA-CASE-XMS-03694-1] c 54 N82-29002

Glass compositions with a high modulus of elasticity  
[NASA-CASE-HQN-10274-1] c 27 N82-29451

## United Aircraft Corp.

- High modulus invert analog glass compositions containing beryllia  
[NASA-CASE-HQN-10931-2] c 27 N82-29452
- Non-toxic invert analog glass compositions of high modulus  
[NASA-CASE-HQN-10328-2] c 27 N82-29454
- United Aircraft Corp., Stratford, CT.**
- Bonded joint and method  
[NASA-CASE-LAR-10900-1] c 37 N74-23064
- Compensating linkage for main rotor control  
[NASA-CASE-LAR-11797-1] c 05 N81-19087
- United Aircraft Corp., Sunnyvale, CA.**
- Method and tool for machining a transverse slot about a bore  
[NASA-CASE-LAR-11855-1] c 37 N81-14319
- United Aircraft Corp., West Palm Beach, FL.**
- Inherent redundancy electric heater  
[NASA-CASE-MFS-21462-1] c 33 N74-14935
- United Aircraft Corp., Windsor Locks, CT.**
- Water separating system Patent  
[NASA-CASE-XMS-13052] c 14 N71-20427
- Method of forming a root cord restrained convolute section  
[NASA-CASE-MSC-12398] c 05 N72-20098
- United States Radium Corp., Parsippany, NJ.**
- Method for applying photographic resists to otherwise incompatible substrates  
[NASA-CASE-MSC-18107-1] c 27 N81-25209
- United Technologies Corp., East Hartford, CT.**
- Method of making a rocket nozzle  
[NASA-CASE-XMF-06884-1] c 20 N79-21123
- Fluid thrust control system  
[NASA-CASE-XMF-05964-1] c 20 N79-21124
- Rocket injector head  
[NASA-CASE-XMF-04592-1] c 20 N79-21125
- Retractable environmental seal  
[NASA-CASE-MFS-23646-1] c 37 N79-22474
- Portable breathing system  
[NASA-CASE-MSC-16182-1] c 54 N80-10799
- High modulus rare earth and beryllium containing silicate glass compositions  
[NASA-CASE-HQN-10595-1] c 27 N82-29455
- Joining lead wires to thin platinum alloy films  
[NASA-CASE-LEW-13934-1] c 35 N83-35338
- Combustor liner construction  
[NASA-CASE-LEW-14035-1] c 07 N84-24577
- United Technologies Corp., South Windsor, CT.**
- Reactant pressure differential control for fuel cell gases  
[NASA-CASE-MSC-20127-2] c 37 N85-34403
- United Technologies Corp., Windsor Locks, CT.**
- Cam-operated pitch-change apparatus  
[NASA-CASE-LEW-13050-1] c 07 N79-14095
- United Technology Center, Sunnyvale, CA.**
- Solid propellant liner Patent  
[NASA-CASE-XNP-09744] c 27 N71-16392
- University of Southern Mississippi, Hattiesburg.**
- Low energy electron magnetometer using a monoenergetic electron beam  
[NASA-CASE-LAR-12706-1] c 35 N84-12444

## V

- Vanderbilt Univ., Nashville, TN.**
- Solar driven liquid metal MHD power generator  
[NASA-CASE-LAR-12495-1] c 44 N83-28573
- Vapor Corp., Chicago, IL.**
- Method and apparatus for controllably heating fluid Patent  
[NASA-CASE-XMF-04237] c 33 N71-16278
- Varian Associates, Palo Alto, CA.**
- High power-high voltage watertoad Patent  
[NASA-CASE-XNP-05381] c 09 N71-20842
- III-V photocathode with nitrogen doping for increased quantum efficiency  
[NASA-CASE-NPO-12134-1] c 33 N76-31409
- Virginia Associated Research Center, Newport News.**
- Method for thermal monitoring subcutaneous tissue  
[NASA-CASE-LAR-13028-1] c 52 N85-30618
- Virginia Polytechnic Inst. and State Univ., Blacksburg.**
- Logarithmic circuit with wide dynamic range  
[NASA-CASE-GSC-12145-1] c 33 N78-32339
- Polyphenylquinoxalines containing pendant phenylethynyl and ethynyl groups  
[NASA-CASE-LAR-12838-1] c 27 N83-34040
- Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-2] c 27 N84-22746
- Ultrasonic transducer with Gaussian radial pressure distribution  
[NASA-CASE-LAR-12967-1] c 35 N84-22932
- Dual differential interferometer  
[NASA-CASE-LAR-12966-1] c 35 N85-30282

## Virginia Univ., Charlottesville.

- Depositing semiconductor films utilizing a thermal gradient  
[NASA-CASE-XKS-04614] c 15 N69-21460
- Active microwave irises and windows  
[NASA-CASE-LAR-10513-1] c 07 N72-25170
- Thin film microwave iris  
[NASA-CASE-LAR-10511-1] c 09 N72-29172
- Apparatus for measuring a sorbate dispersed in a fluid stream  
[NASA-CASE-ARC-10896-1] c 35 N78-19465
- Vivonex Corp., Mountain View, CA.**
- Amino acid analysis  
[NASA-CASE-NPO-12130-1] c 25 N75-14844
- Vought Corp., Hampton, VA.**
- Mechanical end joint system for structural column elements  
[NASA-CASE-LAR-12482-1] c 37 N82-32732

## W

### Weber Aircraft Corp., Burbank, CA.

- Articulated multiple couch assembly Patent  
[NASA-CASE-MSC-11253] c 05 N71-12343
- Device for separating occupant from an ejection seat Patent  
[NASA-CASE-XMS-04625] c 05 N71-20718
- Collapsible Apollo couch  
[NASA-CASE-MSC-13140] c 05 N72-11085
- Westinghouse Electric Corp., Baltimore, MD.**
- Broadband choke for antenna structure  
[NASA-CASE-XMS-05303] c 07 N69-27462
- Electronic background suppression method and apparatus for a field scanning sensor  
[NASA-CASE-XGS-05211] c 07 N69-39980
- Solid-state current transformer  
[NASA-CASE-MFS-22560-1] c 33 N77-14335
- Time delay and integration detectors using charge transfer devices  
[NASA-CASE-GSC-12324-1] c 33 N81-33403
- Westinghouse Electric Corp., Huntsville, AL.**
- Solid state television camera system Patent  
[NASA-CASE-XMF-06092] c 07 N71-24612
- Phototransistor  
[NASA-CASE-MFS-20407] c 09 N73-19235
- Westinghouse Electric Corp., Lima, OH.**
- Transistor drive regulator Patent  
[NASA-CASE-LEW-10233] c 10 N71-27126
- Westinghouse Electric Corp., Pittsburgh, PA.**
- Linear sawtooth voltage-wave generator employing transistor timing circuit having capacitor-zener diode combination feedback Patent  
[NASA-CASE-XMS-01315] c 09 N70-41675
- Thermal conductive connection and method of making same Patent  
[NASA-CASE-XMS-02087] c 09 N70-41717
- Gas cooled high temperature thermocouple Patent  
[NASA-CASE-XLE-09475-1] c 33 N71-15568
- High resolution developing of photosensitive resists Patent  
[NASA-CASE-XGS-04993] c 14 N71-17574
- Regulated power supply Patent  
[NASA-CASE-XMS-01991] c 09 N71-21449
- Pulse modulator providing fast rise and fall times Patent  
[NASA-CASE-XMS-04919] c 09 N71-23270
- Extended area semiconductor radiation detectors and a novel readout arrangement Patent  
[NASA-CASE-XGS-03230] c 14 N71-23401
- Frequency shift keying apparatus Patent  
[NASA-CASE-XGS-01537] c 07 N71-23405
- Phase locked phase modulator including a voltage controlled oscillator Patent  
[NASA-CASE-XNP-05382] c 10 N71-23544
- Bearing and gimbal lock mechanism and spiral flex lead module Patent  
[NASA-CASE-GSC-10556-1] c 31 N71-26537
- Multiple slope sweep generator Patent  
[NASA-CASE-XMS-03542] c 09 N71-28926
- Self-adjusting multisegment, deployable, natural circulation radiator Patent  
[NASA-CASE-XHQ-03673] c 33 N71-29046
- Thermally cascaded thermoelectric generator  
[NASA-CASE-NPO-10753] c 03 N72-26031
- Phototransistor imaging system  
[NASA-CASE-MFS-20809] c 23 N73-13660
- Demodulator for carrier transducers  
[NASA-CASE-NUC-10107-1] c 33 N74-17930
- Heat transfer device  
[NASA-CASE-NPO-11120-1] c 34 N74-18552
- Amplitude steered array  
[NASA-CASE-GSC-11446-1] c 33 N74-20860
- Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c 37 N74-21063

- Millimeter wave pumped parametric amplifier  
[NASA-CASE-GSC-11617-1] c 33 N74-32660
- Method of forming a wick for a heat pipe  
[NASA-CASE-NPO-13391-1] c 34 N76-27515
- Magnifying image intensifier  
[NASA-CASE-GSC-12010-1] c 74 N78-18905
- Westinghouse Electric Corp., Trafford, PA.**
- Sodium storage and injection system  
[NASA-CASE-NPO-14384-1] c 37 N80-10494
- Method of producing silicon  
[NASA-CASE-NPO-14382-1] c 31 N80-18231
- Weston Instruments, Inc., College Park, MD.**
- Electronically resettable fuse Patent  
[NASA-CASE-XGS-11177] c 09 N71-27001
- Whirlpool Corp., Saint Joseph, MI.**
- Relief container  
[NASA-CASE-XMS-06761] c 05 N69-23192
- Fluid sample collector Patent  
[NASA-CASE-XMS-06767-1] c 14 N71-20435
- Whittaker Corp., Los Angeles, CA.**
- Polyurethanes of fluorine containing polycarbonates  
[NASA-CASE-MFS-10512] c 06 N73-30099
- Polyurethanes from fluoroalkyl propyleneglycol polyethers  
[NASA-CASE-MFS-10506] c 06 N73-30100
- Fluorohydroxy ethers  
[NASA-CASE-MFS-10507] c 06 N73-30101
- Highly fluorinated polymers  
[NASA-CASE-MFS-11492] c 06 N73-30102
- Fluorine containing polyurethane  
[NASA-CASE-MFS-10509] c 06 N73-30103
- Fluorine-containing polyformals  
[NASA-CASE-XMF-06900-1] c 27 N79-21191
- Whittaker Corp., San Diego, CA.**
- Reinforced polyquinoxaline gasket and method of preparing the same  
[NASA-CASE-MFS-21364-1] c 37 N74-18126
- Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c 27 N78-31232
- Wisconsin Univ., Madison.**
- Coaxial anode wire for gas radiation counters  
[NASA-CASE-GSC-11492-1] c 35 N74-26949
- Method and system for in vivo measurement of bone tissue using a two level energy source  
[NASA-CASE-MSC-14276-1] c 52 N77-14737

## Y

### Youngstown State Univ., OH.

- Instrumentation for measurement of aircraft noise and sonic boom  
[NASA-CASE-LAR-11173-1] c 35 N75-19614

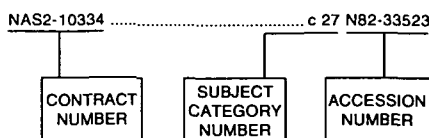


# CONTRACT NUMBER INDEX

## NASA PATENT ABSTRACTS BIBLIOGRAPHY Section 2

JANUARY 1994

### Typical Contract Number Index Listing



Listings in this index are arranged alphanumerically by contract number. Under each contract number, the accession numbers denoting documents that have been produced as a result of research done under the contract are arranged ascending accession number order. The subject category number indicates the category in Section 1 (Abstracts) in which the citation is located.

JPL-950596 ..... c 15 N69-23185  
JPL-950850 ..... c 09 N69-24329  
JPL-951531 ..... c 09 N69-21926  
NAG1-1188 ..... c 34 N92-29830  
NAG1-569 ..... c 24 N92-34214  
NAG1-672 ..... c 23 N90-21118  
NASW-1233 ..... c 06 N72-10138  
NASW-4004 ..... c 24 N85-25436  
NAS1-19000 ..... c 24 N92-34214  
NAS1-2593 ..... c 11 N69-24321  
NAS12-2135 ..... c 09 N72-20206  
NAS12-514 ..... c 14 N71-34389  
NAS2-10334 ..... c 27 N82-33523  
NAS3-24565 ..... c 33 N90-22724  
NAS3-2510 ..... c 10 N69-39888  
NAS3-3232 ..... c 14 N69-24331  
NAS4-1403 ..... c 14 N70-35587  
NAS5-10260 ..... c 06 N72-21105  
NAS5-519 ..... c 23 N69-24332  
NAS7-100 ..... c 15 N69-23185  
c 15 N69-23190  
c 15 N69-24319  
c 09 N69-24329  
c 09 N69-24333  
c 06 N69-31244  
c 07 N69-39736  
c 18 N69-39895  
c 09 N69-39929  
c 15 N69-39935  
c 06 N69-39936  
c 14 N69-39937  
c 03 N70-34646  
c 08 N70-34675  
c 14 N70-34697  
c 15 N70-34699  
c 03 N71-34044  
c 07 N72-20154  
c 09 N73-12214  
c 15 N73-12495  
c 37 N76-16446  
c 35 N78-18395  
c 32 N79-19195  
c 27 N80-16163  
c 32 N80-16261  
c 35 N80-18364  
c 37 N82-11469  
c 35 N82-25484  
c 71 N82-27086  
c 25 N83-24572  
c 76 N84-12968  
c 43 N84-23012

NAS7-150 .....  
NAS7-603 .....  
NAS7-746 .....  
NAS7-918 .....

c 36 N84-25037  
c 76 N85-30922  
c 33 N86-20681  
c 37 N86-20801  
c 03 N69-21337  
c 06 N70-11251  
c 06 N70-11252  
c 06 N72-27151  
c 34 N85-29182  
c 60 N86-24224  
c 76 N86-25269  
c 74 N86-33138  
c 33 N87-10231  
c 37 N87-14704  
c 32 N87-15390  
c 33 N87-15413  
c 29 N87-25489  
c 62 N87-25803  
c 76 N87-25868  
c 31 N88-23917  
c 34 N88-23946  
c 33 N88-24863  
c 35 N88-24943  
c 74 N88-25301  
c 74 N88-25304  
c 74 N88-25305  
c 32 N88-26541  
c 33 N88-29095  
c 76 N89-14120  
c 60 N89-26400  
c 32 N89-28676  
c 33 N89-28713  
c 35 N89-28795  
c 72 N89-29169  
c 31 N89-29577  
c 33 N89-29679  
c 33 N89-29681  
c 37 N89-29750  
c 27 N90-10261  
c 32 N90-16104  
c 33 N90-17010  
c 35 N90-17104  
c 76 N90-17456  
c 17 N90-21061  
c 31 N90-21215  
c 35 N90-22769  
c 34 N90-23700  
c 60 N90-25583  
c 43 N90-26384  
c 76 N90-26685  
c 32 N90-27016  
c 76 N90-27518  
c 32 N91-13594  
c 32 N91-13595  
c 33 N91-13622  
c 34 N91-13658  
c 39 N91-13767  
c 74 N91-13998  
c 33 N91-21434  
c 37 N91-21544  
c 43 N91-21621  
c 32 N91-25316  
c 32 N91-25318  
c 34 N91-25380  
c 62 N91-25693  
c 74 N91-25841  
c 27 N91-27372  
c 31 N91-27385  
c 32 N91-27439  
c 33 N91-27478  
c 74 N91-27957  
c 37 N91-32509  
c 37 N91-32510  
c 60 N91-32805  
c 74 N91-32924  
c 74 N91-32925  
c 32 N92-10126  
c 33 N92-10146  
c 74 N92-11791  
c 60 N92-12438  
c 33 N92-17865  
c 60 N92-17884  
c 74 N92-17892

c 63 N92-17895  
c 33 N92-23464  
c 60 N92-23546  
c 74 N92-23551  
c 37 N92-23553  
c 37 N92-24042  
c 62 N92-24045  
c 63 N92-24245  
c 33 N92-24246  
c 37 N92-29765  
c 63 N92-29955  
c 29 N92-30083  
c 74 N92-30084  
c 63 N92-30085  
c 33 N92-30086  
c 76 N92-30102  
c 74 N92-30104  
c 32 N92-30391  
c 33 N92-30542  
c 61 N92-30543  
c 37 N92-34205  
c 63 N92-34240  
c 74 N92-34241  
c 63 N93-11174  
c 37 N93-11177  
c 33 N93-11456  
c 61 N93-11664  
c 31 N93-12202  
c 74 N93-14404  
c 24 N93-14700  
c 76 N93-15151  
c 74 N93-18276  
c 36 N93-18277  
c 33 N93-18278  
c 25 N93-19025  
c 33 N93-19330  
c 39 N93-24596  
c 63 N93-24599  
c 29 N93-24600  
c 32 N93-28126  
c 37 N93-28129  
c 37 N93-28131  
c 36 N93-28132  
c 74 N93-28133  
c 35 N93-28322  
c 32 N93-28422  
c 20 N93-28424  
c 27 N93-28426  
c 62 N93-28427  
c 74 N93-28428  
c 37 N93-28954  
c 32 N93-28955  
c 74 N93-29086  
c 32 N93-29087  
c 63 N93-29176  
c 74 N93-29848  
c 38 N93-30413  
c 36 N93-30415  
c 06 N93-30416  
c 09 N69-39734  
c 35 N86-26598  
c 37 N92-24043  
c 05 N72-15098

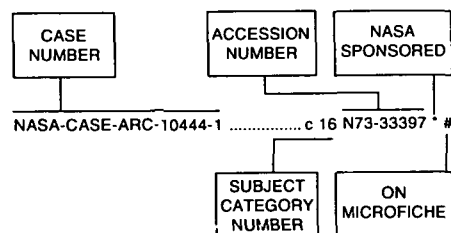
NAS8-11561 .....  
NAS8-34872 .....  
NAS8-918 .....  
NAS9-10963 .....

CONTRACT

## NASA PATENT ABSTRACTS BIBLIOGRAPHY

### Section 2

#### Typical Number Index Listing



Listings in this index are arranged alphanumerically by "patent" number. The subject category number indicates the category in Section 1 (Abstracts) in which the citation is located. The accession number denotes the number by which the citation is identified within the subject category. An asterisk (\*) indicates that the item is a NASA report. A pound sign (#) indicates that the item is available on microfiche.

INNT-PATENT-CLASS-B23K-20/08 c 31 N92-16162 \*

INT-PATENT-CLASS-A47B-97/04 c 37 N92-33616 \*

INT-PATENT-CLASS-A47H-1/144 c 37 N92-29092 \*

INT-PATENT-CLASS-A47K-11/00 c 54 N91-14724 \*

INT-PATENT-CLASS-A47L-11/282 c 31 N93-22035 \*

INT-PATENT-CLASS-A61B-3/14 c 52 N92-28755 \*

INT-PATENT-CLASS-A61B-5/00 c 35 N90-23706 \*

INT-PATENT-CLASS-A61B-5/02 c 35 N92-33016 \*

INT-PATENT-CLASS-A61B-8/00 c 71 N91-27914 \*

INT-PATENT-CLASS-A61B-8/00 c 52 N92-11621 \*

INT-PATENT-CLASS-A61F-2/54 c 54 N93-14870 \*

INT-PATENT-CLASS-A61F-2/58 c 54 N91-32795 \*

INT-PATENT-CLASS-A61F-2/68 c 54 N91-32795 \*

INT-PATENT-CLASS-A61M-1/00 c 52 N92-33032 \*

INT-PATENT-CLASS-B01D-13/02 c 27 N92-25397 \*

INT-PATENT-CLASS-B01D-17/06 c 25 N93-20570 \*

INT-PATENT-CLASS-B01D-29/04 c 51 N91-14703 \*

INT-PATENT-CLASS-B01D-29/42 c 51 N91-14703 \*

INT-PATENT-CLASS-B01D-9/00 c 76 N92-25398 \*

INT-PATENT-CLASS-B01D-9/02 c 76 N93-14707 \*

INT-PATENT-CLASS-B01F-3/02 c 35 N91-21496 \*

INT-PATENT-CLASS-B01J-19/28 c 24 N93-29609 \*

INT-PATENT-CLASS-B01J-29/10 c 25 N92-10073 \*

INT-PATENT-CLASS-B05B-1/02 c 34 N92-21724 \*

INT-PATENT-CLASS-B05B-1/14 c 34 N92-21724 \*

INT-PATENT-CLASS-B05C-17/02 c 37 N92-28754 \*

INT-PATENT-CLASS-B05C-3/152 c 24 N93-24597 \*

INT-PATENT-CLASS-B05D-1/02 c 24 N93-14706 \*

INT-PATENT-CLASS-B05D-1/24 c 24 N92-10070 \*

INT-PATENT-CLASS-B05D-3/12 c 24 N93-14706 \*

INT-PATENT-CLASS-B05D-5/12 c 76 N92-10681 \*

INT-PATENT-CLASS-B22D-27/04 c 26 N91-14462 \*

INT-PATENT-CLASS-B23B-31/10 c 37 N93-14710 \*

INT-PATENT-CLASS-B23B-31/10 c 37 N93-18286 \*

INT-PATENT-CLASS-B23B-39/00 c 35 N92-21723 \*

INT-PATENT-CLASS-B23D-21/06 c 37 N91-31655 \*

INT-PATENT-CLASS-B23H-9/00 c 27 N91-25296 \*

INT-PATENT-CLASS-B23H-9/00 c 35 N92-22038 \*

INT-PATENT-CLASS-B23K-1/00 c 26 N92-29094 \*

INT-PATENT-CLASS-B23K-20/08 c 31 N91-31476 \*

INT-PATENT-CLASS-B23K-26/00 c 31 N91-14508 \*

INT-PATENT-CLASS-B23K-26/00 c 37 N91-32508 \*

INT-PATENT-CLASS-B23K-9/00 c 75 N91-25875 \*

INT-PATENT-CLASS-B23K-9/16 c 31 N90-23586 \*

INT-PATENT-CLASS-B23K-9/24 c 31 N90-26168 \*

INT-PATENT-CLASS-B23K-9/24 c 33 N92-33030 \*

INT-PATENT-CLASS-B23P-19/00 c 37 N93-14871 \*

INT-PATENT-CLASS-B23Q-3/155 c 37 N91-31656 \*

INT-PATENT-CLASS-B23Q-3/155 c 37 N93-29505 \*

INT-PATENT-CLASS-B24G-1/00 c 18 N91-21222 \*

INT-PATENT-CLASS-B25B-11/00 c 37 N91-21545 \*

INT-PATENT-CLASS-B25G-3/00 c 37 N91-14610 \*

INT-PATENT-CLASS-B25G-3/00 c 18 N91-21221 \*

INT-PATENT-CLASS-B25G-3/00 c 37 N92-29140 \*

INT-PATENT-CLASS-B25G-3/00 c 37 N93-20120 \*

INT-PATENT-CLASS-B25G-3/18 c 37 N91-14614 \*

INT-PATENT-CLASS-B25G-3/18 c 31 N92-16161 \*

INT-PATENT-CLASS-B25J-15/04 c 37 N93-29505 \*

INT-PATENT-CLASS-B25J-15/08 c 37 N91-14615 \*

INT-PATENT-CLASS-B25J-15/08 c 37 N93-17625 \*

INT-PATENT-CLASS-B25J-15/08 c 37 N93-18288 \*

INT-PATENT-CLASS-B25J-17/00 c 37 N92-33634 \*

INT-PATENT-CLASS-B25J-3/00 c 37 N93-23078 \*

INT-PATENT-CLASS-B26D-27/00 c 37 N91-31655 \*

INT-PATENT-CLASS-B26D-3/16 c 37 N91-31655 \*

INT-PATENT-CLASS-B29B-15/12 c 24 N93-24597 \*

INT-PATENT-CLASS-B29B-33/02 c 27 N90-23566 \*

INT-PATENT-CLASS-B29B-9/10 c 34 N90-23700 \*

INT-PATENT-CLASS-B29C-45/16 c 27 N93-25995 \*

INT-PATENT-CLASS-B29C-65/48 c 31 N92-33020 \*

INT-PATENT-CLASS-B29C-67/14 c 24 N93-24597 \*

INT-PATENT-CLASS-B32B-15/01 c 27 N92-29090 \*

INT-PATENT-CLASS-B32B-15/08 c 76 N90-24168 \*

INT-PATENT-CLASS-B32B-15/20 c 27 N92-29090 \*

INT-PATENT-CLASS-B32B-31/00 c 33 N93-18285 \*

INT-PATENT-CLASS-B32B-5/02 c 27 N92-29090 \*

INT-PATENT-CLASS-B32B-5/14 c 24 N92-16026 \*

INT-PATENT-CLASS-B32B-7/02 c 76 N90-24168 \*

INT-PATENT-CLASS-B32B-7/08 c 24 N91-31236 \*

INT-PATENT-CLASS-B43L-13/24 c 35 N92-10186 \*

INT-PATENT-CLASS-B44C-1/22 c 25 N92-25399 \*

INT-PATENT-CLASS-B60P-7/15 c 37 N91-27561 \*

INT-PATENT-CLASS-B60T-13/04 c 37 N92-21728 \*

INT-PATENT-CLASS-B61D-15/08 c 37 N91-32514 \*

INT-PATENT-CLASS-B62D-51/04 c 52 N93-14708 \*

INT-PATENT-CLASS-B63C-9/01 c 03 N91-31113 \*

INT-PATENT-CLASS-B64B-21/00 c 34 N91-14562 \*

INT-PATENT-CLASS-B64C-1/22 c 03 N91-31113 \*

INT-PATENT-CLASS-B64C-17/00 c 02 N91-27139 \*

INT-PATENT-CLASS-B64C-19/00 c 05 N91-31140 \*

INT-PATENT-CLASS-B64C-21/10 c 05 N92-21587 \*

INT-PATENT-CLASS-B64C-27/00 c 08 N93-25998 \*

INT-PATENT-CLASS-B64C-3/14 c 02 N92-28729 \*

INT-PATENT-CLASS-B64C-7/00 c 05 N91-27156 \*

INT-PATENT-CLASS-B64C-9/02 c 05 N90-23390 \*

INT-PATENT-CLASS-B64C-9/08 c 05 N90-23390 \*

INT-PATENT-CLASS-B64D-1/00 c 35 N90-22769 \*

INT-PATENT-CLASS-B64D-1/02 c 05 N91-27156 \*

INT-PATENT-CLASS-B64D-1/08 c 03 N91-31113 \*

INT-PATENT-CLASS-B64D-1/12 c 37 N91-32498 \*

INT-PATENT-CLASS-B64D-25/08 c 03 N91-15142 \*

INT-PATENT-CLASS-B64D-27/02 c 16 N93-20115 \*

INT-PATENT-CLASS-B64D-33/00 c 05 N91-14345 \*

INT-PATENT-CLASS-B64D-33/04 c 37 N90-23751 \*

INT-PATENT-CLASS-B64D-33/04 c 37 N91-27560 \*

INT-PATENT-CLASS-B64D-7/00 c 27 N93-29088 \*

INT-PATENT-CLASS-B64D-9/00 c 03 N91-31113 \*

INT-PATENT-CLASS-B64G-1/14 c 16 N90-22584 \*

INT-PATENT-CLASS-B64G-1/14 c 16 N92-16007 \*

INT-PATENT-CLASS-B64G-1/28 c 34 N91-25380 \*

INT-PATENT-CLASS-B64G-1/40 c 18 N92-33013 \*

INT-PATENT-CLASS-B64G-1/42 c 18 N91-27201 \*

INT-PATENT-CLASS-B64G-1/46 c 54 N91-31803 \*

INT-PATENT-CLASS-B64G-1/60 c 54 N93-14713 \*

INT-PATENT-CLASS-B64G-1/62 c 18 N92-21999 \*

INT-PATENT-CLASS-B64G-1/62 c 37 N92-28727 \*

INT-PATENT-CLASS-B64G-1/64 c 18 N91-14374 \*

INT-PATENT-CLASS-B64G-1/64 c 18 N92-28750 \*

INT-PATENT-CLASS-B64G-1/66 c 35 N92-33010 \*

INT-PATENT-CLASS-B64G-7/00 c 14 N93-24598 \*

INT-PATENT-CLASS-B65D-39/12 c 37 N93-14702 \*

INT-PATENT-CLASS-B65D-83/10 c 31 N92-33612 \*

INT-PATENT-CLASS-B66C-1/62 c 37 N92-29138 \*

INT-PATENT-CLASS-B66F-11/04 c 54 N92-16559 \*

INT-PATENT-CLASS-C01B-31/04 c 27 N92-10090 \*

INT-PATENT-CLASS-C04B-35/10 c 27 N92-16122 \*

INT-PATENT-CLASS-C04B-35/56 c 27 N92-34160 \*

INT-PATENT-CLASS-C07C-15/16 c 23 N91-17141 \*

INT-PATENT-CLASS-C07C-15/16 c 23 N91-25185 \*

INT-PATENT-CLASS-C07C-323/09 c 25 N93-29506 \*

INT-PATENT-CLASS-C07D-207/44 c 23 N91-14419 \*

INT-PATENT-CLASS-C07D-271/10 c 23 N92-29141 \*

INT-PATENT-CLASS-C07S-9/40 c 23 N90-23475 \*

INT-PATENT-CLASS-C08F-222/40 c 27 N93-19327 \*

INT-PATENT-CLASS-C08F-222/40 c 27 N93-19388 \*

INT-PATENT-CLASS-C08F-222/40 c 27 N93-22033 \*

INT-PATENT-CLASS-C08F-283/00 c 27 N91-31307 \*

INT-PATENT-CLASS-C08F-283/04 c 27 N91-31307 \*

INT-PATENT-CLASS-C08F-283/04 c 27 N92-29157 \*

INT-PATENT-CLASS-C08G-14/00 c 23 N91-27220 \*

INT-PATENT-CLASS-C08G-16/00 c 27 N91-31307 \*

INT-PATENT-CLASS-C08G-69/26 c 27 N91-15403 \*

INT-PATENT-CLASS-C08G-73/08 c 23 N92-29141 \*

INT-PATENT-CLASS-C08G-73/10 c 23 N91-14418 \*

INT-PATENT-CLASS-C08G-73/10 c 27 N91-15402 \*

INT-PATENT-CLASS-C08G-73/10 c 27 N91-31307 \*

INT-PATENT-CLASS-C08G-8/02 c 23 N91-27220 \*

INT-PATENT-CLASS-C08J-5/08 c 27 N92-21711 \*

INT-PATENT-CLASS-C08J-5/08 c 27 N93-13416 \*

INT-PATENT-CLASS-C08K-3/04 c 24 N92-21711 \*

INT-PATENT-CLASS-C08L-49/08 c 24 N93-13416 \*

INT-PATENT-CLASS-C08L-79/08 c 27 N92-21711 \*

INT-PATENT-CLASS-C08L-79/08 c 27 N92-31792 \*

INT-PATENT-CLASS-C08L-79/08 c 27 N93-11059 \*

INT-PATENT-CLASS-C09K-13/00 c 25 N92-25399 \*

INT-PATENT-CLASS-C12M-03/06 c 51 N91-21701 \*

INT-PATENT-CLASS-C12M-1/10 c 35 N92-31790 \*

INT-PATENT-CLASS-C12M-1/12 c 35 N92-31790 \*

INT-PATENT-CLASS-C12M-3/00 c 35 N92-31790 \*

INT-PATENT-CLASS-C12M-3/02 c 51 N91-30667 \*

INT-PATENT-CLASS-C12M-3/02 c 35 N92-31790 \*

INT-PATENT-CLASS-C12N-5/02 c 51 N93-10109 \*

INT-PATENT-CLASS-C12N-5/02 c 51 N93-10110 \*

INT-PATENT-CLASS-C13K-1/02 c 25 N93-22036 \*

INT-PATENT-CLASS-C21D-1/09 c 09 N90-23415 \*

INT-PATENT-CLASS-C23F-1/00 c 76 N92-10681 \*

INT-PATENT-CLASS-C23F-1/00 c 25 N92-25399 \*

INT-PATENT-CLASS-C25B-1/02 c 25 N93-29617 \*

INT-PATENT-CLASS-C25B-1/04 c 25 N92-28756 \*

INT-PATENT-CLASS-C25B-1/12 c 25 N92-28756 \*

INT-PATENT-CLASS-C25B-1/22 c 25 N93-29617 \*

INT-PATENT-CLASS-C25C-1/06 c 25 N93-29617 \*

INT-PATENT-CLASS-C25D-13/00 c 27 N92-25397 \*

INT-PATENT-CLASS-C30B-7/02 c 76 N90-23242 \*

INT-PATENT-CLASS-D03C-13/00 c 31 N93-29611 \*

INT-PATENT-CLASS-D03D-13/00 c 31 N93-29611 \*

INT-PATENT-CLASS-D03D-41/00 c 31 N93-29611 \*

INT-PATENT-CLASS-D03D-47/14 c 31 N93-18857 \*

INT-PATENT-CLASS-E03D-9/04 c 54 N91-14723 \*

INT-PATENT-CLASS-E04H-12/18 c 18 N91-27199 \*

INT-PATENT-CLASS-E05C-5/02 c 37 N92-21500 \*

INT-PATENT-CLASS-E05C-5/04 c 37 N91-27561 \*

INT-PATENT-CLASS-F01B-19/00 c 35 N91-21494 \*

INT-PATENT-CLASS-F01D-11/08 c 37 N91-14608 \*

INT-PATENT-CLASS-F02K-3/04 c 07 N93-22034 \*

INT-PATENT-CLASS-F02K-3/08 c 07 N93-22034 \*

INT-PATENT-CLASS-F02K-9/58 c 20 N92-15122 \*

INT-PATENT-CLASS-F02K-9/96 c 37 N93-14702 \*

INT-PATENT-CLASS-F02R-9/52 c 20 N92-10054 \*

INT-PATENT-CLASS-F03D-9/00 c 37 N90-23742 \*

INT-PATENT-CLASS-F03G-6/00 c 44 N92-29143 \*

INT-PATENT-CLASS-F16B-1/00 c 37 N91-14610 \*

INT-PATENT-CLASS-F16B-1/04 c 37 N93-20117 \*

INT-PATENT-CLASS-F16B-19/00 c 37 N92-21726 \*

INT-PATENT-CLASS-F16B-21/00 c 37 N93-22384 \*

INT-PATENT-CLASS-F16B-31/02 c 39 N92-34174 \*

INT-PATENT-CLASS-F16B-35/02 c 37 N92-21726 \*

INT-PATENT-CLASS-F16B-37/08 c 37 N92-29150 \*

INT-PATENT-CLASS-F16B-37/08 c 37 N93-13423 \*

INT-PATENT-CLASS-F16B-39/36 c 37 N93-13423 \*

INT-PATENT-CLASS-F16C-11/00 c 37 N91-15544 \*

INT-PATENT-CLASS-F16C-11/00 c 37 N93-23076 \*

INT-PATENT-CLASS-F16C-19/52 c 37 N93-26001 \*

INT-PATENT-CLASS-F16C-32/04 c 37 N92-29099 \*

INT-PATENT-CLASS-F16C-43/04 c 37 N93-26001 \*

INT-PATENT-CLASS-F16C-9/00 c 37 N92-29120 \*

INT-PATENT-CLASS-F16D-3/02 c 37 N91-17387 \*

INT-PATENT-CLASS-F16D-3/50 c 37 N91-17388 \*

INT-PATENT-CLASS-F16D-63/00 c 37 N93-23075 \*

INT-PATENT-CLASS-F16F-1/14 c 39 N93-24596 \*

INT-PATENT-CLASS-F16H-21/16 c 37 N92-33031 \*

INT-PATENT-CLASS-F16H-49/00 c 37 N92-33031 \*

INT-PATENT-CLASS-F16J-15/32 c 37 N92-16318 \*

INT-PATENT-CLASS-F16J-15/46 c 37 N90-23751 \*

INT-PATENT-CLASS-F16J-15/46 c 37 N91-27560 \*

## INT-PATENT-CLASS-F16J-15/46

## REPORT NUMBER INDEX

INT-PATENT-CLASS-F16J-15/46	c 37	N92-22043 *	INT-PATENT-CLASS-G01N-3/00	c 39	N93-26102 *	INT-PATENT-CLASS-H01B-1/00	c 27	N92-16121 *
INT-PATENT-CLASS-F16K-1/22	c 37	N91-14609 *	INT-PATENT-CLASS-G01N-3/08	c 14	N91-27175 *	INT-PATENT-CLASS-H01B-1/06	c 24	N91-15320 *
INT-PATENT-CLASS-F16K-3/316	c 34	N91-14563 *	INT-PATENT-CLASS-G01N-3/20	c 37	N91-21540 *	INT-PATENT-CLASS-H01C-31/58	c 44	N92-22037 *
INT-PATENT-CLASS-F16K-3/32	c 34	N91-14563 *	INT-PATENT-CLASS-G01N-3/32	c 35	N90-23712 *	INT-PATENT-CLASS-H01F-27/30	c 33	N91-14539 *
INT-PATENT-CLASS-F16K-3/32	c 34	N91-27504 *	INT-PATENT-CLASS-G01N-3/32	c 39	N93-20118 *	INT-PATENT-CLASS-H01J-25/34	c 33	N90-22724 *
INT-PATENT-CLASS-F16K-31/06	c 34	N91-27504 *	INT-PATENT-CLASS-G01N-31/12	c 09	N91-21157 *	INT-PATENT-CLASS-H01J-31/14	c 74	N92-33028 *
INT-PATENT-CLASS-F16K-37/00	c 34	N91-14563 *	INT-PATENT-CLASS-G01N-33/569	c 51	N93-25994 *	INT-PATENT-CLASS-H01J-31/50	c 63	N93-24599 *
INT-PATENT-CLASS-F16K-37/00	c 35	N93-29503 *	INT-PATENT-CLASS-G01N-35/08	c 35	N93-17626 *	INT-PATENT-CLASS-H01J-37/00	c 72	N91-27936 *
INT-PATENT-CLASS-F16L-15/00	c 37	N92-10197 *	INT-PATENT-CLASS-G01P-13/04	c 09	N93-24601 *	INT-PATENT-CLASS-H01J-40/14	c 74	N92-33017 *
INT-PATENT-CLASS-F16L-15/00	c 37	N91-14613 *	INT-PATENT-CLASS-G01P-3/36	c 36	N90-25340 *	INT-PATENT-CLASS-H01J-40/14	c 71	N93-24602 *
INT-PATENT-CLASS-F16L-55/04	c 31	N91-25305 *	INT-PATENT-CLASS-G01P-3/36	c 02	N92-34172 *	INT-PATENT-CLASS-H01L-21/306	c 25	N91-31258 *
INT-PATENT-CLASS-F16M-13/00	c 37	N91-14617 *	INT-PATENT-CLASS-G01P-1/04	c 33	N91-14552 *	INT-PATENT-CLASS-H01L-21/324	c 76	N91-28014 *
INT-PATENT-CLASS-F16M-13/00	c 37	N91-21541 *	INT-PATENT-CLASS-G01P-23/16	c 32	N92-29124 *	INT-PATENT-CLASS-H01L-23/02	c 32	N93-29087 *
INT-PATENT-CLASS-F16M-13/00	c 37	N91-21543 *	INT-PATENT-CLASS-G01P-27/00	c 27	N90-23544 *	INT-PATENT-CLASS-H01L-27/02	c 74	N91-25841 *
INT-PATENT-CLASS-F16M-13/00	c 37	N92-34173 *	INT-PATENT-CLASS-G01P-27/02	c 39	N92-29101 *	INT-PATENT-CLASS-H01L-27/12	c 76	N92-22041 *
INT-PATENT-CLASS-F17C-11/00	c 31	N91-15203 *	INT-PATENT-CLASS-G01R-27/26	c 33	N93-26102 *	INT-PATENT-CLASS-H01L-27/14	c 35	N93-19387 *
INT-PATENT-CLASS-F23J-1/00	c 31	N91-15423 *	INT-PATENT-CLASS-G01R-27/72	c 39	N92-29101 *	INT-PATENT-CLASS-H01L-27/14	c 33	N91-21434 *
INT-PATENT-CLASS-F25B-1/00	c 31	N93-13422 *	INT-PATENT-CLASS-G01R-31/02	c 47	N93-10108 *	INT-PATENT-CLASS-H01L-27/14	c 35	N93-19387 *
INT-PATENT-CLASS-F25B-19/02	c 35	N92-29156 *	INT-PATENT-CLASS-G01R-33/12	c 27	N90-23544 *	INT-PATENT-CLASS-H01L-29/161	c 74	N91-25841 *
INT-PATENT-CLASS-F27B-5/14	c 14	N91-27175 *	INT-PATENT-CLASS-G01R-33/12	c 39	N92-28757 *	INT-PATENT-CLASS-H01L-29/161	c 35	N93-19387 *
INT-PATENT-CLASS-F27D-11/10	c 14	N91-27175 *	INT-PATENT-CLASS-G01R-33/12	c 39	N92-29101 *	INT-PATENT-CLASS-H01L-29/205	c 76	N91-11056 *
INT-PATENT-CLASS-F28D-15/02	c 27	N90-23541 *	INT-PATENT-CLASS-G01R-35/00	c 38	N92-29154 *	INT-PATENT-CLASS-H01L-29/48	c 33	N93-16197 *
INT-PATENT-CLASS-F28D-15/02	c 34	N91-21473 *	INT-PATENT-CLASS-G01S-13/86	c 43	N91-21621 *	INT-PATENT-CLASS-H01L-31/10	c 76	N91-11056 *
INT-PATENT-CLASS-F28D-15/02	c 34	N92-29125 *	INT-PATENT-CLASS-G01S-13/89	c 43	N91-21621 *	INT-PATENT-CLASS-H01L-31/18	c 44	N91-27614 *
INT-PATENT-CLASS-F28D-17/00	c 34	N92-28752 *	INT-PATENT-CLASS-G01S-13/89	c 43	N91-32546 *	INT-PATENT-CLASS-H01L-31/42	c 44	N91-27614 *
INT-PATENT-CLASS-F28F-7/00	c 31	N92-27385 *	INT-PATENT-CLASS-G01S-13/90	c 43	N91-14642 *	INT-PATENT-CLASS-H01L-37/00	c 44	N92-16457 *
INT-PATENT-CLASS-F41B-8/00	c 14	N91-15081 *	INT-PATENT-CLASS-G01S-3/02	c 32	N93-29087 *	INT-PATENT-CLASS-H01L-39/22	c 76	N92-22041 *
INT-PATENT-CLASS-F41G-11/00	c 35	N91-14591 *	INT-PATENT-CLASS-G01S-3/80	c 35	N93-20569 *	INT-PATENT-CLASS-H01L-41/08	c 71	N91-14808 *
INT-PATENT-CLASS-F41H-5/04	c 18	N92-15114 *	INT-PATENT-CLASS-G01S-5/02	c 04	N91-14321 *	INT-PATENT-CLASS-H01L-41/08	c 76	N91-14872 *
INT-PATENT-CLASS-F42B-3/11	c 28	N93-18274 *	INT-PATENT-CLASS-G01W-1/00	c 19	N91-14412 *	INT-PATENT-CLASS-H01L-43/00	c 33	N91-14537 *
INT-PATENT-CLASS-F8-15/00	c 31	N91-15424 *	INT-PATENT-CLASS-G01W-1/00	c 47	N93-10108 *	INT-PATENT-CLASS-H01M-10/40	c 33	N92-28753 *
INT-PATENT-CLASS-G01B-11/00	c 74	N91-32922 *	INT-PATENT-CLASS-G02B-1/01	c 74	N92-16808 *	INT-PATENT-CLASS-H01M-4/04	c 33	N91-27478 *
INT-PATENT-CLASS-G01B-11/02	c 74	N93-11058 *	INT-PATENT-CLASS-G02B-1/12	c 74	N92-16808 *	INT-PATENT-CLASS-H01M-4/58	c 33	N91-27478 *
INT-PATENT-CLASS-G01B-11/26	c 35	N91-15512 *	INT-PATENT-CLASS-G02B-21/26	c 37	N91-21545 *	INT-PATENT-CLASS-H01M-6/20	c 33	N91-14538 *
INT-PATENT-CLASS-G01B-15/06	c 38	N90-23756 *	INT-PATENT-CLASS-G02B-21/32	c 37	N91-21545 *	INT-PATENT-CLASS-H01M-8/14	c 44	N93-28974 *
INT-PATENT-CLASS-G01B-33/12	c 26	N93-14705 *	INT-PATENT-CLASS-G02B-23/00	c 35	N91-14591 *	INT-PATENT-CLASS-H01N-1/26	c 34	N92-16243 *
INT-PATENT-CLASS-G01B-5/02	c 35	N92-22039 *	INT-PATENT-CLASS-G02B-23/00	c 74	N92-16810 *	INT-PATENT-CLASS-H01N-17/00	c 34	N92-16243 *
INT-PATENT-CLASS-G01B-5/20	c 35	N93-26103 *	INT-PATENT-CLASS-G02B-26/02	c 37	N92-29151 *	INT-PATENT-CLASS-H01P-1/18	c 74	N92-28571 *
INT-PATENT-CLASS-G01B-7/24	c 26	N93-14705 *	INT-PATENT-CLASS-G02B-27/28	c 36	N92-16290 *	INT-PATENT-CLASS-H01Q-1/380	c 32	N93-29507 *
INT-PATENT-CLASS-G01B-7/28	c 35	N93-26103 *	INT-PATENT-CLASS-G02B-27/42	c 74	N92-33022 *	INT-PATENT-CLASS-H01Q-19/300	c 32	N93-29507 *
INT-PATENT-CLASS-G01B-9/02	c 74	N91-21871 *	INT-PATENT-CLASS-G02B-27/64	c 35	N91-14590 *	INT-PATENT-CLASS-H01R-13/54	c 37	N93-14712 *
INT-PATENT-CLASS-G01B-9/02	c 74	N92-22034 *	INT-PATENT-CLASS-G02B-27/64	c 74	N92-16811 *	INT-PATENT-CLASS-H01S-3/08	c 36	N93-18277 *
INT-PATENT-CLASS-G01C-1/00	c 35	N91-15512 *	INT-PATENT-CLASS-G02B-3/00	c 74	N92-16810 *	INT-PATENT-CLASS-H01S-3/098	c 36	N91-17360 *
INT-PATENT-CLASS-G01C-21/00	c 47	N92-29148 *	INT-PATENT-CLASS-G02B-5/122	c 18	N91-27200 *	INT-PATENT-CLASS-H01S-3/10	c 36	N92-31788 *
INT-PATENT-CLASS-G01C-3/08	c 35	N91-15512 *	INT-PATENT-CLASS-G02B-5/20	c 74	N93-13419 *	INT-PATENT-CLASS-H01S-3/16	c 36	N91-15528 *
INT-PATENT-CLASS-G01D-5/34	c 74	N92-29133 *	INT-PATENT-CLASS-G02B-5/23	c 74	N92-16808 *	INT-PATENT-CLASS-H01S-3/19	c 36	N93-13418 *
INT-PATENT-CLASS-G01F-1/00	c 34	N91-31596 *	INT-PATENT-CLASS-G02B-6/02	c 74	N91-21871 *	INT-PATENT-CLASS-H01S-3/19	c 36	N93-14703 *
INT-PATENT-CLASS-G01F-17/00	c 35	N91-15511 *	INT-PATENT-CLASS-G02B-6/16	c 74	N91-21871 *	INT-PATENT-CLASS-H01S-3/22	c 25	N91-21270 *
INT-PATENT-CLASS-G01F-17/00	c 35	N91-21493 *	INT-PATENT-CLASS-G02B-7/02	c 74	N92-16811 *	INT-PATENT-CLASS-H02K-1/14	c 37	N92-29099 *
INT-PATENT-CLASS-G01F-17/00	c 35	N91-21495 *	INT-PATENT-CLASS-G02B-7/18	c 35	N91-14590 *	INT-PATENT-CLASS-H02K-41/00	c 37	N91-21539 *
INT-PATENT-CLASS-G01F-9/00	c 35	N92-21710 *	INT-PATENT-CLASS-G02F-1/01	c 74	N92-29117 *	INT-PATENT-CLASS-H02K-44/10	c 27	N91-14489 *
INT-PATENT-CLASS-G01J-1/20	c 74	N92-29122 *	INT-PATENT-CLASS-G03B-1/16	c 74	N92-33022 *	INT-PATENT-CLASS-H02K-7/09	c 70	N91-21824 *
INT-PATENT-CLASS-G01J-3/00	c 20	N93-18856 *	INT-PATENT-CLASS-G03H-1/02	c 35	N91-13694 *	INT-PATENT-CLASS-H02L-9/04	c 60	N90-25583 *
INT-PATENT-CLASS-G01J-3/12	c 74	N93-29086 *	INT-PATENT-CLASS-G05B-19/24	c 63	N91-31885 *	INT-PATENT-CLASS-H02M-3/07	c 33	N93-18278 *
INT-PATENT-CLASS-G01K-15/00	c 71	N91-14807 *	INT-PATENT-CLASS-G05B-19/42	c 33	N91-31528 *	INT-PATENT-CLASS-H02N-1/08	c 33	N92-22042 *
INT-PATENT-CLASS-G01K-17/06	c 35	N91-31608 *	INT-PATENT-CLASS-G05B-19/42	c 63	N92-33019 *	INT-PATENT-CLASS-H03B-5/12	c 33	N90-23635 *
INT-PATENT-CLASS-G01K-17/16	c 35	N91-31608 *	INT-PATENT-CLASS-G05D-15/01	c 39	N93-13420 *	INT-PATENT-CLASS-H03D-1/00	c 33	N91-14550 *
INT-PATENT-CLASS-G01K-7/00	c 35	N92-33614 *	INT-PATENT-CLASS-G05D-19/01	c 39	N93-13420 *	INT-PATENT-CLASS-H03D-1/04	c 33	N91-26438 *
INT-PATENT-CLASS-G01K-7/16	c 35	N92-33614 *	INT-PATENT-CLASS-G05F-1/12	c 33	N91-27479 *	INT-PATENT-CLASS-H03D-1/06	c 32	N92-21712 *
INT-PATENT-CLASS-G01K-7/30	c 33	N92-33021 *	INT-PATENT-CLASS-G05G-9/00	c 33	N92-29153 *	INT-PATENT-CLASS-H03M-13/00	c 60	N91-31810 *
INT-PATENT-CLASS-G01L-19/04	c 35	N92-21586 *	INT-PATENT-CLASS-G06F-1/02	c 33	N90-23636 *	INT-PATENT-CLASS-H04B-1/10	c 32	N91-25316 *
INT-PATENT-CLASS-G01L-3/00	c 35	N91-17350 *	INT-PATENT-CLASS-G06F-11/10	c 33	N92-33011 *	INT-PATENT-CLASS-H04B-10/00	c 74	N91-27957 *
INT-PATENT-CLASS-G01L-5/16	c 35	N92-10185 *	INT-PATENT-CLASS-G06F-12/00	c 62	N91-25693 *	INT-PATENT-CLASS-H04B-10/00	c 36	N93-18287 *
INT-PATENT-CLASS-G01L-7/08	c 35	N92-29097 *	INT-PATENT-CLASS-G06F-15/00	c 37	N92-22036 *	INT-PATENT-CLASS-H04J-3/02	c 62	N91-14772 *
INT-PATENT-CLASS-G01L-9/06	c 35	N92-29097 *	INT-PATENT-CLASS-G06F-15/16	c 62	N91-14769 *	INT-PATENT-CLASS-H04K-3/00	c 33	N91-31530 *
INT-PATENT-CLASS-G01M-19/00	c 14	N91-21176 *	INT-PATENT-CLASS-G06F-15/16	c 60	N93-29608 *	INT-PATENT-CLASS-H04L-27/18	c 32	N91-14523 *
INT-PATENT-CLASS-G01M-19/00	c 74	N93-22037 *	INT-PATENT-CLASS-G06F-15/18	c 61	N91-14741 *	INT-PATENT-CLASS-H04L-27/18	c 32	N91-25318 *
INT-PATENT-CLASS-G01M-3/28	c 14	N91-21175 *	INT-PATENT-CLASS-G06F-15/18	c 60	N93-20116 *	INT-PATENT-CLASS-H04L-27/22	c 32	N91-27439 *
INT-PATENT-CLASS-G01M-7/02	c 14	N91-21176 *	INT-PATENT-CLASS-G06F-15/18	c 60	N93-29504 *	INT-PATENT-CLASS-H04N-13/00	c 74	N92-16809 *
INT-PATENT-CLASS-G01M-9/00	c 35	N90-23707 *	INT-PATENT-CLASS-G06F-15/18	c 53	N93-29610 *	INT-PATENT-CLASS-H04N-13/00	c 74	N93-18276 *
INT-PATENT-CLASS-G01M-9/00	c 09	N91-14357 *	INT-PATENT-CLASS-G06F-15/20	c 17	N91-14371 *	INT-PATENT-CLASS-H04N-5/262	c 60	N92-16563 *
INT-PATENT-CLASS-G01M-9/00	c 35	N92-10185 *	INT-PATENT-CLASS-G06F-15/20	c 32	N91-25317 *	INT-PATENT-CLASS-H04N-5/74	c 74	N93-13711 *
INT-PATENT-CLASS-G01M-9/00	c 02	N92-21588 *	INT-PATENT-CLASS-G06F-15/20	c 62	N92-15620 *	INT-PATENT-CLASS-H04N-7/00	c 32	N93-18284 *
INT-PATENT-CLASS-G01M-9/00	c 02	N93-18275 *	INT-PATENT-CLASS-G06F-15/40	c 60	N93-22032 *	INT-PATENT-CLASS-H04N-7/133	c 74	N93-18276 *
INT-PATENT-CLASS-G01M-9/00	c 09	N93-25996 *	INT-PATENT-CLASS-G06F-15/46	c 63	N91-31885 *	INT-PATENT-CLASS-H04N-7/13	c 32	N92-10128 *
INT-PATENT-CLASS-G01M-9/00	c 34	N93-26000 *	INT-PATENT-CLASS-G06F-15/50	c 04	N91-31120 *	INT-PATENT-CLASS-H04N-7/18	c 35	N90-22770 *
INT-PATENT-CLASS-G01M-9/06	c 74	N93-22037 *	INT-PATENT-CLASS-G06F-9/00	c 60	N93-29608 *	INT-PATENT-CLASS-H04N-7/18	c 32	N93-18284 *
INT-PATENT-CLASS-G01N-1/00	c 34	N92-16241 *	INT-PATENT-CLASS-G06F-9/46	c 62	N91-14769 *	INT-PATENT-CLASS-H04N-9/31	c 74	N93-13711 *
INT-PATENT-CLASS-G01N-19/02	c 37	N93-29618 *	INT-PATENT-CLASS-G06G-7/12	c 62	N91-32852 *	INT-PATENT-CLASS-H04R-15/00	c 33	N92-15331 *
INT-PATENT-CLASS-G01N-19/08	c 39	N93-29612 *	INT-PATENT-CLASS-G06G-7/12	c 32	N92-22033 *	INT-PATENT-CLASS-H04R-25/00	c 35	N91-27522 *
INT-PATENT-CLASS-G01N-21/00	c 20	N93-18856 *	INT-PATENT-CLASS-G06G-7/48	c 62	N92-15620 *	INT-PATENT-CLASS-H05B-33/00	c 74	N91-14835 *
INT-PATENT-CLASS-G01N-21/27	c 74	N93-13419 *	INT-PATENT-CLASS-G06K-9/00	c 54	N92-29129 *	INT-PATENT-CLASS-H05B-33/14	c 76	N91-21911 *
INT-PATENT-CLASS-G01N-21/64	c 76	N90-24150 *	INT-PATENT-CLASS-G06K-9/00	c 61	N93-18282 *	INT-PATENT-CLASS-H05B-33/14	c 74	N91-31950 *
INT-PATENT-CLASS-G01N-21/84	c 76	N90-24150 *	INT-PATENT-CLASS-G06K-9/00	c 61	N93-18858 *	INT-PATENT-CLASS-H05H-3/04	c 29	N93-24600 *
INT-PATENT-CLASS-G01N-23/20	c 74	N91-14835 *	INT-PATENT-CLASS-G08B-13/26	c 63	N93-14701 *	INT-PATENT-CLASS-H05K-5/00	c 32	N93-29087 *
INT-PATENT-CLASS-G01N-25/50	c 25	N91-32196 *	INT-PATENT-CLASS-G08B-21/00	c 37	N91-14607 *	INT-PATENT-CLASS-H05K-7/20	c 24	N93-29614 *
INT-PATENT-CLASS-G01N-25/72	c 09	N93-11057 *	INT-PATENT-CLASS-G08C-19/10	c 63	N93-14701 *	INT-PATENT-CLASS-H07M-10/39	c 33	N91-14536 *
INT-PATENT-CLASS-G01N-27/26	c 25	N92-28728 *	INT-PATENT-CLASS-G11B-17/22	c 60	N92-29132 *	INT-PATENT-CLASS-H07M-4/60	c 33	N91-14536 *
INT-PATENT-CLASS-G01N-27/72	c 27	N90-23544 *	INT-PATENT-CLASS-G11B-3/74	c 60	N92-29132 *			
INT-PATENT-CLASS-G01N-27/72	c 70	N92-29130 *	INT-PATENT-CLASS-G11B-5/09	c 60	N92-29132 *			
INT-PATENT-CLASS-G01N-27/72	c 35	N93-26103 *	INT-PATENT-CLASS-G11C-11/15	c 60	N93-14704 *			
INT-PATENT-CLASS-G01N-27/80	c 39	N92-28757 *	INT-PATENT-CLASS-G11C-29/00	c 60	N91-31810 *			
INT-PATENT-CLASS-G01N-29/00	c 71	N93-13421 *	INT-PATENT-CLASS-G21K-1/06	c 74	N93-14711 *			
INT-PATENT-CLASS-G01N-29/22	c 71	N93-13421 *	INT-PATENT-CLASS-G21K-7/00	c 35	N92-29135 *			
INT-PATENT-CLASS-G01N-3/00	c 24	N91-14430 *	INT-PATENT-CLASS-G21K-7/00	c 89	N92-33012 *			
						INT-PATENT-CLASS-N66L-1/66	c 37	N93-13417 *
						NAS 1.15:76884	c 24	N85-25436 *
						NAS 1.71:ARC-11349-1	c 37	N86-20797 *
						NAS 1.71:ARC-11368-2	c 27	

## REPORT NUMBER INDEX

NAS 1.71:MSC-21327-1

NAS 1.71:ARC-11510-1	c 35	N86-32697 *	NAS 1.71:ARC-11510-1	c 35	N86-32697 *	NAS 1.71:LEW-15360-1	c 25	N92-34206 *	#
NAS 1.71:ARC-11641-1	c 24	N88-18628 *	NAS 1.71:ARC-11641-1	c 24	N88-18628 *	NAS 1.71:LEW-15430-1	c 71	N93-17051 *	#
NAS 1.71:ARC-11652-1	c 27	N87-23737 *	NAS 1.71:ARC-11652-1	c 27	N87-23737 *	NAS 1.71:LEW-15489-1	c 27	N93-17062 *	#
NAS 1.71:ARC-11917-1	c 35	N91-15520 *	NAS 1.71:ARC-11917-1	c 35	N91-15520 *	NAS 1.71:LEW-15515-1	c 35	N93-31298 *	#
NAS 1.71:ARC-11921-1	c 34	N92-11286 *	NAS 1.71:ARC-11921-1	c 34	N92-11286 *	NAS 1.71:LEW-15535-1	c 26	N93-31294 *	#
NAS 1.71:GSC-12558-1	c 36	N85-21639 *	NAS 1.71:GSC-12558-1	c 36	N85-21639 *	NAS 1.71:LEW-15570-1	c 37	N93-19027 *	#
NAS 1.71:GSC-12582-2	c 37	N85-20337 *	NAS 1.71:GSC-12582-2	c 37	N85-20337 *	NAS 1.71:LEW-15576-1	c 27	N93-31316 *	#
NAS 1.71:GSC-12682-1	c 35	N84-33765 *	NAS 1.71:GSC-12682-1	c 35	N84-33765 *	NAS 1.71:LEW-15614-1	c 72	N93-19026 *	#
NAS 1.71:GSC-12789-1	c 35	N85-20294 *	NAS 1.71:GSC-12789-1	c 35	N85-20294 *	NAS 1.71:LEW-15697-1	c 26	N93-29172 *	#
NAS 1.71:GSC-12799-1	c 31	N85-21404 *	NAS 1.71:GSC-12799-1	c 31	N85-21404 *	NAS 1.71:LEW-15700-1	c 82	N93-28130 *	#
NAS 1.71:GSC-12808-1	c 25	N85-21279 *	NAS 1.71:GSC-12808-1	c 25	N85-21279 *	NAS 1.71:MFS-25302-2	c 33	N84-33660 *	#
NAS 1.71:GSC-12944-1	c 52	N86-19885 *	NAS 1.71:GSC-12944-1	c 52	N86-19885 *	NAS 1.71:MFS-25637-1	c 44	N85-21769 *	#
NAS 1.71:GSC-13141-1	c 37	N92-23548 *	NAS 1.71:GSC-13141-1	c 37	N92-23548 *	NAS 1.71:MFS-25717-1	c 35	N84-33768 *	#
NAS 1.71:GSC-13265-1	c 76	N91-14066 *	NAS 1.71:GSC-13265-1	c 76	N91-14066 *	NAS 1.71:MFS-25721-1	c 25	N85-21280 *	#
NAS 1.71:GSC-13343-1	c 36	N91-28557 *	NAS 1.71:GSC-13343-1	c 36	N91-28557 *	NAS 1.71:MFS-25852-1	c 33	N84-33661 *	#
NAS 1.71:GSC-13356-1	c 37	N92-24243 *	NAS 1.71:GSC-13356-1	c 37	N92-24243 *	NAS 1.71:MFS-25861-1	c 33	N85-22877 *	#
NAS 1.71:GSC-13359-1	c 37	N92-23377 *	NAS 1.71:GSC-13359-1	c 37	N92-23377 *	NAS 1.71:MFS-25862-2	c 27	N85-20126 *	#
NAS 1.71:GSC-13360-1	c 37	N92-23377 *	NAS 1.71:GSC-13360-1	c 37	N92-23377 *	NAS 1.71:MFS-26002-1-CU	c 35	N86-26598 *	#
NAS 1.71:GSC-13370-1	c 37	N93-31317 *	NAS 1.71:GSC-13370-1	c 37	N93-31317 *	NAS 1.71:MFS-26049-1-NP	c 25	N89-28603 *	#
NAS 1.71:GSC-13408-1	c 18	N92-24244 *	NAS 1.71:GSC-13408-1	c 18	N92-24244 *	NAS 1.71:MFS-26061-1	c 76	N91-16815 *	#
NAS 1.71:GSC-13422-1	c 33	N92-23462 *	NAS 1.71:GSC-13422-1	c 33	N92-23462 *	NAS 1.71:MFS-26083-1-CU	c 26	N90-26940 *	#
NAS 1.71:GSC-13442-1	c 37	N92-23547 *	NAS 1.71:GSC-13442-1	c 37	N92-23547 *	NAS 1.71:MFS-26102-1-CU	c 47	N91-15661 *	#
NAS 1.71:GSC-13450-1	c 44	N92-23463 *	NAS 1.71:GSC-13450-1	c 44	N92-23463 *	NAS 1.71:MFS-26124-1-NPO	c 51	N93-29174 *	#
NAS 1.71:GSC-13451-1	c 39	N92-23549 *	NAS 1.71:GSC-13451-1	c 39	N92-23549 *	NAS 1.71:MFS-26216-1	c 37	N93-28951 *	#
NAS 1.71:KSC-11218-1	c 09	N85-19990 *	NAS 1.71:KSC-11218-1	c 09	N85-19990 *	NAS 1.71:MFS-28008-1	c 35	N85-20300 *	#
NAS 1.71:LAR-12588-1	c 34	N85-21568 *	NAS 1.71:LAR-12588-1	c 34	N85-21568 *	NAS 1.71:MFS-28013-1	c 89	N86-22459 *	#
NAS 1.71:LAR-12723-1	c 27	N85-20123 *	NAS 1.71:LAR-12723-1	c 27	N85-20123 *	NAS 1.71:MFS-28013-2	c 89	N91-14096 *	#
NAS 1.71:LAR-12775-2	c 27	N85-21349 *	NAS 1.71:LAR-12775-2	c 27	N85-21349 *	NAS 1.71:MFS-28013-3	c 89	N90-27594 *	#
NAS 1.71:LAR-12787-2	c 08	N85-19985 *	NAS 1.71:LAR-12787-2	c 08	N85-19985 *	NAS 1.71:MFS-28139-1	c 29	N87-18679 *	#
NAS 1.71:LAR-12858-2	c 27	N85-20124 *	NAS 1.71:LAR-12858-2	c 27	N85-20124 *	NAS 1.71:MFS-28153-1	c 31	N86-32589 *	#
NAS 1.71:LAR-12868-1	c 37	N85-21651 *	NAS 1.71:LAR-12868-1	c 37	N85-21651 *	NAS 1.71:MFS-28161-1	c 37	N87-18817 *	#
NAS 1.71:LAR-12884	c 18	N84-33450 *	NAS 1.71:LAR-12884	c 18	N84-33450 *	NAS 1.71:MFS-28183-1	c 74	N89-13253 *	#
NAS 1.71:LAR-12894-1	c 27	N85-20125 *	NAS 1.71:LAR-12894-1	c 27	N85-20125 *	NAS 1.71:MFS-28248-1	c 31	N88-24817 *	#
NAS 1.71:LAR-12979-1	c 05	N85-21147 *	NAS 1.71:LAR-12979-1	c 05	N85-21147 *	NAS 1.71:MFS-28273-1	c 37	N88-23974 *	#
NAS 1.71:LAR-13014-1	c 09	N85-21178 *	NAS 1.71:LAR-13014-1	c 09	N85-21178 *	NAS 1.71:MFS-28282-1	c 76	N88-29602 *	#
NAS 1.71:LAR-13065-1	c 35	N85-20295 *	NAS 1.71:LAR-13065-1	c 35	N85-20295 *	NAS 1.71:MFS-28287-1	c 35	N88-23959 *	#
NAS 1.71:LAR-13230-1	c 24	N84-34571 *	NAS 1.71:LAR-13230-1	c 24	N84-34571 *	NAS 1.71:MFS-28295-1	c 74	N91-13999 *	#
NAS 1.71:LAR-13233-1	c 05	N84-33400 *	NAS 1.71:LAR-13233-1	c 05	N84-33400 *	NAS 1.71:MFS-28327-1	c 18	N89-28556 *	#
NAS 1.71:LAR-13256-1	c 36	N86-29204 *	NAS 1.71:LAR-13256-1	c 36	N86-29204 *	NAS 1.71:MFS-28328-1	c 37	N91-13731 *	#
NAS 1.71:LAR-13257-1	c 25	N84-32447 *	NAS 1.71:LAR-13257-1	c 25	N84-32447 *	NAS 1.71:MFS-28345-2	c 37	N89-28842 *	#
NAS 1.71:LAR-13292-1	c 27	N86-24841 *	NAS 1.71:LAR-13292-1	c 27	N86-24841 *	NAS 1.71:MFS-28368-1	c 75	N90-10717 *	#
NAS 1.71:LAR-13387-1	c 74	N88-25302 *	NAS 1.71:LAR-13387-1	c 74	N88-25302 *	NAS 1.71:MFS-28384-1	c 37	N90-27112 *	#
NAS 1.71:LAR-13400-1	c 02	N93-22015 *	NAS 1.71:LAR-13400-1	c 02	N93-22015 *	NAS 1.71:MFS-28390-1	c 24	N91-15333 *	#
NAS 1.71:LAR-13447-1	c 27	N88-18725 *	NAS 1.71:LAR-13447-1	c 27	N88-18725 *	NAS 1.71:MFS-28402-1	c 51	N93-28952 *	#
NAS 1.71:LAR-13519-1	c 35	N88-23963 *	NAS 1.71:LAR-13519-1	c 35	N88-23963 *	NAS 1.71:MFS-28406-1	c 37	N91-13729 *	#
NAS 1.71:LAR-13548-1	c 09	N91-28175 *	NAS 1.71:LAR-13548-1	c 09	N91-28175 *	NAS 1.71:MFS-28422-1	c 29	N91-17250 *	#
NAS 1.71:LAR-13555-1	c 23	N86-32526 *	NAS 1.71:LAR-13555-1	c 23	N86-32526 *	NAS 1.71:MFS-28430-1	c 54	N92-24044 *	#
NAS 1.71:LAR-13563-1	c 34	N91-23410 *	NAS 1.71:LAR-13563-1	c 34	N91-23410 *	NAS 1.71:MFS-28431-1	c 24	N92-17870 *	#
NAS 1.71:LAR-13586-1	c 16	N92-10035 *	NAS 1.71:LAR-13586-1	c 16	N92-10035 *	NAS 1.71:MFS-28458-1	c 33	N91-26459 *	#
NAS 1.71:LAR-13632-1	c 26	N87-29650 *	NAS 1.71:LAR-13632-1	c 26	N87-29650 *	NAS 1.71:MFS-28491-1	c 37	N93-28326 *	#
NAS 1.71:LAR-13633-1	c 27	N87-24575 *	NAS 1.71:LAR-13633-1	c 27	N87-24575 *	NAS 1.71:MFS-28493-1	c 09	N91-25155 *	#
NAS 1.71:LAR-13689-1	c 35	N87-23941 *	NAS 1.71:LAR-13689-1	c 35	N87-23941 *	NAS 1.71:MFS-28496-1	c 26	N92-34239 *	#
NAS 1.71:LAR-13705-1	c 39	N88-25011 *	NAS 1.71:LAR-13705-1	c 39	N88-25011 *	NAS 1.71:MFS-28521-1	c 37	N91-26542 *	#
NAS 1.71:LAR-13719-1	c 37	N89-12867 *	NAS 1.71:LAR-13719-1	c 37	N89-12867 *	NAS 1.71:MFS-28522-1	c 37	N93-31313 *	#
NAS 1.71:LAR-13738-1	c 18	N87-29586 *	NAS 1.71:LAR-13738-1	c 18	N87-29586 *	NAS 1.71:MFS-28524-1	c 18	N91-25167 *	#
NAS 1.71:LAR-13805-1	c 37	N92-30097 *	NAS 1.71:LAR-13805-1	c 37	N92-30097 *	NAS 1.71:MFS-28545-1	c 31	N91-25306 *	#
NAS 1.71:LAR-13889-1	c 39	N88-30160 *	NAS 1.71:LAR-13889-1	c 39	N88-30160 *	NAS 1.71:MFS-28547-1	c 20	N93-29847 *	#
NAS 1.71:LAR-13944-1	c 35	N92-11336 *	NAS 1.71:LAR-13944-1	c 35	N92-11336 *	NAS 1.71:MFS-28563-1	c 35	N91-25388 *	#
NAS 1.71:LAR-13950-1	c 60	N92-30541 *	NAS 1.71:LAR-13950-1	c 60	N92-30541 *	NAS 1.71:MFS-28569-1	c 27	N93-30565 *	#
NAS 1.71:LAR-13988-1	c 23	N89-11814 *	NAS 1.71:LAR-13988-1	c 23	N89-11814 *	NAS 1.71:MFS-28610-1	c 54	N93-17045 *	#
NAS 1.71:LAR-13996-1-SB	c 25	N90-15161 *	NAS 1.71:LAR-13996-1-SB	c 25	N90-15161 *	NAS 1.71:MFS-28629-1	c 37	N93-17084 *	#
NAS 1.71:LAR-14004-1	c 63	N93-19024 *	NAS 1.71:LAR-14004-1	c 63	N93-19024 *	NAS 1.71:MFS-28632-1	c 54	N92-17866 *	#
NAS 1.71:LAR-14033-2	c 34	N92-30024 *	NAS 1.71:LAR-14033-2	c 34	N92-30024 *	NAS 1.71:MFS-28633-1	c 54	N92-17866 *	#
NAS 1.71:LAR-14036-1	c 27	N91-13562 *	NAS 1.71:LAR-14036-1	c 27	N91-13562 *	NAS 1.71:MFS-28634-1	c 37	N92-24055 *	#
NAS 1.71:LAR-14047-1	c 31	N93-19038 *	NAS 1.71:LAR-14047-1	c 31	N93-19038 *	NAS 1.71:MFS-28658-1	c 34	N93-17030 *	#
NAS 1.71:LAR-14049-1	c 07	N89-23466 *	NAS 1.71:LAR-14049-1	c 07	N89-23466 *	NAS 1.71:MFS-28659-1	c 37	N93-17089 *	#
NAS 1.71:LAR-14078-1-CU	c 34	N90-27071 *	NAS 1.71:LAR-14078-1-CU	c 34	N90-27071 *	NAS 1.71:MFS-28688-1	c 27	N92-29831 *	#
NAS 1.71:LAR-14142-1	c 37	N90-27116 *	NAS 1.71:LAR-14142-1	c 37	N90-27116 *	NAS 1.71:MFS-28701-1	c 37	N93-17057 *	#
NAS 1.71:LAR-14156-1	c 16	N90-16781 *	NAS 1.71:LAR-14156-1	c 16	N90-16781 *	NAS 1.71:MFS-28707-1	c 54	N93-30566 *	#
NAS 1.71:LAR-14162-1	c 27	N90-15259 *	NAS 1.71:LAR-14162-1	c 27	N90-15259 *	NAS 1.71:MFS-28720-1	c 37	N93-30567 *	#
NAS 1.71:LAR-14169-1	c 37	N92-17677 *	NAS 1.71:LAR-14169-1	c 37	N92-17677 *	NAS 1.71:MFS-28723-1	c 52	N93-17058 *	#
NAS 1.71:LAR-14172-1	c 20	N93-31295 *	NAS 1.71:LAR-14172-1	c 20	N93-31295 *	NAS 1.71:MFS-28724-1	c 18	N93-17061 *	#
NAS 1.71:LAR-14194-1	c 24	N90-15148 *	NAS 1.71:LAR-14194-1	c 24	N90-15148 *	NAS 1.71:MFS-28728-1	c 20	N93-28950 *	#
NAS 1.71:LAR-14198-1	c 27	N90-26956 *	NAS 1.71:LAR-14198-1	c 27	N90-26956 *	NAS 1.71:MFS-28739-1	c 20	N93-28324 *	#
NAS 1.71:LAR-14203-1	c 36	N89-28817 *	NAS 1.71:LAR-14203-1	c 36	N89-28817 *	NAS 1.71:MFS-28772-1	c 54	N93-29845 *	#
NAS 1.71:LAR-14221-1	c 06	N93-19023 *	NAS 1.71:LAR-14221-1	c 06	N93-19023 *	NAS 1.71:MFS-28796-1	c 24	N93-19022 *	#
NAS 1.71:LAR-14232-1	c 09	N92-34213 *	NAS 1.71:LAR-14232-1	c 09	N92-34213 *	NAS 1.71:MFS-28833-1	c 37	N93-29846 *	#
NAS 1.71:LAR-14271-1-CU	c 27	N91-13558 *	NAS 1.71:LAR-14271-1-CU	c 27	N91-13558 *	NAS 1.71:MFS-29291-1	c 37	N89-12868 *	#
NAS 1.71:LAR-14272-1-CU	c 14	N91-28184 *	NAS 1.71:LAR-14272-1-CU	c 14	N91-28184 *	NAS 1.71:MFS-29764-1	c 37	N90-19049 *	#
NAS 1.71:LAR-14339-1	c 27	N90-26955 *	NAS 1.71:LAR-14339-1	c 27	N90-26955 *	NAS 1.71:MSC-18578-1	c 32	N85-21427 *	#
NAS 1.71:LAR-14395-1-CU	c 33	N91-28490 *	NAS 1.71:LAR-14395-1-CU	c 33	N91-28490 *	NAS 1.71:MSC-20112-1	c 37	N85-20338 *	#
NAS 1.71:LAR-14398-1	c 25	N92-30098 *	NAS 1.71:LAR-14398-1	c 25	N92-30098 *	NAS 1.71:MSC-20275-1	c 35	N85-21595 *	#
NAS 1.71:LAR-14418-1	c 32	N92-31257 *	NAS 1.71:LAR-14418-1	c 32	N92-31257 *	NAS 1.71:MSC-20319-1	c 37	N85-21649 *	#
NAS 1.71:LAR-14429-1	c 33	N93-29173 *	NAS 1.71:LAR-14429-1	c 33	N93-29173 *	NAS 1.71:MSC-20761-1	c 37	N87-15465 *	#
NAS 1.71:LAR-14440-1	c 23	N92-10066 *	NAS 1.71:LAR-14440-1	c 23	N92-10066 *	NAS 1.71:MSC-20783-1	c 35	N86-20756 *	#
NAS 1.71:LAR-14448-1	c 27	N93-11912 *	NAS 1.71:LAR-14448-1	c 27	N93-11912 *	NAS 1.71:MSC-20865-1	c 32	N87-18692 *	#
NAS 1.71:LAR-14459-1	c 24	N91-15334 *	NAS 1.71:LAR-14459-1	c 24	N91-15334 *	NAS 1.71:MSC-20907-1	c 37	N87-18818 *	#
NAS 1.71:LAR-14470-1	c 02	N93-11876 *	NAS 1.71:LAR-14470-1	c 02	N93-11876 *	NAS 1.71:MSC-20964-1	c 60	N87-14863 *	#
NAS 1.71:LAR-14471-1	c 27	N93-20041 *	NAS 1.71:LAR-14471-1	c 27	N93-20041 *	NAS 1.71:MSC-21082-1	c 27	N87-29672 *	#
NAS 1.71									

NAS 1.71:MSC-21330-1	c 16	N88-24660 *	#	NAS 1.71:NPO-17524-1-CU	c 27	N90-10261 *	#	NASA-CASE-ARC-10003-1	c 09	N71-25866 *
NAS 1.71:MSC-21354-1	c 37	N88-24969 *	#	NAS 1.71:NPO-17548-1-CU	c 32	N90-16104 *	#	NASA-CASE-ARC-10009-1	c 15	N71-17822 *
NAS 1.71:MSC-21364-1	c 54	N89-13889 *	#	NAS 1.71:NPO-17596-1-CU	c 35	N89-28795 *	#	NASA-CASE-ARC-10017-1	c 14	N72-29464 *
NAS 1.71:MSC-21372-1	c 35	N89-12842 *	#	NAS 1.71:NPO-17621-1-CU	c 33	N90-17010 *	#	NASA-CASE-ARC-10020	c 10	N72-17172 *
NAS 1.71:MSC-21379-1-SB	c 61	N90-27340 *	#	NAS 1.71:NPO-17630-1-CU	c 31	N89-29577 *	#	NASA-CASE-ARC-10030	c 09	N71-12521 *
NAS 1.71:MSC-21381-1	c 63	N91-13944 *	#	NAS 1.71:NPO-17632-1-CU	c 60	N91-32805 *	#	NASA-CASE-ARC-10042-2	c 10	N72-11256 *
NAS 1.71:MSC-21460-1	c 54	N91-13879 *	#	NAS 1.71:NPO-17632-1-CU	c 60	N91-32805 *	#	NASA-CASE-ARC-10043-1	c 05	N71-11193 *
NAS 1.71:MSC-21481-1	c 60	N91-13890 *	#	NAS 1.71:NPO-17723-1-CU	c 76	N90-26685 *	#	NASA-CASE-ARC-10050	c 03	N71-33409 *
NAS 1.71:MSC-21529-1	c 27	N92-30100 *	#	NAS 1.71:NPO-17734-1-CU	c 33	N92-10146 *	#	NASA-CASE-ARC-10097-2	c 07	N73-25160 *
NAS 1.71:MSC-21577-1-SB	c 25	N91-23271 *	#	NAS 1.71:NPO-17781-1-CU	c 60	N92-17884 *	#	NASA-CASE-ARC-10098-1	c 06	N71-24739 *
NAS 1.71:MSC-21613-1	c 61	N92-10331 *	#	NAS 1.71:NPO-17784-1-CU	c 74	N91-13998 *	#	NASA-CASE-ARC-10099-1	c 18	N71-15469 *
NAS 1.71:MSC-21631-1	c 75	N91-32947 *	#	NAS 1.71:NPO-17785-1-CU	c 37	N89-28846 *	#	NASA-CASE-ARC-10100-1	c 05	N71-24738 *
NAS 1.71:MSC-21632-1	c 54	N92-34210 *	#	NAS 1.71:NPO-17786-1-CU	c 35	N90-17104 *	#	NASA-CASE-ARC-10101-1	c 09	N71-33109 *
NAS 1.71:MSC-21648-1	c 37	N92-24051 *	#	NAS 1.71:NPO-17794-1-CU	c 74	N92-30104 *	#	NASA-CASE-ARC-10105	c 09	N72-17153 *
NAS 1.71:MSC-21723-1	c 18	N92-30315 *	#	NAS 1.71:NPO-17807-2-CU	c 63	N92-29955 *	#	NASA-CASE-ARC-10106-1	c 28	N72-22769 *
NAS 1.71:MSC-21737-1	c 61	N91-13911 *	#	NAS 1.71:NPO-17812-1-CU	c 76	N90-17456 *	#	NASA-CASE-ARC-10131-1	c 15	N71-27754 *
NAS 1.71:MSC-21752-1	c 54	N92-17910 *	#	NAS 1.71:NPO-17835-1-CU	c 76	N90-27518 *	#	NASA-CASE-ARC-10132-1	c 09	N71-24597 *
NAS 1.71:MSC-21775-1	c 52	N92-11627 *	#	NAS 1.71:NPO-17836-1-CU	c 32	N92-10126 *	#	NASA-CASE-ARC-10134	c 30	N72-17873 *
NAS 1.71:MSC-21793-1	c 16	N91-28186 *	#	NAS 1.71:NPO-17837-1-CU	c 74	N93-17273 *	#	NASA-CASE-ARC-10136-1	c 09	N72-22202 *
NAS 1.71:MSC-21797-1	c 35	N93-17076 *	#	NAS 1.71:NPO-17904-1-CU	c 32	N91-13594 *	#	NASA-CASE-ARC-10137-1	c 09	N71-28468 *
NAS 1.71:MSC-21806-1	c 74	N92-17863 *	#	NAS 1.71:NPO-17911-1-CU	c 32	N90-27016 *	#	NASA-CASE-ARC-10138-1	c 14	N72-24477 *
NAS 1.71:MSC-21842-1	c 54	N93-17088 *	#	NAS 1.71:NPO-17914-1-CU	c 39	N91-13767 *	#	NASA-CASE-ARC-10140-1	c 15	N71-17653 *
NAS 1.71:MSC-21843-1-NP	c 51	N92-24052 *	#	NAS 1.71:NPO-17918-2-CU	c 63	N92-17895 *	#	NASA-CASE-ARC-10153	c 05	N71-28619 *
NAS 1.71:MSC-21858-1	c 52	N92-11628 *	#	NAS 1.71:NPO-17941-1-CU	c 32	N91-13595 *	#	NASA-CASE-ARC-10154-1	c 14	N72-22440 *
NAS 1.71:MSC-21864-1	c 37	N92-23544 *	#	NAS 1.71:NPO-17970-1-CU	c 43	N90-26384 *	#	NASA-CASE-ARC-10160-1	c 23	N72-27728 *
NAS 1.71:MSC-21874-1	c 63	N92-30314 *	#	NAS 1.71:NPO-17998-1-CU	c 60	N92-12438 *	#	NASA-CASE-ARC-10176-1	c 15	N72-21464 *
NAS 1.71:MSC-21903-1	c 37	N92-30101 *	#	NAS 1.71:NPO-18007-1-CU	c 74	N92-11791 *	#	NASA-CASE-ARC-10178-1	c 09	N72-17152 *
NAS 1.71:MSC-21915-1	c 74	N92-30027 *	#	NAS 1.71:NPO-18062-1-CU	c 33	N92-30542 *	#	NASA-CASE-ARC-10179-1	c 21	N72-22619 *
NAS 1.71:MSC-21940-1	c 37	N92-30540 *	#	NAS 1.71:NPO-18075-1-CU	c 33	N91-13622 *	#	NASA-CASE-ARC-10180-1	c 27	N74-12814 *
NAS 1.71:MSC-21941-1	c 54	N93-17087 *	#	NAS 1.71:NPO-18116-1-CU	c 37	N91-32509 *	#	NASA-CASE-ARC-10192	c 09	N72-21245 *
NAS 1.71:MSC-21950-1	c 37	N92-34242 *	#	NAS 1.71:NPO-18134-1-CU	c 37	N91-32510 *	#	NASA-CASE-ARC-10194-1	c 23	N73-20741 *
NAS 1.71:MSC-21951-1	c 35	N92-23545 *	#	NAS 1.71:NPO-18146-1-CU	c 74	N92-17892 *	#	NASA-CASE-ARC-10196-1	c 18	N73-13562 *
NAS 1.71:MSC-21953-1-NP	c 37	N93-17271 *	#	NAS 1.71:NPO-18194-1-CU	c 74	N91-32924 *	#	NASA-CASE-ARC-10197-1	c 33	N74-17929 *
NAS 1.71:MSC-21954-1-NP	c 51	N93-19054 *	#	NAS 1.71:NPO-18278-1-CU	c 74	N91-32925 *	#	NASA-CASE-ARC-10198	c 34	N78-17336 *
NAS 1.71:MSC-21961-1	c 35	N92-29952 *	#	NAS 1.71:NPO-18343-1-CU	c 33	N93-11456 *	#	NASA-CASE-ARC-10199	c 34	N78-17337 *
NAS 1.71:MSC-21967-1	c 37	N92-30026 *	#	NAS 1.71:NPO-18357-1-CU	c 74	N93-29848 *	#	NASA-CASE-ARC-10263-1	c 14	N72-22438 *
NAS 1.71:MSC-21975-1	c 14	N93-22016 *	#	NAS 1.71:NPO-18391-1-CU	c 20	N93-28424 *	#	NASA-CASE-ARC-10264-1	c 09	N73-20231 *
NAS 1.71:MSC-21979-1	c 51	N93-17049 *	#	NAS 1.71:NPO-18409-1-CU	c 25	N93-19025 *	#	NASA-CASE-ARC-10265-1	c 10	N72-28240 *
NAS 1.71:MSC-22008-1	c 35	N93-17077 *	#	NAS 1.71:NPO-18414-1-CU	c 62	N92-24045 *	#	NASA-CASE-ARC-10266-1	c 33	N75-29318 *
NAS 1.71:MSC-22015-1	c 18	N93-20042 *	#	NAS 1.71:NPO-18428-1-CU	c 33	N92-23464 *	#	NASA-CASE-ARC-10269-1	c 10	N72-16172 *
NAS 1.71:MSC-22020-1	c 37	N93-19331 *	#	NAS 1.71:NPO-18433-1-CU	c 74	N92-34241 *	#	NASA-CASE-ARC-10275-1	c 05	N72-22092 *
NAS 1.71:MSC-22027-1	c 63	N93-17056 *	#	NAS 1.71:NPO-18435-1-CU	c 61	N92-30543 *	#	NASA-CASE-ARC-10278-1	c 14	N73-25463 *
NAS 1.71:MSC-22028-1	c 37	N93-22007 *	#	NAS 1.71:NPO-18448-1-CU	c 29	N92-30083 *	#	NASA-CASE-ARC-10302-1	c 51	N74-15778 *
NAS 1.71:MSC-22046-1	c 37	N93-28501 *	#	NAS 1.71:NPO-18454-1-CU	c 33	N92-17885 *	#	NASA-CASE-ARC-10304-1	c 18	N73-26572 *
NAS 1.71:MSC-22060-1	c 51	N93-19037 *	#	NAS 1.71:NPO-18478-1-CU	c 74	N92-30084 *	#	NASA-CASE-ARC-10304-2	c 27	N74-27037 *
NAS 1.71:MSC-22091-1	c 31	N93-28136 *	#	NAS 1.71:NPO-18483-1-CU	c 76	N93-15151 *	#	NASA-CASE-ARC-10308-1	c 06	N72-31141 *
NAS 1.71:MSC-22093-1	c 82	N93-22017 *	#	NAS 1.71:NPO-18491-1-CU	c 60	N92-23546 *	#	NASA-CASE-ARC-10322-1	c 35	N76-18403 *
NAS 1.71:MSC-22255-1	c 74	N93-28135 *	#	NAS 1.71:NPO-18492-1-CU	c 63	N93-29176 *	#	NASA-CASE-ARC-10325	c 06	N72-25147 *
NAS 1.71:NPO-13556-1	c 35	N84-33766 *	#	NAS 1.71:NPO-18497-1-CU	c 63	N92-24245 *	#	NASA-CASE-ARC-10329-1	c 05	N73-26072 *
NAS 1.71:NPO-15155-1	c 74	N85-22139 *	#	NAS 1.71:NPO-18498-1-CU	c 37	N92-24043 *	#	NASA-CASE-ARC-10330-1	c 09	N73-32112 *
NAS 1.71:NPO-15295-1	c 60	N85-21992 *	#	NAS 1.71:NPO-18499-1-CU	c 37	N92-24042 *	#	NASA-CASE-ARC-10344-2	c 35	N75-26334 *
NAS 1.71:NPO-15341-1	c 35	N84-33769 *	#	NAS 1.71:NPO-18501-1-CU	c 27	N93-28426 *	#	NASA-CASE-ARC-10345-1	c 15	N73-12488 *
NAS 1.71:NPO-15430-1	c 46	N85-21846 *	#	NAS 1.71:NPO-18521-1-CU	c 74	N93-14404 *	#	NASA-CASE-ARC-10348-1	c 33	N75-19518 *
NAS 1.71:NPO-15433-1	c 32	N85-21428 *	#	NAS 1.71:NPO-18551-1-CU	c 33	N93-17277 *	#	NASA-CASE-ARC-10362-1	c 14	N73-32326 *
NAS 1.71:NPO-15466-1	c 71	N85-22104 *	#	NAS 1.71:NPO-18552-1-CU	c 33	N92-24246 *	#	NASA-CASE-ARC-10364-2	c 33	N75-25041 *
NAS 1.71:NPO-15483-1	c 37	N85-21650 *	#	NAS 1.71:NPO-18553-1-CU	c 63	N92-30085 *	#	NASA-CASE-ARC-10364-3	c 33	N75-19520 *
NAS 1.71:NPO-15493-2	c 35	N85-34373 *	#	NAS 1.71:NPO-18568-1-CU	c 33	N93-17274 *	#	NASA-CASE-ARC-10370-1	c 36	N75-31426 *
NAS 1.71:NPO-15494-2	c 35	N85-34373 *	#	NAS 1.71:NPO-18578-1-CU	c 33	N92-30086 *	#	NASA-CASE-ARC-10441-1	c 35	N74-15126 *
NAS 1.71:NPO-15519-1	c 32	N84-34651 *	#	NAS 1.71:NPO-18579-1-CU	c 63	N93-11174 *	#	NASA-CASE-ARC-10442-1	c 35	N74-15093 *
NAS 1.71:NPO-15558-1	c 35	N84-34705 *	#	NAS 1.71:NPO-18580-1-CU	c 33	N93-17278 *	#	NASA-CASE-ARC-10443-1	c 14	N73-20477 *
NAS 1.71:NPO-15560-1	c 33	N85-21491 *	#	NAS 1.71:NPO-18584-1-CU	c 37	N93-11177 *	#	NASA-CASE-ARC-10444-1	c 16	N73-33397 *
NAS 1.71:NPO-15644-1	c 35	N84-33767 *	#	NAS 1.71:NPO-18586-1-CU	c 63	N93-17276 *	#	NASA-CASE-ARC-10445-1	c 31	N76-31365 *
NAS 1.71:NPO-15651-1	c 43	N85-21723 *	#	NAS 1.71:NPO-18596-1-CU	c 36	N93-28132 *	#	NASA-CASE-ARC-10447-1	c 52	N74-22771 *
NAS 1.71:NPO-15753-1	c 27	N84-33589 *	#	NAS 1.71:NPO-18607-1-CU	c 37	N92-23553 *	#	NASA-CASE-ARC-10448-2	c 74	N75-12732 *
NAS 1.71:NPO-15759-1	c 35	N85-21596 *	#	NAS 1.71:NPO-18608-1-CU	c 63	N93-17275 *	#	NASA-CASE-ARC-10448-3	c 35	N77-14408 *
NAS 1.71:NPO-15790-1	c 36	N85-21631 *	#	NAS 1.71:NPO-18611-1-CU	c 36	N93-30415 *	#	NASA-CASE-ARC-10456-1	c 05	N75-12930 *
NAS 1.71:NPO-15801-1	c 74	N85-23396 *	#	NAS 1.71:NPO-18625-1-CU	c 76	N92-30102 *	#	NASA-CASE-ARC-10461-1	c 44	N74-33379 *
NAS 1.71:NPO-15808-1	c 44	N84-34792 *	#	NAS 1.71:NPO-18645-1-CU	c 63	N92-34240 *	#	NASA-CASE-ARC-10462-1	c 37	N74-27901 *
NAS 1.71:NPO-15851-1	c 37	N85-21652 *	#	NAS 1.71:NPO-18655-1-CU	c 35	N93-28322 *	#	NASA-CASE-ARC-10463-1	c 09	N73-32111 *
NAS 1.71:NPO-15920-1	c 33	N85-21493 *	#	NAS 1.71:NPO-18662-1-CU	c 74	N93-28428 *	#	NASA-CASE-ARC-10464-1	c 27	N74-12812 *
NAS 1.71:NPO-16022-1	c 71	N85-22105 *	#	NAS 1.71:NPO-18667-1-CU	c 33	N93-19330 *	#	NASA-CASE-ARC-10466-1	c 60	N75-13539 *
NAS 1.71:NPO-16027-1	c 35	N85-21597 *	#	NAS 1.71:NPO-18668-1-CU	c 37	N92-29765 *	#	NASA-CASE-ARC-10467-1	c 09	N73-14214 *
NAS 1.71:NPO-16233-1	c 37	N86-20801 *	#	NAS 1.71:NPO-18678-1-CU	c 32	N93-28422 *	#	NASA-CASE-ARC-10468-1	c 14	N73-33361 *
NAS 1.71:NPO-16420-1	c 33	N86-20681 *	#	NAS 1.71:NPO-18690-1-CU	c 37	N92-34205 *	#	NASA-CASE-ARC-10469-1	c 25	N75-12086 *
NAS 1.71:NPO-16464-1-CU	c 60	N86-24224 *	#	NAS 1.71:NPO-18701-1-CU	c 32	N92-30391 *	#	NASA-CASE-ARC-10470-1	c 02	N73-26005 *
NAS 1.71:NPO-16494-1-CU	c 34	N85-29182 *	#	NAS 1.71:NPO-18702-1-CU	c 74	N92-23551 *	#	NASA-CASE-ARC-10470-3	c 05	N76-29217 *
NAS 1.71:NPO-16584-1-CU	c 76	N86-25269 *	#	NAS 1.71:NPO-18727-1-CU	c 62	N93-28427 *	#	NASA-CASE-ARC-10516-1	c 70	N74-21300 *
NAS 1.71:NPO-16632-1-CU	c 32	N87-15390 *	#	NAS 1.71:NPO-18733-1-CU	c 06	N93-30416 *	#	NASA-CASE-ARC-10519-2	c 05	N75-25915 *
NAS 1.71:NPO-16784-1	c 33	N87-10231 *	#	NAS 1.71:NPO-18738-1-CU	c 37	N93-28954 *	#	NASA-CASE-ARC-10583-1	c 52	N76-29894 *
NAS 1.71:NPO-16869	c 74	N86-33138 *	#	NAS 1.71:NPO-18764-1-CU	c 37	N93-17272 *	#	NASA-CASE-ARC-10592-1	c 27	N74-21156 *
NAS 1.71:NPO-16882-1-CU	c 33	N88-24863 *	#	NAS 1.71:NPO-18769-1-CU	c 74	N93-28133 *	#	NASA-CASE-ARC-10592-2	c 27	N76-32315 *
NAS 1.71:NPO-16892-1-CU	c 37	N87-14704 *	#	NAS 1.71:NPO-18771-1-CU	c 61	N93-11664 *	#	NASA-CASE-ARC-10593-1	c 33	N74-27682 *
NAS 1.71:NPO-16932-1	c 33	N87-15413 *	#	NAS 1.71:NPO-18772-1-CU	c 32	N93-28955 *	#	NASA-CASE-ARC-10596-1	c 33	N74-21851 *
NAS 1.71:NPO-17024-1-CU	c 35	N88-24943 *	#	NAS 1.71:NPO-18786-1-CU	c 37	N93-28131 *	#	NASA-CASE-ARC-10597-1	c 52	N74-20726 *
NAS 1.71:NPO-17139-1-CU	c 74	N88-25301 *	#	NAS 1.71:NPO-18817-1-CU	c 31	N93-12202 *	#	NASA-CASE-ARC-10598-1	c 75	N74-30156 *
NAS 1.71:NPO-17144-1-CU	c 74	N88-25305 *	#	NAS 1.71:NPO-18902-1-CU	c 37	N93-28129 *	#	NASA-CASE-ARC-10599-1	c 05	N73-26071 *
NAS 1.71:NPO-17184-1-CU	c 32	N88-26541 *	#	NAS 1.71:NPO-18970-1-CU	c 32	N93-28126 *	#	NASA-CASE-ARC-10631-1	c 74	N76-20958 *

## REPORT NUMBER INDEX

## NASA-CASE-ERC-10468

NASA-CASE-ARC-10716-1	c 35	N77-20399 *	NASA-CASE-ARC-11241-1	c 25	N81-14016 *	NASA-CASE-ARC-11643-1-SB	c 23	N87-23698 *
NASA-CASE-ARC-10721-1	c 27	N76-22376 *	NASA-CASE-ARC-11243-2	c 23	N85-33187 *	NASA-CASE-ARC-11646-1	c 14	N87-25344 *
NASA-CASE-ARC-10722-1	c 51	N75-25503 *	NASA-CASE-ARC-11244-1	c 23	N82-16174 *	NASA-CASE-ARC-11649-1-SB	c 27	N88-29040 *
NASA-CASE-ARC-10753-1	c 54	N75-27760 *	NASA-CASE-ARC-11245-1	c 28	N82-18401 *	NASA-CASE-ARC-11649-2-SB	c 27	N90-21177 *
NASA-CASE-ARC-10754-1	c 07	N75-24736 *	NASA-CASE-ARC-11246-1	c 31	N83-34073 *	NASA-CASE-ARC-11652-1	c 27	N87-23737 *
NASA-CASE-ARC-10755-2	c 34	N76-27517 *	NASA-CASE-ARC-11248-1	c 27	N81-17259 *	NASA-CASE-ARC-11873-2	c 25	N91-31258 *
NASA-CASE-ARC-10756-1	c 54	N77-32721 *	NASA-CASE-ARC-11251-1	c 37	N81-17433 *	NASA-CASE-ARC-11876-1	c 36	N90-25340 *
NASA-CASE-ARC-10760-1	c 25	N76-22323 *	NASA-CASE-ARC-11252-1	c 25	N83-36118 *	NASA-CASE-ARC-11877-1-SB	c 09	N91-14357 *
NASA-CASE-ARC-10761-1	c 07	N77-18154 *	NASA-CASE-ARC-11253-1	c 27	N81-17262 *	NASA-CASE-ARC-11882-1-CU	c 54	N93-14713 *
NASA-CASE-ARC-10802-1	c 35	N75-30502 *	NASA-CASE-ARC-11253-2	c 27	N82-24338 *	NASA-CASE-ARC-11886-1-SB	c 35	N91-14591 *
NASA-CASE-ARC-10806-1	c 35	N75-29381 *	NASA-CASE-ARC-11253-3	c 27	N81-24256 *	NASA-CASE-ARC-11888-1	c 24	N92-16026 *
NASA-CASE-ARC-10807-1	c 05	N77-17029 *	NASA-CASE-ARC-11256-1	c 15	N82-24272 *	NASA-CASE-ARC-11891-2-SB	c 27	N92-34160 *
NASA-CASE-ARC-10808-1	c 09	N76-24280 *	NASA-CASE-ARC-11257-1	c 04	N81-21047 *	NASA-CASE-ARC-11892-1-SB	c 74	N92-16810 *
NASA-CASE-ARC-10810-1	c 33	N76-19339 *	NASA-CASE-ARC-11258-1	c 52	N80-33081 *	NASA-CASE-ARC-11907-1-NP	c 24	N91-31236 *
NASA-CASE-ARC-10812-1	c 07	N83-33884 *	NASA-CASE-ARC-11261-1	c 24	N83-25789 *	NASA-CASE-ARC-11909-1	c 03	N91-31113 *
NASA-CASE-ARC-10813-1	c 27	N76-16230 *	NASA-CASE-ARC-11264-2	c 52	N83-29991 *	NASA-CASE-ARC-11916-1-SB	c 74	N92-16811 *
NASA-CASE-ARC-10814-2	c 07	N80-26298 *	NASA-CASE-ARC-11267-2	c 23	N82-28353 *	NASA-CASE-ARC-11917-1	c 35	N91-15520 *
NASA-CASE-ARC-10816-1	c 35	N76-24525 *	NASA-CASE-ARC-11310-1	c 27	N82-24339 *	NASA-CASE-ARC-11921-1	c 34	N92-11286 *
NASA-CASE-ARC-10820-1	c 35	N78-19466 *	NASA-CASE-ARC-11311-1	c 74	N83-13978 *	NASA-CASE-ARC-14408-1	c 27	N82-33523 *
NASA-CASE-ARC-10849-1	c 17	N76-29347 *	NASA-CASE-ARC-11312-1	c 36	N83-34304 *			
NASA-CASE-ARC-10855-1	c 52	N77-10780 *	NASA-CASE-ARC-11314-1	c 54	N82-26987 *	NASA-CASE-ERC-100Q1	c 23	N71-24868 *
NASA-CASE-ARC-10892-2	c 27	N79-14214 *	NASA-CASE-ARC-11317-1	c 35	N83-34272 *	NASA-CASE-ERC-10011	c 07	N71-29065 *
NASA-CASE-ARC-10896-1	c 35	N78-19465 *	NASA-CASE-ARC-11321-1	c 27	N81-27272 *	NASA-CASE-ERC-10013	c 09	N71-26678 *
NASA-CASE-ARC-10897-1	c 33	N77-31404 *	NASA-CASE-ARC-11322-1	c 51	N83-28849 *	NASA-CASE-ERC-10014	c 14	N71-28863 *
NASA-CASE-ARC-10898-1	c 35	N77-18417 *	NASA-CASE-ARC-11325-1	c 37	N82-22496 *	NASA-CASE-ERC-10015-2	c 10	N72-27246 *
NASA-CASE-ARC-10899-1	c 60	N77-19760 *	NASA-CASE-ARC-11326-1	c 25	N83-33977 *	NASA-CASE-ERC-10017	c 16	N71-15567 *
NASA-CASE-ARC-10900-1	c 35	N77-24454 *	NASA-CASE-ARC-11349-1	c 37	N86-20797 *	NASA-CASE-ERC-10019	c 16	N71-15551 *
NASA-CASE-ARC-10903-1	c 09	N78-18083 *	NASA-CASE-ARC-11354-1	c 74	N83-21949 *	NASA-CASE-ERC-10020	c 16	N71-26154 *
NASA-CASE-ARC-10905-1	c 37	N77-13418 *	NASA-CASE-ARC-11359-1	c 51	N84-28361 *	NASA-CASE-ERC-10022	c 15	N71-26635 *
NASA-CASE-ARC-10907-1	c 37	N75-32465 *	NASA-CASE-ARC-11361-1	c 35	N84-22934 *	NASA-CASE-ERC-10031	c 12	N71-18603 *
NASA-CASE-ARC-10911-1	c 35	N77-20400 *	NASA-CASE-ARC-11363-1	c 31	N87-16918 *	NASA-CASE-ERC-10032	c 10	N71-25900 *
NASA-CASE-ARC-10912-1	c 34	N77-19353 *	NASA-CASE-ARC-11368-1	c 27	N83-31854 *	NASA-CASE-ERC-10033	c 14	N71-26672 *
NASA-CASE-ARC-10913-1	c 24	N78-15180 *	NASA-CASE-ARC-11368-2	c 27	N85-21347 *	NASA-CASE-ERC-10034	c 15	N71-24896 *
NASA-CASE-ARC-10915-2	c 27	N79-18052 *	NASA-CASE-ARC-11368-3	c 27	N84-22745 *	NASA-CASE-ERC-10041	c 08	N71-29138 *
NASA-CASE-ARC-10916-1	c 52	N78-10686 *	NASA-CASE-ARC-11370-1	c 27	N84-22750 *	NASA-CASE-ERC-10044-1	c 14	N71-27090 *
NASA-CASE-ARC-10917-1	c 51	N78-27733 *	NASA-CASE-ARC-11372-1	c 08	N86-27288 *	NASA-CASE-ERC-10045	c 15	N71-24910 *
NASA-CASE-ARC-10932-1	c 74	N76-22993 *	NASA-CASE-ARC-11400-1	c 27	N84-14322 *	NASA-CASE-ERC-10046	c 10	N71-18722 *
NASA-CASE-ARC-10970-1	c 36	N77-25501 *	NASA-CASE-ARC-11402-1	c 27	N84-22744 *	NASA-CASE-ERC-10048	c 09	N72-25251 *
NASA-CASE-ARC-10974-1	c 34	N77-27345 *	NASA-CASE-ARC-11402-3	c 23	N86-21582 *	NASA-CASE-ERC-10065	c 09	N71-27364 *
NASA-CASE-ARC-10975-1	c 33	N79-15245 *	NASA-CASE-ARC-11405-1	c 27	N84-27884 *	NASA-CASE-ERC-10072	c 09	N70-11148 *
NASA-CASE-ARC-10976-1	c 74	N77-22950 *	NASA-CASE-ARC-11405-2	c 27	N86-19455 *	NASA-CASE-ERC-10073-1	c 24	N74-19769 *
NASA-CASE-ARC-10977-1	c 07	N80-32392 *	NASA-CASE-ARC-11413-1	c 27	N85-21348 *	NASA-CASE-ERC-10075-2	c 09	N72-22196 *
NASA-CASE-ARC-10979-1	c 09	N77-19076 *	NASA-CASE-ARC-11418-1	c 24	N84-11213 *	NASA-CASE-ERC-10075	c 09	N71-24800 *
NASA-CASE-ARC-10980-1	c 27	N80-23452 *	NASA-CASE-ARC-11421-2	c 27	N86-31726 *	NASA-CASE-ERC-10081	c 14	N72-28437 *
NASA-CASE-ARC-10981-1	c 37	N78-27425 *	NASA-CASE-ARC-11421-3	c 24	N86-25416 *	NASA-CASE-ERC-10087-2	c 14	N72-31446 *
NASA-CASE-ARC-10984-1	c 32	N77-24328 *	NASA-CASE-ARC-11422-1	c 35	N86-20751 *	NASA-CASE-ERC-10087	c 14	N71-27334 *
NASA-CASE-ARC-10985-1	c 52	N79-10724 *	NASA-CASE-ARC-11423-1	c 03	N84-33394 *	NASA-CASE-ERC-10088	c 26	N71-25490 *
NASA-CASE-ARC-10990-1	c 04	N82-16059 *	NASA-CASE-ARC-11424-1	c 27	N85-34281 *	NASA-CASE-ERC-10089	c 23	N72-17747 *
NASA-CASE-ARC-10991-1	c 25	N78-14104 *	NASA-CASE-ARC-11425-2	c 23	N87-28605 *	NASA-CASE-ERC-10090	c 21	N71-24948 *
NASA-CASE-ARC-10992-1	c 26	N78-32229 *	NASA-CASE-ARC-11425-3	c 23	N90-23475 *	NASA-CASE-ERC-10097	c 15	N71-28465 *
NASA-CASE-ARC-10994-1	c 52	N76-33835 *	NASA-CASE-ARC-11425-4	c 23	N90-20133 *	NASA-CASE-ERC-10098	c 09	N71-28618 *
NASA-CASE-ARC-10994-2	c 52	N79-26771 *	NASA-CASE-ARC-11426-1	c 09	N84-12193 *	NASA-CASE-ERC-10100	c 09	N71-33519 *
NASA-CASE-ARC-11007-1	c 52	N77-14736 *	NASA-CASE-ARC-11426-2	c 52	N89-16256 *	NASA-CASE-ERC-10108	c 06	N72-21094 *
NASA-CASE-ARC-11008-1	c 27	N78-31232 *	NASA-CASE-ARC-11427-1	c 24	N86-19380 *	NASA-CASE-ERC-10112	c 07	N72-21119 *
NASA-CASE-ARC-11031-1	c 52	N81-29763 *	NASA-CASE-ARC-11427-2	c 27	N86-27451 *	NASA-CASE-ERC-10113	c 09	N71-27053 *
NASA-CASE-ARC-11035-1	c 52	N79-18580 *	NASA-CASE-ARC-11428-1	c 23	N86-19376 *	NASA-CASE-ERC-10119	c 26	N72-21701 *
NASA-CASE-ARC-11036-1	c 35	N78-32395 *	NASA-CASE-ARC-11428-2	c 27	N87-16909 *	NASA-CASE-ERC-10120	c 26	N69-33482 *
NASA-CASE-ARC-11039-1	c 74	N78-32854 *	NASA-CASE-ARC-11428-3	c 23	N88-24692 *	NASA-CASE-ERC-10125	c 09	N71-24893 *
NASA-CASE-ARC-11040-1	c 24	N79-16915 *	NASA-CASE-ARC-11429-1-CU	c 27	N86-20560 *	NASA-CASE-ERC-10138	c 26	N71-14354 *
NASA-CASE-ARC-11040-2	c 24	N78-27184 *	NASA-CASE-ARC-11429-2-CU	c 27	N87-22845 *	NASA-CASE-ERC-10139	c 09	N72-17154 *
NASA-CASE-ARC-11042-1	c 24	N78-14096 *	NASA-CASE-ARC-11429-3CU	c 27	N87-16908 *	NASA-CASE-ERC-10150	c 14	N71-28992 *
NASA-CASE-ARC-11043-1	c 24	N78-27180 *	NASA-CASE-ARC-11429-4CU	c 27	N87-15904 *	NASA-CASE-ERC-10151	c 16	N71-29131 *
NASA-CASE-ARC-11045-1	c 05	N79-17847 *	NASA-CASE-ARC-11444-1	c 05	N85-29947 *	NASA-CASE-ERC-10174	c 14	N72-25409 *
NASA-CASE-ARC-11046-1	c 35	N78-14364 *	NASA-CASE-ARC-11502-1	c 74	N86-20125 *	NASA-CASE-ERC-10178	c 16	N71-24832 *
NASA-CASE-ARC-11051-1	c 27	N78-32260 *	NASA-CASE-ARC-11503-1	c 35	N85-34374 *	NASA-CASE-ERC-10179	c 07	N72-20141 *
NASA-CASE-ARC-11052-1	c 37	N79-28551 *	NASA-CASE-ARC-11504-1	c 09	N86-32447 *	NASA-CASE-ERC-10180-1	c 60	N74-20836 *
NASA-CASE-ARC-11053-1	c 25	N79-10162 *	NASA-CASE-ARC-11505-1	c 18	N84-22612 *	NASA-CASE-ERC-10187	c 16	N69-31343 *
NASA-CASE-ARC-11057-1	c 27	N78-31233 *	NASA-CASE-ARC-11505-2	c 18	N89-25266 *	NASA-CASE-ERC-10208	c 15	N70-10867 *
NASA-CASE-ARC-11058-1	c 54	N78-31735 *	NASA-CASE-ARC-11506-2	c 23	N86-32525 *	NASA-CASE-ERC-10214	c 09	N72-31235 *
NASA-CASE-ARC-11058-2	c 54	N79-24651 *	NASA-CASE-ARC-11510-1	c 35	N86-32697 *	NASA-CASE-ERC-10222	c 09	N72-22199 *
NASA-CASE-ARC-11059-1	c 54	N78-32721 *	NASA-CASE-ARC-11511-2	c 27	N87-21112 *	NASA-CASE-ERC-10224-2	c 09	N73-27150 *
NASA-CASE-ARC-11060-1	c 27	N79-22300 *	NASA-CASE-ARC-11512-2	c 27	N86-32568 *	NASA-CASE-ERC-10224	c 09	N72-25261 *
NASA-CASE-ARC-11097-1	c 25	N82-24312 *	NASA-CASE-ARC-11522-2	c 27	N85-34280 *	NASA-CASE-ERC-10226-1	c 14	N73-16483 *
NASA-CASE-ARC-11100-1	c 54	N78-31736 *	NASA-CASE-ARC-11525-1	c 37	N86-27629 *	NASA-CASE-ERC-10248	c 14	N72-17323 *
NASA-CASE-ARC-11101-1	c 54	N78-17675 *	NASA-CASE-ARC-11533-1	c 27	N87-23751 *	NASA-CASE-ERC-10267	c 09	N72-23173 *
NASA-CASE-ARC-11104-1	c 15	N79-26100 *	NASA-CASE-ARC-11533-2	c 27	N89-16042 *	NASA-CASE-ERC-10268	c 09	N72-25252 *
NASA-CASE-ARC-11106-1	c 05	N80-14107 *	NASA-CASE-ARC-11533-3	c 27	N87-24564 *	NASA-CASE-ERC-10275	c 26	N72-25680 *
NASA-CASE-ARC-11107-1	c 25	N80-16116 *	NASA-CASE-ARC-11534-1	c 54	N86-29507 *	NASA-CASE-ERC-10276	c 14	N73-26432 *
NASA-CASE-ARC-11110-1	c 37	N82-24492 *	NASA-CASE-ARC-11536-1	c 33	N89-14384 *	NASA-CASE-ERC-10283	c 16	N72-25485 *
NASA-CASE-ARC-11114-1	c 51	N81-14605 *	NASA-CASE-ARC-11538-1SB	c 24	N86-21590 *	NASA-CASE-ERC-10285	c 10	N73-16206 *
NASA-CASE-ARC-11116-1	c 33	N82-24420 *	NASA-CASE-ARC-11543-1	c 54	N86-28620 *	NASA-CASE-ERC-10292	c 14	N72-25410 *
NASA-CASE-ARC-11117-1	c 52	N81-14612 *	NASA-CASE-ARC-11547-1	c 36	N87-17026 *	NASA-CASE-ERC-10307	c 08	N72-21198 *
NASA-CASE-ARC-11118-1	c 52	N81-29764 *	NASA-CASE-ARC-11548-1	c 27	N87-25469 *	NASA-CASE-ERC-10324	c 07	N72-25173 *
NASA-CASE-ARC-11118-2	c 52	N81-14613 *	NASA-CASE-ARC-11610-1	c 54	N86-28619 *	NASA-CASE-ERC-10325	c 15	N72-25457 *
NASA-CASE-ARC-11120-1	c 52	N80-18691 *	NASA-CASE-ARC-11611-1	c 74	N87-28416 *	NASA-CASE-ERC-10338	c 04	N72-33072 *
NASA-CASE-ARC-11121-1	c 25	N79-14169 *	NASA-CASE-ARC-11613-1	c 33	N87-28833 *	NASA-CASE-ERC-10339-1	c 18	N73-30532 *
NASA-CASE-ARC-11154-1	c 25	N80-23383 *	NASA-CASE-ARC-11615-1SB	c 24	N86-28131 *	NASA-CASE-ERC-10350	c 14	N73-20474 *
NASA-CASE-ARC-11157-1	c 37	N80-18393 *	NASA-CASE-ARC-11616-1	c 54	N86-28618 *	NASA-CASE-ERC-10363	c 18	N72-25541 *
NASA-CASE-ARC-11158-1	c 09	N82-24212 *	NASA-CASE-ARC-11620-1	c 37	N87-25573 *	NASA-CASE-ERC-10364	c 18	N72-25540 *
NASA-CASE-ARC-11164-1	c 44	N83-34448 *	NASA-CASE-ARC-11622-1	c 44	N88-14492 *	NASA-CASE-ERC-10365-1	c 31	N73-32749 *
NASA-CASE-ARC-11167-1	c 52	N81-25662 *	NASA-CASE-ARC-11631-1	c 34	N87-21255 *	NASA-CASE-ERC-10392	c 21	N73-14692 *
NASA-CASE-ARC-11169-1	c 24	N79-24062 *	NASA-CASE-ARC-11633-1	c 08	N87-23631 *	NASA-CASE-ERC-10403-1	c 10	N73-26228 *
NASA-CASE-ARC-11170-1	c 27	N79-11215 *	NASA-CASE-ARC-11634-1	c 36	N88-14350 *	NASA-CASE-ERC-10412-1	c 09	N73-12211 *
NASA-CASE-ARC-11174-1	c 24	N81-13999 *	NASA-CASE-ARC-11635-1	c 18	N90-16860 *	NASA-CASE-ERC-10419-1	c 03	N75-30132 *
NASA-CASE-ARC-11176-1	c 27	N82-18389 *	NASA-CASE-ARC-11636-1	c 05	N88-28914 *	NASA-CASE-ERC-10439	c 02	N73-19004 *
NASA-CASE-ARC-11176-2	c 27	N81-27271 *	NASA-CASE-ARC-11641-1	c 24	N88-18628 *	NASA-CASE-ERC-10468	c 09	N72-20206 *



## NASA-CASE-ERC-10552

## REPORT NUMBER INDEX

NASA-CASE-ERC-10552	c 09	N71-12539 *	NASA-CASE-GSC-10518-1	c 15	N72-22489 *	NASA-CASE-GSC-11577-1	c 37	N75-15992 *
NASA-CASE-ERC-11020	c 14	N71-26774 *	NASA-CASE-GSC-10553-1	c 07	N71-19854 *	NASA-CASE-GSC-11577-3	c 24	N79-25143 *
NASA-CASE-FRC-10005	c 15	N71-26145 *	NASA-CASE-GSC-10554-1	c 08	N71-29033 *	NASA-CASE-GSC-11582-1	c 33	N75-19517 *
NASA-CASE-FRC-10010	c 10	N71-24862 *	NASA-CASE-GSC-10555-1	c 21	N71-27324 *	NASA-CASE-GSC-11600-1	c 35	N74-21019 *
NASA-CASE-FRC-10012	c 14	N72-17329 *	NASA-CASE-GSC-10556-1	c 31	N71-26537 *	NASA-CASE-GSC-11602-1	c 33	N74-21850 *
NASA-CASE-FRC-10019	c 15	N73-12487 *	NASA-CASE-GSC-10557-1	c 31	N71-26537 *	NASA-CASE-GSC-11617-1	c 33	N74-32660 *
NASA-CASE-FRC-10022	c 12	N71-26546 *	NASA-CASE-GSC-10564	c 10	N71-29135 *	NASA-CASE-GSC-11619-1	c 34	N75-12222 *
NASA-CASE-FRC-10029-2	c 05	N72-25121 *	NASA-CASE-GSC-10565-1	c 06	N72-25149 *	NASA-CASE-GSC-11620-1	c 34	N74-23039 *
NASA-CASE-FRC-10029	c 09	N71-24618 *	NASA-CASE-GSC-10566-1	c 15	N72-18477 *	NASA-CASE-GSC-11623-1	c 33	N75-25040 *
NASA-CASE-FRC-10036	c 09	N72-22200 *	NASA-CASE-GSC-10590-1	c 31	N73-14853 *	NASA-CASE-GSC-11743-1	c 32	N75-24981 *
NASA-CASE-FRC-10038	c 15	N72-20444 *	NASA-CASE-GSC-10607-1	c 15	N72-20442 *	NASA-CASE-GSC-11744-1	c 33	N75-26243 *
NASA-CASE-FRC-10049-1	c 04	N74-13420 *	NASA-CASE-GSC-10614-1	c 09	N72-11224 *	NASA-CASE-GSC-11746-1	c 36	N75-19654 *
NASA-CASE-FRC-10051-1	c 35	N74-13129 *	NASA-CASE-GSC-10640-1	c 28	N72-18766 *	NASA-CASE-GSC-11752-1	c 77	N75-20140 *
NASA-CASE-FRC-10053	c 14	N70-35587 *	NASA-CASE-GSC-10656-1	c 09	N72-25249 *	NASA-CASE-GSC-11760-1	c 33	N75-19516 *
NASA-CASE-FRC-10060-1	c 14	N73-27379 *	NASA-CASE-GSC-10667-1	c 10	N71-33129 *	NASA-CASE-GSC-11782-1	c 74	N76-30053 *
NASA-CASE-FRC-10063	c 01	N71-12217 *	NASA-CASE-GSC-10668-1	c 07	N71-28430 *	NASA-CASE-GSC-11783-1	c 33	N75-19516 *
NASA-CASE-FRC-10071-1	c 32	N74-20813 *	NASA-CASE-GSC-10669-1	c 03	N72-20031 *	NASA-CASE-GSC-11786-1	c 24	N76-24363 *
NASA-CASE-FRC-10072-1	c 33	N74-14939 *	NASA-CASE-GSC-10695-1	c 09	N72-25259 *	NASA-CASE-GSC-11789-1	c 33	N77-14333 *
NASA-CASE-FRC-10081-1	c 37	N77-14477 *	NASA-CASE-GSC-10700	c 23	N71-30027 *	NASA-CASE-GSC-11824-1	c 33	N77-26386 *
NASA-CASE-FRC-10090-1	c 33	N78-18308 *	NASA-CASE-GSC-10709-1	c 28	N71-25213 *	NASA-CASE-GSC-11829-1	c 35	N75-27331 *
NASA-CASE-FRC-10092-1	c 05	N79-12061 *	NASA-CASE-GSC-10710-1	c 28	N71-27094 *	NASA-CASE-GSC-11839-1	c 60	N77-14751 *
NASA-CASE-FRC-10093-1	c 35	N80-20560 *	NASA-CASE-GSC-10735-1	c 10	N71-26085 *	NASA-CASE-GSC-11839-2	c 60	N78-10709 *
NASA-CASE-FRC-10111-1	c 37	N79-10419 *	NASA-CASE-GSC-10780-1	c 14	N72-16283 *	NASA-CASE-GSC-11839-3	c 60	N77-32731 *
NASA-CASE-FRC-10112-1	c 35	N81-26431 *	NASA-CASE-GSC-10786-1	c 10	N72-28241 *	NASA-CASE-GSC-11844-1	c 33	N75-19522 *
NASA-CASE-FRC-10113-1	c 33	N80-26599 *	NASA-CASE-GSC-10791-1	c 15	N73-14469 *	NASA-CASE-GSC-11849-1	c 33	N76-16332 *
NASA-CASE-FRC-10116-1	c 33	N79-23345 *	NASA-CASE-GSC-10814-1	c 03	N73-20039 *	NASA-CASE-GSC-11862-1	c 32	N76-18295 *
NASA-CASE-FRC-11005-1	c 06	N82-16075 *	NASA-CASE-GSC-10835-1	c 09	N72-33205 *	NASA-CASE-GSC-11868-1	c 17	N76-22245 *
NASA-CASE-FRC-11007-2	c 05	N82-26277 *	NASA-CASE-GSC-10878-1	c 10	N72-22236 *	NASA-CASE-GSC-11877-1	c 74	N76-18913 *
NASA-CASE-FRC-11009-1	c 06	N80-18036 *	NASA-CASE-GSC-10879-1	c 14	N72-25413 *	NASA-CASE-GSC-11883-1	c 37	N77-19458 *
NASA-CASE-FRC-11012-1	c 52	N80-23969 *	NASA-CASE-GSC-10880-1	c 08	N72-11172 *	NASA-CASE-GSC-11883-2	c 37	N78-31426 *
NASA-CASE-FRC-11013-1	c 43	N81-17499 *	NASA-CASE-GSC-10890-1	c 21	N73-30640 *	NASA-CASE-GSC-11889-1	c 35	N76-16393 *
NASA-CASE-FRC-11014-1	c 33	N82-18494 *	NASA-CASE-GSC-10891-1	c 10	N71-26626 *	NASA-CASE-GSC-11892-1	c 35	N76-15433 *
NASA-CASE-FRC-11024-1	c 02	N80-28300 *	NASA-CASE-GSC-10903-1	c 14	N73-12444 *	NASA-CASE-GSC-11893-1	c 35	N76-31489 *
NASA-CASE-FRC-11025-1	c 33	N82-24417 *	NASA-CASE-GSC-10913	c 15	N72-22491 *	NASA-CASE-GSC-11895-1	c 35	N76-15436 *
NASA-CASE-FRC-11026-1	c 24	N82-24296 *	NASA-CASE-GSC-10945-1	c 21	N72-31637 *	NASA-CASE-GSC-11898-1	c 32	N77-30309 *
NASA-CASE-FRC-11029-1	c 06	N81-17057 *	NASA-CASE-GSC-10949-1	c 07	N71-28965 *	NASA-CASE-GSC-11902-1	c 38	N77-17495 *
NASA-CASE-FRC-11041-1	c 33	N82-18493 *	NASA-CASE-GSC-10975-1	c 08	N73-13187 *	NASA-CASE-GSC-11909	c 32	N74-20863 *
NASA-CASE-FRC-11042-1	c 60	N82-24839 *	NASA-CASE-GSC-10984-1	c 37	N75-26371 *	NASA-CASE-GSC-11917-2	c 51	N76-29891 *
NASA-CASE-FRC-11043-1	c 06	N83-33882 *	NASA-CASE-GSC-10990-1	c 09	N73-26195 *	NASA-CASE-GSC-11924-1	c 33	N76-27472 *
NASA-CASE-FRC-11044-1	c 37	N81-33483 *	NASA-CASE-GSC-11013-1	c 09	N73-19234 *	NASA-CASE-GSC-11925-1	c 33	N76-18353 *
NASA-CASE-FRC-11052-1	c 04	N82-23231 *	NASA-CASE-GSC-11018-1	c 31	N73-30829 *	NASA-CASE-GSC-11960-1	c 37	N77-14479 *
NASA-CASE-FRC-11055-1	c 33	N80-29583 *	NASA-CASE-GSC-11046-1	c 07	N73-28013 *	NASA-CASE-GSC-11963-1	c 33	N77-10429 *
NASA-CASE-FRC-11058-1	c 85	N82-33288 *	NASA-CASE-GSC-11063-1	c 37	N77-27400 *	NASA-CASE-GSC-11968-1	c 32	N76-15329 *
NASA-CASE-FRC-11062-1	c 71	N82-16800 *	NASA-CASE-GSC-11074-1	c 14	N73-28489 *	NASA-CASE-GSC-11974-1	c 37	N77-19458 *
NASA-CASE-FRC-11065-1	c 05	N83-19737 *	NASA-CASE-GSC-11077-1	c 02	N73-13008 *	NASA-CASE-GSC-11975-1	c 37	N77-19458 *
NASA-CASE-FRC-11068-1	c 35	N84-12443 *	NASA-CASE-GSC-11079-1	c 37	N75-18574 *	NASA-CASE-GSC-11976-1	c 43	N78-10529 *
NASA-CASE-FRC-11072-1	c 05	N83-27975 *	NASA-CASE-GSC-11092-2	c 04	N73-27052 *	NASA-CASE-GSC-11978-1	c 37	N77-17464 *
NASA-CASE-GSC-10007	c 18	N71-16046 *	NASA-CASE-GSC-11095-1	c 14	N72-10375 *	NASA-CASE-GSC-11989-1	c 74	N77-28932 *
NASA-CASE-GSC-10017-1	c 44	N82-24643 *	NASA-CASE-GSC-11126-1	c 09	N72-25253 *	NASA-CASE-GSC-11989-1	c 34	N77-32413 *
NASA-CASE-GSC-10018-1	c 44	N82-24644 *	NASA-CASE-GSC-11127-1	c 09	N75-24758 *	NASA-CASE-GSC-12010-1	c 74	N78-18905 *
NASA-CASE-GSC-10019-1	c 44	N82-24641 *	NASA-CASE-GSC-11133-1	c 23	N72-11568 *	NASA-CASE-GSC-12017-1	c 32	N77-30308 *
NASA-CASE-GSC-10021-1	c 09	N71-24595 *	NASA-CASE-GSC-11139	c 09	N71-27016 *	NASA-CASE-GSC-12018-1	c 33	N77-14334 *
NASA-CASE-GSC-10022-1	c 10	N71-25882 *	NASA-CASE-GSC-11149-1	c 15	N73-30457 *	NASA-CASE-GSC-12022-1	c 44	N76-28635 *
NASA-CASE-GSC-10041-1	c 10	N71-19418 *	NASA-CASE-GSC-11163-1	c 15	N73-32360 *	NASA-CASE-GSC-12022-2	c 44	N78-24609 *
NASA-CASE-GSC-10062	c 14	N71-15605 *	NASA-CASE-GSC-11169-2	c 05	N73-32011 *	NASA-CASE-GSC-12023-1	c 44	N76-28635 *
NASA-CASE-GSC-10064-1	c 10	N72-22235 *	NASA-CASE-GSC-11182-1	c 15	N75-13007 *	NASA-CASE-GSC-12030-1	c 44	N78-24608 *
NASA-CASE-GSC-10065-1	c 10	N71-27136 *	NASA-CASE-GSC-11188-1	c 14	N73-32320 *	NASA-CASE-GSC-12032-2	c 43	N82-13465 *
NASA-CASE-GSC-10072	c 18	N71-14014 *	NASA-CASE-GSC-11188-2	c 21	N73-19630 *	NASA-CASE-GSC-12039-1	c 51	N77-22794 *
NASA-CASE-GSC-10082-1	c 10	N72-20221 *	NASA-CASE-GSC-11188-3	c 74	N74-20008 *	NASA-CASE-GSC-12044-1	c 60	N78-17691 *
NASA-CASE-GSC-10083-1	c 30	N71-16090 *	NASA-CASE-GSC-11205-1	c 15	N73-25513 *	NASA-CASE-GSC-12046-1	c 52	N79-14750 *
NASA-CASE-GSC-10087-1	c 02	N71-19287 *	NASA-CASE-GSC-11211-1	c 03	N72-25020 *	NASA-CASE-GSC-12053-1	c 32	N77-28346 *
NASA-CASE-GSC-10087-2	c 21	N71-13958 *	NASA-CASE-GSC-11214-1	c 06	N73-13128 *	NASA-CASE-GSC-12058-1	c 74	N77-26942 *
NASA-CASE-GSC-10087-3	c 07	N72-12080 *	NASA-CASE-GSC-11215-1	c 09	N73-28083 *	NASA-CASE-GSC-12059-1	c 35	N77-27366 *
NASA-CASE-GSC-10087-4	c 07	N73-20174 *	NASA-CASE-GSC-11222-1	c 16	N73-32391 *	NASA-CASE-GSC-12075-1	c 32	N77-31350 *
NASA-CASE-GSC-10097-1	c 08	N71-27210 *	NASA-CASE-GSC-11239-1	c 10	N73-25241 *	NASA-CASE-GSC-12077-1	c 35	N77-24455 *
NASA-CASE-GSC-10114-1	c 10	N71-27366 *	NASA-CASE-GSC-11262-1	c 36	N74-21091 *	NASA-CASE-GSC-12081-2	c 52	N82-22875 *
NASA-CASE-GSC-10118-1	c 07	N71-24621 *	NASA-CASE-GSC-11291-1	c 25	N72-33696 *	NASA-CASE-GSC-12082-1	c 54	N76-22914 *
NASA-CASE-GSC-10131-1	c 07	N71-24624 *	NASA-CASE-GSC-11296-1	c 23	N73-30666 *	NASA-CASE-GSC-12082-2	c 52	N81-25661 *
NASA-CASE-GSC-10135	c 33	N78-17296 *	NASA-CASE-GSC-11302-1	c 14	N73-13416 *	NASA-CASE-GSC-12083-1	c 73	N78-32848 *
NASA-CASE-GSC-10185-1	c 07	N72-12081 *	NASA-CASE-GSC-11304-1	c 06	N72-21105 *	NASA-CASE-GSC-12088-1	c 74	N78-13874 *
NASA-CASE-GSC-10186	c 08	N71-33110 *	NASA-CASE-GSC-11340-1	c 10	N72-33230 *	NASA-CASE-GSC-12110-1	c 27	N77-32308 *
NASA-CASE-GSC-10188-1	c 23	N71-24725 *	NASA-CASE-GSC-11353-1	c 74	N74-21304 *	NASA-CASE-GSC-12111-2	c 33	N81-29342 *
NASA-CASE-GSC-10216-1	c 23	N71-26722 *	NASA-CASE-GSC-11358-1	c 06	N73-26100 *	NASA-CASE-GSC-12115-1	c 62	N76-31946 *
NASA-CASE-GSC-10218-1	c 15	N72-21465 *	NASA-CASE-GSC-11367-1	c 44	N74-19692 *	NASA-CASE-GSC-12137-1	c 33	N78-32338 *
NASA-CASE-GSC-10220-1	c 07	N71-27233 *	NASA-CASE-GSC-11367	c 10	N71-26374 *	NASA-CASE-GSC-12138-1	c 33	N79-20314 *
NASA-CASE-GSC-10221-1	c 09	N72-23171 *	NASA-CASE-GSC-11368-1	c 09	N73-32108 *	NASA-CASE-GSC-12143-1	c 35	N77-32456 *
NASA-CASE-GSC-10225-1	c 06	N73-27086 *	NASA-CASE-GSC-11394-1	c 09	N73-32109 *	NASA-CASE-GSC-12145-1	c 33	N78-32339 *
NASA-CASE-GSC-10299-1	c 09	N71-24804 *	NASA-CASE-GSC-11425-1	c 76	N74-20329 *	NASA-CASE-GSC-12146-1	c 33	N78-32340 *
NASA-CASE-GSC-10303	c 15	N72-22487 *	NASA-CASE-GSC-11425-2	c 76	N75-25730 *	NASA-CASE-GSC-12147-1	c 32	N81-27341 *
NASA-CASE-GSC-10306-1	c 15	N71-24694 *	NASA-CASE-GSC-11428-1	c 32	N74-20864 *	NASA-CASE-GSC-12148-1	c 32	N79-20296 *
NASA-CASE-GSC-10344-1	c 03	N72-27053 *	NASA-CASE-GSC-11434-1	c 34	N74-27859 *	NASA-CASE-GSC-12150-1	c 32	N79-11265 *
NASA-CASE-GSC-10349-1	c 44	N82-24645 *	NASA-CASE-GSC-11444-1	c 14	N73-28490 *	NASA-CASE-GSC-12158-1	c 51	N83-27569 *
NASA-CASE-GSC-10350-1	c 44	N82-24642 *	NASA-CASE-GSC-11445-1	c 31	N74-27902 *	NASA-CASE-GSC-12168-1	c 31	N79-17029 *
NASA-CASE-GSC-10361-1	c 18	N72-23581 *	NASA-CASE-GSC-11466-1	c 33	N74-20860 *	NASA-CASE-GSC-12171-1	c 33	N79-28416 *
NASA-CASE-GSC-10366-1	c 10	N71-18772 *	NASA-CASE-GSC-11479-1	c 35	N74-28097 *	NASA-CASE-GSC-12173-1	c 51	N79-10694 *
NASA-CASE-GSC-10373-1	c 07	N71-19773 *	NASA-CASE-GSC-11487-1	c 14	N73-30393 *	NASA-CASE-GSC-12173-2	c 33	N79-12321 *
NASA-CASE-GSC-10376-1	c 14	N71-27407 *	NASA-CASE-GSC-11492-1	c 35	N74-26949 *	NASA-CASE-GSC-12191-1	c 31	N80-32583 *
NASA-CASE-GSC-10390-1	c 07	N72-11149 *	NASA-CASE-GSC-11513-1	c 33	N74-20862 *	NASA-CASE-GSC-12194-2	c 20	N82-18314 *
NASA-CASE-GSC-10413	c 10	N71-26531 *	NASA-CASE-GSC-11514-1	c 03	N72-24037 *	NASA-CASE-GSC-12207-1	c 24	N79-14156 *
NASA-CASE-GSC-10441-1	c 14	N71-27325 *	NASA-CASE-GSC-11531-1	c 52	N74-27566 *	NASA-CASE-GSC-12219-1	c 35	N80-18359 *
NASA-CASE-GSC-10452	c 07	N71-12396 *	NASA-CASE-GSC-11533-1	c 14	N73-13435 *	NASA-CASE-GSC-12223-1	c 60	N83-25378 *
NASA-CASE-GSC-10487-1	c 03	N71-24719 *	NASA-CASE-GSC-11551-1	c 37	N76-18459 *	NASA-CASE-GSC-12225-1	c 74	N79-14891 *
NASA-CASE-GSC-10503-1	c 14	N72-20381 *	NASA-CASE-GSC-11553-1	c 35	N74-15831 *	NASA-CASE-GSC-12228-1	c 33	N79-10338 *
NASA-CASE-GSC-10514-1	c 14	N72-20379 *	NASA-CASE-GSC-11560-1	c 33	N74-20861 *	NASA-CASE-GSC-12237-1	c 36	N80-14384 *
			NASA-CASE-GSC-11569-1	c 89	N74-30886 *	NASA-CASE-GSC-12253-1	c 34	N79-31523 *
			NASA-CASE-GSC-11571-1	c 36	N77-25499 *	NASA-CASE-GSC-12263-1	c 74	N79-20857 *

## REPORT NUMBER INDEX

## NASA-CASE-LAR-10106-1

NASA-CASE-GSC-12273-1	c 35	N80-21719 *	NASA-CASE-GSC-12961-1	c 33	N87-22895 *	NASA-CASE-HQN-10880-1	c 17	N78-17140 *
NASA-CASE-GSC-12274-1	c 37	N79-28550 *	NASA-CASE-GSC-12970-1	c 08	N88-23808 *	NASA-CASE-HQN-10888-1	c 44	N79-14527 *
NASA-CASE-GSC-12289-1	c 37	N80-32717 *	NASA-CASE-GSC-13008-1	c 27	N88-23894 *	NASA-CASE-HQN-10931-2	c 27	N82-29452 *
NASA-CASE-GSC-12291-1	c 76	N80-18951 *	NASA-CASE-GSC-13008-2	c 27	N90-16949 *			
NASA-CASE-GSC-12297-1	c 37	N79-28549 *	NASA-CASE-GSC-13018-1	c 33	N87-21232 *	NASA-CASE-KSC-10002	c 10	N71-25865 *
NASA-CASE-GSC-12303-1	c 24	N79-31347 *	NASA-CASE-GSC-13019-1	c 34	N88-29133 *	NASA-CASE-KSC-10003	c 10	N73-13235 *
NASA-CASE-GSC-12318-1	c 37	N80-23655 *	NASA-CASE-GSC-13027-1-CU	c 35	N91-27522 *	NASA-CASE-KSC-10020	c 10	N71-27338 *
NASA-CASE-GSC-12321-1	c 36	N82-16396 *	NASA-CASE-GSC-13063-2-CU	c 33	N92-16197 *	NASA-CASE-KSC-10031	c 15	N72-22486 *
NASA-CASE-GSC-12322-1	c 37	N80-14398 *	NASA-CASE-GSC-13112-1	c 31	N89-29578 *	NASA-CASE-KSC-10108	c 14	N73-25461 *
NASA-CASE-GSC-12324-1	c 33	N81-33403 *	NASA-CASE-GSC-13127-1	c 37	N91-17388 *	NASA-CASE-KSC-10126	c 11	N71-24985 *
NASA-CASE-GSC-12331-1	c 18	N80-14183 *	NASA-CASE-GSC-13141-1	c 37	N92-23548 *	NASA-CASE-KSC-10162	c 09	N72-11225 *
NASA-CASE-GSC-12334-1	c 36	N79-14362 *	NASA-CASE-GSC-13153-1	c 37	N91-17387 *	NASA-CASE-KSC-10164	c 07	N71-33108 *
NASA-CASE-GSC-12347-1	c 33	N80-18286 *	NASA-CASE-GSC-13161-1	c 37	N92-33634 *	NASA-CASE-KSC-10198	c 11	N71-28629 *
NASA-CASE-GSC-12348-1	c 74	N80-24149 *	NASA-CASE-GSC-13173-1	c 33	N90-23635 *	NASA-CASE-KSC-10242	c 15	N72-23497 *
NASA-CASE-GSC-12354-1	c 35	N82-24471 *	NASA-CASE-GSC-13175-1	c 74	N92-29133 *	NASA-CASE-KSC-10278	c 05	N72-16015 *
NASA-CASE-GSC-12357-1	c 74	N80-21140 *	NASA-CASE-GSC-13179-1	c 33	N91-26438 *	NASA-CASE-KSC-10294	c 14	N72-18411 *
NASA-CASE-GSC-12360-1	c 33	N81-19392 *	NASA-CASE-GSC-13187-1	c 33	N92-29153 *	NASA-CASE-KSC-10326	c 08	N72-21197 *
NASA-CASE-GSC-12365-1	c 32	N80-28578 *	NASA-CASE-GSC-13189-2	c 37	N92-29151 *	NASA-CASE-KSC-10392	c 07	N73-26117 *
NASA-CASE-GSC-12399-1	c 33	N81-25299 *	NASA-CASE-GSC-13194-1	c 36	N93-18287 *	NASA-CASE-KSC-10393	c 09	N72-21247 *
NASA-CASE-GSC-12411-1	c 33	N81-14221 *	NASA-CASE-GSC-13196-1	c 60	N92-29132 *	NASA-CASE-KSC-10397	c 08	N72-25206 *
NASA-CASE-GSC-12415-1	c 33	N82-24419 *	NASA-CASE-GSC-13197-1	c 18	N91-27201 *	NASA-CASE-KSC-10513	c 15	N72-25453 *
NASA-CASE-GSC-12420-1	c 33	N82-16340 *	NASA-CASE-GSC-13199-1	c 27	N90-23541 *	NASA-CASE-KSC-10521	c 07	N73-20176 *
NASA-CASE-GSC-12429-1	c 37	N81-14320 *	NASA-CASE-GSC-13200-1	c 37	N92-21500 *	NASA-CASE-KSC-10565	c 09	N72-25250 *
NASA-CASE-GSC-12430-1	c 60	N82-16747 *	NASA-CASE-GSC-13212-1	c 43	N91-32546 *	NASA-CASE-KSC-10595	c 08	N73-12176 *
NASA-CASE-GSC-12442-2	c 33	N90-20282 *	NASA-CASE-GSC-13220-1	c 37	N92-29140 *	NASA-CASE-KSC-10615	c 15	N73-12486 *
NASA-CASE-GSC-12447-2	c 60	N84-28491 *	NASA-CASE-GSC-13230-1	c 37	N92-28754 *	NASA-CASE-KSC-10622-1	c 31	N72-21893 *
NASA-CASE-GSC-12508-1	c 04	N84-22546 *	NASA-CASE-GSC-13237-1	c 33	N91-14550 *	NASA-CASE-KSC-10626	c 14	N73-27378 *
NASA-CASE-GSC-12513-1	c 31	N81-19343 *	NASA-CASE-GSC-13239-1	c 37	N91-31656 *	NASA-CASE-KSC-10639	c 15	N73-26472 *
NASA-CASE-GSC-12515-1	c 33	N81-26360 *	NASA-CASE-GSC-13240-1	c 35	N92-10186 *	NASA-CASE-KSC-10644	c 09	N72-27227 *
NASA-CASE-GSC-12517-1	c 37	N83-32067 *	NASA-CASE-GSC-13251-1	c 37	N92-29120 *	NASA-CASE-KSC-10647-1	c 10	N73-31273 *
NASA-CASE-GSC-12518-1	c 33	N82-24421 *	NASA-CASE-GSC-13261-1	c 37	N92-29138 *	NASA-CASE-KSC-10654-1	c 07	N73-30115 *
NASA-CASE-GSC-12528-1	c 74	N81-24900 *	NASA-CASE-GSC-13265-1	c 76	N91-14066 *	NASA-CASE-KSC-10698	c 07	N73-20175 *
NASA-CASE-GSC-12550-1	c 37	N84-28082 *	NASA-CASE-GSC-13280-1	c 33	N91-27479 *	NASA-CASE-KSC-10723-1	c 37	N75-13265 *
NASA-CASE-GSC-12551-1	c 18	N83-28064 *	NASA-CASE-GSC-13306-1	c 52	N92-33032 *	NASA-CASE-KSC-10728-1	c 14	N73-32319 *
NASA-CASE-GSC-12553-1	c 34	N83-28356 *	NASA-CASE-GSC-13343-1	c 36	N91-28557 *	NASA-CASE-KSC-10729-1	c 09	N73-32110 *
NASA-CASE-GSC-12555-1	c 33	N86-19515 *	NASA-CASE-GSC-13344-1	c 26	N92-29094 *	NASA-CASE-KSC-10730-1	c 14	N73-32318 *
NASA-CASE-GSC-12558-1	c 36	N85-21639 *	NASA-CASE-GSC-13346-1	c 37	N92-29099 *	NASA-CASE-KSC-10731-1	c 33	N74-27862 *
NASA-CASE-GSC-12560-1	c 52	N82-29863 *	NASA-CASE-GSC-13348-2	c 52	N93-14708 *	NASA-CASE-KSC-10736-1	c 33	N75-19521 *
NASA-CASE-GSC-12565-1	c 36	N84-14509 *	NASA-CASE-GSC-13356-1	c 37	N92-24243 *	NASA-CASE-KSC-10750-1	c 35	N75-12270 *
NASA-CASE-GSC-12566-1	c 33	N83-34189 *	NASA-CASE-GSC-13356-2	c 37	N93-17629 *	NASA-CASE-KSC-10769-1	c 33	N74-29556 *
NASA-CASE-GSC-12567-1	c 33	N84-22887 *	NASA-CASE-GSC-13358-1	c 37	N93-14710 *	NASA-CASE-KSC-10782-1	c 33	N75-30431 *
NASA-CASE-GSC-12582-2	c 37	N85-20337 *	NASA-CASE-GSC-13359-1	c 37	N92-23378 *	NASA-CASE-KSC-10807-1	c 33	N75-26246 *
NASA-CASE-GSC-12584-1	c 37	N82-32730 *	NASA-CASE-GSC-13359-2	c 37	N93-18286 *	NASA-CASE-KSC-10834-1	c 33	N76-14371 *
NASA-CASE-GSC-12587-1	c 35	N82-32659 *	NASA-CASE-GSC-13360-1	c 37	N92-23377 *	NASA-CASE-KSC-10849-1	c 52	N77-14738 *
NASA-CASE-GSC-12592-1	c 36	N84-28065 *	NASA-CASE-GSC-13369-1	c 33	N92-15331 *	NASA-CASE-KSC-10899-1	c 33	N79-18193 *
NASA-CASE-GSC-12595-1	c 33	N82-24422 *	NASA-CASE-GSC-13370-1	c 37	N93-31317 *	NASA-CASE-KSC-11004-1	c 54	N77-30749 *
NASA-CASE-GSC-12608-1	c 74	N83-10900 *	NASA-CASE-GSC-13370-2	c 37	N93-18288 *	NASA-CASE-KSC-11008-1	c 33	N79-22373 *
NASA-CASE-GSC-12609-1	c 36	N81-22344 *	NASA-CASE-GSC-13376-1	c 37	N92-21728 *	NASA-CASE-KSC-11010-1	c 74	N79-12890 *
NASA-CASE-GSC-12609-2	c 36	N83-29681 *	NASA-CASE-GSC-13377-1	c 63	N93-14701 *	NASA-CASE-KSC-11018-1	c 33	N79-10337 *
NASA-CASE-GSC-12614-1	c 74	N83-32577 *	NASA-CASE-GSC-13386-1	c 38	N92-29154 *	NASA-CASE-KSC-11023-1	c 32	N79-23310 *
NASA-CASE-GSC-12619-1	c 37	N84-12491 *	NASA-CASE-GSC-13406-1	c 35	N92-33614 *	NASA-CASE-KSC-11025-1	c 32	N83-13323 *
NASA-CASE-GSC-12620-1	c 37	N84-12492 *	NASA-CASE-GSC-13408-1	c 18	N92-24244 *	NASA-CASE-KSC-11030-1	c 52	N77-25772 *
NASA-CASE-GSC-12632-1	c 33	N83-36355 *	NASA-CASE-GSC-13415-1	c 37	N92-33616 *	NASA-CASE-KSC-11031-1	c 33	N79-11315 *
NASA-CASE-GSC-12636-1	c 31	N83-27058 *	NASA-CASE-GSC-13422-1	c 33	N92-23462 *	NASA-CASE-KSC-11034-1	c 44	N78-32542 *
NASA-CASE-GSC-12640-1	c 74	N84-11920 *	NASA-CASE-GSC-13430-1	c 37	N93-14712 *	NASA-CASE-KSC-11035-1	c 35	N78-28411 *
NASA-CASE-GSC-12643-1	c 37	N83-26078 *	NASA-CASE-GSC-13435-1	c 37	N93-29505 *	NASA-CASE-KSC-11042-1	c 09	N82-29330 *
NASA-CASE-GSC-12645-1	c 33	N84-16454 *	NASA-CASE-GSC-13442-1	c 37	N92-23547 *	NASA-CASE-KSC-11042-2	c 02	N81-26073 *
NASA-CASE-GSC-12646-1	c 33	N83-34191 *	NASA-CASE-GSC-13450-1	c 44	N92-23463 *	NASA-CASE-KSC-11047-1	c 74	N78-14889 *
NASA-CASE-GSC-12650-1	c 33	N84-14421 *	NASA-CASE-GSC-13451-1	c 39	N92-23549 *	NASA-CASE-KSC-11048-1	c 62	N81-24779 *
NASA-CASE-GSC-12652-1	c 52	N84-34913 *	NASA-CASE-GSC-13451-1	c 39	N93-20118 *	NASA-CASE-KSC-11057-1	c 33	N79-14305 *
NASA-CASE-GSC-12662-1	c 35	N84-33765 *	NASA-CASE-GSC-13460-1	c 33	N93-26104 *	NASA-CASE-KSC-11064-1	c 31	N81-14137 *
NASA-CASE-GSC-12683-1	c 74	N83-36898 *	NASA-CASE-GSC-13506-1	c 35	N93-26103 *	NASA-CASE-KSC-11065-1	c 33	N81-26359 *
NASA-CASE-GSC-12686-1	c 27	N83-34039 *				NASA-CASE-KSC-11069-1	c 52	N79-26772 *
NASA-CASE-GSC-12697-1	c 44	N83-28574 *	NASA-CASE-HQN-00573-1	c 37	N79-33468 *	NASA-CASE-KSC-11076-1	c 34	N81-26402 *
NASA-CASE-GSC-12726-1	c 37	N83-34323 *	NASA-CASE-HQN-00936	c 31	N71-29050 *	NASA-CASE-KSC-11085-1	c 54	N81-24724 *
NASA-CASE-GSC-12756-1	c 74	N84-23248 *	NASA-CASE-HQN-00937	c 07	N71-28979 *	NASA-CASE-KSC-11097-1	c 27	N82-33520 *
NASA-CASE-GSC-12761-1	c 74	N86-32266 *	NASA-CASE-HQN-00938	c 33	N71-29053 *	NASA-CASE-KSC-11099-1	c 47	N82-24779 *
NASA-CASE-GSC-12762-1	c 37	N84-28083 *	NASA-CASE-HQN-10037-1	c 14	N73-27376 *	NASA-CASE-KSC-11104-1	c 74	N83-29032 *
NASA-CASE-GSC-12770-1	c 25	N83-29324 *	NASA-CASE-HQN-10069	c 33	N75-27251 *	NASA-CASE-KSC-11155-1	c 04	N86-19304 *
NASA-CASE-GSC-12771-1	c 34	N84-14461 *	NASA-CASE-HQN-10274-1	c 27	N82-29451 *	NASA-CASE-KSC-11170-1	c 33	N83-36356 *
NASA-CASE-GSC-12773-2	c 33	N87-23904 *	NASA-CASE-HQN-10328-2	c 27	N82-29454 *	NASA-CASE-KSC-11218-1	c 09	N85-19990 *
NASA-CASE-GSC-12782-1	c 33	N88-14271 *	NASA-CASE-HQN-10364	c 06	N71-27363 *	NASA-CASE-KSC-11282-1	c 85	N87-21755 *
NASA-CASE-GSC-12788-1	c 33	N85-29145 *	NASA-CASE-HQN-10439	c 21	N72-21624 *	NASA-CASE-KSC-11285-1	c 32	N86-27513 *
NASA-CASE-GSC-12789-1	c 35	N85-20294 *	NASA-CASE-HQN-10462	c 25	N75-29192 *	NASA-CASE-KSC-11304-2	c 28	N91-14495 *
NASA-CASE-GSC-12795-1	c 35	N86-19580 *	NASA-CASE-HQN-10537-1	c 06	N72-10138 *	NASA-CASE-KSC-11322-1	c 54	N89-29953 *
NASA-CASE-GSC-12799-1	c 31	N85-21404 *	NASA-CASE-HQN-10541-1	c 07	N71-26291 *	NASA-CASE-KSC-11368-1	c 37	N89-13786 *
NASA-CASE-GSC-12804-1	c 33	N86-20668 *	NASA-CASE-HQN-10541-2	c 15	N71-27135 *	NASA-CASE-KSC-11386-1	c 35	N90-22023 *
NASA-CASE-GSC-12808-1	c 25	N85-21279 *	NASA-CASE-HQN-10541-3	c 23	N72-23695 *	NASA-CASE-KSC-11387-1	c 29	N90-20236 *
NASA-CASE-GSC-12812-1	c 34	N83-35307 *	NASA-CASE-HQN-10541-4	c 16	N71-27183 *	NASA-CASE-KSC-11392-1	c 74	N90-22383 *
NASA-CASE-GSC-12816-1	c 76	N86-20150 *	NASA-CASE-HQN-10542-1	c 74	N75-25706 *	NASA-CASE-KSC-11395-1-CU	c 34	N91-21473 *
NASA-CASE-GSC-12817-1	c 33	N85-29146 *	NASA-CASE-HQN-10595-1	c 27	N82-29455 *			
NASA-CASE-GSC-12818-1	c 33	N85-29147 *	NASA-CASE-HQN-10638-1	c 15	N73-30460 *	NASA-CASE-LAR-02743	c 14	N73-32324 *
NASA-CASE-GSC-12821-2	c 33	N91-31530 *	NASA-CASE-HQN-10654-1	c 16	N73-13489 *	NASA-CASE-LAR-10000	c 14	N73-30394 *
NASA-CASE-GSC-12825-1	c 74	N86-28732 *	NASA-CASE-HQN-10683	c 14	N71-34389 *	NASA-CASE-LAR-10007-1	c 05	N71-11195 *
NASA-CASE-GSC-12849-1	c 74	N86-26190 *	NASA-CASE-HQN-10703	c 21	N73-13643 *	NASA-CASE-LAR-10031	c 15	N72-22484 *
NASA-CASE-GSC-12851-1	c 35	N85-30281 *	NASA-CASE-HQN-10740-1	c 72	N74-19310 *	NASA-CASE-LAR-10056	c 05	N71-12351 *
NASA-CASE-GSC-12880-1	c 26	N86-32550 *	NASA-CASE-HQN-10756-1	c 14	N72-25428 *	NASA-CASE-LAR-10061-1	c 15	N72-31483 *
NASA-CASE-GSC-12883-1	c 27	N85-29044 *	NASA-CASE-HQN-10780	c 14	N71-30265 *	NASA-CASE-LAR-10073-1	c 37	N76-24575 *
NASA-CASE-GSC-12892-1	c 32	N89-14374 *	NASA-CASE-HQN-10781	c 23	N71-30292 *	NASA-CASE-LAR-10076-1	c 05	N73-20137 *
NASA-CASE-GSC-12897-1	c 74	N87-21679 *	NASA-CASE-HQN-10790-1	c 36	N74-11313 *	NASA-CASE-LAR-10083-1	c 15	N71-27006 *
NASA-CASE-GSC-12899-1	c 33	N86-20669 *	NASA-CASE-HQN-10792-1	c 33	N74-11049 *	NASA-CASE-LAR-10089-1	c 34	N74-23066 *
NASA-CASE-GSC-12911-1	c 74	N86-29650 *	NASA-CASE-HQN-10832-1	c 71	N74-21014 *	NASA-CASE-LAR-10098	c 32	N71-26681 *
NASA-CASE-GSC-12944-1	c 52	N86-19885 *	NASA-CASE-HQN-10841-1	c 73	N78-19920 *	NASA-CASE-LAR-10102-1	c 05	N72-23085 *
NASA-CASE-GSC-12956-1	c 35	N87-14671 *	NASA-CASE-HQN-10844-1	c 36	N75-19653 *	NASA-CASE-LAR-10103-1	c 15	N73-14468 *
NASA-CASE-GSC-12957-1	c 37	N87-17038 *	NASA-CASE-HQN-10862-1	c 44	N76-29699 *	NASA-CASE-LAR-10105-1	c 34	N74-15552 *
NASA-CASE-GSC-12958-1	c 33	N86-32624 *	NASA-CASE-HQN-10876-1	c 33	N76-27473 *	NASA-CASE-LAR-10106-1	c 15	N71-27169 *

## NASA-CASE-LAR-10121-1

## REPORT NUMBER INDEX

NASA-CASE-LAR-10121-1	c 15	N71-26721 *	NASA-CASE-LAR-10753-1	c 08	N74-30421 *	NASA-CASE-LAR-11726-1	c 37	N76-27568 *
NASA-CASE-LAR-10128-1	c 08	N73-20217 *	NASA-CASE-LAR-10756-1	c 32	N73-26910 *	NASA-CASE-LAR-11729-1	c 34	N79-12359 *
NASA-CASE-LAR-10129-1	c 15	N73-25512 *	NASA-CASE-LAR-10765-1	c 32	N73-20740 *	NASA-CASE-LAR-11745-1	c 32	N80-29539 *
NASA-CASE-LAR-10129-2	c 37	N74-20063 *	NASA-CASE-LAR-10773-3	c 51	N77-25769 *	NASA-CASE-LAR-11782-1	c 74	N77-20882 *
NASA-CASE-LAR-10135-1	c 09	N79-21083 *	NASA-CASE-LAR-10774	c 10	N71-13545 *	NASA-CASE-LAR-11797-1	c 05	N81-19087 *
NASA-CASE-LAR-10137-1	c 09	N72-22204 *	NASA-CASE-LAR-10776-1	c 02	N74-10034 *	NASA-CASE-LAR-11821-1	c 26	N80-28492 *
NASA-CASE-LAR-10163-1	c 09	N72-25247 *	NASA-CASE-LAR-10782-1	c 31	N74-14133 *	NASA-CASE-LAR-11825-1	c 35	N77-22449 *
NASA-CASE-LAR-10168-1	c 33	N74-22865 *	NASA-CASE-LAR-10782-2	c 31	N75-13111 *	NASA-CASE-LAR-11827-1	c 32	N77-10392 *
NASA-CASE-LAR-10170-1	c 37	N74-11301 *	NASA-CASE-LAR-10799-2	c 34	N76-17317 *	NASA-CASE-LAR-11828-1	c 27	N78-32261 *
NASA-CASE-LAR-10173-1	c 27	N71-14090 *	NASA-CASE-LAR-10800-1	c 33	N72-27959 *	NASA-CASE-LAR-11855-1	c 37	N81-14319 *
NASA-CASE-LAR-10176-1	c 14	N72-20380 *	NASA-CASE-LAR-10805-2	c 34	N77-18382 *	NASA-CASE-LAR-11859-1	c 35	N79-14349 *
NASA-CASE-LAR-10180-1	c 06	N71-13461 *	NASA-CASE-LAR-10806-1	c 35	N74-32877 *	NASA-CASE-LAR-11868-2	c 08	N79-14108 *
NASA-CASE-LAR-10184	c 14	N72-22445 *	NASA-CASE-LAR-10812-1	c 09	N74-17955 *	NASA-CASE-LAR-11869-1	c 74	N78-27904 *
NASA-CASE-LAR-10193-1	c 15	N71-27146 *	NASA-CASE-LAR-10815-1	c 16	N72-22520 *	NASA-CASE-LAR-11883-1	c 09	N77-27131 *
NASA-CASE-LAR-10194-1	c 34	N74-30608 *	NASA-CASE-LAR-10836-1	c 26	N72-27784 *	NASA-CASE-LAR-11889-1	c 35	N79-26372 *
NASA-CASE-LAR-10195-1	c 15	N73-19458 *	NASA-CASE-LAR-10841-1	c 31	N74-27900 *	NASA-CASE-LAR-11889-2	c 37	N78-27424 *
NASA-CASE-LAR-10203-1	c 15	N72-16330 *	NASA-CASE-LAR-10855-1	c 14	N73-13415 *	NASA-CASE-LAR-11898-1	c 24	N78-10214 *
NASA-CASE-LAR-10204	c 14	N71-27215 *	NASA-CASE-LAR-10862-1	c 35	N74-15092 *	NASA-CASE-LAR-11898-2	c 24	N78-17149 *
NASA-CASE-LAR-10208-1	c 35	N76-18400 *	NASA-CASE-LAR-10868-1	c 33	N74-11050 *	NASA-CASE-LAR-11900-1	c 37	N79-14382 *
NASA-CASE-LAR-10218-1	c 09	N70-34559 *	NASA-CASE-LAR-10894-1	c 18	N73-14584 *	NASA-CASE-LAR-11902-1	c 27	N78-17206 *
NASA-CASE-LAR-10226-1	c 14	N73-19419 *	NASA-CASE-LAR-10900-1	c 37	N74-23064 *	NASA-CASE-LAR-11903-2	c 71	N84-14873 *
NASA-CASE-LAR-10241-1	c 54	N74-14845 *	NASA-CASE-LAR-10907-1	c 35	N76-29551 *	NASA-CASE-LAR-11919-1	c 07	N78-27121 *
NASA-CASE-LAR-10249-1	c 02	N71-26110 *	NASA-CASE-LAR-10910-1	c 35	N74-13132 *	NASA-CASE-LAR-11922-1	c 25	N79-24073 *
NASA-CASE-LAR-10253-1	c 09	N72-25258 *	NASA-CASE-LAR-10913	c 14	N72-16282 *	NASA-CASE-LAR-11932-1	c 05	N78-32086 *
NASA-CASE-LAR-10256-1	c 85	N74-34672 *	NASA-CASE-LAR-10941-1	c 37	N74-21057 *	NASA-CASE-LAR-11970-2	c 08	N81-19130 *
NASA-CASE-LAR-10270-1	c 32	N72-25877 *	NASA-CASE-LAR-10941-2	c 37	N79-13364 *	NASA-CASE-LAR-11973-1	c 35	N78-27384 *
NASA-CASE-LAR-10274-1	c 14	N71-17626 *	NASA-CASE-LAR-10953-1	c 17	N73-27446 *	NASA-CASE-LAR-11995-1	c 28	N77-10213 *
NASA-CASE-LAR-10276-1	c 09	N75-15662 *	NASA-CASE-LAR-10970-1	c 33	N76-14372 *	NASA-CASE-LAR-11999-1	c 44	N80-18552 *
NASA-CASE-LAR-10294-1	c 26	N72-28762 *	NASA-CASE-LAR-10994-1	c 24	N75-13032 *	NASA-CASE-LAR-12007-3	c 35	N84-16523 *
NASA-CASE-LAR-10295-1	c 35	N74-21062 *	NASA-CASE-LAR-11021-1	c 32	N76-14321 *	NASA-CASE-LAR-12009-1	c 44	N78-15560 *
NASA-CASE-LAR-10305	c 14	N71-26137 *	NASA-CASE-LAR-11027-1	c 35	N74-18088 *	NASA-CASE-LAR-12016-1	c 39	N78-15512 *
NASA-CASE-LAR-10310-1	c 10	N73-20253 *	NASA-CASE-LAR-11042-1	c 33	N75-27252 *	NASA-CASE-LAR-12018-1	c 20	N78-24275 *
NASA-CASE-LAR-10311-1	c 16	N73-16536 *	NASA-CASE-LAR-11051-1	c 15	N76-14158 *	NASA-CASE-LAR-12019-1	c 24	N78-17150 *
NASA-CASE-LAR-10317-1	c 32	N71-16103 *	NASA-CASE-LAR-11053-1	c 25	N74-18551 *	NASA-CASE-LAR-12027-1	c 39	N79-22537 *
NASA-CASE-LAR-10318-1	c 31	N74-18089 *	NASA-CASE-LAR-11059-1	c 76	N75-12810 *	NASA-CASE-LAR-12045-1	c 34	N77-24423 *
NASA-CASE-LAR-10319-1	c 14	N73-32322 *	NASA-CASE-LAR-11069-1	c 35	N75-12272 *	NASA-CASE-LAR-12046-1	c 25	N78-15210 *
NASA-CASE-LAR-10320-1	c 09	N72-23172 *	NASA-CASE-LAR-11071-1	c 35	N75-19611 *	NASA-CASE-LAR-12052-1	c 18	N81-29152 *
NASA-CASE-LAR-10323-1	c 12	N71-17573 *	NASA-CASE-LAR-11074-1	c 51	N75-13502 *	NASA-CASE-LAR-12054-1	c 27	N79-33316 *
NASA-CASE-LAR-10337-1	c 24	N75-20260 *	NASA-CASE-LAR-11110-1	c 34	N75-26282 *	NASA-CASE-LAR-12054-2	c 27	N81-14078 *
NASA-CASE-LAR-10348-1	c 11	N73-12264 *	NASA-CASE-LAR-11112-1	c 32	N76-15330 *	NASA-CASE-LAR-12065-1	c 24	N81-14000 *
NASA-CASE-LAR-10365-1	c 05	N72-27102 *	NASA-CASE-LAR-11138	c 12	N71-20436 *	NASA-CASE-LAR-12065-2	c 24	N81-33235 *
NASA-CASE-LAR-10372	c 09	N71-18599 *	NASA-CASE-LAR-11139-1	c 35	N74-32878 *	NASA-CASE-LAR-12077-1	c 31	N81-25259 *
NASA-CASE-LAR-10373-1	c 18	N71-26155 *	NASA-CASE-LAR-11141-1	c 07	N74-32418 *	NASA-CASE-LAR-12095-1	c 31	N81-25258 *
NASA-CASE-LAR-10385-2	c 70	N74-13436 *	NASA-CASE-LAR-11144-1	c 25	N75-26043 *	NASA-CASE-LAR-12099-1	c 27	N80-16158 *
NASA-CASE-LAR-10385-3	c 74	N78-15879 *	NASA-CASE-LAR-11155-1	c 35	N74-15091 *	NASA-CASE-LAR-12106-1	c 71	N78-14867 *
NASA-CASE-LAR-10403	c 21	N71-11766 *	NASA-CASE-LAR-11173-1	c 35	N75-19614 *	NASA-CASE-LAR-12147-1	c 31	N79-11246 *
NASA-CASE-LAR-10409-1	c 31	N74-21059 *	NASA-CASE-LAR-11201-1	c 35	N78-24515 *	NASA-CASE-LAR-12148-1	c 44	N82-24640 *
NASA-CASE-LAR-10416-1	c 24	N74-30001 *	NASA-CASE-LAR-11207-1	c 35	N75-19613 *	NASA-CASE-LAR-12149-2	c 09	N79-31228 *
NASA-CASE-LAR-10423-1	c 23	N82-29358 *	NASA-CASE-LAR-11208-1	c 44	N78-32539 *	NASA-CASE-LAR-12175-1	c 05	N82-28279 *
NASA-CASE-LAR-10426-1	c 09	N74-19528 *	NASA-CASE-LAR-11211-1	c 37	N75-12326 *	NASA-CASE-LAR-12176-1	c 36	N80-16321 *
NASA-CASE-LAR-10439-1	c 33	N73-27796 *	NASA-CASE-LAR-11213-1	c 35	N75-15014 *	NASA-CASE-LAR-12177-1	c 36	N81-24422 *
NASA-CASE-LAR-10440-1	c 14	N73-32323 *	NASA-CASE-LAR-11224-1	c 37	N76-18456 *	NASA-CASE-LAR-12178-1	c 74	N80-21138 *
NASA-CASE-LAR-10450-1	c 37	N74-27905 *	NASA-CASE-LAR-11237-1	c 35	N75-19612 *	NASA-CASE-LAR-12181-1	c 27	N78-17205 *
NASA-CASE-LAR-10483-1	c 14	N73-32327 *	NASA-CASE-LAR-11252-1	c 05	N75-25914 *	NASA-CASE-LAR-12183-1	c 36	N79-18307 *
NASA-CASE-LAR-10489-1	c 31	N74-18124 *	NASA-CASE-LAR-11263-1	c 35	N75-33369 *	NASA-CASE-LAR-12195-1	c 31	N81-27324 *
NASA-CASE-LAR-10489-2	c 31	N74-32920 *	NASA-CASE-LAR-11310-1	c 07	N77-28118 *	NASA-CASE-LAR-12196-1	c 33	N81-26358 *
NASA-CASE-LAR-10496-1	c 14	N72-22437 *	NASA-CASE-LAR-11326-1	c 35	N75-33368 *	NASA-CASE-LAR-12205-1	c 44	N80-20810 *
NASA-CASE-LAR-10503-1	c 09	N72-21248 *	NASA-CASE-LAR-11341-1	c 36	N75-19655 *	NASA-CASE-LAR-12215-1	c 08	N79-23097 *
NASA-CASE-LAR-10507-1	c 11	N72-25284 *	NASA-CASE-LAR-11352-1	c 33	N75-26245 *	NASA-CASE-LAR-12230-1	c 35	N79-14347 *
NASA-CASE-LAR-10511-1	c 09	N72-29172 *	NASA-CASE-LAR-11354-1	c 35	N75-27330 *	NASA-CASE-LAR-12250-1	c 14	N81-26161 *
NASA-CASE-LAR-10513-1	c 07	N72-25170 *	NASA-CASE-LAR-11361-1	c 44	N77-22607 *	NASA-CASE-LAR-12251-1	c 74	N80-27185 *
NASA-CASE-LAR-10523-1	c 14	N72-22444 *	NASA-CASE-LAR-11370-1	c 35	N80-28686 *	NASA-CASE-LAR-12259-2	c 54	N86-22112 *
NASA-CASE-LAR-10539-1	c 17	N73-12547 *	NASA-CASE-LAR-11387-1	c 04	N76-20114 *	NASA-CASE-LAR-12260-1	c 35	N79-10390 *
NASA-CASE-LAR-10541-1	c 15	N72-32487 *	NASA-CASE-LAR-11387-2	c 04	N77-19056 *	NASA-CASE-LAR-12261-1	c 02	N80-20224 *
NASA-CASE-LAR-10544-1	c 37	N74-13178 *	NASA-CASE-LAR-11389-1	c 33	N77-26387 *	NASA-CASE-LAR-12264-1	c 15	N78-32168 *
NASA-CASE-LAR-10545-1	c 09	N72-21244 *	NASA-CASE-LAR-11390-1	c 32	N77-21267 *	NASA-CASE-LAR-12268-1	c 08	N81-24106 *
NASA-CASE-LAR-10546-1	c 11	N72-25287 *	NASA-CASE-LAR-11397-1	c 27	N75-29263 *	NASA-CASE-LAR-12269-1	c 35	N80-18358 *
NASA-CASE-LAR-10547-1	c 31	N74-13177 *	NASA-CASE-LAR-11405-1	c 45	N76-31714 *	NASA-CASE-LAR-12275-1	c 35	N79-18296 *
NASA-CASE-LAR-10549-1	c 31	N73-13898 *	NASA-CASE-LAR-11428-1	c 35	N74-34857 *	NASA-CASE-LAR-12285-1	c 35	N80-28687 *
NASA-CASE-LAR-10550-1	c 09	N74-30597 *	NASA-CASE-LAR-11434-1	c 35	N76-22509 *	NASA-CASE-LAR-12304-1	c 35	N80-20559 *
NASA-CASE-LAR-10551-1	c 25	N74-12813 *	NASA-CASE-LAR-11435-1	c 35	N76-15432 *	NASA-CASE-LAR-12308-1	c 35	N81-29407 *
NASA-CASE-LAR-10557	c 02	N72-11018 *	NASA-CASE-LAR-11458-1	c 35	N76-16392 *	NASA-CASE-LAR-12315-1	c 37	N82-24490 *
NASA-CASE-LAR-10574-1	c 11	N73-13257 *	NASA-CASE-LAR-11465-1	c 37	N76-21554 *	NASA-CASE-LAR-12320-1	c 54	N81-27806 *
NASA-CASE-LAR-10578-1	c 12	N73-25262 *	NASA-CASE-LAR-11476-1	c 07	N76-27232 *	NASA-CASE-LAR-12321-1	c 35	N82-24470 *
NASA-CASE-LAR-10585-1	c 02	N76-22154 *	NASA-CASE-LAR-11490-1	c 39	N78-16387 *	NASA-CASE-LAR-12326-1	c 02	N81-14968 *
NASA-CASE-LAR-10586-1	c 19	N74-15089 *	NASA-CASE-LAR-11500-1	c 35	N76-24523 *	NASA-CASE-LAR-12328-1	c 36	N82-32712 *
NASA-CASE-LAR-10590-1	c 15	N70-26819 *	NASA-CASE-LAR-11549-1	c 37	N77-11397 *	NASA-CASE-LAR-12344-1	c 43	N80-18498 *
NASA-CASE-LAR-10595-1	c 35	N74-16135 *	NASA-CASE-LAR-11551-1	c 44	N80-29834 *	NASA-CASE-LAR-12361-1	c 37	N83-19091 *
NASA-CASE-LAR-10612-1	c 12	N73-28144 *	NASA-CASE-LAR-11552-1	c 35	N76-14429 *	NASA-CASE-LAR-12363-1	c 35	N82-31659 *
NASA-CASE-LAR-10620-1	c 09	N72-25255 *	NASA-CASE-LAR-11563-1	c 37	N77-23462 *	NASA-CASE-LAR-12363-2	c 33	N83-24763 *
NASA-CASE-LAR-10623-1	c 14	N73-30395 *	NASA-CASE-LAR-11570-1	c 34	N76-18364 *	NASA-CASE-LAR-12372-1	c 37	N82-18601 *
NASA-CASE-LAR-10626-1	c 19	N74-21015 *	NASA-CASE-LAR-11575-1	c 02	N76-16014 *	NASA-CASE-LAR-12375-1	c 32	N79-24203 *
NASA-CASE-LAR-10629-1	c 35	N75-33367 *	NASA-CASE-LAR-11607-1	c 32	N77-14292 *	NASA-CASE-LAR-12393-1	c 34	N83-34221 *
NASA-CASE-LAR-10634-1	c 37	N74-18123 *	NASA-CASE-LAR-11617-2	c 35	N78-32397 *	NASA-CASE-LAR-12396-1	c 02	N84-28732 *
NASA-CASE-LAR-10642-1	c 07	N73-31270 *	NASA-CASE-LAR-11645-1	c 02	N77-10001 *	NASA-CASE-LAR-12406-1	c 05	N81-26114 *
NASA-CASE-LAR-10668-1	c 06	N73-16106 *	NASA-CASE-LAR-11648-1	c 35	N77-14407 *	NASA-CASE-LAR-12412-1	c 08	N82-24205 *
NASA-CASE-LAR-10670-1	c 06	N73-30097 *	NASA-CASE-LAR-11649-1	c 51	N77-27677 *	NASA-CASE-LAR-12441-1	c 09	N82-23254 *
NASA-CASE-LAR-10670-2	c 15	N74-27360 *	NASA-CASE-LAR-11658-1	c 37	N77-14478 *	NASA-CASE-LAR-12458-1	c 44	N83-21503 *
NASA-CASE-LAR-10682-1	c 02	N73-26004 *	NASA-CASE-LAR-11667-1	c 52	N76-19785 *	NASA-CASE-LAR-12465-1	c 33	N82-26572 *
NASA-CASE-LAR-10686	c 14	N71-28935 *	NASA-CASE-LAR-11674-1	c 07	N76-18117 *	NASA-CASE-LAR-12468-1	c 08	N82-32373 *
NASA-CASE-LAR-10688-1	c 37	N74-21056 *	NASA-CASE-LAR-11675-1	c 45	N76-17656 *	NASA-CASE-LAR-12469-1	c 35	N83-21311 *
NASA-CASE-LAR-10717-1	c 21	N73-30641 *	NASA-CASE-LAR-11688-1	c 24	N82-26384 *	NASA-CASE-LAR-12471-1	c 52	N82-29862 *
NASA-CASE-LAR-10726-1	c 14	N73-20475 *	NASA-CASE-LAR-11690-1	c 35	N80-14371 *	NASA-CASE-LAR-12474-1	c 35	N82-26628 *
NASA-CASE-LAR-10728-1	c 14	N73-12445 *	NASA-CASE-LAR-11695-2	c 37	N81-24443 *	NASA-CASE-LAR-12482-1	c 37	N82-32732 *
NASA-CASE-LAR-10730-1	c 33	N74-10223 *	NASA-CASE-LAR-11709-1	c 37	N76-27567 *	NASA-CASE-LAR-12495-1	c 44	N83-28573 *
NASA-CASE-LAR-10739-1	c 14	N73-16484 *	NASA-CASE-LAR-11711-1	c 74	N78-17866 *	NASA-CASE-LAR-12513-1	c 44	N82-32841 *

## REPORT NUMBER INDEX

## NASA-CASE-LAR-14159-1-CU

NASA-CASE-LAR-12518-1	c 06	N86-27280 *	NASA-CASE-LAR-13155-1	c 05	N86-19310 *	NASA-CASE-LAR-13662-1	c 37	N88-14359 *
NASA-CASE-LAR-12520-1	c 51	N81-28698 *	NASA-CASE-LAR-13169-1	c 37	N86-25791 *	NASA-CASE-LAR-13669-1	c 27	N92-29157 *
NASA-CASE-LAR-12531-1	c 35	N83-29651 *	NASA-CASE-LAR-13173-1	c 05	N87-14314 *	NASA-CASE-LAR-13678-1	c 76	N90-24168 *
NASA-CASE-LAR-12532-1	c 09	N82-11088 *	NASA-CASE-LAR-13181-1	c 31	N85-29083 *	NASA-CASE-LAR-13678-3	c 35	N93-14714 *
NASA-CASE-LAR-12541-1	c 05	N84-22551 *	NASA-CASE-LAR-13198-1	c 37	N87-23983 *	NASA-CASE-LAR-13680-1	c 35	N87-25561 *
NASA-CASE-LAR-12552-1	c 35	N82-11431 *	NASA-CASE-LAR-13202-1	c 33	N88-23942 *	NASA-CASE-LAR-13689-1-NP	c 35	N87-23941 *
NASA-CASE-LAR-12562-1	c 08	N81-26152 *	NASA-CASE-LAR-13215-1	c 02	N89-14224 *	NASA-CASE-LAR-13696-1	c 37	N90-20409 *
NASA-CASE-LAR-12588-1	c 34	N85-21568 *	NASA-CASE-LAR-13220-1	c 34	N86-12547 *	NASA-CASE-LAR-13705-1	c 39	N88-25011 *
NASA-CASE-LAR-12592-1	c 36	N82-13415 *	NASA-CASE-LAR-13225-1	c 24	N90-25197 *	NASA-CASE-LAR-13710-1	c 35	N90-17117 *
NASA-CASE-LAR-12595-1	c 33	N82-26571 *	NASA-CASE-LAR-13226-1	c 27	N85-34282 *	NASA-CASE-LAR-13719-1	c 37	N89-12867 *
NASA-CASE-LAR-12602-1	c 39	N83-32081 *	NASA-CASE-LAR-13230-1	c 24	N84-34571 *	NASA-CASE-LAR-13724-1	c 38	N90-23756 *
NASA-CASE-LAR-12615-1	c 05	N84-12154 *	NASA-CASE-LAR-13233-1	c 05	N84-33400 *	NASA-CASE-LAR-13732-1	c 27	N87-25474 *
NASA-CASE-LAR-12620-1	c 24	N82-32417 *	NASA-CASE-LAR-13243-1	c 35	N85-34375 *	NASA-CASE-LAR-13734-1-CU	c 09	N90-20096 *
NASA-CASE-LAR-12624-1	c 01	N83-35992 *	NASA-CASE-LAR-13250-1	c 37	N86-27630 *	NASA-CASE-LAR-13738-1	c 18	N87-29586 *
NASA-CASE-LAR-12630-1	c 06	N84-27733 *	NASA-CASE-LAR-13254-1-CU	c 35	N86-29174 *	NASA-CASE-LAR-13740-1	c 35	N90-22770 *
NASA-CASE-LAR-12633-1	c 33	N82-24416 *	NASA-CASE-LAR-13255-1	c 02	N87-16793 *	NASA-CASE-LAR-13741-1-SB	c 25	N90-20180 *
NASA-CASE-LAR-12638-1	c 04	N84-14132 *	NASA-CASE-LAR-13256-1	c 36	N86-29204 *	NASA-CASE-LAR-13742-1	c 02	N92-21588 *
NASA-CASE-LAR-12640-1	c 27	N82-11206 *	NASA-CASE-LAR-13257-1	c 25	N84-32447 *	NASA-CASE-LAR-13747-1-CU	c 32	N89-28672 *
NASA-CASE-LAR-12642-1	c 27	N81-29229 *	NASA-CASE-LAR-13262-1	c 23	N85-28973 *	NASA-CASE-LAR-13761-1	c 34	N90-20323 *
NASA-CASE-LAR-12644-1	c 37	N84-28084 *	NASA-CASE-LAR-13268-1	c 35	N87-14669 *	NASA-CASE-LAR-13772-1	c 36	N92-31788 *
NASA-CASE-LAR-12650-1	c 52	N84-28388 *	NASA-CASE-LAR-13273-2	c 33	N90-20320 *	NASA-CASE-LAR-13773-1	c 20	N90-19298 *
NASA-CASE-LAR-12650-2	c 52	N84-28389 *	NASA-CASE-LAR-13280-1	c 08	N87-20999 *	NASA-CASE-LAR-13775-1	c 35	N90-23706 *
NASA-CASE-LAR-12654-1	c 33	N83-36357 *	NASA-CASE-LAR-13286-1	c 02	N88-14071 *	NASA-CASE-LAR-13776-1	c 35	N88-29149 *
NASA-CASE-LAR-12659-1	c 33	N82-26570 *	NASA-CASE-LAR-13292-1	c 27	N86-24841 *	NASA-CASE-LAR-13777-1	c 05	N90-20078 *
NASA-CASE-LAR-12686-1	c 35	N84-14491 *	NASA-CASE-LAR-13294-1	c 35	N86-32696 *	NASA-CASE-LAR-13780-1	c 18	N92-33013 *
NASA-CASE-LAR-12705-1	c 25	N82-26396 *	NASA-CASE-LAR-13300-1-CU	c 35	N89-14407 *	NASA-CASE-LAR-13785-1	c 70	N91-21824 *
NASA-CASE-LAR-12706-1	c 35	N84-12444 *	NASA-CASE-LAR-13306-1	c 82	N87-29372 *	NASA-CASE-LAR-13797-1	c 35	N88-30108 *
NASA-CASE-LAR-12709-1	c 35	N82-28604 *	NASA-CASE-LAR-13310-1	c 32	N87-14559 *	NASA-CASE-LAR-13798-1	c 32	N89-25363 *
NASA-CASE-LAR-12719-1	c 44	N83-34449 *	NASA-CASE-LAR-13316-1	c 27	N86-27450 *	NASA-CASE-LAR-13805-1	c 37	N92-30097 *
NASA-CASE-LAR-12720-1	c 44	N83-21504 *	NASA-CASE-LAR-13316-2	c 27	N87-14515 *	NASA-CASE-LAR-13816-1	c 35	N90-22025 *
NASA-CASE-LAR-12723-1	c 27	N85-20123 *	NASA-CASE-LAR-13318-1	c 27	N87-14516 *	NASA-CASE-LAR-13817-1	c 26	N90-21170 *
NASA-CASE-LAR-12723-2	c 27	N84-22746 *	NASA-CASE-LAR-13351-1	c 27	N86-31727 *	NASA-CASE-LAR-13817-2	c 39	N92-29155 *
NASA-CASE-LAR-12728-1	c 35	N83-32026 *	NASA-CASE-LAR-13353-1	c 27	N86-29039 *	NASA-CASE-LAR-13817-4	c 39	N92-29101 *
NASA-CASE-LAR-12738-2	c 37	N85-30335 *	NASA-CASE-LAR-13384-1	c 27	N86-20561 *	NASA-CASE-LAR-13817-5	c 39	N92-28757 *
NASA-CASE-LAR-12743-1	c 35	N84-28019 *	NASA-CASE-LAR-13387-1	c 74	N88-25302 *	NASA-CASE-LAR-13821-1	c 27	N90-16950 *
NASA-CASE-LAR-12751-1	c 15	N84-16231 *	NASA-CASE-LAR-13388-1	c 25	N92-33611 *	NASA-CASE-LAR-13823-1	c 35	N93-29084 *
NASA-CASE-LAR-12772-1	c 33	N83-16626 *	NASA-CASE-LAR-13388-2	c 25	N93-20570 *	NASA-CASE-LAR-13825-1	c 31	N92-16162 *
NASA-CASE-LAR-12775-1	c 27	N83-28240 *	NASA-CASE-LAR-13392-1-CU	c 19	N91-14412 *	NASA-CASE-LAR-13826-1	c 35	N88-29150 *
NASA-CASE-LAR-12775-2	c 27	N85-21349 *	NASA-CASE-LAR-13393-1	c 54	N87-29118 *	NASA-CASE-LAR-13832-1	c 28	N93-18274 *
NASA-CASE-LAR-12785-1	c 37	N84-16561 *	NASA-CASE-LAR-13400-1	c 02	N93-22015 *	NASA-CASE-LAR-13853-1	c 35	N89-14423 *
NASA-CASE-LAR-12786-1	c 37	N84-28085 *	NASA-CASE-LAR-13407-1	c 33	N87-28831 *	NASA-CASE-LAR-13854-1-CU	c 04	N91-31120 *
NASA-CASE-LAR-12787-2	c 08	N85-19985 *	NASA-CASE-LAR-13411-1-SB	c 18	N88-23828 *	NASA-CASE-LAR-13855-1	c 37	N91-14615 *
NASA-CASE-LAR-12801-1	c 37	N88-23982 *	NASA-CASE-LAR-13434-1	c 37	N90-23742 *	NASA-CASE-LAR-13870-1-CU	c 05	N92-21587 *
NASA-CASE-LAR-12807-1	c 24	N84-11214 *	NASA-CASE-LAR-13435-1	c 37	N88-23981 *	NASA-CASE-LAR-13875-1	c 05	N91-27156 *
NASA-CASE-LAR-12838-1	c 27	N83-34040 *	NASA-CASE-LAR-13436-1-CU	c 02	N88-23759 *	NASA-CASE-LAR-13887-1	c 36	N92-16290 *
NASA-CASE-LAR-12843-1	c 02	N84-11136 *	NASA-CASE-LAR-13438-1	c 31	N89-12786 *	NASA-CASE-LAR-13889-1	c 39	N88-30160 *
NASA-CASE-LAR-12847-1	c 33	N83-16633 *	NASA-CASE-LAR-13440-1	c 71	N87-21653 *	NASA-CASE-LAR-13898-1	c 37	N91-15544 *
NASA-CASE-LAR-12852-1	c 05	N89-11738 *	NASA-CASE-LAR-13444-1-CU	c 27	N87-22847 *	NASA-CASE-LAR-13901-1-NP	c 52	N90-21519 *
NASA-CASE-LAR-12858-1	c 27	N83-34041 *	NASA-CASE-LAR-13444-2-CU	c 23	N89-12667 *	NASA-CASE-LAR-13901-2	c 52	N92-11621 *
NASA-CASE-LAR-12858-2	c 27	N85-20124 *	NASA-CASE-LAR-13447-1	c 27	N88-18725 *	NASA-CASE-LAR-13902-1	c 27	N90-23546 *
NASA-CASE-LAR-12862-1	c 27	N84-27886 *	NASA-CASE-LAR-13448-1	c 27	N90-21198 *	NASA-CASE-LAR-13910-2-CU	c 27	N91-31307 *
NASA-CASE-LAR-12864-1	c 37	N85-30336 *	NASA-CASE-LAR-13450-1	c 27	N87-28657 *	NASA-CASE-LAR-13924-1-CU	c 26	N89-28621 *
NASA-CASE-LAR-12868-1	c 37	N85-21651 *	NASA-CASE-LAR-13452-1	c 27	N87-22848 *	NASA-CASE-LAR-13925-1	c 27	N92-21711 *
NASA-CASE-LAR-12870-1	c 36	N84-16542 *	NASA-CASE-LAR-13453-1	c 37	N88-14361 *	NASA-CASE-LAR-13925-2	c 27	N93-11059 *
NASA-CASE-LAR-12881-1	c 27	N84-14323 *	NASA-CASE-LAR-13455-1	c 32	N87-21206 *	NASA-CASE-LAR-13926-1	c 37	N90-22042 *
NASA-CASE-LAR-12882-1	c 35	N84-12445 *	NASA-CASE-LAR-13458-1	c 35	N88-23967 *	NASA-CASE-LAR-13944-1	c 35	N92-11336 *
NASA-CASE-LAR-12883-1	c 71	N83-17235 *	NASA-CASE-LAR-13465-1	c 27	N90-23544 *	NASA-CASE-LAR-13950-1	c 60	N92-30541 *
NASA-CASE-LAR-12884-1	c 18	N84-33450 *	NASA-CASE-LAR-13470-1	c 03	N88-14083 *	NASA-CASE-LAR-13952-1-SB	c 34	N90-19534 *
NASA-CASE-LAR-12887-3	c 24	N90-21822 *	NASA-CASE-LAR-13474-1-SB	c 26	N87-25455 *	NASA-CASE-LAR-13952-2-SB	c 34	N91-31596 *
NASA-CASE-LAR-12893-1	c 76	N85-30923 *	NASA-CASE-LAR-13476-1-CU	c 76	N87-29360 *	NASA-CASE-LAR-13963-1	c 76	N90-24150 *
NASA-CASE-LAR-12894-1	c 27	N85-20125 *	NASA-CASE-LAR-13486-1	c 16	N90-22584 *	NASA-CASE-LAR-13965-1-CU	c 23	N90-21118 *
NASA-CASE-LAR-12923-1	c 37	N84-12493 *	NASA-CASE-LAR-13489-1	c 18	N87-27713 *	NASA-CASE-LAR-13965-2-CU	c 23	N91-14418 *
NASA-CASE-LAR-12931-1	c 27	N84-22747 *	NASA-CASE-LAR-13490-1	c 18	N91-27199 *	NASA-CASE-LAR-13966-1	c 71	N91-27914 *
NASA-CASE-LAR-12931-2	c 27	N86-21675 *	NASA-CASE-LAR-13506-1	c 27	N89-12741 *	NASA-CASE-LAR-13968-1	c 71	N91-27913 *
NASA-CASE-LAR-12950-1	c 09	N84-34448 *	NASA-CASE-LAR-13508-1	c 35	N92-21710 *	NASA-CASE-LAR-13981-1	c 37	N91-21539 *
NASA-CASE-LAR-12958-1	c 44	N84-23019 *	NASA-CASE-LAR-13508-3-CU	c 09	N93-11057 *	NASA-CASE-LAR-13983-1	c 05	N90-23390 *
NASA-CASE-LAR-12966-1	c 35	N85-30282 *	NASA-CASE-LAR-13511-1	c 05	N88-23765 *	NASA-CASE-LAR-13985-1	c 24	N91-14430 *
NASA-CASE-LAR-12967-1	c 35	N84-22932 *	NASA-CASE-LAR-13512-1	c 35	N87-28884 *	NASA-CASE-LAR-13988-1	c 23	N89-11814 *
NASA-CASE-LAR-12968-1	c 60	N86-21154 *	NASA-CASE-LAR-13519-1	c 35	N88-23963 *	NASA-CASE-LAR-13989-1	c 35	N91-13694 *
NASA-CASE-LAR-12971-1	c 47	N84-28292 *	NASA-CASE-LAR-13522-1-SB	c 09	N87-25334 *	NASA-CASE-LAR-13992-1-CU	c 23	N91-27220 *
NASA-CASE-LAR-12979-1	c 05	N85-21147 *	NASA-CASE-LAR-13528-1	c 25	N88-29002 *	NASA-CASE-LAR-13996-1-SB	c 25	N90-15161 *
NASA-CASE-LAR-12980-1	c 27	N84-22749 *	NASA-CASE-LAR-13532-1	c 34	N91-14562 *	NASA-CASE-LAR-14001-1	c 27	N92-33008 *
NASA-CASE-LAR-12984-1	c 06	N87-22678 *	NASA-CASE-LAR-13542-2-SB	c 25	N90-20154 *	NASA-CASE-LAR-14004-1	c 63	N93-19024 *
NASA-CASE-LAR-12995-1	c 35	N84-22933 *	NASA-CASE-LAR-13548-1	c 09	N91-28175 *	NASA-CASE-LAR-14031-1	c 05	N90-20079 *
NASA-CASE-LAR-13006-1	c 17	N87-16863 *	NASA-CASE-LAR-13552-1-CU	c 33	N89-14385 *	NASA-CASE-LAR-14033-1	c 34	N92-28752 *
NASA-CASE-LAR-13009-1	c 37	N85-29285 *	NASA-CASE-LAR-13554-1	c 02	N89-12551 *	NASA-CASE-LAR-14033-2	c 34	N92-30024 *
NASA-CASE-LAR-13009-2	c 37	N87-22976 *	NASA-CASE-LAR-13555-1	c 23	N86-32526 *	NASA-CASE-LAR-14036-1	c 27	N91-13562 *
NASA-CASE-LAR-13014-1	c 09	N85-21178 *	NASA-CASE-LAR-13562-1	c 24	N90-25196 *	NASA-CASE-LAR-14046-1	c 31	N93-18857 *
NASA-CASE-LAR-13019-1	c 07	N85-35194 *	NASA-CASE-LAR-13562-2	c 24	N91-25199 *	NASA-CASE-LAR-14047-1	c 31	N93-19038 *
NASA-CASE-LAR-13028-1	c 52	N85-30618 *	NASA-CASE-LAR-13563-1	c 34	N91-23410 *	NASA-CASE-LAR-14048-1	c 31	N93-23611 *
NASA-CASE-LAR-13040-1	c 37	N85-29286 *	NASA-CASE-LAR-13564-1	c 35	N87-25558 *	NASA-CASE-LAR-14049-1	c 07	N89-23466 *
NASA-CASE-LAR-13053-1	c 43	N83-29783 *	NASA-CASE-LAR-13569-1	c 35	N89-12841 *	NASA-CASE-LAR-14050-1	c 31	N90-21216 *
NASA-CASE-LAR-13065-1	c 35	N85-20295 *	NASA-CASE-LAR-13580-1	c 37	N91-21541 *	NASA-CASE-LAR-14056-1	c 35	N90-23713 *
NASA-CASE-LAR-13076-1	c 08	N85-35200 *	NASA-CASE-LAR-13586-1	c 16	N92-10035 *	NASA-CASE-LAR-14078-1-CU	c 34	N90-27071 *
NASA-CASE-LAR-13081-1	c 37	N86-32737 *	NASA-CASE-LAR-13588-1	c 16	N93-20115 *	NASA-CASE-LAR-14088-1-CU	c 35	N92-33016 *
NASA-CASE-LAR-13098-1	c 31	N86-19479 *	NASA-CASE-LAR-13597-1-CU	c 25	N87-23713 *	NASA-CASE-LAR-14096-1	c 31	N91-31476 *
NASA-CASE-LAR-13100-1	c 37	N87-23982 *	NASA-CASE-LAR-13601-1-CU	c 27	N89-14337 *	NASA-CASE-LAR-14101-1	c 27	N91-15403 *
NASA-CASE-LAR-13111-1-CU	c 71	N87-21652 *	NASA-CASE-LAR-13616-1	c 74	N91-31950 *	NASA-CASE-LAR-14107-1	c 24	N91-25200 *
NASA-CASE-LAR-13113-1	c 31	N87-25492 *	NASA-CASE-LAR-13616-3	c 74	N92-29158 *	NASA-CASE-LAR-14116-1	c 05	N91-14345 *
NASA-CASE-LAR-13117-1	c 37	N86-25789 *	NASA-CASE-LAR-13628-1	c 35	N90-23707 *	NASA-CASE-LAR-14142-1	c 37	N92-27116 *
NASA-CASE-LAR-13118-2	c 27	N87-16907 *	NASA-CASE-LAR-13629-1	c 09	N91-14356 *	NASA-CASE-LAR-14145-1	c 27	N92-28751 *
NASA-CASE-LAR-13134-2	c 07	N87-16828 *	NASA-CASE-LAR-13630-1	c 08	N88-23809 *	NASA-CASE-LAR-14149-1-SB	c 14	N91-21176 *
NASA-CASE-LAR-13135-1	c 27	N86-19456 *	NASA-CASE-LAR-13632-1	c 26	N87-29650 *	NASA-CASE-LAR-14155-1-SB	c 25	N90-23517 *
NASA-CASE-LAR-13150-1	c 24	N87-27742 *	NASA-CASE-LAR-13633-1	c 27	N87-24575 *	NASA-CASE-LAR-14155-2-SB	c 25	N91-21270 *
NASA-CASE-LAR-13151-1	c 33	N87-21235 *	NASA-CASE-LAR-13638-1	c 31	N90-19427 *	NASA-CASE-LAR-14156-1	c 16	N90-16781 *
NASA-CASE-LAR-13153-1	c 71	N86-21276 *	NASA-CASE-LAR-13645-1	c 27	N93-25995 *	NASA-CASE-LAR-14159-1-CU	c 27	N92-31792 *

## NASA-CASE-LAR-14162-1

NASA-CASE-LAR-14162-1 ..... c 27 N90-15259 \* #  
NASA-CASE-LAR-14163-1 ..... c 27 N92-33014 \*  
NASA-CASE-LAR-14168-1 ..... c 39 N92-34174 \*  
NASA-CASE-LAR-14169-1 ..... c 37 N92-17677 \* #  
NASA-CASE-LAR-14172-1 ..... c 20 N93-31295 \* #  
NASA-CASE-LAR-14179-1 ..... c 31 N93-26101 \*  
NASA-CASE-LAR-14181-1 ..... c 76 N91-21911 \*  
NASA-CASE-LAR-14188-1 ..... c 27 N90-23545 \*  
NASA-CASE-LAR-14188-2 ..... c 23 N91-14419 \*  
NASA-CASE-LAR-14194-1 ..... c 24 N90-15148 \* #  
NASA-CASE-LAR-14198-1 ..... c 27 N90-26956 \* #  
NASA-CASE-LAR-14203-1 ..... c 36 N89-28817 \* #  
NASA-CASE-LAR-14206-1 ..... c 27 N93-29083 \*  
NASA-CASE-LAR-14207-1 ..... c 35 N91-14590 \*  
NASA-CASE-LAR-14212-1-CU ..... c 05 N91-31140 \*  
NASA-CASE-LAR-14219-1 ..... c 08 N93-25998 \* #  
NASA-CASE-LAR-14221-1 ..... c 06 N93-19023 \* #  
NASA-CASE-LAR-14231-1 ..... c 24 N92-10070 \*  
NASA-CASE-LAR-14232-1 ..... c 09 N92-34213 \* #  
NASA-CASE-LAR-14239-1 ..... c 26 N93-14705 \*  
NASA-CASE-LAR-14250-1-SB ..... c 72 N91-27936 \*  
NASA-CASE-LAR-14271-1-CU ..... c 27 N91-13558 \* #  
NASA-CASE-LAR-14272-1-CU ..... c 14 N91-28184 \* #  
NASA-CASE-LAR-14272-1-CU ..... c 14 N93-24598 \*  
NASA-CASE-LAR-14281-1 ..... c 02 N92-28729 \*  
NASA-CASE-LAR-14322-1 ..... c 02 N91-27139 \*  
NASA-CASE-LAR-14330-2-CU ..... c 27 N93-22033 \*  
NASA-CASE-LAR-14338-1 ..... c 24 N93-13416 \*  
NASA-CASE-LAR-14339-1 ..... c 27 N90-26955 \* #  
NASA-CASE-LAR-14340-1-CU ..... c 35 N92-21586 \*  
NASA-CASE-LAR-14346-1 ..... c 27 N92-22044 \*  
NASA-CASE-LAR-14351-1 ..... c 27 N92-33015 \*  
NASA-CASE-LAR-14352-1 ..... c 37 N92-34173 \*  
NASA-CASE-LAR-14395-1-CU ..... c 33 N91-28490 \* #  
NASA-CASE-LAR-14398-1 ..... c 25 N92-30098 \* #  
NASA-CASE-LAR-14399-1 ..... c 39 N93-26102 \*  
NASA-CASE-LAR-14402-1-CU ..... c 74 N92-33017 \*  
NASA-CASE-LAR-14402-2-CU ..... c 71 N93-24602 \*  
NASA-CASE-LAR-14418-1 ..... c 32 N92-31257 \* #  
NASA-CASE-LAR-14419-1 ..... c 35 N92-10185 \*  
NASA-CASE-LAR-14424-1-SB ..... c 09 N93-25996 \*  
NASA-CASE-LAR-14427-1 ..... c 23 N92-29141 \*  
NASA-CASE-LAR-14429-1 ..... c 33 N93-29173 \* #  
NASA-CASE-LAR-14440-1 ..... c 23 N92-10066 \* #  
NASA-CASE-LAR-14440-1 ..... c 23 N93-18283 \*  
NASA-CASE-LAR-14446-1 ..... c 31 N92-33020 \*  
NASA-CASE-LAR-14448-1 ..... c 27 N93-11912 \* #  
NASA-CASE-LAR-14448-1 ..... c 25 N91-32196 \*  
NASA-CASE-LAR-14454-1 ..... c 27 N93-25997 \* #  
NASA-CASE-LAR-14457-1 ..... c 24 N91-15334 \* #  
NASA-CASE-LAR-14459-1 ..... c 24 N93-24597 \*  
NASA-CASE-LAR-14465-1 ..... c 37 N91-14614 \*  
NASA-CASE-LAR-14470-1 ..... c 02 N93-11876 \* #  
NASA-CASE-LAR-14471-1 ..... c 27 N93-20041 \* #  
NASA-CASE-LAR-14475-1 ..... c 27 N93-19327 \*  
NASA-CASE-LAR-14480-1-CU ..... c 39 N93-29612 \*  
NASA-CASE-LAR-14481-1 ..... c 25 N92-16043 \*  
NASA-CASE-LAR-14483-1 ..... c 31 N93-22035 \*  
NASA-CASE-LAR-14487-1 ..... c 27 N93-29085 \*  
NASA-CASE-LAR-14489-1 ..... c 37 N91-27562 \*  
NASA-CASE-LAR-14508-1-CU ..... c 39 N93-13420 \*  
NASA-CASE-LAR-14515-1-CU ..... c 37 N92-33031 \*  
NASA-CASE-LAR-14520-1-SB ..... c 02 N93-18275 \*  
NASA-CASE-LAR-14525-1-CU ..... c 74 N93-22008 \* #  
NASA-CASE-LAR-14538-1 ..... c 27 N92-11201 \* #  
NASA-CASE-LAR-14542-1 ..... c 37 N93-22384 \*  
NASA-CASE-LAR-14547-1 ..... c 34 N92-17909 \* #  
NASA-CASE-LAR-14556-1 ..... c 36 N91-25392 \* #  
NASA-CASE-LAR-14559-1 ..... c 38 N92-29829 \* #  
NASA-CASE-LAR-14565-1-CU ..... c 37 N92-34212 \* #  
NASA-CASE-LAR-14567-1-CU ..... c 33 N92-33021 \*  
NASA-CASE-LAR-14568-1 ..... c 74 N93-22037 \*  
NASA-CASE-LAR-14579-1 ..... c 35 N92-29097 \*  
NASA-CASE-LAR-14581-1-SB ..... c 38 N93-12204 \* #  
NASA-CASE-LAR-14588-1-CU ..... c 74 N92-29117 \*  
NASA-CASE-LAR-14591-1 ..... c 35 N93-19493 \* #  
NASA-CASE-LAR-14606-1-CU ..... c 23 N93-23077 \* #  
NASA-CASE-LAR-14607-1-SB ..... c 74 N92-30029 \* #  
NASA-CASE-LAR-14608-1 ..... c 27 N92-17676 \* #  
NASA-CASE-LAR-14612-1 ..... c 34 N92-29954 \* #  
NASA-CASE-LAR-14626-1 ..... c 38 N92-17859 \* #  
NASA-CASE-LAR-14639-1 ..... c 27 N93-14709 \*  
NASA-CASE-LAR-14640-1-CU ..... c 74 N93-17052 \* #  
NASA-CASE-LAR-14643-1 ..... c 27 N92-29953 \* #  
NASA-CASE-LAR-14651-1 ..... c 82 N92-30386 \* #  
NASA-CASE-LAR-14652-1-SB ..... c 74 N93-22039 \* #  
NASA-CASE-LAR-14654-1-CU ..... c 39 N93-29613 \*  
NASA-CASE-LAR-14679-2 ..... c 32 N91-31150 \* #  
NASA-CASE-LAR-14682-1 ..... c 34 N92-30387 \* #  
NASA-CASE-LAR-14685-1 ..... c 02 N92-34172 \*  
NASA-CASE-LAR-14698-1 ..... c 39 N92-30028 \* #  
NASA-CASE-LAR-14724-1 ..... c 35 N92-30030 \* #  
NASA-CASE-LAR-14729-1-CU ..... c 33 N93-19051 \* #  
NASA-CASE-LAR-14738-1 ..... c 37 N93-29175 \* #  
NASA-CASE-LAR-14741-1 ..... c 39 N92-11384 \* #  
NASA-CASE-LAR-14744-1 ..... c 02 N93-19053 \* #

NASA-CASE-LAR-14747-1 ..... c 08 N93-20039 \* #  
NASA-CASE-LAR-14753-1 ..... c 27 N93-25999 \*  
NASA-CASE-LAR-14763-1 ..... c 27 N92-12121 \* #  
NASA-CASE-LAR-14773-1-CU ..... c 27 N92-10105 \* #  
NASA-CASE-LAR-14773-2-CU ..... c 25 N93-29506 \*  
NASA-CASE-LAR-14774-1 ..... c 27 N93-19388 \*  
NASA-CASE-LAR-14775-1 ..... c 39 N92-30099 \* #  
NASA-CASE-LAR-14776-1 ..... c 35 N93-12205 \* #  
NASA-CASE-LAR-14779-1 ..... c 74 N92-29951 \* #  
NASA-CASE-LAR-14785-1 ..... c 74 N93-19052 \* #  
NASA-CASE-LAR-14789-1 ..... c 37 N92-30388 \* #  
NASA-CASE-LAR-14790-1 ..... c 36 N93-19373 \* #  
NASA-CASE-LAR-14791-1 ..... c 35 N93-31297 \* #  
NASA-CASE-LAR-14796-1 ..... c 25 N93-31459 \* #  
NASA-CASE-LAR-14810-1-SB ..... c 33 N93-19492 \* #  
NASA-CASE-LAR-14811-1 ..... c 35 N92-30389 \* #  
NASA-CASE-LAR-14811-1 ..... c 33 N93-20119 \*  
NASA-CASE-LAR-14815-1-CU ..... c 34 N92-29830 \* #  
NASA-CASE-LAR-14816-1-SB ..... c 39 N93-19329 \* #  
NASA-CASE-LAR-14817-1 ..... c 35 N93-17041 \* #  
NASA-CASE-LAR-14817-1 ..... c 35 N93-20569 \* #  
NASA-CASE-LAR-14824-1-SB ..... c 34 N93-26000 \*  
NASA-CASE-LAR-14835-1 ..... c 35 N93-19328 \* #  
NASA-CASE-LAR-14850-1-CU ..... c 38 N93-17048 \* #  
NASA-CASE-LAR-14857-1-SB ..... c 74 N93-19374 \* #  
NASA-CASE-LAR-14925-1 ..... c 27 N93-20567 \* #  
NASA-CASE-LAR-14954-1 ..... c 24 N92-34214 \* #  
NASA-CASE-LAR-15022-1 ..... c 53 N93-28128 \* #  
NASA-CASE-LAR-15063-1 ..... c 38 N93-30414 \* #  
NASA-CASE-LEW-10106-1 ..... c 28 N71-26642 \*  
NASA-CASE-LEW-10155-1 ..... c 09 N71-29035 \*  
NASA-CASE-LEW-10199-1 ..... c 27 N74-23125 \*  
NASA-CASE-LEW-10210-1 ..... c 28 N71-26781 \*  
NASA-CASE-LEW-10219-1 ..... c 18 N71-28729 \*  
NASA-CASE-LEW-10233 ..... c 10 N71-27126 \*  
NASA-CASE-LEW-10250-1 ..... c 22 N71-28759 \*  
NASA-CASE-LEW-10278-1 ..... c 15 N71-28582 \*  
NASA-CASE-LEW-10281-1 ..... c 14 N72-17327 \*  
NASA-CASE-LEW-10286-1 ..... c 28 N71-28915 \*  
NASA-CASE-LEW-10326-3 ..... c 37 N74-10474 \*  
NASA-CASE-LEW-10327 ..... c 17 N71-33408 \*  
NASA-CASE-LEW-10330-1 ..... c 09 N72-27226 \*  
NASA-CASE-LEW-10345-1 ..... c 10 N71-25899 \*  
NASA-CASE-LEW-10359-2 ..... c 33 N73-25952 \*  
NASA-CASE-LEW-10359 ..... c 33 N72-25911 \*  
NASA-CASE-LEW-10364-1 ..... c 09 N71-13522 \*  
NASA-CASE-LEW-10374-1 ..... c 28 N73-13773 \*  
NASA-CASE-LEW-10387 ..... c 09 N72-22201 \*  
NASA-CASE-LEW-10393-1 ..... c 17 N71-15468 \*  
NASA-CASE-LEW-10424-2-2 ..... c 18 N72-25539 \*  
NASA-CASE-LEW-10433-1 ..... c 09 N72-22197 \*  
NASA-CASE-LEW-10436-1 ..... c 17 N73-32415 \*  
NASA-CASE-LEW-10450-1 ..... c 15 N72-25448 \*  
NASA-CASE-LEW-10489-1 ..... c 15 N72-25447 \*  
NASA-CASE-LEW-10518-1 ..... c 24 N72-33681 \*  
NASA-CASE-LEW-10518-3 ..... c 25 N78-27226 \*  
NASA-CASE-LEW-10531-1 ..... c 15 N73-28515 \*  
NASA-CASE-LEW-10532-2 ..... c 37 N74-11300 \*  
NASA-CASE-LEW-10689-1 ..... c 28 N71-26173 \*  
NASA-CASE-LEW-10698-1 ..... c 37 N74-21063 \*  
NASA-CASE-LEW-1070-1 ..... c 28 N72-22770 \*  
NASA-CASE-LEW-1070-1 ..... c 06 N72-17093 \*  
NASA-CASE-LEW-10805-1 ..... c 15 N73-13465 \*  
NASA-CASE-LEW-10805-2 ..... c 37 N74-13179 \*  
NASA-CASE-LEW-10805-3 ..... c 26 N74-10521 \*  
NASA-CASE-LEW-10814-1 ..... c 28 N70-35422 \* #  
NASA-CASE-LEW-10835-1 ..... c 28 N72-22771 \*  
NASA-CASE-LEW-10856-1 ..... c 17 N72-22490 \*  
NASA-CASE-LEW-10874-1 ..... c 15 N72-22535 \*  
NASA-CASE-LEW-10906-1 ..... c 25 N74-30502 \*  
NASA-CASE-LEW-10920-1 ..... c 17 N73-24569 \*  
NASA-CASE-LEW-10950-1 ..... c 33 N74-27683 \*  
NASA-CASE-LEW-10965-1 ..... c 15 N72-25452 \*  
NASA-CASE-LEW-10981-1 ..... c 35 N74-21018 \*  
NASA-CASE-LEW-11005-1 ..... c 09 N72-21243 \*  
NASA-CASE-LEW-11015 ..... c 26 N73-32571 \*  
NASA-CASE-LEW-11026-1 ..... c 15 N73-33383 \*  
NASA-CASE-LEW-11058-1 ..... c 20 N74-13502 \*  
NASA-CASE-LEW-11065-2 ..... c 44 N76-14600 \*  
NASA-CASE-LEW-11069-1 ..... c 44 N74-14784 \*  
NASA-CASE-LEW-11072-1 ..... c 14 N73-24472 \*  
NASA-CASE-LEW-11072-2 ..... c 35 N76-15434 \*  
NASA-CASE-LEW-11076-1 ..... c 37 N74-21061 \*  
NASA-CASE-LEW-11076-2 ..... c 37 N74-32921 \*  
NASA-CASE-LEW-11076-3 ..... c 37 N75-30562 \*  
NASA-CASE-LEW-11076-4 ..... c 37 N76-15461 \*  
NASA-CASE-LEW-11087-1 ..... c 15 N73-30458 \*  
NASA-CASE-LEW-11087-2 ..... c 37 N74-15128 \*  
NASA-CASE-LEW-11087-3 ..... c 37 N74-21064 \*  
NASA-CASE-LEW-11101-1 ..... c 31 N73-32750 \*  
NASA-CASE-LEW-11118-1 ..... c 20 N74-32919 \*  
NASA-CASE-LEW-11118-2 ..... c 20 N76-14191 \*  
NASA-CASE-LEW-11152-1 ..... c 15 N73-32359 \*  
NASA-CASE-LEW-11158-1 ..... c 37 N77-28486 \*  
NASA-CASE-LEW-11159-1 ..... c 14 N73-28488 \*

NASA-CASE-LEW-11162-1 ..... c 33 N74-12913 \*  
NASA-CASE-LEW-11169-1 ..... c 37 N76-23570 \*  
NASA-CASE-LEW-11179-1 ..... c 27 N76-16229 \*  
NASA-CASE-LEW-11180-1 ..... c 25 N73-25760 \*  
NASA-CASE-LEW-11187-1 ..... c 28 N73-19793 \*  
NASA-CASE-LEW-11188-1 ..... c 02 N74-20646 \*  
NASA-CASE-LEW-11192-1 ..... c 09 N73-13208 \*  
NASA-CASE-LEW-11227-1 ..... c 73 N75-30876 \*  
NASA-CASE-LEW-11262-1 ..... c 27 N74-13270 \*  
NASA-CASE-LEW-11267-1 ..... c 17 N73-32414 \*  
NASA-CASE-LEW-11274-1 ..... c 37 N75-21631 \*  
NASA-CASE-LEW-11286-1 ..... c 07 N74-27490 \*  
NASA-CASE-LEW-11325-1 ..... c 06 N73-27980 \*  
NASA-CASE-LEW-11326-1 ..... c 23 N73-30665 \*  
NASA-CASE-LEW-11358 ..... c 03 N71-26084 \*  
NASA-CASE-LEW-11359-2 ..... c 03 N72-20034 \*  
NASA-CASE-LEW-11359 ..... c 03 N71-28579 \*  
NASA-CASE-LEW-11387-1 ..... c 37 N74-18128 \*  
NASA-CASE-LEW-11388-1 ..... c 15 N73-32358 \*  
NASA-CASE-LEW-11388-2 ..... c 37 N74-21055 \*  
NASA-CASE-LEW-11390-2 ..... c 25 N76-27383 \*  
NASA-CASE-LEW-11390-3 ..... c 25 N76-29379 \*  
NASA-CASE-LEW-11402-1 ..... c 07 N74-28226 \*  
NASA-CASE-LEW-11484-1 ..... c 24 N75-31181 \*  
NASA-CASE-LEW-11496-1 ..... c 44 N73-14580 \*  
NASA-CASE-LEW-11531 ..... c 15 N71-14932 \*  
NASA-CASE-LEW-11549-1 ..... c 44 N77-19571 \*  
NASA-CASE-LEW-11569-1 ..... c 07 N74-15453 \*  
NASA-CASE-LEW-11573-1 ..... c 26 N77-28265 \*  
NASA-CASE-LEW-11581-1 ..... c 54 N75-13531 \*  
NASA-CASE-LEW-11583-1 ..... c 35 N79-17192 \*  
NASA-CASE-LEW-11593-1 ..... c 20 N76-14190 \*  
NASA-CASE-LEW-11617-1 ..... c 33 N74-10195 \*  
NASA-CASE-LEW-11632-2 ..... c 35 N75-13213 \*  
NASA-CASE-LEW-11646-1 ..... c 20 N74-31269 \*  
NASA-CASE-LEW-11669-1 ..... c 05 N73-27062 \*  
NASA-CASE-LEW-11672-1 ..... c 37 N74-27904 \*  
NASA-CASE-LEW-11676-1 ..... c 37 N76-22541 \*  
NASA-CASE-LEW-11694-1 ..... c 20 N75-18310 \*  
NASA-CASE-LEW-11694-2 ..... c 37 N76-14481 \*  
NASA-CASE-LEW-11696-1 ..... c 37 N75-13261 \*  
NASA-CASE-LEW-11696-2 ..... c 26 N75-19408 \*  
NASA-CASE-LEW-11726-1 ..... c 26 N73-26752 \*  
NASA-CASE-LEW-11855-1 ..... c 07 N78-25090 \*  
NASA-CASE-LEW-11860-1 ..... c 37 N76-18458 \*  
NASA-CASE-LEW-11866-1 ..... c 72 N76-15660 \*  
NASA-CASE-LEW-11873-1 ..... c 37 N79-22475 \*  
NASA-CASE-LEW-11876-1 ..... c 20 N76-21276 \*  
NASA-CASE-LEW-11877-1 ..... c 34 N78-27357 \*  
NASA-CASE-LEW-11881-1 ..... c 33 N77-17354 \*  
NASA-CASE-LEW-11890-1 ..... c 05 N79-24976 \*  
NASA-CASE-LEW-11915-1 ..... c 35 N76-14431 \*  
NASA-CASE-LEW-11925-1 ..... c 37 N75-31446 \*  
NASA-CASE-LEW-11930-1 ..... c 24 N76-22309 \*  
NASA-CASE-LEW-11930-3 ..... c 24 N80-33482 \*  
NASA-CASE-LEW-11930-4 ..... c 24 N79-17916 \*  
NASA-CASE-LEW-11938-1 ..... c 33 N76-15373 \*  
NASA-CASE-LEW-11949-1 ..... c 37 N76-29588 \*  
NASA-CASE-LEW-11978-1 ..... c 33 N77-26385 \*  
NASA-CASE-LEW-11981-1 ..... c 31 N78-17237 \*  
NASA-CASE-LEW-11981-2 ..... c 34 N79-20336 \*  
NASA-CASE-LEW-12013-1 ..... c 33 N79-10339 \*  
NASA-CASE-LEW-12039-1 ..... c 44 N78-14625 \*  
NASA-CASE-LEW-12048-1 ..... c 20 N77-20162 \*  
NASA-CASE-LEW-12050-1 ..... c 35 N77-32454 \*  
NASA-CASE-LEW-12051-1 ..... c 52 N75-33640 \*  
NASA-CASE-LEW-12053-1 ..... c 27 N78-15276 \*  
NASA-CASE-LEW-12053-2 ..... c 27 N79-28307 \*  
NASA-CASE-LEW-12078-1 ..... c 35 N75-30503 \*  
NASA-CASE-LEW-12081-1 ..... c 28 N78-24365 \*  
NASA-CASE-LEW-12081-2 ..... c 28 N80-20402 \*  
NASA-CASE-LEW-12081-3 ..... c 28 N81-14103 \*  
NASA-CASE-LEW-12082-1 ..... c 20 N77-10148 \*  
NASA-CASE-LEW-12083-1 ..... c 37 N78-13436 \*  
NASA-CASE-LEW-12094-1 ..... c 76 N76-25049 \*  
NASA-CASE-LEW-12095-1 ..... c 26 N78-18182 \*  
NASA-CASE-LEW-12118-1 ..... c 24 N77-27188 \*  
NASA-CASE-LEW-12119-1 ..... c 37 N80-28711 \*  
NASA-CASE-LEW-12119-2 ..... c 37 N81-26447 \*  
NASA-CASE-LEW-12131-1 ..... c 37 N79-18318 \*  
NASA-CASE-LEW-12131-2 ..... c 37 N80-26658 \*  
NASA-CASE-LEW-12131-3 ..... c 37 N82-19540 \*  
NASA-CASE-LEW-12137-1 ..... c 25 N78-10224 \*  
NASA-CASE-LEW-12159-1 ..... c 44 N78-19599 \*  
NASA-CASE-LEW-12164-1 ..... c 36 N77-32478 \*  
NASA-CASE-LEW-12174-2 ..... c 35 N79-14346 \*  
NASA-CASE-LEW-12185-1 ..... c 44 N78-25528 \*  
NASA-CASE-LEW-12217-1 ..... c 43 N78-14452 \*  
NASA-CASE-LEW-12220-1 ..... c 44 N77-14581 \*  
NASA-CASE-LEW-12232-1 ..... c 07 N79-10057 \*  
NASA-CASE-LEW-12236-2 ..... c 44 N79-13288 \*  
NASA-CASE-LEW-12245-1 ..... c 26 N77-20201 \*  
NASA-CASE-LEW-12252-1 ..... c 34 N79-13288 \*  
NASA-CASE-LEW-12253-1 ..... c 74 N83-19596 \*  
NASA-CASE-LEW-12258-1 ..... c 52 N77-28716 \*  
NASA-CASE-LEW-12270-1 ..... c 26 N77-32280 \*

## REPORT NUMBER INDEX



# REPORT NUMBER INDEX

# NASA-CASE-LEW-15308-1

NASA-CASE-LEW-12274-1	c 37	N80-31790 *	NASA-CASE-LEW-13132-1	c 27	N83-29388 *	NASA-CASE-LEW-14162-4	c 24	N93-20568 *	#
NASA-CASE-LEW-12296-1	c 33	N82-26568 *	NASA-CASE-LEW-13135-2	c 27	N81-24257 *	NASA-CASE-LEW-14170-1	c 37	N86-25790 *	
NASA-CASE-LEW-12312-1	c 07	N77-32148 *	NASA-CASE-LEW-13142-1	c 07	N83-36029 *	NASA-CASE-LEW-14177-1	c 44	N86-32875 *	
NASA-CASE-LEW-12313-1	c 37	N78-10468 *	NASA-CASE-LEW-13142-2	c 07	N86-20389 *	NASA-CASE-LEW-14196-2	c 37	N87-25585 *	#
NASA-CASE-LEW-12317-1	c 07	N78-17055 *	NASA-CASE-LEW-13148-1	c 33	N80-20487 *	NASA-CASE-LEW-14203-1	c 27	N91-15402 *	
NASA-CASE-LEW-12321-1	c 37	N78-10467 *	NASA-CASE-LEW-13148-2	c 44	N81-29524 *	NASA-CASE-LEW-14212-1	c 37	N88-23978 *	
NASA-CASE-LEW-12358-1	c 44	N79-17313 *	NASA-CASE-LEW-13150-1	c 44	N79-26474 *	NASA-CASE-LEW-14262-1	c 26	N87-28647 *	
NASA-CASE-LEW-12358-2	c 25	N82-21268 *	NASA-CASE-LEW-13169-1	c 26	N82-29415 *	NASA-CASE-LEW-14295-1	c 31	N91-15424 *	
NASA-CASE-LEW-12364-1	c 44	N77-22606 *	NASA-CASE-LEW-13169-2	c 26	N82-30371 *	NASA-CASE-LEW-14297-1	c 35	N89-12048 *	
NASA-CASE-LEW-12378-1	c 07	N79-14097 *	NASA-CASE-LEW-13171-1	c 44	N82-29708 *	NASA-CASE-LEW-14345-1	c 23	N88-26404 *	
NASA-CASE-LEW-12389-2	c 07	N78-18066 *	NASA-CASE-LEW-13171-2	c 44	N83-32176 *	NASA-CASE-LEW-14345-2	c 25	N90-23497 *	
NASA-CASE-LEW-12389-3	c 07	N79-14096 *	NASA-CASE-LEW-13174-1	c 34	N83-27144 *	NASA-CASE-LEW-14345-3	c 23	N91-17141 *	
NASA-CASE-LEW-12390-1	c 07	N78-17056 *	NASA-CASE-LEW-13199-1	c 07	N82-26293 *	NASA-CASE-LEW-14345-4	c 23	N91-25185 *	
NASA-CASE-LEW-12419-1	c 07	N77-14025 *	NASA-CASE-LEW-13201-1	c 07	N81-14999 *	NASA-CASE-LEW-14345-6	c 23	N92-17882 *	#
NASA-CASE-LEW-12441-1	c 34	N79-13289 *	NASA-CASE-LEW-13226-1	c 27	N81-17260 *	NASA-CASE-LEW-14345-7	c 23	N93-17412 *	#
NASA-CASE-LEW-12441-2	c 34	N80-24573 *	NASA-CASE-LEW-13246-1	c 44	N83-27344 *	NASA-CASE-LEW-14346-1	c 23	N90-19300 *	
NASA-CASE-LEW-12441-3	c 44	N81-24519 *	NASA-CASE-LEW-13268-1	c 27	N82-29453 *	NASA-CASE-LEW-14374-1	c 09	N88-28939 *	
NASA-CASE-LEW-12443-1	c 44	N83-32175 *	NASA-CASE-LEW-13268-2	c 37	N82-26674 *	NASA-CASE-LEW-14392-1	c 27	N87-28656 *	
NASA-CASE-LEW-12444-1	c 33	N77-28385 *	NASA-CASE-LEW-13269-1	c 18	N83-20996 *	NASA-CASE-LEW-14392-2	c 27	N89-29538 *	
NASA-CASE-LEW-12445-1	c 37	N81-22360 *	NASA-CASE-LEW-13269-2	c 37	N84-22957 *	NASA-CASE-LEW-14472-1	c 24	N91-15320 *	
NASA-CASE-LEW-12452-1	c 07	N78-25089 *	NASA-CASE-LEW-13282-1	c 33	N82-24415 *	NASA-CASE-LEW-14474-1	c 27	N91-28423 *	#
NASA-CASE-LEW-12465-1	c 25	N78-25148 *	NASA-CASE-LEW-13286-1	c 33	N84-14422 *	NASA-CASE-LEW-14474-2	c 27	N92-11186 *	#
NASA-CASE-LEW-12477-1	c 37	N77-32501 *	NASA-CASE-LEW-13324-2	c 24	N85-21266 *	NASA-CASE-LEW-14520-1	c 33	N90-22724 *	
NASA-CASE-LEW-12493-1	c 24	N81-17170 *	NASA-CASE-LEW-13339-1	c 26	N82-31505 *	NASA-CASE-LEW-14586-1	c 07	N83-31603 *	
NASA-CASE-LEW-12493-2	c 24	N81-26179 *	NASA-CASE-LEW-13343-1	c 27	N82-28441 *	NASA-CASE-LEW-14672-1	c 37	N91-27560 *	
NASA-CASE-LEW-12496-1	c 07	N78-33101 *	NASA-CASE-LEW-13343	c 26	N83-31795 *	NASA-CASE-LEW-14676-1	c 33	N91-31529 *	
NASA-CASE-LEW-12508-1	c 34	N78-17335 *	NASA-CASE-LEW-13349-1	c 26	N84-22734 *	NASA-CASE-LEW-14676-2	c 76	N90-17454 *	#
NASA-CASE-LEW-12508-3	c 34	N83-29625 *	NASA-CASE-LEW-1335901	c 27	N83-31855 *	NASA-CASE-LEW-14679-1	c 37	N91-25296 *	
NASA-CASE-LEW-12513-1	c 25	N79-22235 *	NASA-CASE-LEW-13400-1	c 44	N82-31764 *	NASA-CASE-LEW-14695-1	c 37	N90-23751 *	
NASA-CASE-LEW-12527-1	c 37	N77-32500 *	NASA-CASE-LEW-13401-1	c 44	N82-29709 *	NASA-CASE-LEW-14698-2	c 27	N92-10090 *	
NASA-CASE-LEW-12541-1	c 44	N78-25529 *	NASA-CASE-LEW-13401-2	c 44	N83-32177 *	NASA-CASE-LEW-14719-1	c 24	N90-23493 *	
NASA-CASE-LEW-12542-2	c 26	N79-22271 *	NASA-CASE-LEW-13414-1	c 44	N85-20530 *	NASA-CASE-LEW-14731-1	c 44	N92-22037 *	
NASA-CASE-LEW-12543-3	c 26	N80-32484 *	NASA-CASE-LEW-13426-1	c 25	N84-16276 *	NASA-CASE-LEW-14734-1	c 24	N89-23623 *	#
NASA-CASE-LEW-12550-1	c 24	N77-19170 *	NASA-CASE-LEW-13429-1	c 33	N83-31952 *	NASA-CASE-LEW-14746-1	c 33	N91-14552 *	
NASA-CASE-LEW-12552-1	c 44	N78-25527 *	NASA-CASE-LEW-13450-1	c 31	N83-35177 *	NASA-CASE-LEW-14776-1	c 37	N91-21540 *	
NASA-CASE-LEW-12552-2	c 44	N79-11472 *	NASA-CASE-LEW-13495-1	c 33	N84-33663 *	NASA-CASE-LEW-14791-1	c 02	N92-34243 *	#
NASA-CASE-LEW-12554-1	c 34	N78-18355 *	NASA-CASE-LEW-13504-1	c 25	N83-13188 *	NASA-CASE-LEW-14795-1	c 74	N91-21871 *	
NASA-CASE-LEW-12569-1	c 37	N79-10418 *	NASA-CASE-LEW-13506-1	c 37	N85-33490 *	NASA-CASE-LEW-14844-1	c 35	N90-22024 *	
NASA-CASE-LEW-12582-1	c 76	N83-34796 *	NASA-CASE-LEW-13524-1	c 07	N84-33419 *	NASA-CASE-LEW-14846-1	c 20	N92-10054 *	
NASA-CASE-LEW-12586-1	c 44	N80-14472 *	NASA-CASE-LEW-13526-1	c 36	N84-22944 *	NASA-CASE-LEW-14846-2	c 20	N91-26200 *	
NASA-CASE-LEW-12587-1	c 44	N77-31601 *	NASA-CASE-LEW-13556-1	c 44	N81-27615 *	NASA-CASE-LEW-14848-1	c 14	N91-27175 *	
NASA-CASE-LEW-12590-1	c 37	N84-22958 *	NASA-CASE-LEW-13562-2	c 07	N85-35195 *	NASA-CASE-LEW-14862-1	c 37	N91-14617 *	
NASA-CASE-LEW-12594-2	c 07	N81-19116 *	NASA-CASE-LEW-13570-1	c 33	N84-16452 *	NASA-CASE-LEW-14878-1	c 74	N92-28571 *	
NASA-CASE-LEW-12608-1	c 07	N77-27116 *	NASA-CASE-LEW-13598-1	c 35	N84-22930 *	NASA-CASE-LEW-14880-1	c 35	N92-21723 *	
NASA-CASE-LEW-12619-1	c 24	N77-19171 *	NASA-CASE-LEW-13609-1	c 25	N90-11824 *	NASA-CASE-LEW-14887-1	c 37	N91-27561 *	
NASA-CASE-LEW-12649-1	c 44	N78-25530 *	NASA-CASE-LEW-13620-1	c 44	N83-13579 *	NASA-CASE-LEW-14901-1	c 75	N91-25875 *	
NASA-CASE-LEW-12658-1	c 71	N79-14871 *	NASA-CASE-LEW-13622-1	c 07	N84-22559 *	NASA-CASE-LEW-14902-1	c 24	N91-27244 *	
NASA-CASE-LEW-12661-1	c 35	N79-14345 *	NASA-CASE-LEW-13639-1	c 26	N84-33555 *	NASA-CASE-LEW-14906-1	c 37	N93-12203 *	#
NASA-CASE-LEW-12668-1	c 52	N78-14773 *	NASA-CASE-LEW-13639-2	c 26	N84-27855 *	NASA-CASE-LEW-14906-2	c 37	N93-31314 *	#
NASA-CASE-LEW-12718-1	c 34	N78-25351 *	NASA-CASE-LEW-13653-1	c 44	N84-28205 *	NASA-CASE-LEW-14921-1	c 24	N91-13502 *	
NASA-CASE-LEW-12723-1	c 52	N80-18690 *	NASA-CASE-LEW-13654-1	c 07	N84-22560 *	NASA-CASE-LEW-14945-1	c 32	N91-13588 *	#
NASA-CASE-LEW-12760-1	c 07	N77-17059 *	NASA-CASE-LEW-13670-1	c 37	N86-19608 *	NASA-CASE-LEW-14945-2	c 32	N92-10128 *	
NASA-CASE-LEW-12775-1	c 44	N79-11468 *	NASA-CASE-LEW-13717-1	c 37	N85-30333 *	NASA-CASE-LEW-14949-1	c 44	N92-29143 *	
NASA-CASE-LEW-12780-1	c 20	N79-20179 *	NASA-CASE-LEW-13736-1	c 33	N84-27974 *	NASA-CASE-LEW-14959-1	c 44	N91-27614 *	
NASA-CASE-LEW-12785-1	c 37	N78-24545 *	NASA-CASE-LEW-13758-1	c 24	N84-27829 *	NASA-CASE-LEW-14965-1	c 37	N91-13732 *	
NASA-CASE-LEW-12791-1	c 33	N78-32341 *	NASA-CASE-LEW-13770-1	c 27	N84-27885 *	NASA-CASE-LEW-14967-1	c 35	N91-31608 *	
NASA-CASE-LEW-12793-1	c 37	N79-11403 *	NASA-CASE-LEW-13770-2	c 25	N85-28982 *	NASA-CASE-LEW-14967-2	c 35	N92-22038 *	
NASA-CASE-LEW-12806-2	c 44	N81-12542 *	NASA-CASE-LEW-13770-3	c 27	N85-21350 *	NASA-CASE-LEW-14973-1	c 44	N93-28974 *	
NASA-CASE-LEW-12819-1	c 44	N79-11467 *	NASA-CASE-LEW-13770-4	c 27	N85-21351 *	NASA-CASE-LEW-14984-1	c 27	N92-16122 *	
NASA-CASE-LEW-12819-2	c 44	N79-18444 *	NASA-CASE-LEW-13770-5	c 27	N85-21352 *	NASA-CASE-LEW-14990-1-CU	c 24	N91-17145 *	
NASA-CASE-LEW-12830-1	c 07	N77-23106 *	NASA-CASE-LEW-13770-6	c 25	N85-30039 *	NASA-CASE-LEW-14996-1	c 74	N93-11058 *	
NASA-CASE-LEW-12876-2	c 27	N83-29392 *	NASA-CASE-LEW-13773-2	c 33	N86-20671 *	NASA-CASE-LEW-14999-1	c 24	N92-21725 *	
NASA-CASE-LEW-12892-1	c 44	N83-14692 *	NASA-CASE-LEW-13822-1	c 44	N86-25874 *	NASA-CASE-LEW-15020-1	c 27	N91-15412 *	#
NASA-CASE-LEW-12905-1	c 26	N78-18183 *	NASA-CASE-LEW-13827-1	c 44	N85-21768 *	NASA-CASE-LEW-15020-2	c 24	N93-14706 *	
NASA-CASE-LEW-12906-1	c 26	N77-32279 *	NASA-CASE-LEW-13828-1	c 24	N85-30027 *	NASA-CASE-LEW-15027-1	c 27	N91-13566 *	
NASA-CASE-LEW-12907-2	c 07	N81-19115 *	NASA-CASE-LEW-13833-1	c 33	N85-21492 *	NASA-CASE-LEW-15027-2	c 27	N92-24053 *	#
NASA-CASE-LEW-12916-1	c 37	N78-17384 *	NASA-CASE-LEW-13834-1	c 26	N87-14482 *	NASA-CASE-LEW-15043-1	c 27	N91-32230 *	#
NASA-CASE-LEW-12917-1	c 07	N78-18067 *	NASA-CASE-LEW-13837-1	c 24	N84-22695 *	NASA-CASE-LEW-15077-1	c 24	N92-16025 *	
NASA-CASE-LEW-12918-1	c 44	N81-24521 *	NASA-CASE-LEW-13837-2	c 24	N85-21267 *	NASA-CASE-LEW-15077-2	c 24	N93-29609 *	
NASA-CASE-LEW-12919-1	c 24	N83-10117 *	NASA-CASE-LEW-13864-1	c 27	N86-19457 *	NASA-CASE-LEW-15085-1	c 37	N92-22043 *	
NASA-CASE-LEW-12919-2	c 70	N84-28565 *	NASA-CASE-LEW-13881-1	c 20	N85-21256 *	NASA-CASE-LEW-15086-1	c 37	N92-16318 *	
NASA-CASE-LEW-12933-1	c 27	N81-19296 *	NASA-CASE-LEW-13899-1	c 31	N87-21160 *	NASA-CASE-LEW-15094-1	c 07	N93-22034 *	
NASA-CASE-LEW-12938-1	c 07	N82-32366 *	NASA-CASE-LEW-13914-1	c 37	N85-33489 *	NASA-CASE-LEW-15154-1	c 27	N93-19332 *	#
NASA-CASE-LEW-12940-1	c 72	N80-33186 *	NASA-CASE-LEW-13922-1	c 33	N86-20672 *	NASA-CASE-LEW-15154-2	c 27	N93-31300 *	#
NASA-CASE-LEW-12941-1	c 26	N83-10170 *	NASA-CASE-LEW-13923-1	c 26	N85-35267 *	NASA-CASE-LEW-15155-1	c 27	N92-29090 *	
NASA-CASE-LEW-12950-1	c 34	N82-11399 *	NASA-CASE-LEW-13934-1	c 35	N83-35338 *	NASA-CASE-LEW-15164-1	c 27	N91-25298 *	#
NASA-CASE-LEW-12950-2	c 34	N85-29179 *	NASA-CASE-LEW-13935-1	c 33	N87-21234 *	NASA-CASE-LEW-15170-1	c 71	N93-28953 *	#
NASA-CASE-LEW-12955-1	c 52	N80-14684 *	NASA-CASE-LEW-13981-2	c 33	N86-21742 *	NASA-CASE-LEW-15196-1	c 37	N92-29092 *	
NASA-CASE-LEW-12971-1	c 07	N80-18039 *	NASA-CASE-LEW-14028-1	c 44	N86-19721 *	NASA-CASE-LEW-15200-1	c 20	N93-18856 *	
NASA-CASE-LEW-12972-1	c 44	N79-25481 *	NASA-CASE-LEW-14035-1	c 07	N84-24577 *	NASA-CASE-LEW-15216-1	c 37	N92-17678 *	#
NASA-CASE-LEW-12982-1	c 37	N81-19455 *	NASA-CASE-LEW-14037-1	c 20	N87-16875 *	NASA-CASE-LEW-15218-1	c 34	N93-11172 *	#
NASA-CASE-LEW-12989-1	c 37	N82-12442 *	NASA-CASE-LEW-14039-1	c 34	N85-33433 *	NASA-CASE-LEW-15222-1	c 76	N91-26966 *	#
NASA-CASE-LEW-12990-1	c 07	N81-29129 *	NASA-CASE-LEW-14057-1	c 24	N85-35233 *	NASA-CASE-LEW-15223-3	c 76	N93-17413 *	#
NASA-CASE-LEW-12991-1	c 37	N81-24442 *	NASA-CASE-LEW-14072-1	c 27	N86-19458 *	NASA-CASE-LEW-15223-1	c 76	N91-26967 *	#
NASA-CASE-LEW-12995-1	c 37	N84-33808 *	NASA-CASE-LEW-14072-2	c 27	N86-32569 *	NASA-CASE-LEW-15235-1	c 34	N92-29125 *	
NASA-CASE-LEW-13027-1	c 27	N80-24437 *	NASA-CASE-LEW-14072-3	c 27	N87-23736 *	NASA-CASE-LEW-15241-1	c 24	N92-17861 *	#
NASA-CASE-LEW-13028-1	c 27	N82-33521 *	NASA-CASE-LEW-14077-1	c 44	N85-34441 *	NASA-CASE-LEW-15241-2	c 24	N93-31296 *	#
NASA-CASE-LEW-13050-1	c 07	N79-14095 *	NASA-CASE-LEW-14080-1	c 31	N85-20153 *	NASA-CASE-LEW-15250-1	c 35	N91-17060 *	#
NASA-CASE-LEW-13088-1	c 26	N81-25188 *	NASA-CASE-LEW-14104-2	c 26	N88-14179 *	NASA-CASE-LEW-15262-1	c 24	N93-26100 *	
NASA-CASE-LEW-13101-2	c 23	N81-29160 *	NASA-CASE-LEW-14108-1	c 33	N87-28832 *	NASA-CASE-LEW-15263-1	c 24	N93-11543 *	
NASA-CASE-LEW-13102-1	c 33	N85-29144 *	NASA-CASE-LEW-14124-1	c 35	N90-23712 *	NASA-CASE-LEW-15264-1	c 24	N93-31293 *	#
NASA-CASE-LEW-13103-1	c 27	N80-32516 *	NASA-CASE-LEW-14127-1	c 33	N86-20680 *	NASA-CASE-LEW-15264-2	c 24	N93-31299 *	#
NASA-CASE-LEW-13107-1	c 52	N83-21785 *	NASA-CASE-LEW-14130-1	c 31	N86-32587 *	NASA-CASE-LEW-15269-1	c 24	N93-20040 *	#
NASA-CASE-LEW-13107-2	c 52	N84-23095 *	NASA-CASE-LEW-14134-2	c 26	N89-14303 *	NASA-CASE-LEW-15306-1	c 27	N93-20566 *	#
NASA-CASE-LEW									



## NASA-CASE-LEW-15314-1

## REPORT NUMBER INDEX

NASA-CASE-LEW-15314-1	c 27	N92-23461 *	#	NASA-CASE-MFS-20261	c 14	N71-27005 *	NASA-CASE-MFS-21433	c 09	N73-20232 *
NASA-CASE-LEW-15314-2	c 27	N93-28423 *	#	NASA-CASE-MFS-20284-1	c 52	N74-12778 *	NASA-CASE-MFS-21441-1	c 14	N73-30392 *
NASA-CASE-LEW-15345-1	c 37	N93-12327 *	#	NASA-CASE-MFS-20299	c 15	N72-11392 *	NASA-CASE-MFS-21455-1	c 35	N74-15146 *
NASA-CASE-LEW-15345-2	c 37	N93-28127 *	#	NASA-CASE-MFS-20317	c 15	N73-13463 *	NASA-CASE-MFS-21462-1	c 33	N74-14935 *
NASA-CASE-LEW-15360-1	c 25	N92-34206 *	#	NASA-CASE-MFS-20325	c 28	N71-27095 *	NASA-CASE-MFS-21465-1	c 10	N73-32145 *
NASA-CASE-LEW-15430-1	c 71	N93-17051 *	#	NASA-CASE-MFS-20332-2	c 05	N73-25125 *	NASA-CASE-MFS-21470-1	c 44	N74-19870 *
NASA-CASE-LEW-15444-1	c 35	N93-14840 *	#	NASA-CASE-MFS-20332	c 05	N72-20097 *	NASA-CASE-MFS-21481-1	c 37	N74-18127 *
NASA-CASE-LEW-15489-1	c 27	N93-17062 *	#	NASA-CASE-MFS-20333	c 09	N71-13486 *	NASA-CASE-MFS-21485-1	c 37	N74-25968 *
NASA-CASE-LEW-15515-1	c 35	N93-31298 *	#	NASA-CASE-MFS-20335-1	c 35	N74-10415 *	NASA-CASE-MFS-21488-1	c 14	N75-24794 *
NASA-CASE-LEW-15535-1	c 26	N93-31294 *	#	NASA-CASE-MFS-20355	c 33	N71-25353 *	NASA-CASE-MFS-21540-1	c 32	N74-19790 *
NASA-CASE-LEW-15570-1	c 37	N93-19027 *	#	NASA-CASE-MFS-20385	c 09	N71-24904 *	NASA-CASE-MFS-21556-1	c 35	N74-26945 *
NASA-CASE-LEW-15576-1	c 27	N93-31316 *	#	NASA-CASE-MFS-20386	c 21	N71-19212 *	NASA-CASE-MFS-21577-1	c 19	N74-29410 *
NASA-CASE-LEW-15614-1	c 72	N93-19026 *	#	NASA-CASE-MFS-20395	c 15	N71-24903 *	NASA-CASE-MFS-21606-1	c 37	N75-19685 *
NASA-CASE-LEW-15697-1	c 26	N93-29172 *	#	NASA-CASE-MFS-20400	c 31	N71-18611 *	NASA-CASE-MFS-21611-1	c 54	N75-12616 *
NASA-CASE-LEW-15700-1	c 82	N93-28130 *	#	NASA-CASE-MFS-20407	c 09	N73-19235 *	NASA-CASE-MFS-21616-1	c 33	N75-30429 *
NASA-CASE-LEW-23169-2	c 26	N81-16209 *	#	NASA-CASE-MFS-20408	c 18	N73-12604 *	NASA-CASE-MFS-21628-1	c 44	N75-32581 *
NASA-CASE-MFS-06074	c 15	N71-20393 *		NASA-CASE-MFS-20410	c 15	N71-19214 *	NASA-CASE-MFS-21628-2	c 44	N76-23675 *
NASA-CASE-MFS-07369	c 15	N71-20443 *		NASA-CASE-MFS-20413	c 15	N72-21463 *	NASA-CASE-MFS-21629	c 14	N72-22442 *
NASA-CASE-MFS-10068	c 10	N71-25139 *		NASA-CASE-MFS-20418	c 14	N73-24473 *	NASA-CASE-MFS-21660-1	c 35	N74-21017 *
NASA-CASE-MFS-10340	c 15	N71-17628 *		NASA-CASE-MFS-20423	c 15	N72-11388 *	NASA-CASE-MFS-21671-1	c 33	N74-22885 *
NASA-CASE-MFS-10412	c 12	N71-17578 *		NASA-CASE-MFS-20433	c 15	N72-28496 *	NASA-CASE-MFS-21672-1	c 74	N76-19935 *
NASA-CASE-MFS-10506	c 06	N73-30100 *		NASA-CASE-MFS-20434	c 11	N72-25288 *	NASA-CASE-MFS-21675-1	c 25	N74-33378 *
NASA-CASE-MFS-10507	c 06	N73-30101 *		NASA-CASE-MFS-20453	c 15	N71-29133 *	NASA-CASE-MFS-21680-1	c 18	N74-27397 *
NASA-CASE-MFS-10509	c 06	N73-30103 *		NASA-CASE-MFS-20482	c 15	N72-22492 *	NASA-CASE-MFS-21681-1	c 18	N74-27397 *
NASA-CASE-MFS-10512	c 06	N73-30099 *		NASA-CASE-MFS-20485	c 14	N72-11365 *	NASA-CASE-MFS-21698-1	c 33	N74-26732 *
NASA-CASE-MFS-10555	c 11	N71-19494 *		NASA-CASE-MFS-20486-2	c 27	N74-17283 *	NASA-CASE-MFS-21704-1	c 35	N75-25124 *
NASA-CASE-MFS-10946-1	c 31	N79-21226 *		NASA-CASE-MFS-20506-1	c 35	N75-12273 *	NASA-CASE-MFS-21728-1	c 35	N74-27865 *
NASA-CASE-MFS-11132	c 15	N71-17649 *		NASA-CASE-MFS-20509	c 11	N72-17183 *	NASA-CASE-MFS-21761-1	c 35	N75-15931 *
NASA-CASE-MFS-11133	c 31	N71-16222 *		NASA-CASE-MFS-20523	c 14	N72-27412 *	NASA-CASE-MFS-21846-1	c 37	N74-26976 *
NASA-CASE-MFS-11204	c 14	N71-29134 *		NASA-CASE-MFS-20546-2	c 14	N73-30389 *	NASA-CASE-MFS-21919-1	c 10	N73-25243 *
NASA-CASE-MFS-11279	c 16	N71-20400 *		NASA-CASE-MFS-20586	c 15	N71-17686 *	NASA-CASE-MFS-21931-1	c 37	N75-26372 *
NASA-CASE-MFS-11492	c 06	N73-30102 *		NASA-CASE-MFS-20589	c 25	N72-32688 *	NASA-CASE-MFS-22002-1	c 44	N76-16612 *
NASA-CASE-MFS-11497	c 28	N71-16224 *		NASA-CASE-MFS-20596	c 14	N72-17324 *	NASA-CASE-MFS-22022-1	c 37	N76-15460 *
NASA-CASE-MFS-11537	c 14	N71-20442 *		NASA-CASE-MFS-20607-1	c 37	N76-19436 *	NASA-CASE-MFS-22039-1	c 09	N75-12968 *
NASA-CASE-MFS-12750	c 27	N71-16223 *		NASA-CASE-MFS-20619	c 28	N72-11708 *	NASA-CASE-MFS-22040-1	c 35	N74-26946 *
NASA-CASE-MFS-12805	c 15	N71-17805 *		NASA-CASE-MFS-20620	c 11	N72-27262 *	NASA-CASE-MFS-22060-1	c 35	N75-29380 *
NASA-CASE-MFS-12806	c 14	N71-17588 *		NASA-CASE-MFS-20642	c 14	N72-21407 *	NASA-CASE-MFS-22073-1	c 33	N75-13139 *
NASA-CASE-MFS-12827	c 14	N71-17656 *		NASA-CASE-MFS-20645-1	c 37	N74-23070 *	NASA-CASE-MFS-22088-1	c 33	N75-15874 *
NASA-CASE-MFS-12915	c 11	N71-17600 *		NASA-CASE-MFS-20658-1	c 14	N73-30386 *	NASA-CASE-MFS-22102-1	c 54	N74-20725 *
NASA-CASE-MFS-13046	c 07	N71-19433 *		NASA-CASE-MFS-20673	c 14	N73-20476 *	NASA-CASE-MFS-22129-1	c 33	N75-18477 *
NASA-CASE-MFS-13130	c 10	N72-17173 *		NASA-CASE-MFS-20675	c 26	N73-26751 *	NASA-CASE-MFS-22133-1	c 33	N74-26977 *
NASA-CASE-MFS-13532	c 18	N72-17532 *		NASA-CASE-MFS-20698-2	c 15	N73-19457 *	NASA-CASE-MFS-22145-1	c 75	N75-13625 *
NASA-CASE-MFS-13686	c 15	N71-18132 *		NASA-CASE-MFS-20698	c 15	N72-20446 *	NASA-CASE-MFS-22145-2	c 75	N76-17951 *
NASA-CASE-MFS-13687-2	c 09	N72-22198 *		NASA-CASE-MFS-20710	c 11	N72-23215 *	NASA-CASE-MFS-22189-1	c 35	N75-19615 *
NASA-CASE-MFS-13687	c 09	N71-28691 *		NASA-CASE-MFS-20730-1	c 39	N74-11313 *	NASA-CASE-MFS-22208-1	c 33	N75-26244 *
NASA-CASE-MFS-13929	c 15	N71-27091 *		NASA-CASE-MFS-20757	c 09	N72-28225 *	NASA-CASE-MFS-22234-1	c 32	N79-10264 *
NASA-CASE-MFS-13994-1	c 06	N71-11240 *		NASA-CASE-MFS-20760	c 14	N72-33377 *	NASA-CASE-MFS-22283-1	c 37	N75-33395 *
NASA-CASE-MFS-13994-2	c 06	N72-25148 *		NASA-CASE-MFS-20761-1	c 44	N74-27519 *	NASA-CASE-MFS-22287-1	c 75	N76-14931 *
NASA-CASE-MFS-14017	c 14	N71-26627 *		NASA-CASE-MFS-20767-1	c 38	N74-15130 *	NASA-CASE-MFS-22323-1	c 37	N76-14463 *
NASA-CASE-MFS-14023	c 33	N71-25351 *		NASA-CASE-MFS-20774	c 14	N73-19420 *	NASA-CASE-MFS-22324-1	c 27	N75-27160 *
NASA-CASE-MFS-14114-2	c 09	N71-24807 *		NASA-CASE-MFS-20775-1	c 31	N75-12161 *	NASA-CASE-MFS-22342-1	c 33	N75-30428 *
NASA-CASE-MFS-14114	c 33	N71-27862 *		NASA-CASE-MFS-20809	c 23	N73-13660 *	NASA-CASE-MFS-22343-1	c 33	N74-34638 *
NASA-CASE-MFS-14216	c 14	N73-13418 *		NASA-CASE-MFS-20823-1	c 16	N73-30476 *	NASA-CASE-MFS-22355-1	c 23	N76-15268 *
NASA-CASE-MFS-14253	c 33	N71-24858 *		NASA-CASE-MFS-20829	c 12	N72-21310 *	NASA-CASE-MFS-22356-1	c 23	N75-30256 *
NASA-CASE-MFS-14259	c 15	N71-19213 *		NASA-CASE-MFS-20830	c 15	N71-30028 *	NASA-CASE-MFS-22409-2	c 74	N78-15880 *
NASA-CASE-MFS-14322	c 08	N71-18692 *		NASA-CASE-MFS-20831	c 28	N71-29153 *	NASA-CASE-MFS-22411-1	c 37	N74-21058 *
NASA-CASE-MFS-14405	c 15	N72-28495 *		NASA-CASE-MFS-20855-1	c 15	N77-10112 *	NASA-CASE-MFS-22458-1	c 44	N77-10635 *
NASA-CASE-MFS-14610	c 09	N71-28886 *		NASA-CASE-MFS-20855	c 15	N73-27405 *	NASA-CASE-MFS-22517-1	c 35	N76-18402 *
NASA-CASE-MFS-14671	c 05	N71-12341 *		NASA-CASE-MFS-20861-1	c 18	N73-32437 *	NASA-CASE-MFS-22537-1	c 35	N75-27328 *
NASA-CASE-MFS-14685	c 31	N71-15689 *		NASA-CASE-MFS-20863	c 31	N73-26876 *	NASA-CASE-MFS-22560-1	c 33	N77-14335 *
NASA-CASE-MFS-14710	c 09	N72-22195 *		NASA-CASE-MFS-20890	c 14	N72-22439 *	NASA-CASE-MFS-22562-1	c 44	N76-14595 *
NASA-CASE-MFS-14711	c 15	N71-26185 *		NASA-CASE-MFS-20916	c 14	N73-25460 *	NASA-CASE-MFS-22597	c 36	N78-17366 *
NASA-CASE-MFS-14741	c 09	N70-20737 *	#	NASA-CASE-MFS-20922-1	c 18	N74-22136 *	NASA-CASE-MFS-22631-1	c 66	N76-19888 *
NASA-CASE-MFS-14772	c 15	N71-17692 *		NASA-CASE-MFS-20922	c 31	N72-20840 *	NASA-CASE-MFS-22636-1	c 37	N76-22540 *
NASA-CASE-MFS-14971	c 15	N71-24984 *		NASA-CASE-MFS-20932-1	c 35	N75-19616 *	NASA-CASE-MFS-22649-1	c 37	N75-25186 *
NASA-CASE-MFS-15063	c 14	N72-25412 *		NASA-CASE-MFS-20935	c 09	N71-34212 *	NASA-CASE-MFS-22671-1	c 35	N75-21582 *
NASA-CASE-MFS-15162	c 14	N72-32452 *		NASA-CASE-MFS-20944	c 15	N73-13466 *	NASA-CASE-MFS-22671-2	c 35	N77-17426 *
NASA-CASE-MFS-15218-1	c 37	N77-19457 *		NASA-CASE-MFS-20979-2	c 06	N73-32030 *	NASA-CASE-MFS-22707-1	c 37	N76-15457 *
NASA-CASE-MFS-15429-1	c 18	N84-22609 *	#	NASA-CASE-MFS-20979	c 06	N72-25151 *	NASA-CASE-MFS-22729-1	c 32	N76-21366 *
NASA-CASE-MFS-15670-1	c 33	N82-33634 *	#	NASA-CASE-MFS-20994-1	c 35	N75-12271 *	NASA-CASE-MFS-22734-1	c 18	N75-19329 *
NASA-CASE-MFS-16570-1	c 05	N73-32013 *		NASA-CASE-MFS-21010-1	c 05	N73-30078 *	NASA-CASE-MFS-22743-1	c 44	N76-22657 *
NASA-CASE-MFS-16609-3	c 03	N76-32140 *		NASA-CASE-MFS-21040-1	c 06	N73-30098 *	NASA-CASE-MFS-22744-1	c 44	N76-24696 *
NASA-CASE-MFS-18100	c 15	N72-11390 *		NASA-CASE-MFS-21042	c 07	N72-25171 *	NASA-CASE-MFS-22749-1	c 44	N76-14501 *
NASA-CASE-MFS-18495	c 15	N72-11385 *		NASA-CASE-MFS-21045-1	c 35	N75-15932 *	NASA-CASE-MFS-22758-1	c 70	N75-26789 *
NASA-CASE-MFS-19193-1	c 37	N75-19686 *		NASA-CASE-MFS-21046-1	c 14	N73-27377 *	NASA-CASE-MFS-22787-1	c 15	N77-10113 *
NASA-CASE-MFS-19194-1	c 37	N76-14460 *		NASA-CASE-MFS-21049-1	c 52	N74-27864 *	NASA-CASE-MFS-22905-1	c 19	N76-22284 *
NASA-CASE-MFS-19220-1	c 20	N76-22296 *		NASA-CASE-MFS-21077-1	c 24	N75-28135 *	NASA-CASE-MFS-22906-1	c 75	N78-27913 *
NASA-CASE-MFS-19259-1	c 36	N78-14380 *		NASA-CASE-MFS-21087-1	c 35	N74-17153 *	NASA-CASE-MFS-22907-1	c 26	N76-18257 *
NASA-CASE-MFS-19287-1	c 34	N77-30399 *		NASA-CASE-MFS-21108-1	c 34	N74-27861 *	NASA-CASE-MFS-22926-1	c 24	N77-27187 *
NASA-CASE-MFS-19796-1	c 37	N86-32736 *	#	NASA-CASE-MFS-21109-1	c 05	N73-27941 *	NASA-CASE-MFS-22938-1	c 34	N76-18374 *
NASA-CASE-MFS-20011	c 18	N72-22566 *		NASA-CASE-MFS-21115-1	c 54	N74-12779 *	NASA-CASE-MFS-22991-1	c 34	N77-10463 *
NASA-CASE-MFS-20044	c 14	N71-28993 *		NASA-CASE-MFS-21136-1	c 35	N74-18323 *	NASA-CASE-MFS-23001-1	c 76	N77-32919 *
NASA-CASE-MFS-20068	c 07	N71-27191 *		NASA-CASE-MFS-21163-1	c 54	N74-17853 *	NASA-CASE-MFS-23008-1	c 35	N78-18390 *
NASA-CASE-MFS-20074	c 16	N71-15565 *		NASA-CASE-MFS-21214-1	c 09	N73-30181 *	NASA-CASE-MFS-23047-1	c 37	N76-18454 *
NASA-CASE-MFS-20075	c 09	N71-26133 *		NASA-CASE-MFS-21233-1	c 38	N74-15395 *	NASA-CASE-MFS-23051-1	c 37	N79-10422 *
NASA-CASE-MFS-20095	c 24	N72-11595 *		NASA-CASE-MFS-21244-1	c 36	N75-15028 *	NASA-CASE-MFS-23052-2	c 74	N79-13855 *
NASA-CASE-MFS-20096	c 14	N71-30026 *		NASA-CASE-MFS-21309-1	c 37	N74-18125 *	NASA-CASE-MFS-23059-1	c 44	N76-27664 *
NASA-CASE-MFS-20125	c 16	N72-13437 *		NASA-CASE-MFS-21311-1	c 20	N76-21275 *	NASA-CASE-MFS-23062-1	c 37	N77-12402 *
NASA-CASE-MFS-20130	c 28	N71-27585 *		NASA-CASE-MFS-21362	c 11	N73-20267 *	NASA-CASE-MFS-23074-1	c 54	N77-21844 *
NASA-CASE-MFS-20180	c 16	N72-12440 *		NASA-CASE-MFS-21364-1	c 37	N74-18126 *	NASA-CASE-MFS-23088-1	c 37	N77-23483 *
NASA-CASE-MFS-20207-1	c 09	N73-32107 *		NASA-CASE-MFS-21372-1	c 74	N74-27866 *	NASA-CASE-MFS-23099-1	c 09	N76-23273 *
NASA-CASE-MFS-20240	c 14	N71-26788 *		NASA-CASE-MFS-21374-1	c 33	N74-12951 *	NASA-CASE-MFS-23114-1	c 38	N78-32447 *
NASA-CASE-MFS-20242	c 14	N73-19421 *		NASA-CASE-MFS-21394-1	c 34	N74-27744 *	NASA-CASE-MFS-23118-1	c 35	N77-31465 *
NASA-CASE-MFS-20243	c 23	N73-13662 *		NASA-CASE-MFS-21395-1	c 25	N74-26948 *	NASA-CASE-MFS-23167-1	c 44	N76-31667 *
NASA-CASE-MFS-20249	c 15	N72-11386 *		NASA-CASE-MFS-21415-1	c 52	N74-20728 *	NASA-CASE-MFS-23175-1	c 35	N77-30436 *
				NASA-CASE-MFS-21424-1	c 34	N74-27730 *	NASA-CASE-MFS-23178-1	c 35	N77-10493 *

## REPORT NUMBER INDEX

## NASA-CASE-MSC-11010

NASA-CASE-MFS-23181-1	c 33	N77-17351 *	NASA-CASE-MFS-25535-2	c 33	N84-22885 *	NASA-CASE-MFS-28206-1-SB	c 76	N90-23242 *
NASA-CASE-MFS-23194-1	c 35	N78-17357 *	NASA-CASE-MFS-25586-1	c 33	N82-11360 *	NASA-CASE-MFS-28217-1	c 34	N89-14392 *
NASA-CASE-MFS-23225-1	c 52	N77-14735 *	NASA-CASE-MFS-25607-1	c 33	N83-34190 *	NASA-CASE-MFS-28232-1	c 74	N91-14835 *
NASA-CASE-MFS-23250-1	c 35	N82-11432 *	NASA-CASE-MFS-25616-1	c 33	N84-16455 *	NASA-CASE-MFS-28234-1	c 52	N90-20616 *
NASA-CASE-MFS-23267-1	c 35	N77-20401 *	NASA-CASE-MFS-25631-1	c 34	N84-12406 *	NASA-CASE-MFS-28242-1	c 35	N89-26202 *
NASA-CASE-MFS-23270-1	c 44	N78-25531 *	NASA-CASE-MFS-25637-1	c 44	N85-21769 *	NASA-CASE-MFS-28248-1	c 31	N88-24817 *
NASA-CASE-MFS-23274-1	c 33	N78-13320 *	NASA-CASE-MFS-25641-1	c 72	N84-28575 *	NASA-CASE-MFS-28253-1	c 37	N89-28831 *
NASA-CASE-MFS-23280-1	c 33	N78-10376 *	NASA-CASE-MFS-25670-1	c 33	N84-22884 *	NASA-CASE-MFS-28273-1	c 37	N88-23974 *
NASA-CASE-MFS-23281-1	c 35	N77-22450 *	NASA-CASE-MFS-25678-1	c 37	N84-11497 *	NASA-CASE-MFS-28281-1	c 09	N90-23415 *
NASA-CASE-MFS-23284-1	c 37	N80-14397 *	NASA-CASE-MFS-25687-1	c 35	N84-22928 *	NASA-CASE-MFS-28282-1	c 76	N88-29602 *
NASA-CASE-MFS-23299-1	c 39	N77-28511 *	NASA-CASE-MFS-25707-1	c 35	N82-26631 *	NASA-CASE-MFS-28287-1	c 35	N88-23959 *
NASA-CASE-MFS-23303-1	c 32	N77-18307 *	NASA-CASE-MFS-25717-1	c 35	N84-33768 *	NASA-CASE-MFS-28294-1	c 31	N91-14508 *
NASA-CASE-MFS-23311-1	c 54	N78-17676 *	NASA-CASE-MFS-25721-1	c 25	N85-21280 *	NASA-CASE-MFS-28295-1	c 74	N91-13999 *
NASA-CASE-MFS-23312-1	c 33	N78-27326 *	NASA-CASE-MFS-25740-1	c 52	N84-11744 *	NASA-CASE-MFS-28298-1	c 76	N91-14872 *
NASA-CASE-MFS-23315-1	c 76	N78-24950 *	NASA-CASE-MFS-25750-1	c 32	N86-20647 *	NASA-CASE-MFS-28314-1	c 26	N91-14462 *
NASA-CASE-MFS-23345-1	c 27	N77-30237 *	NASA-CASE-MFS-25752-1	c 74	N86-21348 *	NASA-CASE-MFS-28323-1	c 14	N92-15081 *
NASA-CASE-MFS-23349-1	c 44	N79-23481 *	NASA-CASE-MFS-25754-1	c 35	N84-28018 *	NASA-CASE-MFS-28327-1	c 18	N89-28556 *
NASA-CASE-MFS-23362-1	c 47	N77-10753 *	NASA-CASE-MFS-25786-2	c 76	N90-20896 *	NASA-CASE-MFS-28328-1	c 37	N91-13731 *
NASA-CASE-MFS-23363-1	c 35	N78-32396 *	NASA-CASE-MFS-25791-1	c 09	N84-27749 *	NASA-CASE-MFS-28345-1	c 37	N91-14608 *
NASA-CASE-MFS-23405-1	c 26	N77-29260 *	NASA-CASE-MFS-25807-2	c 37	N86-21850 *	NASA-CASE-MFS-28345-2	c 37	N89-28842 *
NASA-CASE-MFS-23447-1	c 37	N79-11404 *	NASA-CASE-MFS-25807	c 37	N83-20154 *	NASA-CASE-MFS-28368-1	c 75	N90-10717 *
NASA-CASE-MFS-23460-1	c 12	N79-26075 *	NASA-CASE-MFS-25825-1	c 31	N86-29055 *	NASA-CASE-MFS-28370-1	c 35	N92-31790 *
NASA-CASE-MFS-23461-1	c 35	N79-10389 *	NASA-CASE-MFS-25828-1	c 71	N84-28568 *	NASA-CASE-MFS-28372-1	c 27	N92-16123 *
NASA-CASE-MFS-23506-1	c 24	N78-24290 *	NASA-CASE-MFS-25833-1	c 35	N86-32698 *	NASA-CASE-MFS-28376-1	c 14	N91-21175 *
NASA-CASE-MFS-23513-1	c 74	N79-11865 *	NASA-CASE-MFS-25837-1	c 18	N85-29991 *	NASA-CASE-MFS-28383-1	c 34	N91-14563 *
NASA-CASE-MFS-23515-1	c 44	N80-21828 *	NASA-CASE-MFS-25842-2	c 37	N86-20788 *	NASA-CASE-MFS-28384-1	c 37	N90-27112 *
NASA-CASE-MFS-23518-1	c 44	N79-11469 *	NASA-CASE-MFS-25843-1	c 20	N83-17588 *	NASA-CASE-MFS-28390-1	c 24	N91-15333 *
NASA-CASE-MFS-23518-3	c 44	N80-16452 *	NASA-CASE-MFS-25852-1	c 33	N84-33661 *	NASA-CASE-MFS-28402-1	c 51	N92-28952 *
NASA-CASE-MFS-23540-1	c 44	N79-26475 *	NASA-CASE-MFS-25853-1	c 16	N84-27784 *	NASA-CASE-MFS-28406-1	c 37	N91-13729 *
NASA-CASE-MFS-23541-1	c 76	N79-14906 *	NASA-CASE-MFS-25854-1	c 33	N84-27975 *	NASA-CASE-MFS-28419-1	c 18	N91-27200 *
NASA-CASE-MFS-23551-1	c 04	N76-26175 *	NASA-CASE-MFS-25861-1	c 33	N85-22877 *	NASA-CASE-MFS-28420-1	c 37	N91-21545 *
NASA-CASE-MFS-23564-1	c 15	N78-25119 *	NASA-CASE-MFS-25862-1	c 27	N85-20126 *	NASA-CASE-MFS-28421-1	c 18	N92-28750 *
NASA-CASE-MFS-23579-1	c 18	N79-11108 *	NASA-CASE-MFS-25862-2	c 37	N84-33807 *	NASA-CASE-MFS-28422-1	c 29	N91-17250 *
NASA-CASE-MFS-23620-1	c 37	N79-10421 *	NASA-CASE-MFS-25868-1	c 33	N86-20670 *	NASA-CASE-MFS-28425-1	c 35	N92-33010 *
NASA-CASE-MFS-23626-1	c 24	N80-26388 *	NASA-CASE-MFS-25878-1	c 18	N84-27787 *	NASA-CASE-MFS-28426-1	c 54	N91-32795 *
NASA-CASE-MFS-23642-1	c 20	N80-10278 *	NASA-CASE-MFS-25905-2	c 31	N86-21718 *	NASA-CASE-MFS-28430-1	c 54	N92-24044 *
NASA-CASE-MFS-23642-2	c 20	N78-27176 *	NASA-CASE-MFS-25906-1	c 37	N86-20789 *	NASA-CASE-MFS-28431-1	c 24	N92-18770 *
NASA-CASE-MFS-23646-1	c 37	N79-22474 *	NASA-CASE-MFS-25907-1	c 37	N85-34401 *	NASA-CASE-MFS-28458-1	c 33	N91-26459 *
NASA-CASE-MFS-23659-1	c 33	N79-17133 *	NASA-CASE-MFS-25910-1	c 39	N86-20841 *	NASA-CASE-MFS-28473-1	c 76	N93-14707 *
NASA-CASE-MFS-23674-1	c 24	N81-29163 *	NASA-CASE-MFS-25942-1	c 74	N86-20124 *	NASA-CASE-MFS-28481-1	c 54	N93-14870 *
NASA-CASE-MFS-23675-1	c 89	N79-10969 *	NASA-CASE-MFS-25946-1	c 20	N86-26368 *	NASA-CASE-MFS-28485-1	c 35	N92-29135 *
NASA-CASE-MFS-23696-1	c 54	N81-26718 *	NASA-CASE-MFS-25949-1	c 37	N86-19603 *	NASA-CASE-MFS-28491-1	c 37	N93-28326 *
NASA-CASE-MFS-23717-1	c 52	N81-25660 *	NASA-CASE-MFS-25956-1	c 37	N87-21333 *	NASA-CASE-MFS-28492-1	c 74	N93-14711 *
NASA-CASE-MFS-23720-1	c 43	N80-23711 *	NASA-CASE-MFS-25962-1	c 09	N89-25242 *	NASA-CASE-MFS-28493-1	c 09	N91-25155 *
NASA-CASE-MFS-23720-2	c 43	N80-14423 *	NASA-CASE-MFS-25963-1	c 35	N86-20750 *	NASA-CASE-MFS-28496-1	c 26	N92-34239 *
NASA-CASE-MFS-23720-3	c 43	N79-25443 *	NASA-CASE-MFS-25964-2	c 37	N87-22977 *	NASA-CASE-MFS-28507-1	c 76	N92-34171 *
NASA-CASE-MFS-23721-1	c 31	N79-28370 *	NASA-CASE-MFS-25966-1	c 16	N86-26352 *	NASA-CASE-MFS-28521-1	c 37	N91-26542 *
NASA-CASE-MFS-23725-1	c 43	N79-31706 *	NASA-CASE-MFS-25978-1	c 44	N87-21410 *	NASA-CASE-MFS-28522-1	c 37	N93-31313 *
NASA-CASE-MFS-23726-1	c 43	N79-26439 *	NASA-CASE-MFS-25981-1	c 35	N87-14670 *	NASA-CASE-MFS-28524-1	c 18	N91-25167 *
NASA-CASE-MFS-23727-1	c 44	N80-14473 *	NASA-CASE-MFS-25989-1	c 20	N87-14420 *	NASA-CASE-MFS-28545-1	c 31	N91-25306 *
NASA-CASE-MFS-23775-1	c 44	N82-16474 *	NASA-CASE-MFS-26000-1	c 74	N87-14971 *	NASA-CASE-MFS-28547-1	c 20	N93-29847 *
NASA-CASE-MFS-23776-1	c 33	N82-28545 *	NASA-CASE-MFS-26002-1-CU	c 35	N86-26598 *	NASA-CASE-MFS-28563-1	c 35	N91-25388 *
NASA-CASE-MFS-23777-1	c 37	N80-32716 *	NASA-CASE-MFS-26008-1-CU	c 76	N88-14835 *	NASA-CASE-MFS-28569-1	c 27	N93-30565 *
NASA-CASE-MFS-23816-1	c 26	N80-23419 *	NASA-CASE-MFS-26009-1-SB	c 54	N88-24163 *	NASA-CASE-MFS-28589-1	c 37	N93-29618 *
NASA-CASE-MFS-23825-1	c 51	N81-32829 *	NASA-CASE-MFS-26011-1-SB	c 52	N87-24874 *	NASA-CASE-MFS-28610-1	c 54	N93-17045 *
NASA-CASE-MFS-23828-1	c 33	N82-26569 *	NASA-CASE-MFS-26042-1-SB	c 37	N91-14613 *	NASA-CASE-MFS-28629-1	c 37	N93-17084 *
NASA-CASE-MFS-23830-1	c 44	N82-24639 *	NASA-CASE-MFS-26047-1	c 29	N90-21209 *	NASA-CASE-MFS-28629-1	c 37	N93-26001 *
NASA-CASE-MFS-23845-1	c 33	N81-17348 *	NASA-CASE-MFS-26049-1-NP	c 25	N89-28603 *	NASA-CASE-MFS-28632-1	c 54	N93-17042 *
NASA-CASE-MFS-23846-1	c 37	N82-32731 *	NASA-CASE-MFS-26049-2-NP	c 25	N92-28728 *	NASA-CASE-MFS-28633-1	c 54	N92-17866 *
NASA-CASE-MFS-23862-1	c 48	N80-18667 *	NASA-CASE-MFS-26050-1	c 27	N92-25397 *	NASA-CASE-MFS-28634-1	c 37	N92-24055 *
NASA-CASE-MFS-23883-1	c 51	N80-16715 *	NASA-CASE-MFS-26061-1	c 76	N91-16815 *	NASA-CASE-MFS-28658-1	c 34	N93-17039 *
NASA-CASE-MFS-23923-1	c 35	N81-19426 *	NASA-CASE-MFS-26083-1-CU	c 26	N90-26940 *	NASA-CASE-MFS-28659-1	c 37	N93-17080 *
NASA-CASE-MFS-23981-1	c 07	N83-20944 *	NASA-CASE-MFS-26088-1-CU	c 76	N92-25398 *	NASA-CASE-MFS-28682-1	c 27	N92-29831 *
NASA-CASE-MFS-23988-1	c 33	N81-27395 *	NASA-CASE-MFS-26102-1-CU	c 47	N91-15661 *	NASA-CASE-MFS-28688-1	c 76	N93-17043 *
NASA-CASE-MFS-23999-1	c 44	N81-24520 *	NASA-CASE-MFS-26102-2-CU	c 47	N93-10108 *	NASA-CASE-MFS-28701-1	c 37	N93-17057 *
NASA-CASE-MFS-24368-3	c 33	N81-22280 *	NASA-CASE-MFS-26124-1-NPO	c 51	N93-29174 *	NASA-CASE-MFS-28707-1	c 54	N93-30566 *
NASA-CASE-MFS-25000-1	c 25	N81-19242 *	NASA-CASE-MFS-26216-1	c 37	N93-29851 *	NASA-CASE-MFS-28720-1	c 37	N93-30567 *
NASA-CASE-MFS-25050-1	c 71	N81-15767 *	NASA-CASE-MFS-28001-2	c 37	N88-14360 *	NASA-CASE-MFS-28723-1	c 52	N93-17058 *
NASA-CASE-MFS-25134-1	c 31	N83-31895 *	NASA-CASE-MFS-28008-1	c 35	N85-20300 *	NASA-CASE-MFS-28724-1	c 18	N93-17061 *
NASA-CASE-MFS-25139-1	c 34	N82-13376 *	NASA-CASE-MFS-28013-1	c 89	N86-22459 *	NASA-CASE-MFS-28728-1	c 20	N93-28950 *
NASA-CASE-MFS-25181-1	c 27	N82-24340 *	NASA-CASE-MFS-28013-2	c 89	N91-14096 *	NASA-CASE-MFS-28739-1	c 20	N93-28324 *
NASA-CASE-MFS-25208-1	c 33	N83-10345 *	NASA-CASE-MFS-28013-3	c 89	N90-27594 *	NASA-CASE-MFS-28772-1	c 54	N93-29845 *
NASA-CASE-MFS-25209-1	c 33	N83-35227 *	NASA-CASE-MFS-28013-4	c 89	N92-33012 *	NASA-CASE-MFS-28796-1	c 24	N93-19022 *
NASA-CASE-MFS-25211-2	c 33	N84-14423 *	NASA-CASE-MFS-28030-1	c 35	N86-25752 *	NASA-CASE-MFS-28833-1	c 37	N93-29846 *
NASA-CASE-MFS-25215-1	c 33	N83-31953 *	NASA-CASE-MFS-28044-1	c 31	N87-25491 *	NASA-CASE-MFS-28844-1	c 37	N93-31292 *
NASA-CASE-MFS-25242-1	c 35	N83-29650 *	NASA-CASE-MFS-28057-1	c 09	N87-14355 *	NASA-CASE-MFS-29134-1	c 74	N87-17493 *
NASA-CASE-MFS-25282-1	c 34	N83-19015 *	NASA-CASE-MFS-28058-1	c 37	N86-21332 *	NASA-CASE-MFS-29149-1	c 33	N90-19492 *
NASA-CASE-MFS-25287-1	c 44	N82-18686 *	NASA-CASE-MFS-28059-1	c 37	N86-32738 *	NASA-CASE-MFS-29177-1	c 37	N88-14362 *
NASA-CASE-MFS-25302-1	c 33	N83-28319 *	NASA-CASE-MFS-28060-1	c 76	N87-25862 *	NASA-CASE-MFS-29207-1	c 74	N87-25843 *
NASA-CASE-MFS-25302-2	c 33	N84-33660 *	NASA-CASE-MFS-28080-1	c 33	N87-21233 *	NASA-CASE-MFS-29241-1	c 24	N90-23480 *
NASA-CASE-MFS-25306-1	c 25	N83-31187 *	NASA-CASE-MFS-28087-1	c 35	N87-23944 *	NASA-CASE-MFS-29252-1	c 37	N88-23980 *
NASA-CASE-MFS-25312-1	c 74	N83-17305 *	NASA-CASE-MFS-28090-1	c 27	N87-21111 *	NASA-CASE-MFS-29260-1	c 37	N90-19602 *
NASA-CASE-MFS-25315-1	c 36	N83-29680 *	NASA-CASE-MFS-28110-1	c 37	N87-24689 *	NASA-CASE-MFS-29291-1	c 37	N89-12868 *
NASA-CASE-MFS-25319-1	c 60	N85-33701 *	NASA-CASE-MFS-28118-1	c 39	N87-25601 *	NASA-CASE-MFS-29348-1	c 74	N89-25689 *
NASA-CASE-MFS-25323-1	c 33	N84-22886 *	NASA-CASE-MFS-28122-1	c 72	N88-24253 *	NASA-CASE-MFS-29489-1	c 31	N90-23586 *
NASA-CASE-MFS-25363-1	c 37	N82-12441 *	NASA-CASE-MFS-28137-1	c 76	N88-24544 *	NASA-CASE-MFS-29491-1	c 31	N90-26168 *
NASA-CASE-MFS-25403-1	c 18	N83-29303 *	NASA-CASE-MFS-28139-1	c 29	N87-18679 *	NASA-CASE-MFS-29576-1	c 25	N92-25309 *
NASA-CASE-MFS-25405-1	c 35	N84-22929 *	NASA-CASE-MFS-28142-1	c 25	N88-23845 *	NASA-CASE-MFS-29764-1	c 37	N93-19049 *
NASA-CASE-MFS-25426-1	c 25	N83-10126 *	NASA-CASE-MFS-28144-1	c 76	N88-24545 *	NASA-CASE-MFS-29766-1	c 33	N92-33030 *
NASA-CASE-MFS-25429-1	c 18	N86-20469 *	NASA-CASE-MFS-28153-1	c 31	N86-32589 *	NASA-CASE-MFS-29904-1	c 35	N93-29503 *
NASA-CASE-MFS-25430-1	c 33	N84-16453 *	NASA-CASE-MFS-28161-1	c 37	N87-18817 *			
NASA-CASE-MFS-25436-1	c 27	N83-36220 *	NASA-CASE-MFS-28177-1	c 35	N91-21496 *	NASA-CASE-MSC-10954-1	c 54	N78-18761 *
NASA-CASE-MFS-25477-1	c 33	N84-14424 *	NASA-CASE-MFS-28182-1	c 76	N90-24169 *	NASA-CASE-MSC-10959	c 15	N71-26243 *
NASA-CASE-MFS-25509-1	c 35	N83-24828 *	NASA-CASE-MFS-28183-1	c 74	N89-13253 *	NASA-CASE-MSC-10960-1	c 03	N71-24718 *
NASA-CASE-MFS-25510-1	c 37	N84-16560 *	NASA-CASE-MFS-28185-1	c 37	N88-23979 *	NASA-CASE-MSC-10966	c 14	N71-19568 *
NASA-CASE-MFS-25535-1	c 33	N81-12330 *	NASA-CASE-MFS-28192-1	c 37	N90-17154 *	NASA-CASE-MSC-11010	c 15	N71-19485 *

## NASA-CASE-MSC-11072

## REPORT NUMBER INDEX

NASA-CASE-MSC-11072	c 54	N74-32546 *	NASA-CASE-MSC-13282-1	c 05	N71-24729 *	NASA-CASE-MSC-16462-1	c 32	N82-31583 *
NASA-CASE-MSC-11235	c 33	N78-17294 *	NASA-CASE-MSC-13332-1	c 14	N72-21408 *	NASA-CASE-MSC-16497-1	c 25	N82-12166 *
NASA-CASE-MSC-11242	c 35	N78-17358 *	NASA-CASE-MSC-13335-1	c 06	N72-31140 *	NASA-CASE-MSC-16697-1	c 33	N79-28415 *
NASA-CASE-MSC-11253	c 05	N71-12343 *	NASA-CASE-MSC-13397-1	c 21	N72-25595 *	NASA-CASE-MSC-16747-1	c 33	N81-17349 *
NASA-CASE-MSC-11277	c 09	N71-29008 *	NASA-CASE-MSC-13407-1	c 10	N72-20225 *	NASA-CASE-MSC-16777-1	c 51	N80-27067 *
NASA-CASE-MSC-11561-1	c 05	N73-32014 *	NASA-CASE-MSC-13436-1	c 05	N73-32015 *	NASA-CASE-MSC-16800-1	c 32	N81-14187 *
NASA-CASE-MSC-11817-1	c 15	N71-26611 *	NASA-CASE-MSC-13492-1	c 10	N71-28860 *	NASA-CASE-MSC-16841-1	c 34	N79-24285 *
NASA-CASE-MSC-11847-1	c 14	N72-11363 *	NASA-CASE-MSC-13512-1	c 15	N72-22485 *	NASA-CASE-MSC-16934-3	c 24	N84-16262 *
NASA-CASE-MSC-11849-1	c 15	N72-22488 *	NASA-CASE-MSC-13530-2	c 23	N75-14834 *	NASA-CASE-MSC-16938-1	c 37	N80-23653 *
NASA-CASE-MSC-12033-1	c 09	N71-13531 *	NASA-CASE-MSC-13540-1	c 05	N72-33096 *	NASA-CASE-MSC-16973-1	c 37	N81-14317 *
NASA-CASE-MSC-12049	c 31	N71-16080 *	NASA-CASE-MSC-13587-1	c 15	N73-30459 *	NASA-CASE-MSC-17832-1	c 33	N74-14956 *
NASA-CASE-MSC-12052-1	c 15	N71-24599 *	NASA-CASE-MSC-13601-2	c 54	N75-27759 *	NASA-CASE-MSC-18035-1	c 32	N81-15179 *
NASA-CASE-MSC-12084-1	c 12	N71-17569 *	NASA-CASE-MSC-13604-1	c 05	N73-13114 *	NASA-CASE-MSC-18106-1	c 33	N82-11357 *
NASA-CASE-MSC-12086-1	c 05	N71-12345 *	NASA-CASE-MSC-13609-1	c 05	N72-25122 *	NASA-CASE-MSC-18107-1	c 27	N81-25209 *
NASA-CASE-MSC-12101	c 09	N71-18720 *	NASA-CASE-MSC-13648	c 05	N72-27103 *	NASA-CASE-MSC-18134-1	c 37	N81-15363 *
NASA-CASE-MSC-12105-1	c 14	N72-21409 *	NASA-CASE-MSC-13746-1	c 10	N73-32143 *	NASA-CASE-MSC-18172-3	c 31	N88-29052 *
NASA-CASE-MSC-12109	c 18	N71-26285 *	NASA-CASE-MSC-13789-1	c 11	N73-32152 *	NASA-CASE-MSC-18179-1	c 20	N80-18097 *
NASA-CASE-MSC-12111-1	c 02	N71-11039 *	NASA-CASE-MSC-13802-2	c 35	N76-15431 *	NASA-CASE-MSC-18223-1	c 24	N82-29362 *
NASA-CASE-MSC-12116-1	c 15	N71-17648 *	NASA-CASE-MSC-13855-1	c 35	N74-17885 *	NASA-CASE-MSC-18223-2	c 54	N84-11758 *
NASA-CASE-MSC-12121-1	c 15	N71-27147 *	NASA-CASE-MSC-13907-1	c 10	N73-26230 *	NASA-CASE-MSC-18255-1	c 74	N80-33210 *
NASA-CASE-MSC-12135-1	c 09	N71-12526 *	NASA-CASE-MSC-13912-1	c 32	N74-30524 *	NASA-CASE-MSC-18334-1	c 32	N80-32604 *
NASA-CASE-MSC-12139-1	c 28	N71-14058 *	NASA-CASE-MSC-13917-1	c 05	N72-15098 #	NASA-CASE-MSC-18381-1	c 52	N81-28740 *
NASA-CASE-MSC-12143-1	c 33	N72-17947 *	NASA-CASE-MSC-13932-1	c 62	N74-14920 *	NASA-CASE-MSC-18382-1	c 27	N82-16238 *
NASA-CASE-MSC-12146-1	c 07	N72-17109 *	NASA-CASE-MSC-13972-1	c 52	N74-10975 *	NASA-CASE-MSC-18382-2	c 27	N84-14324 *
NASA-CASE-MSC-12165-1	c 07	N71-33696 *	NASA-CASE-MSC-13999-1	c 52	N74-26626 *	NASA-CASE-MSC-18407-1	c 33	N82-24427 #
NASA-CASE-MSC-12168-1	c 09	N71-18600 *	NASA-CASE-MSC-14053-1	c 60	N74-12888 *	NASA-CASE-MSC-18417-1	c 74	N85-29750 *
NASA-CASE-MSC-12178-1	c 09	N71-13518 *	NASA-CASE-MSC-14065-1	c 32	N74-26654 *	NASA-CASE-MSC-18422-1	c 37	N82-16408 *
NASA-CASE-MSC-12205-1	c 07	N71-27056 *	NASA-CASE-MSC-14066-1	c 33	N74-27705 *	NASA-CASE-MSC-18430-1	c 37	N82-24491 *
NASA-CASE-MSC-12206-1	c 05	N71-17599 *	NASA-CASE-MSC-14070-1	c 32	N74-32598 *	NASA-CASE-MSC-18498-1	c 60	N82-29013 *
NASA-CASE-MSC-12209	c 09	N71-24842 *	NASA-CASE-MSC-14081-1	c 35	N74-27860 *	NASA-CASE-MSC-18526-1	c 37	N82-24494 *
NASA-CASE-MSC-12223-1	c 07	N71-26181 *	NASA-CASE-MSC-14082-1	c 60	N76-23850 *	NASA-CASE-MSC-18532-1	c 32	N82-27558 *
NASA-CASE-MSC-12233-1	c 15	N72-25454 *	NASA-CASE-MSC-14096-1	c 74	N74-15095 *	NASA-CASE-MSC-18538-1	c 37	N82-26672 *
NASA-CASE-MSC-12233-2	c 32	N73-13921 *	NASA-CASE-MSC-14129-1	c 33	N75-18479 *	NASA-CASE-MSC-18578-1	c 32	N85-21427 *
NASA-CASE-MSC-12239-1	c 52	N79-21750 *	NASA-CASE-MSC-14130-1	c 33	N74-32711 *	NASA-CASE-MSC-18606-1	c 32	N82-11336 *
NASA-CASE-MSC-12243-1	c 05	N71-24728 *	NASA-CASE-MSC-14131-1	c 33	N75-19515 *	NASA-CASE-MSC-18627-1	c 74	N82-30071 *
NASA-CASE-MSC-12259-1	c 07	N70-12616 #	NASA-CASE-MSC-14143-1	c 77	N75-20139 *	NASA-CASE-MSC-18675-1	c 32	N84-22820 *
NASA-CASE-MSC-12259-2	c 07	N72-33146 #	NASA-CASE-MSC-14180-1	c 52	N76-14757 *	NASA-CASE-MSC-18723-1	c 35	N83-21312 *
NASA-CASE-MSC-12279-1	c 15	N70-35679 #	NASA-CASE-MSC-14182-1	c 27	N76-14264 *	NASA-CASE-MSC-18736-1	c 24	N83-13172 *
NASA-CASE-MSC-12279	c 15	N72-17450 *	NASA-CASE-MSC-14187-1	c 35	N74-32879 *	NASA-CASE-MSC-18737-1	c 24	N83-13171 *
NASA-CASE-MSC-12280	c 27	N71-16348 *	NASA-CASE-MSC-14219-1	c 32	N74-27612 *	NASA-CASE-MSC-18741-1	c 27	N82-29456 *
NASA-CASE-MSC-12293-1	c 14	N72-27411 *	NASA-CASE-MSC-14240-1	c 33	N75-14957 *	NASA-CASE-MSC-18742-1	c 37	N82-26673 #
NASA-CASE-MSC-12297	c 14	N72-23457 *	NASA-CASE-MSC-14245-1	c 18	N75-27041 *	NASA-CASE-MSC-18759-1	c 52	N83-27578 *
NASA-CASE-MSC-12324-1	c 05	N72-22093 *	NASA-CASE-MSC-14270-1	c 27	N76-22377 *	NASA-CASE-MSC-18761-1	c 52	N83-27577 *
NASA-CASE-MSC-12327-1	c 35	N77-27368 *	NASA-CASE-MSC-14270-2	c 27	N76-23426 *	NASA-CASE-MSC-18791-1	c 37	N83-36482 *
NASA-CASE-MSC-12357	c 15	N73-12489 *	NASA-CASE-MSC-14273-1	c 34	N75-33342 *	NASA-CASE-MSC-18794-1	c 44	N83-14693 *
NASA-CASE-MSC-12363-1	c 14	N73-26431 *	NASA-CASE-MSC-14276-1	c 52	N77-14737 *	NASA-CASE-MSC-18807-1	c 37	N83-36483 *
NASA-CASE-MSC-12372-1	c 31	N72-25842 *	NASA-CASE-MSC-14331-1	c 27	N76-24405 *	NASA-CASE-MSC-18808-1	c 32	N90-20280 *
NASA-CASE-MSC-12389	c 33	N71-29052 *	NASA-CASE-MSC-14331-2	c 27	N78-17213 *	NASA-CASE-MSC-18832-1	c 27	N83-18908 *
NASA-CASE-MSC-12390	c 27	N71-29155 *	NASA-CASE-MSC-14331-3	c 27	N78-32262 *	NASA-CASE-MSC-18852-1	c 37	N85-29283 *
NASA-CASE-MSC-12391	c 30	N73-12884 *	NASA-CASE-MSC-14339-1	c 05	N75-24716 *	NASA-CASE-MSC-18866-1	c 35	N85-29213 *
NASA-CASE-MSC-12393-1	c 02	N73-26006 *	NASA-CASE-MSC-14428-1	c 23	N77-17161 *	NASA-CASE-MSC-18929-1	c 39	N83-20280 *
NASA-CASE-MSC-12394-1	c 08	N74-10942 *	NASA-CASE-MSC-14435-1	c 37	N76-18455 *	NASA-CASE-MSC-18934-3	c 24	N82-26387 #
NASA-CASE-MSC-12395	c 09	N72-25257 *	NASA-CASE-MSC-14472-1	c 43	N77-10584 *	NASA-CASE-MSC-18936-1	c 35	N83-29652 *
NASA-CASE-MSC-12396-1	c 03	N73-31988 *	NASA-CASE-MSC-14557-1	c 32	N76-16249 *	NASA-CASE-MSC-18969-1	c 18	N84-22605 *
NASA-CASE-MSC-12397-1	c 05	N72-25119 *	NASA-CASE-MSC-14558-1	c 32	N75-21486 *	NASA-CASE-MSC-19095-1	c 37	N75-19683 *
NASA-CASE-MSC-12398	c 05	N72-20098 *	NASA-CASE-MSC-14623-1	c 52	N77-28717 *	NASA-CASE-MSC-19372-1	c 39	N76-31562 *
NASA-CASE-MSC-12404-1	c 23	N73-13661 *	NASA-CASE-MSC-14632-1	c 54	N78-14784 *	NASA-CASE-MSC-19442-1	c 74	N77-10899 *
NASA-CASE-MSC-12408-1	c 46	N74-13011 *	NASA-CASE-MSC-14640-1	c 54	N76-14804 *	NASA-CASE-MSC-19514-1	c 37	N79-20377 *
NASA-CASE-MSC-12411-1	c 05	N72-20096 *	NASA-CASE-MSC-14649-1	c 33	N76-16331 *	NASA-CASE-MSC-19535-1	c 37	N77-32499 *
NASA-CASE-MSC-12423-1	c 91	N76-30131 *	NASA-CASE-MSC-14653-1	c 35	N77-19385 *	NASA-CASE-MSC-19536-1	c 37	N77-22482 *
NASA-CASE-MSC-12428-1	c 10	N73-25240 *	NASA-CASE-MSC-14683-1	c 74	N77-18893 *	NASA-CASE-MSC-19568-1	c 34	N78-25350 *
NASA-CASE-MSC-12433	c 31	N73-14854 *	NASA-CASE-MSC-14733-1	c 54	N76-24900 *	NASA-CASE-MSC-19666-1	c 37	N78-17383 *
NASA-CASE-MSC-12458-1	c 08	N73-32081 *	NASA-CASE-MSC-14735-1	c 54	N76-24900 *	NASA-CASE-MSC-19672-1	c 38	N79-14398 *
NASA-CASE-MSC-12462-1	c 32	N74-20809 *	NASA-CASE-MSC-14757-1	c 35	N78-10428 *	NASA-CASE-MSC-19693-1	c 26	N78-24333 *
NASA-CASE-MSC-12494-1	c 32	N74-20810 *	NASA-CASE-MSC-14771-1	c 54	N77-32722 *	NASA-CASE-MSC-19706-1	c 09	N78-31129 *
NASA-CASE-MSC-12506-1	c 32	N77-12239 *	NASA-CASE-MSC-14773-1	c 35	N78-12390 *	NASA-CASE-MSC-20036-1	c 76	N85-33826 *
NASA-CASE-MSC-12531-1	c 35	N75-30504 *	NASA-CASE-MSC-14805-1	c 54	N78-32720 *	NASA-CASE-MSC-20078-3	c 52	N91-14709 *
NASA-CASE-MSC-12549-1	c 37	N74-27903 *	NASA-CASE-MSC-14831-1	c 25	N78-10225 *	NASA-CASE-MSC-20080-1	c 37	N85-30334 *
NASA-CASE-MSC-12559-1	c 18	N76-14186 *	NASA-CASE-MSC-14836-1	c 52	N82-11770 *	NASA-CASE-MSC-20112-1	c 37	N85-20338 *
NASA-CASE-MSC-12561-1	c 18	N77-17185 *	NASA-CASE-MSC-14840-1	c 32	N77-24331 *	NASA-CASE-MSC-20127-2	c 37	N85-34403 *
NASA-CASE-MSC-12568-1	c 24	N76-14204 *	NASA-CASE-MSC-14903-1	c 27	N78-32256 *	NASA-CASE-MSC-20148-1	c 37	N85-29284 *
NASA-CASE-MSC-12593-1	c 17	N76-21250 *	NASA-CASE-MSC-14903-2	c 27	N80-10358 *	NASA-CASE-MSC-20162-1	c 37	N87-17036 *
NASA-CASE-MSC-12607-1	c 32	N75-21485 *	NASA-CASE-MSC-14903-3	c 27	N80-24438 *	NASA-CASE-MSC-20181-1	c 33	N88-23941 *
NASA-CASE-MSC-12609-1	c 05	N73-32012 *	NASA-CASE-MSC-14905-1	c 37	N77-28487 *	NASA-CASE-MSC-20187-1	c 33	N87-25531 *
NASA-CASE-MSC-12611-1	c 12	N76-15189 *	NASA-CASE-MSC-14916-1	c 33	N78-10375 *	NASA-CASE-MSC-20202-1	c 54	N84-16803 *
NASA-CASE-MSC-12615-1	c 37	N76-19437 *	NASA-CASE-MSC-14939-1	c 32	N79-11264 *	NASA-CASE-MSC-20206-1	c 25	N86-27431 *
NASA-CASE-MSC-12617-1	c 35	N76-29552 *	NASA-CASE-MSC-15158-1	c 14	N72-17325 *	NASA-CASE-MSC-20250-1	c 35	N86-19581 *
NASA-CASE-MSC-12618-1	c 74	N78-17865 *	NASA-CASE-MSC-15474-1	c 15	N71-26162 *	NASA-CASE-MSC-20254-1	c 16	N84-22601 *
NASA-CASE-MSC-12619-2	c 27	N79-12221 *	NASA-CASE-MSC-15567-1	c 33	N73-16918 *	NASA-CASE-MSC-20258-1	c 60	N84-28492 *
NASA-CASE-MSC-12631-1	c 24	N77-28225 *	NASA-CASE-MSC-15626-1	c 14	N72-25411 *	NASA-CASE-MSC-20261-1	c 54	N84-28484 *
NASA-CASE-MSC-12631-3	c 27	N81-14077 *	NASA-CASE-MSC-16000-1	c 37	N78-24544 *	NASA-CASE-MSC-20261-2	c 54	N84-23113 *
NASA-CASE-MSC-12640-1	c 74	N76-31998 *	NASA-CASE-MSC-16043-1	c 37	N79-11402 *	NASA-CASE-MSC-20275-1	c 35	N85-21595 *
NASA-CASE-MSC-12662-1	c 33	N79-12331 *	NASA-CASE-MSC-16074-1	c 27	N80-26446 *	NASA-CASE-MSC-20304-1	c 37	N82-31690 #
NASA-CASE-MSC-12709-1	c 33	N77-24375 *	NASA-CASE-MSC-16098-1	c 51	N79-10693 *	NASA-CASE-MSC-20319-1	c 37	N85-21649 *
NASA-CASE-MSC-12731-1	c 37	N78-25426 *	NASA-CASE-MSC-16170-2	c 32	N84-27952 *	NASA-CASE-MSC-20418-1	c 74	N86-20126 *
NASA-CASE-MSC-12737-1	c 24	N79-25142 *	NASA-CASE-MSC-16182-1	c 54	N80-10799 *	NASA-CASE-MSC-20467-1	c 35	N88-23966 *
NASA-CASE-MSC-12743-1	c 32	N79-10263 *	NASA-CASE-MSC-16217-1	c 31	N81-27323 *	NASA-CASE-MSC-20475-1	c 37	N87-17037 *
NASA-CASE-MSC-12745-1	c 33	N81-27397 *	NASA-CASE-MSC-16239-1	c 37	N81-32510 *	NASA-CASE-MSC-20476-2	c 20	N89-25279 *
NASA-CASE-MSC-13047-1	c 31	N71-25434 *	NASA-CASE-MSC-16253-1	c 32	N79-20297 *	NASA-CASE-MSC-20497-1	c 34	N85-29180 *
NASA-CASE-MSC-13054	c 54	N78-17677 *	NASA-CASE-MSC-16258-1	c 45	N79-12584 *	NASA-CASE-MSC-20543-1	c 18	N84-22610 #
NASA-CASE-MSC-13110-1	c 08	N72-22163 *	NASA-CASE-MSC-16260-1	c 51	N80-16714 *	NASA-CASE-MSC-20549-2	c 35	N88-24927 *
NASA-CASE-MSC-13112	c 03	N71-11057 *	NASA-CASE-MSC-16270-1	c 37	N78-27423 *	NASA-CASE-MSC-20622-1	c 25	N86-19413 *
NASA-CASE-MSC-13140	c 05	N72-11085 *	NASA-CASE-MSC-16370-1	c 35	N81-19427 *	NASA-CASE-MSC-20635-1	c 18	N87-14373 *
NASA-CASE-MSC-13201-1	c 07	N71-28429 *	NASA-CASE-MSC-16394-1	c 28	N81-24280 *	NASA-CASE-MSC-20653-1	c 35	N86-26595 *
NASA-CASE-MSC-13276-1	c 14	N71-27058 *	NASA-CASE-MSC-16433-1	c 52	N81-24711 *	NASA-CASE-MSC-20676-1	c 18	N86-24729 *
NASA-CASE-MSC-13281	c 31	N72-18859 *	NASA-CASE-MSC-16461-1	c 33	N79-11313 *	NASA-CASE-MSC-20761-1	c 37	N87-15465 #

## REPORT NUMBER INDEX

## NASA-CASE-NPO-10700

NASA-CASE-MSC-20782-1	c 27	N90-23566 *	NASA-CASE-MSC-21539-1	c 37	N91-14610 *	NASA-CASE-NPO-10112	c 08	N71-12502 *	
NASA-CASE-MSC-20783-1	c 35	N86-20756 * #	NASA-CASE-MSC-21540-1	c 37	N91-32514 *	NASA-CASE-NPO-10117	c 15	N71-15608 *	
NASA-CASE-MSC-20797-1	c 37	N87-23981 *	NASA-CASE-MSC-21542-1	c 20	N92-15122 *	NASA-CASE-NPO-10118	c 07	N71-24741 *	
NASA-CASE-MSC-20797-2	c 35	N91-21494 *	NASA-CASE-MSC-21549-1	c 34	N91-27504 *	NASA-CASE-NPO-10122	c 12	N71-17631 *	
NASA-CASE-MSC-20812-1	c 34	N86-27593 *	NASA-CASE-MSC-21555-1	c 37	N93-23075 *	NASA-CASE-NPO-10123	c 15	N71-24835 *	
NASA-CASE-MSC-20821-1	c 17	N87-25348 *	NASA-CASE-MSC-21559-1	c 51	N92-34231 *	NASA-CASE-NPO-10138	c 33	N71-16357 *	
NASA-CASE-MSC-20840-1	c 34	N88-29132 *	NASA-CASE-MSC-21560-1	c 51	N92-34229 *	NASA-CASE-NPO-10140	c 07	N71-24742 *	
NASA-CASE-MSC-20841-1	c 34	N87-22950 *	NASA-CASE-MSC-21562-1	c 16	N92-16007 *	NASA-CASE-NPO-10141	c 11	N71-24964 *	
NASA-CASE-MSC-20841-2	c 34	N88-23958 *	NASA-CASE-MSC-21572-1	SB	c 25	N92-28756 *	NASA-CASE-NPO-10143	c 10	N71-26326 *
NASA-CASE-MSC-20857-1	c 37	N87-17035 *	NASA-CASE-MSC-21577-1	SB	c 25	N91-23271 * #	NASA-CASE-NPO-10144	c 14	N71-17701 *
NASA-CASE-MSC-20865-1	c 32	N87-18692 * #	NASA-CASE-MSC-21580-1	c 37	N92-21726 *	NASA-CASE-NPO-10150	c 08	N71-24650 *	
NASA-CASE-MSC-20867-1	c 36	N88-24958 *	NASA-CASE-MSC-21584-1	c 25	N92-33029 *	NASA-CASE-NPO-10151	c 37	N78-17386 *	
NASA-CASE-MSC-20873-1	SB	c 32	NASA-CASE-MSC-21585-1	c 51	N91-31755 *	NASA-CASE-NPO-10158	c 33	N71-16356 *	
NASA-CASE-MSC-20900-1	c 37	N88-30131 *	NASA-CASE-MSC-21589-1	c 54	N92-29137 *	NASA-CASE-NPO-10166-1	c 07	N73-22076 * #	
NASA-CASE-MSC-20906-2	c 35	N89-15379 *	NASA-CASE-MSC-21613-1	c 61	N92-10331 * #	NASA-CASE-NPO-10166-2	c 35	N76-16391 *	
NASA-CASE-MSC-20907-1	c 37	N87-18818 * #	NASA-CASE-MSC-21625-1	c 53	N93-29610 *	NASA-CASE-NPO-10169	c 10	N71-24844 *	
NASA-CASE-MSC-20910-1	c 37	N87-25582 *	NASA-CASE-MSC-21629-1	c 54	N91-31803 * #	NASA-CASE-NPO-10173	c 15	N71-24696 ...	
NASA-CASE-MSC-20912-1	c 32	N88-26568 *	NASA-CASE-MSC-21631-1	c 75	N91-32947 * #	NASA-CASE-NPO-10174	c 14	N71-18465 *	
NASA-CASE-MSC-20929-1	c 51	N91-14703 *	NASA-CASE-MSC-21632-1	c 54	N92-34210 * #	NASA-CASE-NPO-10175	c 14	N71-18625 *	
NASA-CASE-MSC-20946-1	c 34	N87-28867 *	NASA-CASE-MSC-21648-1	c 37	N92-24051 * #	NASA-CASE-NPO-10185	c 10	N71-26339 *	
NASA-CASE-MSC-20964-1	c 60	N87-14863 * #	NASA-CASE-MSC-21662-1	c 51	N92-34232 *	NASA-CASE-NPO-10188	c 03	N71-20273 *	
NASA-CASE-MSC-20979-1	c 37	N87-22985 *	NASA-CASE-MSC-21671-1	c 37	N91-32498 *	NASA-CASE-NPO-10189-1	c 33	N77-21314 *	
NASA-CASE-MSC-20985-1	c 18	N88-26398 *	NASA-CASE-MSC-21675-1	c 52	N92-28755 *	NASA-CASE-NPO-10194	c 03	N71-20407 *	
NASA-CASE-MSC-21025-1	c 31	N87-25495 * #	NASA-CASE-MSC-21700-1	c 35	N92-22039 *	NASA-CASE-NPO-10198	c 09	N71-24806 *	
NASA-CASE-MSC-21025-2	c 54	N91-14724 *	NASA-CASE-MSC-21703-1	c 31	N91-25305 *	NASA-CASE-NPO-10199	c 09	N72-17156 *	
NASA-CASE-MSC-21025-3	c 54	N91-26747 *	NASA-CASE-MSC-21721-1	c 54	N92-16559 *	NASA-CASE-NPO-10201	c 08	N71-18694 *	
NASA-CASE-MSC-21025-4	c 54	N91-14723 *	NASA-CASE-MSC-21723-1	c 18	N92-30315 * #	NASA-CASE-NPO-10214	c 10	N71-26577 *	
NASA-CASE-MSC-21056-1	c 18	N88-23827 *	NASA-CASE-MSC-21729-1	c 34	N92-16241 *	NASA-CASE-NPO-10230	c 09	N71-12520 *	
NASA-CASE-MSC-21059-2	c 35	N91-15511 *	NASA-CASE-MSC-21730-1	c 37	N93-13417 *	NASA-CASE-NPO-10231	c 07	N71-26101 *	
NASA-CASE-MSC-21059-3	c 35	N91-21495 *	NASA-CASE-MSC-21737-1	c 61	N91-13911 * #	NASA-CASE-NPO-10233-1	c 74	N78-33913 *	
NASA-CASE-MSC-21082-1	c 27	N87-29672 * #	NASA-CASE-MSC-21737-2	c 61	N93-18282 *	NASA-CASE-NPO-10234	c 06	N72-17094 *	
NASA-CASE-MSC-21094-1	c 35	N88-24941 * #	NASA-CASE-MSC-21748-1	c 37	N92-21727 *	NASA-CASE-NPO-10242	c 09	N71-24803 *	
NASA-CASE-MSC-21095-1	c 37	N89-12866 * #	NASA-CASE-MSC-21752-1	c 54	N92-17910 * #	NASA-CASE-NPO-10244	c 15	N72-26371 *	
NASA-CASE-MSC-21096-1	c 18	N89-12621 *	NASA-CASE-MSC-21759-1	c 25	N93-29617 *	NASA-CASE-NPO-10250	c 23	N71-16212 *	
NASA-CASE-MSC-21117-1	c 18	N88-28958 *	NASA-CASE-MSC-21763-1	SB	c 51	N93-18351 *	NASA-CASE-NPO-10251	c 10	N71-27365 *
NASA-CASE-MSC-21117-2	c 18	N89-28554 *	NASA-CASE-MSC-21775-1	c 52	N92-11627 * #	NASA-CASE-NPO-10271	c 17	N71-16393 *	
NASA-CASE-MSC-21132-1	c 37	N88-29181 *	NASA-CASE-MSC-21776-1	c 31	N92-33612 *	NASA-CASE-NPO-10298	c 12	N71-17661 *	
NASA-CASE-MSC-21166-1	c 35	N87-25555 * #	NASA-CASE-MSC-21793-1	c 16	N91-28186 * #	NASA-CASE-NPO-10300	c 14	N71-17662 *	
NASA-CASE-MSC-21169-1	c 27	N89-29539 *	NASA-CASE-MSC-21797-1	c 35	N93-17076 * #	NASA-CASE-NPO-10301	c 07	N72-11148 *	
NASA-CASE-MSC-21170-1	c 17	N91-14371 *	NASA-CASE-MSC-21799-1	c 37	N92-29150 *	NASA-CASE-NPO-10302	c 10	N71-26142 *	
NASA-CASE-MSC-21171-1	c 37	N88-23973 * #	NASA-CASE-MSC-21806-1	c 74	N92-17863 * #	NASA-CASE-NPO-10303	c 07	N72-22127 *	
NASA-CASE-MSC-21207-1	c 37	N88-29180 *	NASA-CASE-MSC-21823-1	c 37	N93-14843 * #	NASA-CASE-NPO-10309	c 15	N69-23190 * #	
NASA-CASE-MSC-21211-1	c 18	N89-28553 *	NASA-CASE-MSC-21842-1	c 54	N93-17088 * #	NASA-CASE-NPO-10311	c 31	N71-15643 *	
NASA-CASE-MSC-21253-1	c 31	N90-20254 *	NASA-CASE-MSC-21843-1	NP	c 51	N92-24052 * #	NASA-CASE-NPO-10316-1	c 37	N77-22479 *
NASA-CASE-MSC-21271-1	c 34	N90-21999 *	NASA-CASE-MSC-21858-1	c 52	N92-11628 * #	NASA-CASE-NPO-10320	c 14	N71-17655 *	
NASA-CASE-MSC-21293-1	c 51	N91-21700 *	NASA-CASE-MSC-21864-1	c 37	N92-23544 * #	NASA-CASE-NPO-10331	c 09	N71-26701 *	
NASA-CASE-MSC-21293-2	c 51	N93-10109 *	NASA-CASE-MSC-21864-1	c 37	N93-20117 *	NASA-CASE-NPO-10337	c 14	N71-15604 *	
NASA-CASE-MSC-21294-1	c 51	N91-30667 *	NASA-CASE-MSC-21868-1	c 54	N92-21589 *	NASA-CASE-NPO-10342	c 10	N71-33407 *	
NASA-CASE-MSC-21294-2	c 51	N93-10110 *	NASA-CASE-MSC-21874-1	c 63	N92-30314 * #	NASA-CASE-NPO-10343	c 07	N71-27341 *	
NASA-CASE-MSC-21299-1	c 20	N88-24684 * #	NASA-CASE-MSC-21881-1	c 37	N93-14871 *	NASA-CASE-NPO-10344	c 10	N71-26544 *	
NASA-CASE-MSC-21299-2	c 37	N91-32508 *	NASA-CASE-MSC-21884-1	c 27	N93-29088 *	NASA-CASE-NPO-10348	c 10	N71-12554 *	
NASA-CASE-MSC-21327-1	c 18	N90-11798 * #	NASA-CASE-MSC-21898-1	c 37	N93-14702 *	NASA-CASE-NPO-10351	c 08	N71-12503 *	
NASA-CASE-MSC-21330-1	c 16	N88-24660 * #	NASA-CASE-MSC-21903-1	c 37	N92-30101 * #	NASA-CASE-NPO-10373	c 03	N71-18698 *	
NASA-CASE-MSC-21332-1	c 03	N91-15142 *	NASA-CASE-MSC-21906-1	c 37	N92-28727 *	NASA-CASE-NPO-10388	c 07	N71-24622 *	
NASA-CASE-MSC-21334-1	c 32	N91-25317 *	NASA-CASE-MSC-21915-1	c 74	N92-30027 * #	NASA-CASE-NPO-10401	c 03	N72-20033 *	
NASA-CASE-MSC-21348-1	c 62	N91-14769 *	NASA-CASE-MSC-21918-1	c 37	N93-23076 *	NASA-CASE-NPO-10404	c 03	N71-12255 *	
NASA-CASE-MSC-21350-1	c 60	N92-16563 *	NASA-CASE-MSC-21922-1	c 35	N93-14841 * #	NASA-CASE-NPO-10412	c 09	N71-28421 *	
NASA-CASE-MSC-21354-1	c 37	N88-24969 * #	NASA-CASE-MSC-21935-1	c 37	N93-13423 *	NASA-CASE-NPO-10416	c 12	N71-27332 *	
NASA-CASE-MSC-21356-1	c 18	N90-19278 *	NASA-CASE-MSC-21936-1	SB	c 25	N92-20336 *	NASA-CASE-NPO-10417	c 16	N71-33410 *
NASA-CASE-MSC-21360-1	c 18	N91-14374 *	NASA-CASE-MSC-21940-1	c 37	N92-30540 * #	NASA-CASE-NPO-10424-1	c 27	N81-24258 *	
NASA-CASE-MSC-21361-1	c 51	N91-21701 *	NASA-CASE-MSC-21940-2	c 37	N93-20120 *	NASA-CASE-NPO-10431	c 15	N71-29132 *	
NASA-CASE-MSC-21364-1	c 54	N89-13889 * #	NASA-CASE-MSC-21941-1	c 54	N93-17087 * #	NASA-CASE-NPO-10440	c 15	N72-21466 *	
NASA-CASE-MSC-21365-1	c 37	N90-20408 *	NASA-CASE-MSC-21950-1	c 37	N92-34242 * #	NASA-CASE-NPO-10447	c 06	N70-11252 * #	
NASA-CASE-MSC-21366-1	c 54	N90-25498 *	NASA-CASE-MSC-21951-1	c 35	N92-23545 * #	NASA-CASE-NPO-10467	c 23	N71-26654 *	
NASA-CASE-MSC-21372-1	c 35	N89-12842 * #	NASA-CASE-MSC-21953-1	NP	c 37	N93-17271 * #	NASA-CASE-NPO-10468	c 23	N71-33229 *
NASA-CASE-MSC-21379-1	SB	c 61	NASA-CASE-MSC-21954-1	NP	c 51	N93-19054 * #	NASA-CASE-NPO-10539	c 07	N71-11285 *
NASA-CASE-MSC-21381-1	c 63	N91-13944 * #	NASA-CASE-MSC-21955-1	c 37	N93-14842 * #	NASA-CASE-NPO-10542	c 09	N72-27228 *	
NASA-CASE-MSC-21384-1	c 34	N92-16243 *	NASA-CASE-MSC-21961-1	c 35	N92-29952 * #	NASA-CASE-NPO-10548	c 16	N71-24831 *	
NASA-CASE-MSC-21384-2	c 35	N93-17626 *	NASA-CASE-MSC-21967-1	c 37	N92-30026 * #	NASA-CASE-NPO-10556	c 14	N71-27185 *	
NASA-CASE-MSC-21386-1	c 18	N90-20126 *	NASA-CASE-MSC-21975-1	c 14	N93-22016 * #	NASA-CASE-NPO-10557	c 27	N78-17214 *	
NASA-CASE-MSC-21387-1	c 61	N93-18855 *	NASA-CASE-MSC-21979-1	c 51	N93-17049 * #	NASA-CASE-NPO-10560	c 08	N72-22166 *	
NASA-CASE-MSC-21408-1	c 37	N91-14607 *	NASA-CASE-MSC-22008-1	c 35	N93-17077 * #	NASA-CASE-NPO-10567	c 08	N71-24633 *	
NASA-CASE-MSC-21415-1	SB	c 61	NASA-CASE-MSC-22015-1	c 18	N93-20042 * #	NASA-CASE-NPO-10575	c 03	N72-25019 *	
NASA-CASE-MSC-21416-1	c 74	N91-32922 *	NASA-CASE-MSC-22020-1	c 37	N93-19331 * #	NASA-CASE-NPO-10591	c 03	N72-22041 *	
NASA-CASE-MSC-21420-1	c 18	N92-15114 *	NASA-CASE-MSC-22027-1	c 63	N93-17056 * #	NASA-CASE-NPO-10595	c 10	N71-25917 *	
NASA-CASE-MSC-21428-1	c 33	N91-14537 *	NASA-CASE-MSC-22028-1	c 37	N93-22007 * #	NASA-CASE-NPO-10596	c 06	N71-25929 *	
NASA-CASE-MSC-21434-1	c 37	N92-10197 *	NASA-CASE-MSC-22046-1	c 37	N93-28501 * #	NASA-CASE-NPO-10606	c 15	N72-25451 *	
NASA-CASE-MSC-21436-1	c 37	N90-21390 *	NASA-CASE-MSC-22060-1	c 51	N93-19037 * #	NASA-CASE-NPO-10607	c 09	N71-27232 *	
NASA-CASE-MSC-21460-1	c 54	N91-13879 * #	NASA-CASE-MSC-22091-1	c 31	N93-28136 * #	NASA-CASE-NPO-10617-1	c 35	N74-22095 *	
NASA-CASE-MSC-21463-1	c 37	N92-33018 *	NASA-CASE-MSC-22093-1	c 82	N93-22017 * #	NASA-CASE-NPO-10619-1	c 35	N77-21393 *	
NASA-CASE-MSC-21465-1	c 61	N91-14741 *	NASA-CASE-MSC-22255-1	c 74	N93-28135 * #	NASA-CASE-NPO-10625	c 09	N71-26182 *	
NASA-CASE-MSC-21469-1	c 37	N91-31655 *	NASA-CASE-MSC-25707-1	c 35	N85-29214 *	NASA-CASE-NPO-10629	c 08	N72-18184 *	
NASA-CASE-MSC-21470-1	c 09	N91-21157 *	NASA-CASE-MSC-90153-2	c 05	N72-25120 *	NASA-CASE-NPO-10633	c 03	N72-28025 *	
NASA-CASE-MSC-21476-1	c 37	N91-21542 *				NASA-CASE-NPO-10634	c 23	N72-25619 *	
NASA-CASE-MSC-21481-1	c 60	N91-13890 * #	NASA-CASE-NPO-08835-1	c 27	N78-33228 *	NASA-CASE-NPO-10636	c 08	N72-25210 *	
NASA-CASE-MSC-21487-1	c 25	N92-33009 *	NASA-CASE-NPO-10003	c 10	N71-26415 *	NASA-CASE-NPO-10637	c 15	N72-12409 *	
NASA-CASE-MSC-21487-2	c 2								

## NASA-CASE-NPO-10701

## REPORT NUMBER INDEX

NASA-CASE-NPO-10701	c 06	N71-28620 *	NASA-CASE-NPO-11239	c 14	N73-12446 *	NASA-CASE-NPO-12015	c 27	N73-16764 *
NASA-CASE-NPO-10704	c 15	N72-20445 *	NASA-CASE-NPO-11243	c 07	N72-20154 *	NASA-CASE-NPO-12061-1	c 27	N76-16228 *
NASA-CASE-NPO-10711-1	c 35	N77-21392 *	NASA-CASE-NPO-11253	c 09	N72-17157 *	NASA-CASE-NPO-12070-1	c 28	N73-32606 *
NASA-CASE-NPO-10714	c 06	N69-31244 *	NASA-CASE-NPO-11264	c 07	N72-25174 *	NASA-CASE-NPO-12072	c 28	N72-22772 *
NASA-CASE-NPO-10716	c 09	N71-24892 *	NASA-CASE-NPO-11282	c 10	N73-16205 *	NASA-CASE-NPO-12087-1	c 74	N81-19898 *
NASA-CASE-NPO-10721	c 15	N72-27484 *	NASA-CASE-NPO-11283	c 09	N72-25260 *	NASA-CASE-NPO-12106	c 09	N73-15235 *
NASA-CASE-NPO-10722	c 09	N72-20199 *	NASA-CASE-NPO-11291-1	c 14	N73-30388 *	NASA-CASE-NPO-12107	c 08	N71-27255 *
NASA-CASE-NPO-10737	c 28	N72-11709 *	NASA-CASE-NPO-11302-1	c 07	N73-13149 *	NASA-CASE-NPO-12109	c 11	N72-22245 *
NASA-CASE-NPO-10743	c 08	N72-21199 *	NASA-CASE-NPO-11302-2	c 32	N74-10132 *	NASA-CASE-NPO-12119-1	c 52	N75-15270 *
NASA-CASE-NPO-10745	c 08	N72-22164 *	NASA-CASE-NPO-11304	c 14	N73-26430 *	NASA-CASE-NPO-12122-1	c 24	N76-14203 *
NASA-CASE-NPO-10747	c 03	N72-22042 *	NASA-CASE-NPO-11307-1	c 10	N73-30205 *	NASA-CASE-NPO-12127-1	c 91	N74-13130 *
NASA-CASE-NPO-10748	c 08	N72-20177 *	NASA-CASE-NPO-11311	c 14	N72-25414 *	NASA-CASE-NPO-12128-1	c 14	N73-32317 *
NASA-CASE-NPO-10753	c 03	N72-26031 *	NASA-CASE-NPO-11317-2	c 36	N74-13205 *	NASA-CASE-NPO-12130-1	c 25	N75-14844 *
NASA-CASE-NPO-10755	c 15	N71-27084 *	NASA-CASE-NPO-11322	c 06	N72-25146 *	NASA-CASE-NPO-12131-3	c 37	N80-18400 *
NASA-CASE-NPO-10758	c 14	N73-14427 *	NASA-CASE-NPO-11330	c 33	N73-26958 *	NASA-CASE-NPO-12134-1	c 33	N76-31409 *
NASA-CASE-NPO-10760	c 09	N72-25254 *	NASA-CASE-NPO-11333	c 08	N72-22162 *	NASA-CASE-NPO-12142-1	c 38	N76-28563 *
NASA-CASE-NPO-10764-1	c 14	N73-14428 *	NASA-CASE-NPO-11336-1	c 76	N79-16678 *	NASA-CASE-NPO-12148-1	c 44	N78-27515 *
NASA-CASE-NPO-10764-2	c 35	N75-25122 *	NASA-CASE-NPO-11337-1	c 74	N81-19896 *	NASA-CASE-NPO-13044-1	c 35	N74-15094 *
NASA-CASE-NPO-10765	c 06	N72-20121 *	NASA-CASE-NPO-11338	c 08	N72-25208 *	NASA-CASE-NPO-13050-1	c 36	N75-15029 *
NASA-CASE-NPO-10767-1	c 06	N73-33076 *	NASA-CASE-NPO-11340	c 15	N72-33477 *	NASA-CASE-NPO-13058-1	c 37	N77-22480 *
NASA-CASE-NPO-10767-2	c 06	N72-27151 *	NASA-CASE-NPO-11342	c 09	N72-25248 *	NASA-CASE-NPO-13059-1	c 37	N76-20480 *
NASA-CASE-NPO-10768-2	c 06	N72-27144 *	NASA-CASE-NPO-11358	c 07	N72-25172 *	NASA-CASE-NPO-13063-1	c 25	N76-18245 *
NASA-CASE-NPO-10768	c 06	N71-27254 *	NASA-CASE-NPO-11361	c 07	N72-32169 *	NASA-CASE-NPO-13064-1	c 33	N79-11314 *
NASA-CASE-NPO-10769	c 08	N72-11171 *	NASA-CASE-NPO-11366	c 11	N73-26238 *	NASA-CASE-NPO-13065-1	c 52	N74-26625 *
NASA-CASE-NPO-10774	c 06	N72-17095 *	NASA-CASE-NPO-11369	c 15	N73-13467 *	NASA-CASE-NPO-13067-1	c 60	N76-18800 *
NASA-CASE-NPO-10778	c 14	N72-11364 *	NASA-CASE-NPO-11371	c 08	N73-12177 *	NASA-CASE-NPO-13081-1	c 33	N74-22814 *
NASA-CASE-NPO-10781-1	c 33	N77-21314 *	NASA-CASE-NPO-11373	c 13	N72-25323 *	NASA-CASE-NPO-13086-1	c 15	N73-12495 *
NASA-CASE-NPO-10790-1	c 33	N77-21316 *	NASA-CASE-NPO-11377	c 15	N73-27406 *	NASA-CASE-NPO-13087-2	c 44	N76-31666 *
NASA-CASE-NPO-10796	c 15	N71-27068 *	NASA-CASE-NPO-11387	c 14	N73-14429 *	NASA-CASE-NPO-13091-1	c 09	N73-12214 *
NASA-CASE-NPO-10808	c 15	N71-27432 *	NASA-CASE-NPO-11388	c 03	N72-23048 *	NASA-CASE-NPO-13096-1	c 37	N77-22480 *
NASA-CASE-NPO-10810	c 14	N71-27323 *	NASA-CASE-NPO-11403-1	c 33	N77-22386 *	NASA-CASE-NPO-13103-1	c 32	N74-20811 *
NASA-CASE-NPO-10812	c 15	N73-13464 *	NASA-CASE-NPO-11406	c 08	N73-12175 *	NASA-CASE-NPO-13105-1	c 37	N74-21060 *
NASA-CASE-NPO-10817-1	c 08	N73-30135 *	NASA-CASE-NPO-11417	c 15	N73-24513 *	NASA-CASE-NPO-13112-1	c 73	N74-26767 *
NASA-CASE-NPO-10821	c 03	N71-19545 *	NASA-CASE-NPO-11418-1	c 14	N73-13420 *	NASA-CASE-NPO-13114-2	c 73	N78-28913 *
NASA-CASE-NPO-10828	c 33	N72-17948 *	NASA-CASE-NPO-11426	c 07	N73-26119 *	NASA-CASE-NPO-13120-1	c 27	N76-15311 *
NASA-CASE-NPO-10830-1	c 27	N81-15104 *	NASA-CASE-NPO-11429-1	c 74	N77-21941 *	NASA-CASE-NPO-13121-1	c 73	N77-18891 *
NASA-CASE-NPO-10831	c 33	N72-20915 *	NASA-CASE-NPO-11432-2	c 35	N74-15090 *	NASA-CASE-NPO-13125-1	c 33	N75-19519 *
NASA-CASE-NPO-10832	c 14	N72-21405 *	NASA-CASE-NPO-11437	c 16	N72-28521 *	NASA-CASE-NPO-13127-1	c 35	N74-23040 *
NASA-CASE-NPO-10844	c 07	N72-20140 *	NASA-CASE-NPO-11456	c 08	N73-26176 *	NASA-CASE-NPO-13131-1	c 36	N75-19652 *
NASA-CASE-NPO-10851	c 07	N71-24613 *	NASA-CASE-NPO-11458A	c 20	N78-32179 *	NASA-CASE-NPO-13137-1	c 27	N80-32514 *
NASA-CASE-NPO-10857-1	c 33	N80-14330 *	NASA-CASE-NPO-11458	c 28	N72-23810 *	NASA-CASE-NPO-13138-1	c 33	N74-17927 *
NASA-CASE-NPO-10862	c 06	N72-22107 *	NASA-CASE-NPO-11479	c 15	N73-13462 *	NASA-CASE-NPO-13139-1	c 60	N76-21914 *
NASA-CASE-NPO-10863-2	c 06	N72-25152 *	NASA-CASE-NPO-11481	c 21	N73-13644 *	NASA-CASE-NPO-13140-1	c 32	N75-24982 *
NASA-CASE-NPO-10863	c 06	N70-11251 *	NASA-CASE-NPO-11493	c 14	N73-12447 *	NASA-CASE-NPO-13147-1	c 36	N77-25502 *
NASA-CASE-NPO-10866-1	c 28	N79-14228 *	NASA-CASE-NPO-11497	c 08	N73-25206 *	NASA-CASE-NPO-13157-1	c 37	N74-32918 *
NASA-CASE-NPO-10870-1	c 33	N77-22386 *	NASA-CASE-NPO-11510-1	c 33	N77-21315 *	NASA-CASE-NPO-13159-1	c 33	N74-17928 *
NASA-CASE-NPO-10872-1	c 35	N79-16246 *	NASA-CASE-NPO-11515-1	c 33	N77-13315 *	NASA-CASE-NPO-13160-1	c 35	N74-18090 *
NASA-CASE-NPO-10883	c 31	N72-22874 *	NASA-CASE-NPO-11548	c 07	N73-26118 *	NASA-CASE-NPO-13170-1	c 35	N76-14430 *
NASA-CASE-NPO-10890	c 11	N73-12265 *	NASA-CASE-NPO-11556	c 12	N72-25292 *	NASA-CASE-NPO-13171-1	c 32	N74-11000 *
NASA-CASE-NPO-10893	c 27	N73-22710 *	NASA-CASE-NPO-11559	c 28	N73-24784 *	NASA-CASE-NPO-13175-1	c 36	N75-31427 *
NASA-CASE-NPO-10985	c 14	N73-20478 *	NASA-CASE-NPO-11569	c 10	N73-26229 *	NASA-CASE-NPO-13201-1	c 37	N75-15050 *
NASA-CASE-NPO-10998-1	c 06	N73-32029 *	NASA-CASE-NPO-11572	c 07	N73-16121 *	NASA-CASE-NPO-13205-1	c 31	N74-32917 *
NASA-CASE-NPO-10999-1	c 06	N73-32029 *	NASA-CASE-NPO-11575-1	c 74	N81-19896 *	NASA-CASE-NPO-13214-1	c 35	N75-25123 *
NASA-CASE-NPO-11001	c 07	N72-21118 *	NASA-CASE-NPO-11593-1	c 07	N73-28012 *	NASA-CASE-NPO-13215-1	c 35	N75-25123 *
NASA-CASE-NPO-11002	c 14	N72-22441 *	NASA-CASE-NPO-11609-2	c 27	N77-31308 *	NASA-CASE-NPO-13217-1	c 32	N75-26194 *
NASA-CASE-NPO-11012	c 15	N72-11391 *	NASA-CASE-NPO-11623-1	c 71	N74-31148 *	NASA-CASE-NPO-13231-1	c 45	N75-27585 *
NASA-CASE-NPO-11013	c 11	N72-22247 *	NASA-CASE-NPO-11628-1	c 07	N73-30113 *	NASA-CASE-NPO-13237-1	c 44	N76-18641 *
NASA-CASE-NPO-11016	c 08	N72-31226 *	NASA-CASE-NPO-11630	c 08	N72-33172 *	NASA-CASE-NPO-13247-1	c 76	N79-16678 *
NASA-CASE-NPO-11018	c 08	N72-21200 *	NASA-CASE-NPO-11631	c 10	N73-12244 *	NASA-CASE-NPO-13253-1	c 37	N75-18573 *
NASA-CASE-NPO-11021	c 03	N72-20032 *	NASA-CASE-NPO-11659-1	c 35	N74-11283 *	NASA-CASE-NPO-13263-1	c 12	N75-24774 *
NASA-CASE-NPO-11023	c 09	N72-17155 *	NASA-CASE-NPO-11661	c 07	N73-14130 *	NASA-CASE-NPO-13274-1	c 25	N79-10163 *
NASA-CASE-NPO-11031	c 07	N71-33606 *	NASA-CASE-NPO-11682-1	c 35	N74-15127 *	NASA-CASE-NPO-13281-1	c 37	N75-13266 *
NASA-CASE-NPO-11036	c 15	N72-24522 *	NASA-CASE-NPO-11686	c 14	N73-25462 *	NASA-CASE-NPO-13282	c 38	N78-17396 *
NASA-CASE-NPO-11059	c 15	N72-17454 *	NASA-CASE-NPO-11703-1	c 10	N73-32144 *	NASA-CASE-NPO-13283	c 38	N78-17395 *
NASA-CASE-NPO-11064	c 07	N72-11150 *	NASA-CASE-NPO-11707	c 07	N73-25161 *	NASA-CASE-NPO-13292-1	c 32	N75-15854 *
NASA-CASE-NPO-11078	c 09	N72-25262 *	NASA-CASE-NPO-11738-1	c 09	N73-30185 *	NASA-CASE-NPO-13303-1	c 20	N75-24837 *
NASA-CASE-NPO-11082	c 08	N72-22167 *	NASA-CASE-NPO-11743-1	c 28	N74-27425 *	NASA-CASE-NPO-13308-1	c 36	N75-30524 *
NASA-CASE-NPO-11087	c 23	N71-29125 *	NASA-CASE-NPO-11749	c 14	N73-28486 *	NASA-CASE-NPO-13309-1	c 25	N81-19244 *
NASA-CASE-NPO-11088	c 08	N71-29034 *	NASA-CASE-NPO-11751	c 07	N73-24176 *	NASA-CASE-NPO-13313-1	c 54	N75-27761 *
NASA-CASE-NPO-11091	c 18	N72-22567 *	NASA-CASE-NPO-11758-1	c 31	N74-23065 *	NASA-CASE-NPO-13321-1	c 32	N75-26195 *
NASA-CASE-NPO-11095	c 15	N72-25455 *	NASA-CASE-NPO-11771	c 03	N73-20040 *	NASA-CASE-NPO-13327-1	c 35	N75-23910 *
NASA-CASE-NPO-11103-1	c 35	N77-27367 *	NASA-CASE-NPO-11775	c 26	N72-28761 *	NASA-CASE-NPO-13342-1	c 37	N76-16446 *
NASA-CASE-NPO-11104	c 08	N72-22165 *	NASA-CASE-NPO-11806-1	c 44	N74-19693 *	NASA-CASE-NPO-13342-2	c 44	N76-29700 *
NASA-CASE-NPO-11106	c 14	N70-34697 *	NASA-CASE-NPO-11820-1	c 32	N74-19788 *	NASA-CASE-NPO-13345-1	c 37	N75-19684 *
NASA-CASE-NPO-11118	c 03	N72-25021 *	NASA-CASE-NPO-11821-1	c 08	N73-26175 *	NASA-CASE-NPO-13346-1	c 36	N76-29575 *
NASA-CASE-NPO-11120-1	c 34	N74-18552 *	NASA-CASE-NPO-11850-1	c 32	N74-12912 *	NASA-CASE-NPO-13348-1	c 33	N75-31332 *
NASA-CASE-NPO-11129	c 09	N72-33204 *	NASA-CASE-NPO-11856-1	c 36	N74-15145 *	NASA-CASE-NPO-13360-1	c 37	N75-25185 *
NASA-CASE-NPO-11130	c 08	N72-20176 *	NASA-CASE-NPO-11861-1	c 36	N74-20009 *	NASA-CASE-NPO-13374-1	c 33	N75-19524 *
NASA-CASE-NPO-11133	c 10	N72-20223 *	NASA-CASE-NPO-11868	c 10	N73-20254 *	NASA-CASE-NPO-13385-1	c 33	N76-18345 *
NASA-CASE-NPO-11134	c 09	N72-21246 *	NASA-CASE-NPO-11880	c 28	N73-24783 *	NASA-CASE-NPO-13386-1	c 54	N75-27758 *
NASA-CASE-NPO-11138	c 03	N70-34646 *	NASA-CASE-NPO-11905-1	c 33	N74-12887 *	NASA-CASE-NPO-13388-1	c 35	N76-16390 *
NASA-CASE-NPO-11140	c 15	N72-17455 *	NASA-CASE-NPO-11919-1	c 35	N74-11284 *	NASA-CASE-NPO-13391-1	c 34	N76-27515 *
NASA-CASE-NPO-11147	c 14	N72-27408 *	NASA-CASE-NPO-11921-1	c 32	N74-30523 *	NASA-CASE-NPO-13396-1	c 35	N76-18401 *
NASA-CASE-NPO-11150	c 35	N78-17359 *	NASA-CASE-NPO-11932-1	c 35	N74-23040 *	NASA-CASE-NPO-13402-1	c 37	N76-18457 *
NASA-CASE-NPO-11156-2	c 33	N75-31331 *	NASA-CASE-NPO-11941-1	c 10	N73-27171 *	NASA-CASE-NPO-13422-1	c 60	N76-14818 *
NASA-CASE-NPO-11161	c 08	N72-25207 *	NASA-CASE-NPO-11942-1	c 33	N73-32818 *	NASA-CASE-NPO-13423-1	c 33	N75-31329 *
NASA-CASE-NPO-11177	c 15	N72-17453 *	NASA-CASE-NPO-11945-1	c 36	N76-18427 *	NASA-CASE-NPO-13426-1	c 33	N75-31330 *
NASA-CASE-NPO-11190	c 03	N71-34044 *	NASA-CASE-NPO-11948-1	c 33	N74-32712 *	NASA-CASE-NPO-13428-1	c 60	N77-12721 *
NASA-CASE-NPO-11191-1	c 33	N77-22386 *	NASA-CASE-NPO-11951-1	c 37	N74-21065 *	NASA-CASE-NPO-13435-1	c 31	N76-14284 *
NASA-CASE-NPO-11194	c 08	N72-25209 *	NASA-CASE-NPO-11954-1	c 35	N78-29421 *	NASA-CASE-NPO-13436-1	c 37	N76-20480 *
NASA-CASE-NPO-11201	c 14	N72-27409 *	NASA-CASE-NPO-11961-1	c 44	N76-18643 *	NASA-CASE-NPO-13443-1	c 76	N76-20994 *
NASA-CASE-NPO-11202	c 15	N72-25450 *	NASA-CASE-NPO-11962-1	c 33	N74-10194 *	NASA-CASE-NPO-13447-1	c 60	N77-12721 *
NASA-CASE-NPO-11203	c 10	N72-20224 *	NASA-CASE-NPO-11966-1	c 33	N74-17928 *	NASA-CASE-NPO-13449-1	c 36	N75-32441 *
NASA-CASE-NPO-11210	c 11	N72-20244 *	NASA-CASE-NPO-11975-1	c 28	N74-33209 *	NASA-CASE-NPO-13451-1	c 33	N76-14373 *
NASA-CASE-NPO-11213	c 15	N73-20514 *	NASA-CASE-NPO-11978	c 31	N78-17238 *	NASA-CASE-NPO-13459-1	c 31	N77-10229 *
NASA-CASE-NPO-11222	c 15	N72-25456 *	NASA-CASE-NPO-12000	c 27	N72-25699 *	NASA-CASE-NPO-13462-1	c 35	N76-24572 *



## REPORT NUMBER INDEX

## NASA-CASE-NPO-15251-1

NASA-CASE-NPO-13464-1	c 44	N76-18642 *	NASA-CASE-NPO-13867-1	c 27	N78-14164 *	NASA-CASE-NPO-14329-1	c 52	N81-20703 *
NASA-CASE-NPO-13464-2	c 44	N76-29704 *	NASA-CASE-NPO-13872-1	c 33	N78-10377 *	NASA-CASE-NPO-14340-1	c 45	N80-14579 *
NASA-CASE-NPO-13465-1	c 32	N76-31372 *	NASA-CASE-NPO-13877-1	c 45	N82-11634 *	NASA-CASE-NPO-14350-1	c 33	N80-14332 *
NASA-CASE-NPO-13474-1	c 45	N76-21742 *	NASA-CASE-NPO-13886-1	c 32	N78-24391 *	NASA-CASE-NPO-14361-1	c 32	N82-23376 *
NASA-CASE-NPO-13479-1	c 35	N77-10492 *	NASA-CASE-NPO-13899-1	c 27	N80-32515 *	NASA-CASE-NPO-14362-1	c 32	N80-16261 *
NASA-CASE-NPO-13482-1	c 44	N78-13526 *	NASA-CASE-NPO-13904-1	c 25	N79-11152 *	NASA-CASE-NPO-14363-1	c 39	N81-25400 *
NASA-CASE-NPO-13490-1	c 36	N76-31512 *	NASA-CASE-NPO-13906-1	c 54	N79-24652 *	NASA-CASE-NPO-14369-1	c 44	N83-10501 *
NASA-CASE-NPO-13497-1	c 44	N76-14602 *	NASA-CASE-NPO-13907-1	c 28	N80-10374 *	NASA-CASE-NPO-14372-1	c 35	N80-26635 *
NASA-CASE-NPO-13504-1	c 33	N75-30430 *	NASA-CASE-NPO-13909-1	c 33	N78-25319 *	NASA-CASE-NPO-14382-1	c 31	N80-18231 *
NASA-CASE-NPO-13506-1	c 35	N76-15435 *	NASA-CASE-NPO-13910-1	c 52	N79-27836 *	NASA-CASE-NPO-14384-1	c 37	N80-10494 *
NASA-CASE-NPO-13510-1	c 44	N77-32581 *	NASA-CASE-NPO-13913-1	c 52	N79-12694 *	NASA-CASE-NPO-14387-1	c 43	N81-26509 *
NASA-CASE-NPO-13512-1	c 33	N77-10428 *	NASA-CASE-NPO-13914-1	c 44	N78-31526 *	NASA-CASE-NPO-14388-1	c 37	N81-17432 *
NASA-CASE-NPO-13519-1	c 33	N76-19338 *	NASA-CASE-NPO-13918-1	c 76	N79-11920 *	NASA-CASE-NPO-14395-1	c 37	N82-21587 *
NASA-CASE-NPO-13528-1	c 09	N77-10071 *	NASA-CASE-NPO-13921-1	c 44	N79-14526 *	NASA-CASE-NPO-14402-1	c 52	N81-27783 *
NASA-CASE-NPO-13530-1	c 25	N81-17187 *	NASA-CASE-NPO-13930-1	c 52	N79-14749 *	NASA-CASE-NPO-14406-1	c 37	N80-29703 *
NASA-CASE-NPO-13531-1	c 36	N76-24553 *	NASA-CASE-NPO-13935-1	c 52	N79-14751 *	NASA-CASE-NPO-14416-1	c 44	N81-14389 *
NASA-CASE-NPO-13535-1	c 37	N76-31524 *	NASA-CASE-NPO-13937-1	c 44	N78-31527 *	NASA-CASE-NPO-14424-1	c 33	N80-32650 *
NASA-CASE-NPO-13540-1	c 35	N77-14409 *	NASA-CASE-NPO-13941-1	c 32	N79-10262 *	NASA-CASE-NPO-14426-1	c 33	N81-27396 *
NASA-CASE-NPO-13541-1	c 37	N79-14383 *	NASA-CASE-NPO-13944-1	c 52	N79-14751 *	NASA-CASE-NPO-14430-1	c 33	N80-32650 *
NASA-CASE-NPO-13543-1	c 32	N77-12240 *	NASA-CASE-NPO-13945-1	c 36	N78-27402 *	NASA-CASE-NPO-14435-1	c 33	N81-33405 *
NASA-CASE-NPO-13544-1	c 36	N76-18428 *	NASA-CASE-NPO-13948-1	c 35	N78-25391 *	NASA-CASE-NPO-14444-1	c 33	N81-15192 *
NASA-CASE-NPO-13545-1	c 32	N77-12240 *	NASA-CASE-NPO-13953-1	c 35	N79-28527 *	NASA-CASE-NPO-14448-1	c 74	N81-29963 *
NASA-CASE-NPO-13550-1	c 36	N77-26477 *	NASA-CASE-NPO-13958-1	c 25	N79-11151 *	NASA-CASE-NPO-14467-1	c 44	N79-31753 *
NASA-CASE-NPO-13553-1	c 33	N76-32457 *	NASA-CASE-NPO-13969-1	c 76	N79-23798 *	NASA-CASE-NPO-14473-1	c 37	N80-23654 *
NASA-CASE-NPO-13556-1	c 35	N84-33766 *	NASA-CASE-NPO-13970-1	c 33	N81-20352 *	NASA-CASE-NPO-14474-1	c 26	N80-14229 *
NASA-CASE-NPO-13560-1	c 44	N77-10636 *	NASA-CASE-NPO-13982-1	c 32	N79-14267 *	NASA-CASE-NPO-14477-1	c 28	N80-28536 *
NASA-CASE-NPO-13561-1	c 44	N77-10636 *	NASA-CASE-NPO-13993-1	c 72	N79-13826 *	NASA-CASE-NPO-14480-1	c 32	N80-20448 *
NASA-CASE-NPO-13566-1	c 25	N77-32255 *	NASA-CASE-NPO-13999-1	c 35	N78-18395 *	NASA-CASE-NPO-14501-1	c 35	N80-18357 *
NASA-CASE-NPO-13567-1	c 44	N76-29701 *	NASA-CASE-NPO-14000-1	c 33	N79-24254 *	NASA-CASE-NPO-14502-1	c 74	N81-17888 *
NASA-CASE-NPO-13568-1	c 32	N76-21365 *	NASA-CASE-NPO-14001-1	c 27	N81-14076 *	NASA-CASE-NPO-14505-1	c 33	N81-19393 *
NASA-CASE-NPO-13569-2	c 35	N79-14348 *	NASA-CASE-NPO-14005-1	c 71	N79-20827 *	NASA-CASE-NPO-14513-1	c 35	N81-14287 *
NASA-CASE-NPO-13579-1	c 44	N78-17450 *	NASA-CASE-NPO-14009-1	c 32	N79-13214 *	NASA-CASE-NPO-14519-1	c 32	N80-23524 *
NASA-CASE-NPO-13579-2	c 44	N79-24433 *	NASA-CASE-NPO-14014-1	c 37	N79-10420 *	NASA-CASE-NPO-14521-1	c 37	N81-27519 *
NASA-CASE-NPO-13579-3	c 44	N79-24432 *	NASA-CASE-NPO-14019-1	c 32	N79-14268 *	NASA-CASE-NPO-14524-1	c 32	N80-24510 *
NASA-CASE-NPO-13579-4	c 44	N79-14529 *	NASA-CASE-NPO-14021-2	c 27	N80-16163 *	NASA-CASE-NPO-14525-1	c 32	N79-19195 *
NASA-CASE-NPO-13581-2	c 44	N78-31525 *	NASA-CASE-NPO-14022-1	c 32	N78-31321 *	NASA-CASE-NPO-14525-2	c 32	N83-31918 *
NASA-CASE-NPO-13587-1	c 32	N77-32342 *	NASA-CASE-NPO-14035-1	c 32	N83-19968 *	NASA-CASE-NPO-14527-1	c 32	N80-24510 *
NASA-CASE-NPO-13604-1	c 35	N76-31490 *	NASA-CASE-NPO-14054-1	c 32	N82-12297 *	NASA-CASE-NPO-14536-1	c 32	N81-14185 *
NASA-CASE-NPO-13606-2	c 35	N80-18364 *	NASA-CASE-NPO-14056-1	c 33	N79-24257 *	NASA-CASE-NPO-14542-1	c 25	N82-23282 *
NASA-CASE-NPO-13613-1	c 37	N76-29590 *	NASA-CASE-NPO-14058-1	c 44	N79-18443 *	NASA-CASE-NPO-14544-1	c 46	N82-12685 *
NASA-CASE-NPO-13619-1	c 37	N78-16369 *	NASA-CASE-NPO-14066-1	c 74	N79-34011 *	NASA-CASE-NPO-14549-2	c 52	N82-33996 *
NASA-CASE-NPO-13620-1	c 27	N77-30236 *	NASA-CASE-NPO-14078-1	c 72	N80-14877 *	NASA-CASE-NPO-14554-1	c 60	N81-27814 *
NASA-CASE-NPO-13621-1	c 32	N79-24210 *	NASA-CASE-NPO-14079-1	c 25	N80-20334 *	NASA-CASE-NPO-14556-1	c 33	N82-24418 *
NASA-CASE-NPO-13641-1	c 52	N76-29896 *	NASA-CASE-NPO-14092-1	c 52	N80-16725 *	NASA-CASE-NPO-14558-1	c 46	N80-24906 *
NASA-CASE-NPO-13643-1	c 52	N76-29895 *	NASA-CASE-NPO-14093-1	c 35	N80-20563 *	NASA-CASE-NPO-14567-1	c 33	N83-18996 *
NASA-CASE-NPO-13644-1	c 25	N79-28253 *	NASA-CASE-NPO-14096-1	c 44	N80-18551 *	NASA-CASE-NPO-14579-1	c 32	N80-18253 *
NASA-CASE-NPO-13652-1	c 44	N79-17314 *	NASA-CASE-NPO-14100-1	c 44	N79-12541 *	NASA-CASE-NPO-14588-1	c 32	N81-25278 *
NASA-CASE-NPO-13652-2	c 44	N79-24431 *	NASA-CASE-NPO-14101-1	c 52	N80-14687 *	NASA-CASE-NPO-14590-1	c 32	N80-18253 *
NASA-CASE-NPO-13652-3	c 44	N80-14474 *	NASA-CASE-NPO-14103-1	c 28	N78-31255 *	NASA-CASE-NPO-14596-1	c 31	N81-33319 *
NASA-CASE-NPO-13663-1	c 35	N77-14406 *	NASA-CASE-NPO-14109-1	c 28	N80-23471 *	NASA-CASE-NPO-14596-3	c 31	N83-31896 *
NASA-CASE-NPO-13666-1	c 27	N77-13217 *	NASA-CASE-NPO-14110-1	c 28	N81-15119 *	NASA-CASE-NPO-14597-2	c 37	N84-28081 *
NASA-CASE-NPO-13671-1	c 37	N77-31497 *	NASA-CASE-NPO-14112-1	c 46	N79-22679 *	NASA-CASE-NPO-14617-1	c 33	N81-24338 *
NASA-CASE-NPO-13673-1	c 71	N77-26919 *	NASA-CASE-NPO-14124-1	c 46	N80-14603 *	NASA-CASE-NPO-14619-1	c 44	N81-17518 *
NASA-CASE-NPO-13675-1	c 44	N77-32580 *	NASA-CASE-NPO-14126-1	c 44	N79-11470 *	NASA-CASE-NPO-14632-1	c 32	N82-18443 *
NASA-CASE-NPO-13676-1	c 60	N79-20751 *	NASA-CASE-NPO-14130-1	c 34	N79-20335 *	NASA-CASE-NPO-14635-1	c 44	N80-24741 *
NASA-CASE-NPO-13683-1	c 35	N77-14411 *	NASA-CASE-NPO-14134-1	c 71	N79-23753 *	NASA-CASE-NPO-14640-1	c 32	N80-32605 *
NASA-CASE-NPO-13687-1	c 35	N78-18391 *	NASA-CASE-NPO-14140-1	c 43	N81-26509 *	NASA-CASE-NPO-14641-1	c 32	N81-29308 *
NASA-CASE-NPO-13689-2	c 44	N81-29525 *	NASA-CASE-NPO-14143-1	c 25	N81-14015 *	NASA-CASE-NPO-14657-1	c 74	N81-17887 *
NASA-CASE-NPO-13689-4	c 44	N82-28780 *	NASA-CASE-NPO-14152-1	c 32	N80-18252 *	NASA-CASE-NPO-14670-1	c 44	N81-19558 *
NASA-CASE-NPO-13690-1	c 27	N78-19302 *	NASA-CASE-NPO-14162-1	c 60	N81-15706 *	NASA-CASE-NPO-14749-1	c 32	N81-14186 *
NASA-CASE-NPO-13690-2	c 27	N79-14213 *	NASA-CASE-NPO-14163-1	c 33	N81-14220 *	NASA-CASE-NPO-14782-1	c 36	N82-28616 *
NASA-CASE-NPO-13691-1	c 43	N79-17288 *	NASA-CASE-NPO-14167-1	c 60	N81-15706 *	NASA-CASE-NPO-14813-1	c 74	N82-24072 *
NASA-CASE-NPO-13707-1	c 74	N77-28933 *	NASA-CASE-NPO-14169-1	c 60	N81-15706 *	NASA-CASE-NPO-14831-1	c 76	N82-30105 *
NASA-CASE-NPO-13722-1	c 74	N77-22951 *	NASA-CASE-NPO-14170-1	c 37	N81-15364 *	NASA-CASE-NPO-14839-1	c 35	N82-15381 *
NASA-CASE-NPO-13731-1	c 39	N78-10493 *	NASA-CASE-NPO-14173-1	c 04	N80-32359 *	NASA-CASE-NPO-14845-1	c 27	N82-25842 *
NASA-CASE-NPO-13732-1	c 44	N79-10513 *	NASA-CASE-NPO-14174-1	c 74	N79-20856 *	NASA-CASE-NPO-14857-1	c 27	N83-19900 *
NASA-CASE-NPO-13734-1	c 44	N78-10554 *	NASA-CASE-NPO-14191-1	c 31	N80-32584 *	NASA-CASE-NPO-14864-1	c 74	N83-19597 *
NASA-CASE-NPO-13736-1	c 44	N77-32583 *	NASA-CASE-NPO-14192-1	c 39	N80-10507 *	NASA-CASE-NPO-14902-1	c 25	N82-29371 *
NASA-CASE-NPO-13753-1	c 32	N77-20289 *	NASA-CASE-NPO-14199-1	c 44	N79-25482 *	NASA-CASE-NPO-14936-1	c 47	N83-32292 *
NASA-CASE-NPO-13758-2	c 31	N81-15154 *	NASA-CASE-NPO-14200-1	c 44	N79-25482 *	NASA-CASE-NPO-14940-1	c 33	N83-31954 *
NASA-CASE-NPO-13759-1	c 74	N78-17867 *	NASA-CASE-NPO-14205-1	c 44	N79-31752 *	NASA-CASE-NPO-14987-1	c 24	N83-33950 *
NASA-CASE-NPO-13763-1	c 44	N78-33526 *	NASA-CASE-NPO-14212-1	c 52	N80-27072 *	NASA-CASE-NPO-14998-1	c 32	N83-18975 *
NASA-CASE-NPO-13764-1	c 27	N78-17215 *	NASA-CASE-NPO-14219-1	c 74	N81-17886 *	NASA-CASE-NPO-15015-1	c 25	N82-28368 *
NASA-CASE-NPO-13772-1	c 35	N78-10429 *	NASA-CASE-NPO-14220-1	c 37	N81-14318 *	NASA-CASE-NPO-15021-1	c 36	N83-10417 *
NASA-CASE-NPO-13786-1	c 44	N80-29835 *	NASA-CASE-NPO-14221-1	c 37	N81-25370 *	NASA-CASE-NPO-15024-1	c 32	N84-27951 *
NASA-CASE-NPO-13792-1	c 35	N77-32455 *	NASA-CASE-NPO-14224-1	c 33	N80-18287 *	NASA-CASE-NPO-15036-1	c 74	N82-19029 *
NASA-CASE-NPO-13801-1	c 36	N78-18410 *	NASA-CASE-NPO-14229-1	c 33	N80-18285 *	NASA-CASE-NPO-15037-2	c 37	N85-29282 *
NASA-CASE-NPO-13802-1	c 71	N78-10837 *	NASA-CASE-NPO-14231-1	c 46	N80-10709 *	NASA-CASE-NPO-15066-1	c 33	N82-29538 *
NASA-CASE-NPO-13804-1	c 33	N80-23559 *	NASA-CASE-NPO-14237-1	c 44	N80-20808 *	NASA-CASE-NPO-15070-1	c 31	N83-35176 *
NASA-CASE-NPO-13808-1	c 35	N78-15461 *	NASA-CASE-NPO-14253-1	c 32	N80-32605 *	NASA-CASE-NPO-15071-1	c 44	N82-16475 *
NASA-CASE-NPO-13810-1	c 44	N77-32582 *	NASA-CASE-NPO-14254-1	c 36	N80-18372 *	NASA-CASE-NPO-15100-1	c 44	N84-14583 *
NASA-CASE-NPO-13812-1	c 33	N77-30365 *	NASA-CASE-NPO-14255-1	c 46	N79-23555 *	NASA-CASE-NPO-15102-1	c 25	N81-25159 *
NASA-CASE-NPO-13813-1	c 44	N78-31526 *	NASA-CASE-NPO-14258-1	c 35	N81-33448 *	NASA-CASE-NPO-15111-1	c 36	N82-29589 *
NASA-CASE-NPO-13817-1	c 44	N79-11471 *	NASA-CASE-NPO-14260-1	c 28	N79-28342 *	NASA-CASE-NPO-15115-1	c 37	N82-24493 *
NASA-CASE-NPO-13821-1	c 44	N78-28594 *	NASA-CASE-NPO-14272-1	c 25	N81-33246 *	NASA-CASE-NPO-15155-1	c 74	N85-22139 *
NASA-CASE-NPO-13823-1	c 37	N81-25371 *	NASA-CASE-NPO-14273-1	c 25	N82-11144 *	NASA-CASE-NPO-15161-1	c 33	N84-16456 *
NASA-CASE-NPO-13828-1	c 37	N79-11405 *	NASA-CASE-NPO-14295-1	c 76	N80-32245 *	NASA-CASE-NPO-15179-1	c 44	N82-26777 *
NASA-CASE-NPO-13830-1	c 32	N80-14281 *	NASA-CASE-NPO-14297-1	c 33	N81-19389 *	NASA-CASE-NPO-15183-1	c 44	N82-26776 *
NASA-CASE-NPO-13836-1	c 32	N78-15323 *	NASA-CASE-NPO-14298-1	c 76	N80-32244 *	NASA-CASE-NPO-15197-1	c 52	N83-25346 *
NASA-CASE-NPO-13839-1	c 31	N78-25256 *	NASA-CASE-NPO-14303-1	c 44	N80-18550 *	NASA-CASE-NPO-15201-1	c 36	N83-35350 *
NASA-CASE-NPO-13847-2	c 85	N79-17747 *	NASA-CASE-NPO-14305-1	c 44	N80-18550 *	NASA-CASE-NPO-15202-1	c 27	N83-34043 *
NASA-CASE-NPO-13848-2	c 85	N79-17747 *	NASA-CASE-NPO-14311-1	c 33	N82-29539 *	NASA-CASE-NPO-15210-1	c 25	N84-22709 *
NASA-CASE-NPO-13849-1	c 28	N80-10374 *	NASA-CASE-NPO-14315-1	c 27	N81-17261 *	NASA-CASE-NPO-15213-1	c 51	N83-17045 *
NASA-CASE-NPO-13858-1	c 28	N79-11231 *	NASA-CASE-NPO-14316-1	c 33	N81-33404 *	NASA-CASE-NPO-15223-1	c 45	N83-25217 *
NASA-CASE-NPO-13859-1	c 28	N79-11231 *	NASA-CASE-NPO-14324-1	c 72	N80-27163 *	NASA-CASE-NPO-15227-1	c 37	N81-33482 *
NASA-CASE-NPO-13862-1	c 35	N79-10391 *	NASA-CASE-NPO-14328-1	c 32	N80-18253 *	NASA-CASE-NPO-15251-1	c 31	N83-31897 *



## NASA-CASE-NPO-15264-1

## REPORT NUMBER INDEX

NASA-CASE-NPO-15264-1	c 04	N84-27713 *	NASA-CASE-NPO-16103-1	c 27	N85-29043 *	NASA-CASE-NPO-17249-1-CU	c 32	N89-28676 *
NASA-CASE-NPO-15269-1	c 44	N82-29710 *	NASA-CASE-NPO-16112-1	c 33	N86-19516 *	NASA-CASE-NPO-17258-1-CU	c 33	N91-14551 *
NASA-CASE-NPO-15292-1	c 35	N83-27184 *	NASA-CASE-NPO-16116-2	c 60	N88-29310 *	NASA-CASE-NPO-17259-1-CU	c 76	N90-19884 *
NASA-CASE-NPO-15295-1	c 60	N85-21992 *	NASA-CASE-NPO-16135-1	c 25	N83-24572 *	NASA-CASE-NPO-17275-1-CU	c 37	N89-29750 *
NASA-CASE-NPO-15304-1	c 25	N83-31743 *	NASA-CASE-NPO-16142-1-CU	c 35	N86-20752 *	NASA-CASE-NPO-17278-1-CU	c 31	N90-21215 *
NASA-CASE-NPO-15334-1	c 71	N83-35781 *	NASA-CASE-NPO-16147-1-CU	c 71	N85-29693 *	NASA-CASE-NPO-17280-1-CU	c 17	N90-21061 *
NASA-CASE-NPO-15341-1	c 35	N84-33769 *	NASA-CASE-NPO-16155-1	c 44	N85-30475 *	NASA-CASE-NPO-17282-1-CU	c 36	N91-15528 *
NASA-CASE-NPO-15342-1	c 60	N83-32342 *	NASA-CASE-NPO-16171-1-CU	c 04	N86-27270 *	NASA-CASE-NPO-17291-1-CU	c 34	N88-23946 *
NASA-CASE-NPO-15345-1	c 74	N84-23247 *	NASA-CASE-NPO-16203-1	c 23	N85-35227 *	NASA-CASE-NPO-17301-1-CU	c 31	N90-23587 *
NASA-CASE-NPO-15351-1	c 06	N83-10040 *	NASA-CASE-NPO-16233-1	c 37	N86-20801 *	NASA-CASE-NPO-17310-1-CU	c 17	N88-28946 *
NASA-CASE-NPO-15351-2	c 06	N84-34443 *	NASA-CASE-NPO-16236-1	c 44	N86-27706 *	NASA-CASE-NPO-17325-1-CU	c 32	N90-17005 *
NASA-CASE-NPO-15358-1	c 33	N83-27126 *	NASA-CASE-NPO-16256-1	c 32	N87-21207 *	NASA-CASE-NPO-17334-1-CU	c 31	N88-23917 *
NASA-CASE-NPO-15375-1	c 74	N84-11921 *	NASA-CASE-NPO-16257-1	c 31	N85-29082 *	NASA-CASE-NPO-17354-1-CU	c 37	N90-17153 *
NASA-CASE-NPO-15388-1	c 44	N84-28203 *	NASA-CASE-NPO-16271-1	c 35	N86-25753 *	NASA-CASE-NPO-17355-1-CU	c 36	N91-17360 *
NASA-CASE-NPO-15398-1	c 35	N84-22931 *	NASA-CASE-NPO-16299-1	c 33	N87-14594 *	NASA-CASE-NPO-17390-1-CU	c 35	N90-22769 *
NASA-CASE-NPO-15400-1	c 34	N83-31993 *	NASA-CASE-NPO-16306-1-CU	c 76	N91-15898 *	NASA-CASE-NPO-17393-1-CU	c 33	N89-29679 *
NASA-CASE-NPO-15401-1	c 32	N87-27085 *	NASA-CASE-NPO-16321-1-CU	c 37	N87-17034 *	NASA-CASE-NPO-17394-1-CU	c 60	N91-31810 *
NASA-CASE-NPO-15419-2	c 44	N85-30474 *	NASA-CASE-NPO-16337-1-CU	c 33	N87-22894 *	NASA-CASE-NPO-17399-1-CU	c 76	N89-14120 *
NASA-CASE-NPO-15429-1	c 35	N84-28016 *	NASA-CASE-NPO-16372-1	c 72	N86-33127 *	NASA-CASE-NPO-17401-1-CU	c 63	N91-31885 *
NASA-CASE-NPO-15426-1	c 35	N84-17555 *	NASA-CASE-NPO-16392-1	c 25	N86-25428 *	NASA-CASE-NPO-17426-1-CU	c 33	N91-21434 *
NASA-CASE-NPO-15430-1	c 46	N85-21846 *	NASA-CASE-NPO-16393-1-CU	c 31	N87-21159 *	NASA-CASE-NPO-17430-1-CU	c 33	N90-21951 *
NASA-CASE-NPO-15432-1	c 32	N85-29117 *	NASA-CASE-NPO-16402-2	c 33	N88-24862 *	NASA-CASE-NPO-17436-1-CU	c 35	N91-15512 *
NASA-CASE-NPO-15433-1	c 32	N85-21428 *	NASA-CASE-NPO-16414-1-CU	c 32	N87-25511 *	NASA-CASE-NPO-17461-1-CU	c 35	N91-17350 *
NASA-CASE-NPO-15435-1	c 71	N83-36846 *	NASA-CASE-NPO-16420-1	c 33	N86-20681 *	NASA-CASE-NPO-17479-1-CU	c 34	N91-13658 *
NASA-CASE-NPO-15453-1	c 71	N83-32515 *	NASA-CASE-NPO-16423-1-CU	c 37	N87-21334 *	NASA-CASE-NPO-17480-1-CU	c 25	N92-10073 *
NASA-CASE-NPO-15458-1	c 25	N84-12262 *	NASA-CASE-NPO-16433-1	c 36	N87-23961 *	NASA-CASE-NPO-17498-1-CU	c 72	N91-14813 *
NASA-CASE-NPO-15464-1	c 74	N85-29749 *	NASA-CASE-NPO-16461-1-CU	c 60	N89-26400 *	NASA-CASE-NPO-17511-1-CU	c 71	N91-14807 *
NASA-CASE-NPO-15465-1	c 34	N84-22903 *	NASA-CASE-NPO-16462-1-CU	c 60	N88-24169 *	NASA-CASE-NPO-17512-1-CU	c 74	N91-26918 *
NASA-CASE-NPO-15466-1	c 71	N85-22104 *	NASA-CASE-NPO-16464-1-CU	c 60	N86-24224 *	NASA-CASE-NPO-17524-1-CU	c 27	N90-10261 *
NASA-CASE-NPO-15482-1	c 37	N87-23970 *	NASA-CASE-NPO-16467-1-CU	c 33	N87-23879 *	NASA-CASE-NPO-17525-1-CU	c 60	N90-25583 *
NASA-CASE-NPO-15483-1	c 37	N85-21650 *	NASA-CASE-NPO-16479-1-CU	c 35	N86-32695 *	NASA-CASE-NPO-17526-1-CU	c 35	N91-14588 *
NASA-CASE-NPO-15494-1	c 35	N82-25484 *	NASA-CASE-NPO-16494-1-CU	c 34	N85-29182 *	NASA-CASE-NPO-17543-2-CU	c 35	N93-19387 *
NASA-CASE-NPO-15496-1	c 44	N84-23018 *	NASA-CASE-NPO-16497-1-CU	c 36	N87-25587 *	NASA-CASE-NPO-17548-1-CU	c 32	N90-16104 *
NASA-CASE-NPO-15516-1	c 36	N84-22943 *	NASA-CASE-NPO-16526-1-CU	c 44	N87-17399 *	NASA-CASE-NPO-17552-1-CU	c 54	N92-29129 *
NASA-CASE-NPO-15519-1	c 32	N84-34651 *	NASA-CASE-NPO-16542-1-CU	c 36	N87-23960 *	NASA-CASE-NPO-17564-1-CU	c 32	N92-22033 *
NASA-CASE-NPO-15522-1	c 71	N83-32516 *	NASA-CASE-NPO-16544-1-CU	c 35	N87-22953 *	NASA-CASE-NPO-17569-1-CU	c 31	N92-15203 *
NASA-CASE-NPO-15530-1	c 76	N83-35888 *	NASA-CASE-NPO-16558-1-CU	c 74	N87-23259 *	NASA-CASE-NPO-17573-2-CU	c 33	N92-16196 *
NASA-CASE-NPO-15539-1	c 37	N82-11469 *	NASA-CASE-NPO-16567-1-CU	c 36	N87-28006 *	NASA-CASE-NPO-17596-1-CU	c 35	N89-28795 *
NASA-CASE-NPO-15547-1	c 72	N84-16959 *	NASA-CASE-NPO-16584-1-CU	c 76	N86-25269 *	NASA-CASE-NPO-17604-1-CU	c 33	N91-14536 *
NASA-CASE-NPO-15553-1	c 33	N85-29142 *	NASA-CASE-NPO-16607-1-CU	c 76	N88-14836 *	NASA-CASE-NPO-17612-1-CU	c 74	N92-16808 *
NASA-CASE-NPO-15558-1	c 35	N84-34705 *	NASA-CASE-NPO-16617-2-CU	c 35	N90-17118 *	NASA-CASE-NPO-17620-1-CU	c 71	N91-14808 *
NASA-CASE-NPO-15559-1	c 71	N85-30765 *	NASA-CASE-NPO-16632-1-CU	c 32	N87-15390 *	NASA-CASE-NPO-17621-1-CU	c 33	N90-17010 *
NASA-CASE-NPO-15560-1	c 33	N85-21491 *	NASA-CASE-NPO-16635-1-CU	c 31	N91-32240 *	NASA-CASE-NPO-17625-1-CU	c 34	N92-21724 *
NASA-CASE-NPO-15562-1	c 71	N82-27086 *	NASA-CASE-NPO-16640-1-CU	c 72	N87-21661 *	NASA-CASE-NPO-17628-1-CU	c 32	N92-21712 *
NASA-CASE-NPO-15592-1	c 71	N84-16940 *	NASA-CASE-NPO-16675-1-CU	c 71	N88-24241 *	NASA-CASE-NPO-17629-1-CU	c 60	N93-29608 *
NASA-CASE-NPO-15609-2	c 25	N88-23846 *	NASA-CASE-NPO-16681-1-CU	c 76	N88-24543 *	NASA-CASE-NPO-17630-1-CU	c 31	N89-29577 *
NASA-CASE-NPO-15617-1	c 35	N87-21304 *	NASA-CASE-NPO-16734-1-CU	c 31	N88-14223 *	NASA-CASE-NPO-17632-1-CU	c 60	N91-32805 *
NASA-CASE-NPO-15625-1	c 76	N83-20789 *	NASA-CASE-NPO-16750-1-CU	c 74	N89-14078 *	NASA-CASE-NPO-17633-1-CU	c 27	N91-27372 *
NASA-CASE-NPO-15629-1	c 76	N84-35113 *	NASA-CASE-NPO-16764-1-CU	c 33	N88-14270 *	NASA-CASE-NPO-17640-1-CU	c 33	N91-14538 *
NASA-CASE-NPO-15640-1	c 27	N84-22748 *	NASA-CASE-NPO-16766-1-CU	c 37	N89-13785 *	NASA-CASE-NPO-17653-1-CU	c 51	N93-25994 *
NASA-CASE-NPO-15644-1	c 35	N84-33767 *	NASA-CASE-NPO-16784-1	c 33	N87-10231 *	NASA-CASE-NPO-17664-1-CU	c 62	N91-32852 *
NASA-CASE-NPO-15651-1	c 43	N85-21723 *	NASA-CASE-NPO-16789-1-CU	c 72	N89-29169 *	NASA-CASE-NPO-17678-1-CU	c 76	N91-28014 *
NASA-CASE-NPO-15656-1	c 43	N84-23012 *	NASA-CASE-NPO-16808-1-CU	c 76	N87-25868 *	NASA-CASE-NPO-17684-1-CU	c 33	N92-22042 *
NASA-CASE-NPO-15658-1	c 26	N86-32551 *	NASA-CASE-NPO-16859-1-CU	c 60	N90-21527 *	NASA-CASE-NPO-17703-1-CU	c 74	N91-27957 *
NASA-CASE-NPO-15662-1	c 44	N84-28204 *	NASA-CASE-NPO-16869-1-CU	c 74	N86-33138 *	NASA-CASE-NPO-17716-1-CU	c 62	N92-15620 *
NASA-CASE-NPO-15689-1	c 71	N84-23233 *	NASA-CASE-NPO-16878-1-CU	c 35	N90-20335 *	NASA-CASE-NPO-17723-1-CU	c 76	N90-26685 *
NASA-CASE-NPO-15696-1	c 33	N85-34333 *	NASA-CASE-NPO-16882-1-CU	c 33	N88-24863 *	NASA-CASE-NPO-17724-1-CU	c 76	N92-22035 *
NASA-CASE-NPO-15704-1	c 32	N85-34327 *	NASA-CASE-NPO-16888-1-CU	c 33	N89-29681 *	NASA-CASE-NPO-17734-1-CU	c 33	N92-10146 *
NASA-CASE-NPO-15706-1	c 35	N84-28017 *	NASA-CASE-NPO-16892-1-CU	c 37	N87-14704 *	NASA-CASE-NPO-17736-2-CU	c 24	N92-18561 *
NASA-CASE-NPO-15722-1	c 35	N85-29212 *	NASA-CASE-NPO-16896-1-CU	c 71	N89-13236 *	NASA-CASE-NPO-17759-1-CU	c 32	N92-29124 *
NASA-CASE-NPO-15743-1	c 32	N85-29118 *	NASA-CASE-NPO-16901-1-CU	c 31	N90-19425 *	NASA-CASE-NPO-17763-1-CU	c 36	N93-14703 *
NASA-CASE-NPO-15753-1	c 27	N84-33589 *	NASA-CASE-NPO-16904-2-CU	c 32	N91-14523 *	NASA-CASE-NPO-17781-1-CU	c 60	N92-17884 *
NASA-CASE-NPO-15759-1	c 35	N85-21596 *	NASA-CASE-NPO-16907-1-CU	c 25	N88-24732 *	NASA-CASE-NPO-17781-1-CU	c 60	N93-20116 *
NASA-CASE-NPO-15767-1	c 23	N84-16255 *	NASA-CASE-NPO-16932-1-CU	c 33	N87-15413 *	NASA-CASE-NPO-17784-1-CU	c 74	N91-13998 *
NASA-CASE-NPO-15772-1	c 76	N85-29800 *	NASA-CASE-NPO-16932-2-CU	c 74	N93-13711 *	NASA-CASE-NPO-17785-1-CU	c 37	N89-28846 *
NASA-CASE-NPO-15786-1	c 76	N84-35112 *	NASA-CASE-NPO-16949-1-CU	c 62	N90-19776 *	NASA-CASE-NPO-17786-1-CU	c 35	N90-17104 *
NASA-CASE-NPO-15789-1	c 31	N83-19947 *	NASA-CASE-NPO-16985-1-CU	c 31	N91-15423 *	NASA-CASE-NPO-17794-1-CU	c 74	N92-30104 *
NASA-CASE-NPO-15790-1	c 36	N85-21631 *	NASA-CASE-NPO-16987-1-CU	c 32	N91-25316 *	NASA-CASE-NPO-17800-1-CU	c 37	N92-22036 *
NASA-CASE-NPO-15800-2	c 76	N87-23286 *	NASA-CASE-NPO-16989-1-CU	c 35	N91-14587 *	NASA-CASE-NPO-17801-1-CU	c 37	N91-21544 *
NASA-CASE-NPO-15801-1	c 74	N85-23396 *	NASA-CASE-NPO-16995-1-CU	c 71	N90-12289 *	NASA-CASE-NPO-17806-1-CU	c 31	N91-27385 *
NASA-CASE-NPO-15805-1	c 74	N84-28590 *	NASA-CASE-NPO-17022-1-CU	c 29	N87-25489 *	NASA-CASE-NPO-17807-2-CU	c 63	N92-29955 *
NASA-CASE-NPO-15808-1	c 44	N84-34792 *	NASA-CASE-NPO-17024-1-CU	c 35	N88-24943 *	NASA-CASE-NPO-17809-1-CU	c 33	N91-27478 *
NASA-CASE-NPO-15811-1	c 76	N84-12968 *	NASA-CASE-NPO-17058-1-CU	c 62	N87-25803 *	NASA-CASE-NPO-17812-1-CU	c 76	N90-17456 *
NASA-CASE-NPO-15813-1	c 76	N85-30922 *	NASA-CASE-NPO-17068-1-CU	c 35	N88-29151 *	NASA-CASE-NPO-17812-2-CU	c 76	N92-22040 *
NASA-CASE-NPO-15813-2	c 76	N87-15882 *	NASA-CASE-NPO-17074-2-CU	c 76	N92-21499 *	NASA-CASE-NPO-17812-3-CU	c 76	N92-22041 *
NASA-CASE-NPO-15851-1	c 37	N85-21652 *	NASA-CASE-NPO-17085-1-CU	c 31	N89-12785 *	NASA-CASE-NPO-17820-1-CU	c 04	N91-14321 *
NASA-CASE-NPO-15865-1	c 74	N85-34629 *	NASA-CASE-NPO-17086-1-CU	c 35	N89-14422 *	NASA-CASE-NPO-17824-1-CU	c 36	N90-17132 *
NASA-CASE-NPO-15890-1-CU	c 33	N85-29143 *	NASA-CASE-NPO-17108-1-CU	c 33	N89-28713 *	NASA-CASE-NPO-17826-1-CU	c 27	N92-16121 *
NASA-CASE-NPO-15904-1	c 76	N86-28760 *	NASA-CASE-NPO-17122-1-CU	c 27	N91-14489 *	NASA-CASE-NPO-17830-1-CU	c 33	N91-14539 *
NASA-CASE-NPO-15920-1	c 33	N85-21493 *	NASA-CASE-NPO-17134-1-CU	c 33	N91-31528 *	NASA-CASE-NPO-17831-1-CU	c 43	N91-14642 *
NASA-CASE-NPO-15924-1	c 25	N85-35253 *	NASA-CASE-NPO-17139-1-CU	c 74	N88-25301 *	NASA-CASE-NPO-17835-1-CU	c 76	N90-27518 *
NASA-CASE-NPO-15928-1	c 26	N85-29005 *	NASA-CASE-NPO-17140-1-CU	c 74	N89-14077 *	NASA-CASE-NPO-17836-1-CU	c 32	N92-10126 *
NASA-CASE-NPO-15939-1	c 43	N86-19711 *	NASA-CASE-NPO-17143-1-CU	c 31	N89-14351 *	NASA-CASE-NPO-17836-1-CU	c 32	N93-18284 *
NASA-CASE-NPO-15949-1	c 85	N85-34722 *	NASA-CASE-NPO-17144-1-CU	c 74	N88-25305 *	NASA-CASE-NPO-17837-1-CU	c 74	N93-17273 *
NASA-CASE-NPO-15959-2	c 37	N91-14616 *	NASA-CASE-NPO-17157-1-CU	c 33	N88-26596 *	NASA-CASE-NPO-17845-2-CU	c 61	N93-14882 *
NASA-CASE-NPO-15960-1	c 37	N86-19604 *	NASA-CASE-NPO-17184-1-CU	c 32	N88-26541 *	NASA-CASE-NPO-17851-1-CU	c 37	N93-23078 *
NASA-CASE-NPO-15980-1	c 36	N85-30305 *	NASA-CASE-NPO-17185-1-CU	c 62	N91-14772 *	NASA-CASE-NPO-17852-1-CU	c 63	N92-33019 *
NASA-CASE-NPO-15982-1	c 60	N87-21591 *	NASA-CASE-NPO-17196-1-CU	c 32	N88-29076 *	NASA-CASE-NPO-17853-1-CU	c 32	N91-25318 *
NASA-CASE-NPO-16000-1	c 36	N85-29264 *	NASA-CASE-NPO-17197-1-CU	c 62	N91-25693 *	NASA-CASE-NPO-17858-1-CU	c 24	N93-14700 *
NASA-CASE-NPO-16021-1	c 33	N85-30187 *	NASA-CASE-NPO-17203-1-CU	c 34	N90-23700 *	NASA-CASE-NPO-17873-2-CU	c 32	N93-29507 *
NASA-CASE-NPO-16022-1	c 71	N85-22105 *	NASA-CASE-NPO-17204-1-CU	c 34	N91-25380 *	NASA-CASE-NPO-17880-1-CU	c 76	N93-11056 *
NASA-CASE-NPO-16027-1	c 35	N85-21597 *	NASA-CASE-NPO-17205-1-CU	c 60	N90-21525 *	NASA-CASE-NPO-17896-1-CU	c 32	N91-27439 *
NASA-CASE-NPO-16030-1	c 36	N84-25037 *	NASA-CASE-NPO-17207-1-CU	c 74	N88-25304 *	NASA-CASE-NPO-17897-1-CU	c 33	N92-33011 *
NASA-CASE-NPO-16038-1	c 37	N86-19605 *	NASA-CASE-NPO-17233-1-CU	c 33	N88-29095 *	NASA-CASE-NPO-17904-1-CU	c 32	N91-13594 *
NASA-CASE-NPO-16045-1	c 76	N87-13313 *	NASA-CASE-NPO-17235-1-CU	c 35	N90-21358 *	NASA-CASE-NPO-17911-1-CU	c 32	N90-27016 *
NASA-CASE-NPO-16061-1-CU	c 72	N87-21660 *	NASA-CASE-NPO-17241-1-CU	c 33	N90-23636 *	NASA-CASE-NPO-17913-1-CU	c 74	N92-22034 *

## REPORT NUMBER INDEX

## NASA-CASE-XGS-02441

NASA-CASE-NPO-17914-1-CU	c 39	N91-13767 *	NASA-CASE-NPO-18982-1-CU	c 38	N93-30413 *	NASA-CASE-XER-11019	c 09	N71-23598 *
NASA-CASE-NPO-17914-1-CU	c 39	N93-24596 *				NASA-CASE-XER-11046-2	c 33	N74-22864 *
NASA-CASE-NPO-17918-2-CU	c 63	N92-17895 *	NASA-CASE-NST-00007-1	c 45	N91-14662 *	NASA-CASE-XER-11046	c 09	N72-22203 *
NASA-CASE-NPO-17922-1-CU	c 33	N92-28753 *				NASA-CASE-XER-11203	c 14	N71-28994 *
NASA-CASE-NPO-17937-1-CU	c 43	N91-21621 *	NASA-CASE-NSTL-10	c 45	N84-12654 *			
NASA-CASE-NPO-17939-1-CU	c 60	N93-22032 *				NASA-CASE-XFR-00181	c 21	N70-33279 *
NASA-CASE-NPO-17941-1-CU	c 32	N91-13595 *	NASA-CASE-NUC-10107-1	c 33	N74-17930 *	NASA-CASE-XFR-00756	c 02	N71-13421 *
NASA-CASE-NPO-17949-1-CU	c 76	N92-10681 *				NASA-CASE-XFR-00811	c 15	N70-36901 *
NASA-CASE-NPO-17954-1-CU	c 60	N93-14704 *	NASA-CASE-SSC-00004-1	c 37	N91-14609 *	NASA-CASE-XFR-00929	c 31	N70-34966 *
NASA-CASE-NPO-17970-1-CU	c 43	N90-26384 *	NASA-CASE-SSC-00006-1	c 35	N91-13691 *	NASA-CASE-XFR-02007	c 12	N71-24692 *
NASA-CASE-NPO-17994-1-CU	c 33	N93-18278 *	NASA-CASE-SSC-00008-1	c 37	N91-13733 *	NASA-CASE-XFR-03107	c 09	N71-19449 *
NASA-CASE-NPO-17997-1-CU	c 60	N92-33057 *	NASA-CASE-SSC-00010-1	c 82	N91-23976 *	NASA-CASE-XFR-03802	c 33	N71-23085 *
NASA-CASE-NPO-17998-1-CU	c 60	N92-12438 *	NASA-CASE-SSC-00010-2	c 82	N92-23550 *	NASA-CASE-XFR-04104	c 03	N70-42073 *
NASA-CASE-NPO-18004-1-CU	c 60	N93-29504 *	NASA-CASE-SSC-00013-1	c 38	N91-32515 *	NASA-CASE-XFR-04147	c 11	N71-10748 *
NASA-CASE-NPO-18007-1-CU	c 74	N92-11791 *				NASA-CASE-XFR-05302	c 15	N71-23254 *
NASA-CASE-NPO-18028-1-CU	c 74	N92-16809 *	NASA-CASE-WLP-10002	c 15	N72-17451 *	NASA-CASE-XFR-05421	c 15	N71-22994 *
NASA-CASE-NPO-18034-1-CU	c 44	N92-16457 *	NASA-CASE-WLP-10055-1	c 35	N84-28015 *	NASA-CASE-XFR-05637	c 09	N71-19480 *
NASA-CASE-NPO-18062-1-CU	c 33	N92-30542 *	NASA-CASE-WLP-10055-2	c 35	N85-21598 *	NASA-CASE-XFR-07172	c 05	N71-27234 *
NASA-CASE-NPO-18075-1-CU	c 33	N91-13622 *				NASA-CASE-XFR-07658-1	c 05	N71-26293 *
NASA-CASE-NPO-18095-1-CU	c 74	N92-29122 *	NASA-CASE-WOO-00428-1	c 32	N79-19186 *	NASA-CASE-XFR-08403	c 05	N71-11202 *
NASA-CASE-NPO-18098-1-CU	c 74	N92-33028 *	NASA-CASE-WOO-00625	c 37	N78-17385 *	NASA-CASE-XFR-09479	c 14	N69-27503 *
NASA-CASE-NPO-18101-1-CU	c 74	N91-25841 *				NASA-CASE-XFR-10856	c 05	N71-11189 *
NASA-CASE-NPO-18115-1-CU	c 47	N92-29148 *	NASA-CASE-XAC-00001	c 15	N71-28952 *	NASA-CASE-XGS-00131	c 09	N70-38995 *
NASA-CASE-NPO-18116-1-CU	c 37	N91-32509 *	NASA-CASE-XAC-00030	c 14	N70-34820 *	NASA-CASE-XGS-00174	c 08	N70-34743 *
NASA-CASE-NPO-18134-1-CU	c 37	N91-32510 *	NASA-CASE-XAC-00042	c 14	N70-34816 *	NASA-CASE-XGS-00260	c 31	N70-37924 *
NASA-CASE-NPO-18146-1-CU	c 74	N92-17892 *	NASA-CASE-XAC-00048	c 02	N71-29128 *	NASA-CASE-XGS-00359	c 14	N70-34158 *
NASA-CASE-NPO-18155-1-CU	c 71	N93-13421 *	NASA-CASE-XAC-00060	c 09	N70-39915 *	NASA-CASE-XGS-00373	c 23	N71-15978 *
NASA-CASE-NPO-18184-1-CU	c 35	N92-29156 *	NASA-CASE-XAC-00073	c 14	N70-34813 *	NASA-CASE-XGS-00381	c 09	N70-34819 *
NASA-CASE-NPO-18187-1-CU	c 70	N92-29130 *	NASA-CASE-XAC-00074	c 15	N70-34817 *	NASA-CASE-XGS-00458	c 09	N70-38604 *
NASA-CASE-NPO-18191-1-CU	c 09	N93-24601 *	NASA-CASE-XAC-00086	c 09	N70-33182 *	NASA-CASE-XGS-00463	c 21	N70-34297 *
NASA-CASE-NPO-18194-1-CU	c 74	N91-32924 *	NASA-CASE-XAC-00139	c 02	N70-34856 *	NASA-CASE-XGS-00476	c 03	N70-38713 *
NASA-CASE-NPO-18243-1-CU	c 36	N93-13418 *	NASA-CASE-XAC-00319	c 25	N70-41628 *	NASA-CASE-XGS-00587	c 15	N70-35087 *
NASA-CASE-NPO-18278-1-CU	c 74	N91-32925 *	NASA-CASE-XAC-00399	c 11	N70-34815 *	NASA-CASE-XGS-00619	c 30	N70-40016 *
NASA-CASE-NPO-18317-1-CU	c 74	N93-13179 *	NASA-CASE-XAC-00404	c 08	N70-40125 *	NASA-CASE-XGS-00689	c 08	N70-34787 *
NASA-CASE-NPO-18343-1-CU	c 33	N93-11456 *	NASA-CASE-XAC-00405	c 05	N70-41819 *	NASA-CASE-XGS-00740	c 07	N71-23098 *
NASA-CASE-NPO-18357-1-CU	c 74	N93-29848 *	NASA-CASE-XAC-00435	c 09	N70-35440 *	NASA-CASE-XGS-00769	c 14	N70-41647 *
NASA-CASE-NPO-18366-1-CU	c 31	N93-13422 *	NASA-CASE-XAC-00472	c 15	N70-40180 *	NASA-CASE-XGS-00783	c 30	N71-17788 *
NASA-CASE-NPO-18379-1-CU	c 74	N92-33022 *	NASA-CASE-XAC-00648	c 14	N70-40400 *	NASA-CASE-XGS-00809	c 21	N70-35427 *
NASA-CASE-NPO-18386-1-CU	c 36	N93-18277 *	NASA-CASE-XAC-00731	c 11	N71-15960 *	NASA-CASE-XGS-00823	c 10	N71-15910 *
NASA-CASE-NPO-18391-1-CU	c 20	N93-28424 *	NASA-CASE-XAC-00812	c 14	N71-15598 *	NASA-CASE-XGS-00824	c 15	N71-16078 *
NASA-CASE-NPO-18409-1-CU	c 25	N93-19025 *	NASA-CASE-XAC-00942	c 10	N71-16042 *	NASA-CASE-XGS-00829-1	c 44	N79-19447 *
NASA-CASE-NPO-18410-1-CU	c 74	N93-29086 *	NASA-CASE-XAC-01101	c 14	N70-41957 *	NASA-CASE-XGS-00886	c 03	N71-11053 *
NASA-CASE-NPO-18414-1-CU	c 62	N92-24045 *	NASA-CASE-XAC-01158	c 15	N71-23051 *	NASA-CASE-XGS-00938	c 32	N70-41367 *
NASA-CASE-NPO-18428-1-CU	c 33	N92-23464 *	NASA-CASE-XAC-01404	c 05	N70-41581 *	NASA-CASE-XGS-00963	c 15	N69-39735 *
NASA-CASE-NPO-18433-1-CU	c 74	N92-34241 *	NASA-CASE-XAC-01591	c 31	N71-17729 *	NASA-CASE-XGS-01013	c 14	N71-23725 *
NASA-CASE-NPO-18435-1-CU	c 61	N92-30543 *	NASA-CASE-XAC-01662	c 14	N71-23037 *	NASA-CASE-XGS-01021	c 08	N71-21042 *
NASA-CASE-NPO-18448-1-CU	c 29	N93-20083 *	NASA-CASE-XAC-01677	c 09	N71-20816 *	NASA-CASE-XGS-01022	c 07	N71-16088 *
NASA-CASE-NPO-18448-1-CU	c 29	N93-24600 *	NASA-CASE-XAC-02058	c 02	N71-16087 *	NASA-CASE-XGS-01023	c 14	N71-22992 *
NASA-CASE-NPO-18454-1-CU	c 33	N92-17865 *	NASA-CASE-XAC-02405	c 09	N71-16089 *	NASA-CASE-XGS-01036	c 14	N70-40003 *
NASA-CASE-NPO-18454-1-CU	c 33	N93-18285 *	NASA-CASE-XAC-02407	c 14	N69-27423 *	NASA-CASE-XGS-01052	c 14	N71-15992 *
NASA-CASE-NPO-18478-1-CU	c 74	N92-30084 *	NASA-CASE-XAC-02807	c 09	N71-23021 *	NASA-CASE-XGS-01110	c 07	N69-24334 *
NASA-CASE-NPO-18483-1-CU	c 76	N93-15151 *	NASA-CASE-XAC-02877	c 14	N70-41681 *	NASA-CASE-XGS-01118	c 10	N71-23662 *
NASA-CASE-NPO-18491-1-CU	c 60	N92-23546 *	NASA-CASE-XAC-02970	c 14	N69-39896 *	NASA-CASE-XGS-01143	c 31	N71-15647 *
NASA-CASE-NPO-18492-1-CU	c 63	N93-29176 *	NASA-CASE-XAC-02981	c 14	N71-21072 *	NASA-CASE-XGS-01155	c 10	N71-21483 *
NASA-CASE-NPO-18497-1-CU	c 63	N92-24245 *	NASA-CASE-XAC-03107	c 23	N71-16098 *	NASA-CASE-XGS-01159	c 21	N71-10678 *
NASA-CASE-NPO-18497-1-CU	c 63	N93-24599 *	NASA-CASE-XAC-03392	c 03	N70-41954 *	NASA-CASE-XGS-01222	c 10	N71-20841 *
NASA-CASE-NPO-18498-1-CU	c 37	N92-24043 *	NASA-CASE-XAC-03740	c 14	N71-26135 *	NASA-CASE-XGS-01223	c 07	N71-10609 *
NASA-CASE-NPO-18499-1-CU	c 37	N92-24042 *	NASA-CASE-XAC-03777	c 10	N71-15909 *	NASA-CASE-XGS-01230	c 08	N71-19544 *
NASA-CASE-NPO-18501-1-CU	c 27	N93-28426 *	NASA-CASE-XAC-04030	c 10	N71-19472 *	NASA-CASE-XGS-01231	c 14	N70-41676 *
NASA-CASE-NPO-18521-1-CU	c 74	N93-14404 *	NASA-CASE-XAC-04031	c 08	N71-18594 *	NASA-CASE-XGS-01245-1	c 35	N79-33449 *
NASA-CASE-NPO-18551-1-CU	c 33	N93-17277 *	NASA-CASE-XAC-04458	c 14	N71-24232 *	NASA-CASE-XGS-01286-1	c 37	N79-33469 *
NASA-CASE-NPO-18552-1-CU	c 33	N92-24246 *	NASA-CASE-XAC-04885	c 14	N71-23790 *	NASA-CASE-XGS-01293-1	c 35	N79-33450 *
NASA-CASE-NPO-18553-1-CU	c 63	N92-30085 *	NASA-CASE-XAC-04886-1	c 14	N71-20439 *	NASA-CASE-XGS-01331	c 14	N71-22996 *
NASA-CASE-NPO-18568-1-CU	c 33	N93-17274 *	NASA-CASE-XAC-05333	c 11	N71-22875 *	NASA-CASE-XGS-01395	c 03	N69-21539 *
NASA-CASE-NPO-18578-1-CU	c 33	N92-30086 *	NASA-CASE-XAC-05422	c 04	N71-23185 *	NASA-CASE-XGS-01418	c 09	N71-23573 *
NASA-CASE-NPO-18579-1-CU	c 63	N93-11174 *	NASA-CASE-XAC-05462-2	c 10	N72-17171 *	NASA-CASE-XGS-01419	c 03	N70-41864 *
NASA-CASE-NPO-18580-1-CU	c 33	N93-17278 *	NASA-CASE-XAC-05506-1	c 24	N71-16095 *	NASA-CASE-XGS-01451	c 09	N71-10677 *
NASA-CASE-NPO-18584-1-CU	c 37	N93-11177 *	NASA-CASE-XAC-05632	c 32	N71-23971 *	NASA-CASE-XGS-01473	c 09	N71-10673 *
NASA-CASE-NPO-18586-1-CU	c 63	N93-17276 *	NASA-CASE-XAC-05695	c 25	N71-16073 *	NASA-CASE-XGS-01475	c 03	N71-11058 *
NASA-CASE-NPO-18593-1-CU	c 74	N93-18276 *	NASA-CASE-XAC-05706	c 05	N71-12342 *	NASA-CASE-XGS-01504	c 16	N70-41578 *
NASA-CASE-NPO-18596-1-CU	c 36	N93-28132 *	NASA-CASE-XAC-05902	c 11	N71-18578 *	NASA-CASE-XGS-01513	c 03	N71-23336 *
NASA-CASE-NPO-18607-1-CU	c 37	N92-23553 *	NASA-CASE-XAC-06029-1	c 31	N71-24813 *	NASA-CASE-XGS-01537	c 07	N71-23405 *
NASA-CASE-NPO-18608-1-CU	c 63	N93-17275 *	NASA-CASE-XAC-06302	c 08	N71-19763 *	NASA-CASE-XGS-01587	c 14	N71-15962 *
NASA-CASE-NPO-18611-1-CU	c 36	N93-30415 *	NASA-CASE-XAC-06956	c 15	N71-21177 *	NASA-CASE-XGS-01590	c 07	N71-12392 *
NASA-CASE-NPO-18625-1-CU	c 76	N92-30102 *	NASA-CASE-XAC-07043	c 05	N71-23161 *	NASA-CASE-XGS-01654	c 03	N70-35408 *
NASA-CASE-NPO-18645-1-CU	c 63	N92-34240 *	NASA-CASE-XAC-08494	c 30	N71-15990 *	NASA-CASE-XGS-01674	c 31	N71-24750 *
NASA-CASE-NPO-18655-1-CU	c 35	N93-28322 *	NASA-CASE-XAC-08972	c 02	N69-20570 *	NASA-CASE-XGS-01725	c 03	N71-29129 *
NASA-CASE-NPO-18662-1-CU	c 74	N93-28428 *	NASA-CASE-XAC-08981	c 09	N69-39897 *	NASA-CASE-XGS-01784	c 14	N69-39892 *
NASA-CASE-NPO-18667-1-CU	c 33	N93-19330 *	NASA-CASE-XAC-09489-1	c 15	N71-26673 *	NASA-CASE-XGS-01812	c 07	N71-23001 *
NASA-CASE-NPO-18668-1-CU	c 37	N92-29765 *	NASA-CASE-XAC-10019	c 15	N71-23809 *	NASA-CASE-XGS-01881	c 09	N70-40123 *
NASA-CASE-NPO-18678-1-CU	c 32	N93-28422 *	NASA-CASE-XAC-10607	c 10	N71-23669 *	NASA-CASE-XGS-01971	c 15	N71-15922 *
NASA-CASE-NPO-18690-1-CU	c 37	N92-34205 *	NASA-CASE-XAC-10608-1	c 09	N71-12517 *	NASA-CASE-XGS-01983	c 10	N70-41964 *
NASA-CASE-NPO-18701-1-CU	c 32	N92-30391 *	NASA-CASE-XAC-10768	c 09	N71-18830 *	NASA-CASE-XGS-02011	c 15	N71-20739 *
NASA-CASE-NPO-18702-1-CU	c 74	N92-23551 *	NASA-CASE-XAC-10770-1	c 16	N71-24828 *	NASA-CASE-XGS-02171	c 09	N69-24324 *
NASA-CASE-NPO-18713-1-CU	c 32	N93-29087 *	NASA-CASE-XAC-11225	c 14	N69-27486 *	NASA-CASE-XGS-02290	c 07	N71-28809 *
NASA-CASE-NPO-18727-1-CU	c 62	N93-28427 *				NASA-CASE-XGS-02317	c 09	N71-23525 *
NASA-CASE-NPO-18733-1-CU	c 06	N93-30416 *	NASA-CASE-XAR-01547	c 05	N69-21473 *	NASA-CASE-XGS-02319	c 14	N71-22965 *
NASA-CASE-NPO-18738-1-CU	c 37	N93-28954 *	NASA-CASE-XAR-03786	c 09	N69-21313 *	NASA-CASE-XGS-02401	c 14	N69-27485 *
NASA-CASE-NPO-18764-1-CU	c 37	N93-17272 *				NASA-CASE-XGS-02422	c 15	N71-21529 *
NASA-CASE-NPO-18769-1-CU	c 74	N93-28133 *	NASA-CASE-XER-07894	c 09	N71-18721 *	NASA-CASE-XGS-02435	c 18	N71-22998 *
NASA-CASE-NPO-18771-1-CU	c 61	N93-11664 *	NASA-CASE-XER-07895	c 26	N72-25679 *	NASA-CASE-XGS-02437	c 15	N69-21472 *
NASA-CASE-NPO-18772-1-CU	c 32	N93-28955 *	NASA-CASE-XER-07896-2	c 23	N72-22673 *	NASA-CASE-XGS-02439	c 14	N71-19431 *
NASA-CASE-NPO-18786-1-CU	c 37	N93-28131 *	NASA-CASE-XER-08476-1	c 26	N72-17820 *	NASA-CASE-XGS-02440	c 08	N71-19432 *
NASA-CASE-NPO-18817-1-CU	c 31	N93-12202 *	NASA-CASE-XER-09213	c 07	N71-12390 *	NASA-CASE-XGS-02441	c 15	N70-41629 *
NASA-CASE-NPO-18902-1-CU	c 37	N93-28129 *	NASA-CASE-XER-09519	c 14	N71-18483 *			
NASA-CASE-NPO-18970-1-CU	c 32	N93-28126 *	NASA-CASE-XER-09521	c 09	N72-12136 *			

## NASA-CASE-XGS-02554

NASA-CASE-XGS-02554 ..... c 31 N71-21064 \*  
NASA-CASE-XGS-02607 ..... c 31 N71-23009 \*  
NASA-CASE-XGS-02608 ..... c 07 N70-41678 \*  
NASA-CASE-XGS-02610 ..... c 14 N71-23174 \*  
NASA-CASE-XGS-02612 ..... c 08 N71-19435 \*  
NASA-CASE-XGS-02629 ..... c 14 N71-21082 \*  
NASA-CASE-XGS-02630 ..... c 03 N71-22974 \*  
NASA-CASE-XGS-02631 ..... c 03 N71-23006 \*  
NASA-CASE-XGS-02749 ..... c 07 N69-39978 \* #  
NASA-CASE-XGS-02751 ..... c 09 N71-23015 \*  
NASA-CASE-XGS-02812 ..... c 09 N71-19468 \*  
NASA-CASE-XGS-02816 ..... c 07 N69-24323 \* #  
NASA-CASE-XGS-02884 ..... c 15 N71-22705 \*  
NASA-CASE-XGS-02889 ..... c 07 N71-11282 \*  
NASA-CASE-XGS-03058 ..... c 10 N71-19547 \*  
NASA-CASE-XGS-03095 ..... c 09 N69-27463 \* #  
NASA-CASE-XGS-03120 ..... c 15 N71-24047 \*  
NASA-CASE-XGS-03230 ..... c 14 N71-23401 \*  
NASA-CASE-XGS-03303 ..... c 08 N71-18595 \*  
NASA-CASE-XGS-03304 ..... c 09 N71-22988 \*  
NASA-CASE-XGS-03351 ..... c 31 N71-16081 \*  
NASA-CASE-XGS-03390 ..... c 03 N71-23187 \*  
NASA-CASE-XGS-03427 ..... c 10 N71-23029 \*  
NASA-CASE-XGS-03429 ..... c 03 N69-21330 \* #  
NASA-CASE-XGS-03431 ..... c 21 N71-15642 \*  
NASA-CASE-XGS-03501 ..... c 09 N71-20864 \*  
NASA-CASE-XGS-03502 ..... c 10 N71-20852 \*  
NASA-CASE-XGS-03505 ..... c 03 N71-10608 \*  
NASA-CASE-XGS-03532 ..... c 14 N71-17627 \*  
NASA-CASE-XGS-03556 ..... c 27 N70-35534 \*  
NASA-CASE-XGS-03632 ..... c 09 N71-23311 \*  
NASA-CASE-XGS-03644 ..... c 16 N71-18614 \*  
NASA-CASE-XGS-03736 ..... c 14 N72-22443 \*  
NASA-CASE-XGS-03864 ..... c 15 N69-24320 \* #  
NASA-CASE-XGS-03865 ..... c 14 N69-21363 \* #  
NASA-CASE-XGS-04047-2 ..... c 03 N72-11062 \*  
NASA-CASE-XGS-04119 ..... c 18 N69-39979 \* #  
NASA-CASE-XGS-04173 ..... c 19 N71-26674 \*  
NASA-CASE-XGS-04175 ..... c 15 N71-18579 \*  
NASA-CASE-XGS-04224 ..... c 10 N71-26418 \*  
NASA-CASE-XGS-04227 ..... c 15 N71-21744 \*  
NASA-CASE-XGS-04393 ..... c 21 N71-14159 \*  
NASA-CASE-XGS-04478 ..... c 14 N71-24233 \*  
NASA-CASE-XGS-04480 ..... c 16 N69-27491 \* #  
NASA-CASE-XGS-04531 ..... c 03 N69-24267 \* #  
NASA-CASE-XGS-04548 ..... c 15 N71-24045 \*  
NASA-CASE-XGS-04554 ..... c 15 N69-39786 \* #  
NASA-CASE-XGS-04765 ..... c 08 N71-18693 \*  
NASA-CASE-XGS-04766 ..... c 08 N71-18602 \*  
NASA-CASE-XGS-04767 ..... c 08 N71-12494 \*  
NASA-CASE-XGS-04768 ..... c 08 N71-19437 \*  
NASA-CASE-XGS-04799 ..... c 18 N71-24183 \*  
NASA-CASE-XGS-04808 ..... c 03 N69-25146 \* #  
NASA-CASE-XGS-04879 ..... c 14 N71-20428 \*  
NASA-CASE-XGS-04987 ..... c 08 N71-20571 \*  
NASA-CASE-XGS-04993 ..... c 14 N71-17574 \*  
NASA-CASE-XGS-04994 ..... c 09 N69-21543 \* #  
NASA-CASE-XGS-04999 ..... c 09 N69-24317 \* #  
NASA-CASE-XGS-05003 ..... c 09 N69-24318 \* #  
NASA-CASE-XGS-05180 ..... c 18 N71-25881 \*  
NASA-CASE-XGS-05211 ..... c 07 N69-39980 \* #  
NASA-CASE-XGS-05289 ..... c 09 N71-19470 \*  
NASA-CASE-XGS-05290 ..... c 09 N71-25999 \*  
NASA-CASE-XGS-05291 ..... c 23 N71-16341 \*  
NASA-CASE-XGS-05432 ..... c 03 N71-19438 \*  
NASA-CASE-XGS-05434 ..... c 03 N71-20491 \*  
NASA-CASE-XGS-05441 ..... c 10 N71-22962 \*  
NASA-CASE-XGS-05532 ..... c 06 N71-17705 \*  
NASA-CASE-XGS-05533 ..... c 04 N69-27487 \* #  
NASA-CASE-XGS-05534 ..... c 23 N71-16355 \*  
NASA-CASE-XGS-05579 ..... c 31 N71-15676 \*  
NASA-CASE-XGS-05582 ..... c 07 N69-27460 \* #  
NASA-CASE-XGS-05584-1 ..... c 25 N82-29370 \*  
NASA-CASE-XGS-05680 ..... c 14 N71-17585 \*  
NASA-CASE-XGS-05715 ..... c 23 N71-16100 \*  
NASA-CASE-XGS-05718 ..... c 26 N71-16037 \*  
NASA-CASE-XGS-05918 ..... c 07 N69-39974 \* #  
NASA-CASE-XGS-06226 ..... c 10 N71-25950 \*  
NASA-CASE-XGS-06306 ..... c 17 N71-16044 \*  
NASA-CASE-XGS-06628 ..... c 24 N71-16213 \*  
NASA-CASE-XGS-07375-1 ..... c 25 N82-29370 \*  
NASA-CASE-XGS-07397-1 ..... c 25 N82-29370 \*  
NASA-CASE-XGS-07514 ..... c 23 N71-16099 \*  
NASA-CASE-XGS-07752 ..... c 14 N73-30390 \*  
NASA-CASE-XGS-07801 ..... c 09 N71-12513 \*  
NASA-CASE-XGS-07805 ..... c 15 N72-33476 \*  
NASA-CASE-XGS-08259 ..... c 14 N71-23698 \*  
NASA-CASE-XGS-08266 ..... c 14 N69-27432 \* #  
NASA-CASE-XGS-08269 ..... c 23 N71-26206 \*  
NASA-CASE-XGS-08679 ..... c 10 N71-21473 \*  
NASA-CASE-XGS-08718 ..... c 15 N71-24600 \*  
NASA-CASE-XGS-08729 ..... c 28 N71-14044 \*  
NASA-CASE-XGS-09186 ..... c 33 N78-17295 \*  
NASA-CASE-XGS-09190 ..... c 31 N71-16102 \*  
NASA-CASE-XGS-10010 ..... c 03 N72-15986 \*  
NASA-CASE-XGS-10518 ..... c 16 N71-28554 \*

NASA-CASE-XGS-11177 ..... c 09 N71-27001 \*  
NASA-CASE-XHQ-01208 ..... c 15 N70-35409 \*  
NASA-CASE-XHQ-01897 ..... c 28 N70-35381 \*  
NASA-CASE-XHQ-02146 ..... c 18 N75-27040 \*  
NASA-CASE-XHQ-03673 ..... c 33 N71-29046 \*  
NASA-CASE-XHQ-03903 ..... c 15 N69-21922 \* #  
NASA-CASE-XHQ-04106 ..... c 14 N70-40240 \*  
NASA-CASE-XKS-01985 ..... c 15 N71-10782 \*  
NASA-CASE-XKS-02342 ..... c 05 N71-11199 \*  
NASA-CASE-XKS-02582 ..... c 15 N71-21234 \*  
NASA-CASE-XKS-03338 ..... c 15 N71-24043 \*  
NASA-CASE-XKS-03381 ..... c 09 N71-22796 \*  
NASA-CASE-XKS-03495 ..... c 14 N69-39785 \* #  
NASA-CASE-XKS-03509 ..... c 14 N71-23175 \*  
NASA-CASE-XKS-04614 ..... c 15 N69-21460 \* #  
NASA-CASE-XKS-04631 ..... c 10 N71-23663 \*  
NASA-CASE-XKS-05932 ..... c 09 N71-26787 \*  
NASA-CASE-XKS-06167 ..... c 08 N71-24890 \*  
NASA-CASE-XKS-06250 ..... c 14 N71-15600 \*  
NASA-CASE-XKS-07814 ..... c 15 N71-27067 \*  
NASA-CASE-XKS-07953 ..... c 15 N71-26134 \*  
NASA-CASE-XKS-08012-2 ..... c 31 N71-15566 \*  
NASA-CASE-XKS-08485 ..... c 07 N71-19493 \*  
NASA-CASE-XKS-09340 ..... c 07 N71-24614 \*  
NASA-CASE-XKS-09348 ..... c 09 N71-13521 \*  
NASA-CASE-XKS-10543 ..... c 07 N71-26292 \*  
NASA-CASE-XKS-10804 ..... c 05 N71-24606 \*  
NASA-CASE-XLA-00013 ..... c 15 N71-29136 \*  
NASA-CASE-XLA-00062 ..... c 14 N70-33254 \*  
NASA-CASE-XLA-00087 ..... c 02 N70-33332 \*  
NASA-CASE-XLA-00100 ..... c 14 N70-36807 \*  
NASA-CASE-XLA-00105 ..... c 28 N70-33331 \*  
NASA-CASE-XLA-00112 ..... c 11 N70-33287 \*  
NASA-CASE-XLA-00113 ..... c 14 N70-33386 \*  
NASA-CASE-XLA-00115 ..... c 03 N70-33343 \*  
NASA-CASE-XLA-00117 ..... c 31 N71-17680 \*  
NASA-CASE-XLA-00118 ..... c 05 N70-33285 \*  
NASA-CASE-XLA-00119 ..... c 11 N70-33329 \*  
NASA-CASE-XLA-00120 ..... c 21 N70-33181 \*  
NASA-CASE-XLA-00128 ..... c 15 N70-37925 \*  
NASA-CASE-XLA-00135 ..... c 14 N70-33322 \*  
NASA-CASE-XLA-00137 ..... c 15 N70-33180 \*  
NASA-CASE-XLA-00138 ..... c 31 N70-37981 \*  
NASA-CASE-XLA-00141 ..... c 09 N70-33312 \*  
NASA-CASE-XLA-00142 ..... c 02 N70-33286 \*  
NASA-CASE-XLA-00147 ..... c 25 N70-34661 \*  
NASA-CASE-XLA-00149 ..... c 31 N70-37938 \*  
NASA-CASE-XLA-00154 ..... c 28 N70-33374 \*  
NASA-CASE-XLA-00158 ..... c 26 N70-36805 \*  
NASA-CASE-XLA-00165 ..... c 31 N70-33242 \*  
NASA-CASE-XLA-00166 ..... c 02 N70-34178 \*  
NASA-CASE-XLA-00183 ..... c 14 N70-40239 \*  
NASA-CASE-XLA-00188 ..... c 15 N71-22874 \*  
NASA-CASE-XLA-00189 ..... c 33 N70-36846 \*  
NASA-CASE-XLA-00195 ..... c 02 N70-38009 \*  
NASA-CASE-XLA-00203 ..... c 14 N70-34161 \*  
NASA-CASE-XLA-00204 ..... c 32 N70-36536 \*  
NASA-CASE-XLA-00210 ..... c 30 N70-40309 \*  
NASA-CASE-XLA-00221 ..... c 02 N70-33266 \*  
NASA-CASE-XLA-00229 ..... c 12 N70-33305 \*  
NASA-CASE-XLA-00230 ..... c 02 N70-33255 \*  
NASA-CASE-XLA-00241 ..... c 31 N70-37986 \*  
NASA-CASE-XLA-00256 ..... c 31 N71-15663 \*  
NASA-CASE-XLA-00258 ..... c 31 N70-38676 \*  
NASA-CASE-XLA-00281 ..... c 21 N70-36943 \*  
NASA-CASE-XLA-00284 ..... c 15 N71-16075 \*  
NASA-CASE-XLA-00302 ..... c 15 N71-16077 \*  
NASA-CASE-XLA-00304 ..... c 27 N70-34783 \*  
NASA-CASE-XLA-00326 ..... c 03 N70-34667 \*  
NASA-CASE-XLA-00327 ..... c 25 N71-29184 \*  
NASA-CASE-XLA-00330 ..... c 33 N70-34540 \*  
NASA-CASE-XLA-00349 ..... c 33 N70-37979 \*  
NASA-CASE-XLA-00350 ..... c 02 N70-38011 \*  
NASA-CASE-XLA-00377 ..... c 33 N71-17610 \*  
NASA-CASE-XLA-00378 ..... c 11 N71-15925 \*  
NASA-CASE-XLA-00414 ..... c 07 N70-38200 \*  
NASA-CASE-XLA-00415 ..... c 15 N71-16079 \*  
NASA-CASE-XLA-00471 ..... c 08 N70-34778 \*  
NASA-CASE-XLA-00481 ..... c 14 N70-36824 \*  
NASA-CASE-XLA-00482 ..... c 15 N70-36409 \*  
NASA-CASE-XLA-00487 ..... c 14 N70-40157 \*  
NASA-CASE-XLA-00492 ..... c 14 N70-34799 \*  
NASA-CASE-XLA-00493 ..... c 11 N70-34786 \*  
NASA-CASE-XLA-00495 ..... c 14 N70-41332 \*  
NASA-CASE-XLA-00670 ..... c 08 N71-12501 \*  
NASA-CASE-XLA-00675 ..... c 25 N70-33267 \*  
NASA-CASE-XLA-00678 ..... c 31 N70-34296 \*  
NASA-CASE-XLA-00679 ..... c 15 N70-38601 \*  
NASA-CASE-XLA-00686 ..... c 31 N70-34135 \*  
NASA-CASE-XLA-00711 ..... c 03 N71-12258 \*  
NASA-CASE-XLA-00754 ..... c 15 N70-34850 \*  
NASA-CASE-XLA-00755 ..... c 01 N71-13410 \*  
NASA-CASE-XLA-00781 ..... c 09 N71-22999 \*

NASA-CASE-XLA-00791 ..... c 03 N70-39930 \*  
NASA-CASE-XLA-00793 ..... c 21 N71-22880 \*  
NASA-CASE-XLA-00805 ..... c 31 N70-38010 \*  
NASA-CASE-XLA-00806 ..... c 02 N70-34858 \*  
NASA-CASE-XLA-00838 ..... c 03 N70-36778 \*  
NASA-CASE-XLA-00892 ..... c 33 N71-17897 \*  
NASA-CASE-XLA-00898 ..... c 02 N70-36804 \*  
NASA-CASE-XLA-00901 ..... c 07 N71-10775 \*  
NASA-CASE-XLA-00934 ..... c 14 N71-22765 \*  
NASA-CASE-XLA-00936 ..... c 14 N71-14996 \*  
NASA-CASE-XLA-00937 ..... c 31 N71-17691 \*  
NASA-CASE-XLA-00939 ..... c 11 N71-15926 \*  
NASA-CASE-XLA-00941 ..... c 14 N71-23240 \*  
NASA-CASE-XLA-01019 ..... c 15 N70-40156 \*  
NASA-CASE-XLA-01027 ..... c 31 N71-24035 \*  
NASA-CASE-XLA-01043 ..... c 28 N71-10780 \*  
NASA-CASE-XLA-01090 ..... c 07 N71-12389 \*  
NASA-CASE-XLA-01091 ..... c 15 N71-10672 \*  
NASA-CASE-XLA-01127 ..... c 07 N70-41372 \*  
NASA-CASE-XLA-01131 ..... c 14 N71-10774 \*  
NASA-CASE-XLA-01141 ..... c 15 N71-13789 \*  
NASA-CASE-XLA-01163 ..... c 21 N71-15582 \*  
NASA-CASE-XLA-01219 ..... c 10 N71-23084 \*  
NASA-CASE-XLA-01220 ..... c 02 N70-41863 \*  
NASA-CASE-XLA-01243 ..... c 33 N71-22792 \*  
NASA-CASE-XLA-01262 ..... c 15 N71-21404 \*  
NASA-CASE-XLA-01288 ..... c 09 N69-21470 \* #  
NASA-CASE-XLA-01290 ..... c 02 N70-42016 \*  
NASA-CASE-XLA-01291 ..... c 33 N70-36617 \*  
NASA-CASE-XLA-01326 ..... c 11 N71-21481 \*  
NASA-CASE-XLA-01332 ..... c 31 N71-15664 \*  
NASA-CASE-XLA-01339 ..... c 31 N71-15692 \*  
NASA-CASE-XLA-01349 ..... c 20 N77-17143 \*  
NASA-CASE-XLA-01353 ..... c 14 N70-41366 \*  
NASA-CASE-XLA-01354 ..... c 25 N70-36946 \*  
NASA-CASE-XLA-01396 ..... c 03 N71-12259 \*  
NASA-CASE-XLA-01400 ..... c 07 N70-41331 \*  
NASA-CASE-XLA-01401 ..... c 15 N71-21179 \*  
NASA-CASE-XLA-01441 ..... c 15 N70-41679 \*  
NASA-CASE-XLA-01446 ..... c 15 N71-21528 \*  
NASA-CASE-XLA-01486 ..... c 01 N71-23497 \*  
NASA-CASE-XLA-01494 ..... c 15 N71-24164 \*  
NASA-CASE-XLA-01530 ..... c 14 N71-23092 \*  
NASA-CASE-XLA-01551 ..... c 14 N71-22989 \*  
NASA-CASE-XLA-01552 ..... c 07 N71-11284 \*  
NASA-CASE-XLA-01583 ..... c 02 N70-36825 \*  
NASA-CASE-XLA-01584 ..... c 14 N71-23269 \*  
NASA-CASE-XLA-01731 ..... c 32 N71-21045 \*  
NASA-CASE-XLA-01745 ..... c 33 N71-28903 \*  
NASA-CASE-XLA-01781 ..... c 14 N69-39975 \* #  
NASA-CASE-XLA-01782 ..... c 14 N71-26136 \*  
NASA-CASE-XLA-01787 ..... c 11 N71-16028 \*  
NASA-CASE-XLA-01791 ..... c 14 N71-22991 \*  
NASA-CASE-XLA-01794 ..... c 33 N71-21586 \*  
NASA-CASE-XLA-01804 ..... c 02 N70-34160 \*  
NASA-CASE-XLA-01807 ..... c 15 N71-10799 \*  
NASA-CASE-XLA-01808 ..... c 15 N71-20740 \*  
NASA-CASE-XLA-01832 ..... c 14 N71-21006 \*  
NASA-CASE-XLA-01907 ..... c 14 N71-23268 \*  
NASA-CASE-XLA-01926 ..... c 14 N71-15620 \*  
NASA-CASE-XLA-01952 ..... c 08 N71-12507 \*  
NASA-CASE-XLA-01967 ..... c 31 N70-42015 \*  
NASA-CASE-XLA-01987 ..... c 23 N71-23976 \*  
NASA-CASE-XLA-01989 ..... c 21 N70-34295 \*  
NASA-CASE-XLA-01995 ..... c 18 N71-23047 \*  
NASA-CASE-XLA-02050 ..... c 31 N71-22968 \*  
NASA-CASE-XLA-02057 ..... c 26 N70-40015 \*  
NASA-CASE-XLA-02059 ..... c 33 N71-24276 \*  
NASA-CASE-XLA-02079 ..... c 12 N71-16894 \*  
NASA-CASE-XLA-02081 ..... c 20 N71-16281 \*  
NASA-CASE-XLA-02131 ..... c 32 N70-42003 \*  
NASA-CASE-XLA-02132 ..... c 31 N71-10582 \*  
NASA-CASE-XLA-02332 ..... c 32 N71-17609 \*  
NASA-CASE-XLA-02551 ..... c 21 N71-21708 \*  
NASA-CASE-XLA-02605 ..... c 14 N71-10773 \*  
NASA-CASE-XLA-02609 ..... c 09 N72-25256 \*  
NASA-CASE-XLA-02619 ..... c 10 N71-26334 \*  
NASA-CASE-XLA-02651 ..... c 28 N70-41967 \*  
NASA-CASE-XLA-02704 ..... c 11 N69-21540 \* #  
NASA-CASE-XLA-02705 ..... c 08 N71-15908 \*  
NASA-CASE-XLA-02758 ..... c 14 N71-18481 \*  
NASA-CASE-XLA-02809 ..... c 15 N71-22982 \*  
NASA-CASE-XLA-02810 ..... c 14 N71-25901 \*  
NASA-CASE-XLA-02850 ..... c 09 N71-20447 \*  
NASA-CASE-XLA-02854 ..... c 15 N69-27490 \* #  
NASA-CASE-XLA-02865 ..... c 28 N71-15563 \*  
NASA-CASE-XLA-02898 ..... c 05 N71-20269 \*  
NASA-CASE-XLA-03076 ..... c 07 N71-11266 \*  
NASA-CASE-XLA-03102 ..... c 14 N71-21079 \*  
NASA-CASE-XLA-03103 ..... c 25 N71-21693 \*  
NASA-CASE-XLA-03104 ..... c 06 N71-11235 \*  
NASA-CASE-XLA-03105 ..... c 15 N69-27483 \* #  
NASA-CASE-XLA-03114 ..... c 09 N71-22888 \*  
NASA-CASE-XLA-03127 ..... c 11 N71-10776 \*  
NASA-CASE-XLA-03132 ..... c 31 N71-22969 \*  
NASA-CASE-XLA-03135 ..... c 32 N71-16428 \*

## REPORT NUMBER INDEX

# REPORT NUMBER INDEX

# NASA-CASE-XLE-2529-2

NASA-CASE-XLA-03213	c 05	N71-11207 *	NASA-CASE-XLA-11154	c 07	N72-21117 *	NASA-CASE-XLE-01902	c 28	N71-10574 *
NASA-CASE-XLA-03271	c 11	N69-24321 *	NASA-CASE-XLA-11189	c 10	N72-20222 *	NASA-CASE-XLE-01903	c 22	N71-23599 *
NASA-CASE-XLA-03273	c 14	N71-18699 *				NASA-CASE-XLE-01988	c 27	N71-15634 *
NASA-CASE-XLA-03356	c 10	N71-23315 *	NASA-CASE-XLE-00005	c 28	N70-39899 *	NASA-CASE-XLE-01997	c 06	N71-23527 *
NASA-CASE-XLA-03374	c 25	N71-15562 *	NASA-CASE-XLE-00010	c 15	N70-33382 *	NASA-CASE-XLE-02008	c 09	N71-21583 *
NASA-CASE-XLA-03375	c 16	N71-24074 *	NASA-CASE-XLE-00011	c 14	N70-41946 *	NASA-CASE-XLE-02024	c 14	N71-22964 *
NASA-CASE-XLA-03410	c 16	N71-25914 *	NASA-CASE-XLE-00020	c 15	N70-33226 *	NASA-CASE-XLE-02038	c 09	N71-16086 *
NASA-CASE-XLA-03415	c 15	N71-22713 *	NASA-CASE-XLE-00023	c 15	N70-33330 *	NASA-CASE-XLE-02062-1	c 20	N80-14188 *
NASA-CASE-XLA-03492	c 15	N71-23052 *	NASA-CASE-XLE-00027	c 33	N71-29152 *	NASA-CASE-XLE-02066	c 28	N71-15661 *
NASA-CASE-XLA-03497	c 15	N71-24897 *	NASA-CASE-XLE-00035	c 33	N71-29151 *	NASA-CASE-XLE-02082	c 17	N71-16026 *
NASA-CASE-XLA-03538	c 15	N71-20430 *	NASA-CASE-XLE-00037	c 28	N70-33372 *	NASA-CASE-XLE-02083	c 03	N69-39983 *
NASA-CASE-XLA-03645	c 14	N71-11041 *	NASA-CASE-XLE-00046	c 15	N70-33311 *	NASA-CASE-XLE-02367-1	c 31	N79-21225 *
NASA-CASE-XLA-03659	c 02	N71-21060 *	NASA-CASE-XLE-00057	c 28	N70-38711 *	NASA-CASE-XLE-02428	c 17	N70-33288 *
NASA-CASE-XLA-03660	c 15	N71-33518 *	NASA-CASE-XLE-00078	c 28	N70-33284 *	NASA-CASE-XLE-02531	c 05	N71-23080 *
NASA-CASE-XLA-03661	c 15	N71-15674 *	NASA-CASE-XLE-00085	c 28	N70-39895 *	NASA-CASE-XLE-02545-1	c 76	N79-21910 *
NASA-CASE-XLA-03691	c 31	N69-27461 *	NASA-CASE-XLE-00092	c 15	N70-33264 *	NASA-CASE-XLE-02578	c 25	N71-20747 *
NASA-CASE-XLA-03724	c 14	N71-27271 *	NASA-CASE-XLE-00101	c 15	N70-33376 *	NASA-CASE-XLE-02624	c 12	N69-39988 *
NASA-CASE-XLA-03893	c 10	N71-33160 *	NASA-CASE-XLE-00103	c 28	N70-33241 *	NASA-CASE-XLE-02647	c 18	N71-23658 *
NASA-CASE-XLA-04063	c 31	N71-26779 *	NASA-CASE-XLE-00106	c 15	N71-16076 *	NASA-CASE-XLE-02792	c 26	N71-10607 *
NASA-CASE-XLA-04126	c 28	N71-17687 *	NASA-CASE-XLE-00111	c 28	N70-38199 *	NASA-CASE-XLE-02798	c 26	N71-23654 *
NASA-CASE-XLA-04143	c 18	N71-26100 *	NASA-CASE-XLE-00143	c 14	N70-36618 *	NASA-CASE-XLE-02823	c 09	N71-23443 *
NASA-CASE-XLA-04251	c 18	N71-24170 *	NASA-CASE-XLE-00144	c 28	N70-34860 *	NASA-CASE-XLE-02824	c 03	N69-39890 *
NASA-CASE-XLA-04295	c 16	N71-12243 *	NASA-CASE-XLE-00145	c 28	N70-36806 *	NASA-CASE-XLE-02902	c 25	N71-21694 *
NASA-CASE-XLA-04451	c 02	N71-25892 *	NASA-CASE-XLE-00150	c 28	N70-41818 *	NASA-CASE-XLE-02991	c 17	N71-16025 *
NASA-CASE-XLA-04555-1	c 14	N69-27484 *	NASA-CASE-XLE-00151	c 17	N70-33283 *	NASA-CASE-XLE-02998	c 14	N70-42074 *
NASA-CASE-XLA-04556	c 14	N71-16106 *	NASA-CASE-XLE-00155	c 28	N71-29154 *	NASA-CASE-XLE-02999	c 15	N71-16052 *
NASA-CASE-XLA-04605	c 32	N70-41580 *	NASA-CASE-XLE-00164	c 15	N70-36411 *	NASA-CASE-XLE-03061-1	c 10	N71-24798 *
NASA-CASE-XLA-04622	c 03	N71-23008 *	NASA-CASE-XLE-00168	c 11	N70-33278 *	NASA-CASE-XLE-03157	c 28	N71-24736 *
NASA-CASE-XLA-04804	c 31	N72-22482 *	NASA-CASE-XLE-00170	c 15	N70-36412 *	NASA-CASE-XLE-03186-1	c 09	N79-21084 *
NASA-CASE-XLA-04897	c 15	N71-24315 *	NASA-CASE-XLE-00177	c 28	N70-40367 *	NASA-CASE-XLE-03280	c 14	N71-23093 *
NASA-CASE-XLA-04901	c 31	N72-28438 *	NASA-CASE-XLE-00207	c 28	N70-33375 *	NASA-CASE-XLE-03307	c 33	N71-14035 *
NASA-CASE-XLA-04980-2	c 14	N69-27422 *	NASA-CASE-XLE-00208	c 28	N70-34294 *	NASA-CASE-XLE-03432	c 33	N71-24145 *
NASA-CASE-XLA-04980	c 09	N72-11389 *	NASA-CASE-XLE-00209	c 22	N73-32528 *	NASA-CASE-XLE-03494	c 27	N71-21819 *
NASA-CASE-XLA-05056	c 15	N73-30391 *	NASA-CASE-XLE-00212	c 03	N70-34134 *	NASA-CASE-XLE-03512	c 12	N69-21466 *
NASA-CASE-XLA-05087	c 14	N73-13209 *	NASA-CASE-XLE-00222	c 02	N70-37939 *	NASA-CASE-XLE-03583	c 31	N71-17629 *
NASA-CASE-XLA-05099	c 09	N71-17696 *	NASA-CASE-XLE-00228	c 17	N70-38490 *	NASA-CASE-XLE-03629	c 17	N71-23248 *
NASA-CASE-XLA-05100	c 15	N71-11194 *	NASA-CASE-XLE-00231	c 17	N70-38198 *	NASA-CASE-XLE-03778	c 09	N69-21542 *
NASA-CASE-XLA-05332	c 05	N71-15687 *	NASA-CASE-XLE-00243	c 14	N70-38602 *	NASA-CASE-XLE-03803-2	c 15	N71-17651 *
NASA-CASE-XLA-05369	c 31	N71-21475 *	NASA-CASE-XLE-00252	c 11	N70-34844 *	NASA-CASE-XLE-03803	c 15	N71-23816 *
NASA-CASE-XLA-05378	c 11	N71-14132 *	NASA-CASE-XLE-00266	c 14	N70-34156 *	NASA-CASE-XLE-03804	c 10	N71-19471 *
NASA-CASE-XLA-05464	c 21	N71-26387 *	NASA-CASE-XLE-00267	c 28	N70-33356 *	NASA-CASE-XLE-03925	c 18	N71-22894 *
NASA-CASE-XLA-05541	c 12	N71-19569 *	NASA-CASE-XLE-00288	c 17	N70-36616 *	NASA-CASE-XLE-03940-2	c 17	N72-28536 *
NASA-CASE-XLA-05749	c 15	N71-13411 *	NASA-CASE-XLE-00303	c 15	N70-34247 *	NASA-CASE-XLE-03940	c 18	N71-26153 *
NASA-CASE-XLA-05828	c 01	N71-16221 *	NASA-CASE-XLE-00303	c 15	N70-36535 *	NASA-CASE-XLE-04026	c 14	N71-23267 *
NASA-CASE-XLA-05906	c 31	N72-12408 *	NASA-CASE-XLE-00335	c 28	N70-38505 *	NASA-CASE-XLE-04222	c 23	N71-22881 *
NASA-CASE-XLA-05966	c 15	N69-39981 *	NASA-CASE-XLE-00342	c 14	N70-35368 *	NASA-CASE-XLE-04250	c 09	N71-20446 *
NASA-CASE-XLA-06095	c 01	N71-24875 *	NASA-CASE-XLE-00345	c 28	N70-37980 *	NASA-CASE-XLE-04501	c 09	N71-23190 *
NASA-CASE-XLA-06199	c 15	N71-20563 *	NASA-CASE-XLE-00353	c 15	N70-38020 *	NASA-CASE-XLE-04503	c 14	N71-24864 *
NASA-CASE-XLA-06232	c 25	N71-13422 *	NASA-CASE-XLE-00376	c 18	N70-39897 *	NASA-CASE-XLE-04526	c 03	N71-11052 *
NASA-CASE-XLA-06339	c 02	N72-28436 *	NASA-CASE-XLE-00387	c 28	N70-37245 *	NASA-CASE-XLE-04535	c 03	N71-23354 *
NASA-CASE-XLA-06683	c 14	N71-28991 *	NASA-CASE-XLE-00388	c 33	N70-34812 *	NASA-CASE-XLE-04599	c 22	N72-20597 *
NASA-CASE-XLA-06713	c 14	N71-11037 *	NASA-CASE-XLE-00397	c 28	N70-34788 *	NASA-CASE-XLE-04603	c 33	N71-21507 *
NASA-CASE-XLA-06824-2	c 02	N71-11038 *	NASA-CASE-XLE-00409	c 15	N70-36492 *	NASA-CASE-XLE-04677	c 15	N71-10577 *
NASA-CASE-XLA-06958	c 02	N71-18616 *	NASA-CASE-XLE-00454	c 23	N71-15658 *	NASA-CASE-XLE-04787	c 03	N71-20492 *
NASA-CASE-XLA-07390	c 15	N71-17579 *	NASA-CASE-XLE-00455	c 23	N71-17802 *	NASA-CASE-XLE-04788	c 09	N71-22987 *
NASA-CASE-XLA-07391	c 12	N71-18482 *	NASA-CASE-XLE-00490	c 28	N70-38197 *	NASA-CASE-XLE-04791	c 32	N74-22096 *
NASA-CASE-XLA-07424	c 14	N72-22246 *	NASA-CASE-XLE-00503	c 33	N70-34545 *	NASA-CASE-XLE-04857	c 28	N71-23968 *
NASA-CASE-XLA-07430	c 11	N71-24895 *	NASA-CASE-XLE-00519	c 14	N70-34818 *	NASA-CASE-XLE-04946	c 17	N71-24911 *
NASA-CASE-XLA-07473	c 15	N71-12514 *	NASA-CASE-XLE-00586	c 28	N70-41576 *	NASA-CASE-XLE-05033	c 15	N71-23810 *
NASA-CASE-XLA-07497	c 09	N71-22890 *	NASA-CASE-XLE-00620	c 15	N71-15968 *	NASA-CASE-XLE-05079	c 15	N71-17652 *
NASA-CASE-XLA-07728	c 33	N71-18751 *	NASA-CASE-XLE-00660	c 32	N70-41579 *	NASA-CASE-XLE-05130-2	c 15	N71-19570 *
NASA-CASE-XLA-07732	c 08	N71-29139 *	NASA-CASE-XLE-00685	c 28	N70-39925 *	NASA-CASE-XLE-05130	c 15	N69-21362 *
NASA-CASE-XLA-07788	c 09	N72-17328 *	NASA-CASE-XLE-00688	c 28	N70-41992 *	NASA-CASE-XLE-05230-2	c 14	N73-13417 *
NASA-CASE-XLA-07813	c 14	N71-27057 *	NASA-CASE-XLE-00690	c 14	N70-41330 *	NASA-CASE-XLE-05230	c 14	N72-27410 *
NASA-CASE-XLA-07828	c 08	N72-16329 *	NASA-CASE-XLE-00702	c 25	N69-39884 *	NASA-CASE-XLE-05260	c 14	N71-20429 *
NASA-CASE-XLA-07829	c 15	N71-15571 *	NASA-CASE-XLE-00703	c 14	N70-40203 *	NASA-CASE-XLE-05641-1	c 15	N71-26346 *
NASA-CASE-XLA-07911	c 15	N71-26161 *	NASA-CASE-XLE-00715	c 15	N71-15967 *	NASA-CASE-XLE-05689	c 28	N71-15559 *
NASA-CASE-XLA-08254	c 14	N69-21380 *	NASA-CASE-XLE-00720	c 15	N70-34859 *	NASA-CASE-XLE-05913	c 33	N71-14032 *
NASA-CASE-XLA-08491	c 05	N71-19421 *	NASA-CASE-XLE-00726	c 14	N70-40201 *	NASA-CASE-XLE-06094	c 33	N78-17293 *
NASA-CASE-XLA-08493	c 10	N69-39984 *	NASA-CASE-XLE-00785	c 17	N71-15644 *	NASA-CASE-XLE-06461-2	c 17	N72-28535 *
NASA-CASE-XLA-08507	c 09	N71-25360 *	NASA-CASE-XLE-00787	c 33	N71-16104 *	NASA-CASE-XLE-06461	c 17	N72-22530 *
NASA-CASE-XLA-08530	c 32	N69-21465 *	NASA-CASE-XLE-00808	c 14	N71-21090 *	NASA-CASE-XLE-06773	c 15	N71-23817 *
NASA-CASE-XLA-08645	c 15	N71-17586 *	NASA-CASE-XLE-00810	c 24	N71-10560 *	NASA-CASE-XLE-06774-2	c 06	N72-25150 *
NASA-CASE-XLA-08646	c 14	N71-27272 *	NASA-CASE-XLE-00815	c 15	N70-34861 *	NASA-CASE-XLE-06969	c 17	N71-24142 *
NASA-CASE-XLA-08799	c 10	N71-11043 *	NASA-CASE-XLE-00817	c 15	N70-35407 *	NASA-CASE-XLE-07087	c 06	N69-39889 *
NASA-CASE-XLA-08801-1	c 02	N71-11238 *	NASA-CASE-XLE-00820	c 28	N70-33265 *	NASA-CASE-XLE-08511-2	c 18	N71-16105 *
NASA-CASE-XLA-08802	c 06	N71-27214 *	NASA-CASE-XLE-00953	c 14	N71-16014 *	NASA-CASE-XLE-08511	c 18	N71-23710 *
NASA-CASE-XLA-08911	c 15	N71-28933 *	NASA-CASE-XLE-01015	c 15	N71-15966 *	NASA-CASE-XLE-08569-2	c 03	N71-24681 *
NASA-CASE-XLA-08913	c 14	N82-21269 *	NASA-CASE-XLE-01092	c 03	N69-39898 *	NASA-CASE-XLE-08569	c 03	N71-23449 *
NASA-CASE-XLA-08914-2	c 25	N73-12492 *	NASA-CASE-XLE-01124	c 15	N71-22797 *	NASA-CASE-XLE-08917-2	c 15	N71-24836 *
NASA-CASE-XLA-08914	c 15	N73-28487 *	NASA-CASE-XLE-01182	c 28	N71-14043 *	NASA-CASE-XLE-08917	c 15	N71-15597 *
NASA-CASE-XLA-08916-2	c 14	N71-29018 *	NASA-CASE-XLE-01246	c 27	N71-15635 *	NASA-CASE-XLE-09341	c 12	N71-28741 *
NASA-CASE-XLA-08916	c 15	N71-25903 *	NASA-CASE-XLE-01300	c 14	N71-10797 *	NASA-CASE-XLE-09475-1	c 33	N71-15568 *
NASA-CASE-XLA-08966-1	c 17	N71-27088 *	NASA-CASE-XLE-01399	c 15	N70-41993 *	NASA-CASE-XLE-09527-2	c 15	N71-26189 *
NASA-CASE-XLA-08967	c 02	N69-27505 *	NASA-CASE-XLE-01449	c 33	N71-15625 *	NASA-CASE-XLE-09527	c 15	N71-17688 *
NASA-CASE-XLA-09122	c 15	N71-28740 *	NASA-CASE-XLE-01481	c 15	N70-41646 *	NASA-CASE-XLE-10326-2	c 15	N72-29488 *
NASA-CASE-XLA-09346	c 10	N71-18724 *	NASA-CASE-XLE-01512	c 14	N71-10781 *	NASA-CASE-XLE-10326-4	c 37	N74-15125 *
NASA-CASE-XLA-09371	c 15	N72-33612 *	NASA-CASE-XLE-01533	c 12	N70-40124 *	NASA-CASE-XLE-10337	c 15	N71-24046 *
NASA-CASE-XLA-09480	c 11	N72-27485 *	NASA-CASE-XLE-01604-2	c 11	N71-10777 *	NASA-CASE-XLE-103477-1	c 28	N71-20330 *
NASA-CASE-XLA-09843	c 15	N71-16085 *	NASA-CASE-XLE-01609	c 15	N71-15610 *	NASA-CASE-XLE-10453-2	c 28	N73-27699 *
NASA-CASE-XLA-09881	c 31	N72-17452 *	NASA-CASE-XLE-01640	c 14	N71-10500 *	NASA-CASE-XLE-10466	c 17	N69-25147 *
NASA-CASE-XLA-10022	c 15	N71-29041 *	NASA-CASE-XLE-01645	c 31	N71-15637 *	NASA-CASE-XLE-10529	c 14	N69-23191 *
NASA-CASE-XLA-10402	c 14	N71-21493 *	NASA-CASE-XLE-01716	c 03	N71-20904 *	NASA-CASE-XLE-10715	c 26	N71-23292 *
NASA-CASE-XLA-10450	c 28	N72-21489 *	NASA-CASE-XLE-01765	c 09	N70-40234 *	NASA-CASE-XLE-10717	c 37	N75-29426 *
NASA-CASE-XLA-10470	c 15	N71-28980 *	NASA-CASE-XLE-01783	c 18	N71-10772 *	NASA-CASE-XLE-10910	c 18	N71-29040 *
NASA-CASE-XLA-10772	c 07	N74-27035 *		c 28	N70-34175 *	NASA-CASE-XLE-2529-2	c 36	N75-27364 *
NASA-CASE-XLA-11028-1	c 24							

## NASA-CASE-XLE-2529-3

## REPORT NUMBER INDEX

NASA-CASE-XLE-2529-3	c 33	N74-20859 *	NASA-CASE-XMF-03873	c 06	N69-39733 *	NASA-CASE-XMS-01445	c 12	N71-16031 *
NASA-CASE-XMF-00148	c 28	N70-38710 *	NASA-CASE-XMF-03934	c 09	N71-22985 *	NASA-CASE-XMS-01492	c 05	N70-41297 *
NASA-CASE-XMF-00185	c 21	N70-34539 *	NASA-CASE-XMF-03968	c 14	N71-27186 *	NASA-CASE-XMS-01546	c 14	N70-40233 *
NASA-CASE-XMF-00324	c 09	N70-34596 *	NASA-CASE-XMF-03988	c 15	N71-21403 *	NASA-CASE-XMS-01554	c 10	N71-10578 *
NASA-CASE-XMF-00339	c 15	N70-39896 *	NASA-CASE-XMF-04042	c 15	N71-23023 *	NASA-CASE-XMS-01615	c 05	N70-41329 *
NASA-CASE-XMF-00341	c 15	N70-33323 *	NASA-CASE-XMF-04132	c 15	N69-27502 *	NASA-CASE-XMS-01618	c 14	N71-20741 *
NASA-CASE-XMF-00369	c 09	N70-36494 *	NASA-CASE-XMF-04133	c 06	N71-20717 *	NASA-CASE-XMS-01620	c 23	N71-15673 *
NASA-CASE-XMF-00375	c 15	N70-34249 *	NASA-CASE-XMF-04134	c 14	N71-23755 *	NASA-CASE-XMS-01624	c 15	N70-40062 *
NASA-CASE-XMF-00389	c 31	N70-34176 *	NASA-CASE-XMF-04163	c 02	N71-23007 *	NASA-CASE-XMS-01625	c 15	N71-23022 *
NASA-CASE-XMF-00392	c 15	N70-34814 *	NASA-CASE-XMF-04208	c 33	N71-29051 *	NASA-CASE-XMS-01816	c 33	N71-15623 *
NASA-CASE-XMF-00411	c 11	N70-36913 *	NASA-CASE-XMF-04237	c 33	N71-16278 *	NASA-CASE-XMS-01905	c 12	N71-21089 *
NASA-CASE-XMF-00421	c 09	N70-34502 *	NASA-CASE-XMF-04238	c 09	N69-39734 *	NASA-CASE-XMS-01906	c 31	N70-41373 *
NASA-CASE-XMF-00424	c 11	N70-38196 *	NASA-CASE-XMF-04367	c 09	N71-23545 *	NASA-CASE-XMS-01991	c 09	N71-21449 *
NASA-CASE-XMF-00437	c 07	N70-40202 *	NASA-CASE-XMF-04415	c 14	N71-24693 *	NASA-CASE-XMS-01994-1	c 14	N72-17326 *
NASA-CASE-XMF-00442	c 31	N71-10747 *	NASA-CASE-XMF-04494-1	c 33	N79-33392 *	NASA-CASE-XMS-02009	c 33	N71-20834 *
NASA-CASE-XMF-00447	c 14	N70-33179 *	NASA-CASE-XMF-04592-1	c 20	N79-21125 *	NASA-CASE-XMS-02063	c 03	N71-29044 *
NASA-CASE-XMF-00456	c 14	N70-34705 *	NASA-CASE-XMF-04593-1	c 20	N79-21125 *	NASA-CASE-XMS-02087	c 09	N70-41717 *
NASA-CASE-XMF-00462	c 14	N70-34298 *	NASA-CASE-XMF-04680	c 15	N71-19489 *	NASA-CASE-XMS-02159	c 10	N71-22961 *
NASA-CASE-XMF-00479	c 14	N70-34794 *	NASA-CASE-XMF-04709	c 15	N71-15609 *	NASA-CASE-XMS-02182	c 10	N71-28783 *
NASA-CASE-XMF-00480	c 14	N70-39898 *	NASA-CASE-XMF-04958-1	c 10	N71-26414 *	NASA-CASE-XMS-02184	c 15	N71-20813 *
NASA-CASE-XMF-00515	c 15	N70-34664 *	NASA-CASE-XMF-04966	c 14	N71-17658 *	NASA-CASE-XMS-02383	c 15	N71-15918 *
NASA-CASE-XMF-00517	c 03	N70-34157 *	NASA-CASE-XMF-05046	c 33	N71-28892 *	NASA-CASE-XMS-02399	c 05	N71-22896 *
NASA-CASE-XMF-00580	c 11	N70-35383 *	NASA-CASE-XMF-05114-2	c 15	N71-26148 *	NASA-CASE-XMS-02532	c 15	N70-41808 *
NASA-CASE-XMF-00640	c 15	N70-39924 *	NASA-CASE-XMF-05114-3	c 15	N71-24853 *	NASA-CASE-XMS-02677	c 31	N70-42075 *
NASA-CASE-XMF-00641	c 31	N70-36410 *	NASA-CASE-XMF-05114	c 15	N71-17650 *	NASA-CASE-XMS-02744	c 33	N75-27249 *
NASA-CASE-XMF-00658	c 12	N70-38897 *	NASA-CASE-XMF-05195	c 10	N71-24861 *	NASA-CASE-XMS-02872	c 05	N69-21925 *
NASA-CASE-XMF-00663	c 08	N71-18752 *	NASA-CASE-XMF-05224	c 14	N71-23726 *	NASA-CASE-XMS-02930	c 11	N71-23042 *
NASA-CASE-XMF-00684	c 21	N71-21688 *	NASA-CASE-XMF-05279	c 18	N71-16124 *	NASA-CASE-XMS-02952	c 18	N71-20742 *
NASA-CASE-XMF-00701	c 09	N70-40272 *	NASA-CASE-XMF-05344	c 31	N71-16345 *	NASA-CASE-XMS-02977	c 11	N71-10746 *
NASA-CASE-XMF-00722	c 15	N70-40204 *	NASA-CASE-XMF-05373-1	c 33	N79-21264 *	NASA-CASE-XMS-03252	c 15	N71-10658 *
NASA-CASE-XMF-00906	c 09	N70-41655 *	NASA-CASE-XMF-05757-1	c 31	N79-21227 *	NASA-CASE-XMS-03371	c 05	N70-42000 *
NASA-CASE-XMF-00908	c 14	N70-40238 *	NASA-CASE-XMF-05835	c 08	N71-12504 *	NASA-CASE-XMS-03454	c 09	N71-20658 *
NASA-CASE-XMF-00923	c 28	N70-36802 *	NASA-CASE-XMF-05843	c 03	N71-11055 *	NASA-CASE-XMS-03537	c 15	N69-21471 *
NASA-CASE-XMF-00968	c 28	N71-15660 *	NASA-CASE-XMF-05844	c 14	N71-17587 *	NASA-CASE-XMS-03542	c 09	N71-28926 *
NASA-CASE-XMF-01016	c 26	N71-17818 *	NASA-CASE-XMF-05868	c 26	N75-27125 *	NASA-CASE-XMS-03613	c 31	N71-16346 *
NASA-CASE-XMF-01030	c 18	N70-41583 *	NASA-CASE-XMF-05882	c 35	N75-27329 *	NASA-CASE-XMS-03694-1	c 54	N82-29002 *
NASA-CASE-XMF-01045	c 15	N70-40354 *	NASA-CASE-XMF-05941	c 31	N71-23912 *	NASA-CASE-XMS-03700	c 15	N69-24266 *
NASA-CASE-XMF-01049	c 15	N71-23049 *	NASA-CASE-XMF-05964-1	c 20	N79-21124 *	NASA-CASE-XMS-03722	c 15	N71-21530 *
NASA-CASE-XMF-01083	c 15	N71-22723 *	NASA-CASE-XMF-05999	c 15	N71-29032 *	NASA-CASE-XMS-03745	c 15	N71-21076 *
NASA-CASE-XMF-01096	c 10	N71-16030 *	NASA-CASE-XMF-06053	c 26	N75-27126 *	NASA-CASE-XMS-03792	c 14	N70-41812 *
NASA-CASE-XMF-01097	c 10	N71-16058 *	NASA-CASE-XMF-06065	c 15	N71-20395 *	NASA-CASE-XMS-04061-1	c 09	N69-39885 *
NASA-CASE-XMF-01099	c 14	N71-15969 *	NASA-CASE-XMF-06092	c 07	N71-24612 *	NASA-CASE-XMS-04072	c 15	N70-42017 *
NASA-CASE-XMF-01129	c 09	N70-38712 *	NASA-CASE-XMF-06409	c 06	N71-23230 *	NASA-CASE-XMS-04142	c 31	N70-41631 *
NASA-CASE-XMF-01160	c 07	N71-11298 *	NASA-CASE-XMF-06515	c 14	N71-23227 *	NASA-CASE-XMS-04170	c 05	N71-22748 *
NASA-CASE-XMF-01174	c 02	N70-41589 *	NASA-CASE-XMF-06519	c 09	N71-12519 *	NASA-CASE-XMS-04178	c 15	N71-22798 *
NASA-CASE-XMF-01371	c 15	N70-41829 *	NASA-CASE-XMF-06531	c 14	N71-17575 *	NASA-CASE-XMS-04201	c 14	N71-22990 *
NASA-CASE-XMF-01402	c 18	N71-21651 *	NASA-CASE-XMF-06589	c 05	N71-23159 *	NASA-CASE-XMS-04212-1	c 05	N71-12346 *
NASA-CASE-XMF-01452	c 15	N70-41371 *	NASA-CASE-XMF-06617	c 09	N71-24843 *	NASA-CASE-XMS-04213-1	c 09	N71-26002 *
NASA-CASE-XMF-01483	c 14	N69-27431 *	NASA-CASE-XMF-06884-1	c 20	N79-21123 *	NASA-CASE-XMS-04215-1	c 09	N69-39987 *
NASA-CASE-XMF-01543	c 31	N71-17730 *	NASA-CASE-XMF-06888	c 15	N71-24044 *	NASA-CASE-XMS-04268	c 33	N71-16277 *
NASA-CASE-XMF-01544	c 28	N70-34162 *	NASA-CASE-XMF-06892	c 09	N71-24805 *	NASA-CASE-XMS-04269	c 16	N71-22895 *
NASA-CASE-XMF-01598	c 21	N71-15583 *	NASA-CASE-XMF-06900-1	c 27	N79-21191 *	NASA-CASE-XMS-04292	c 15	N71-22722 *
NASA-CASE-XMF-01599	c 09	N71-20705 *	NASA-CASE-XMF-06926	c 28	N71-22983 *	NASA-CASE-XMS-04300	c 09	N71-19479 *
NASA-CASE-XMF-01667	c 15	N71-17647 *	NASA-CASE-XMF-07069	c 15	N71-23815 *	NASA-CASE-XMS-04312	c 07	N71-22984 *
NASA-CASE-XMF-01669	c 21	N71-23289 *	NASA-CASE-XMF-07488	c 11	N71-18773 *	NASA-CASE-XMS-04318	c 15	N69-27871 *
NASA-CASE-XMF-01730	c 15	N71-23050 *	NASA-CASE-XMF-07587	c 15	N71-18701 *	NASA-CASE-XMS-04390	c 31	N70-41871 *
NASA-CASE-XMF-01772	c 11	N70-41677 *	NASA-CASE-XMF-07770-2	c 18	N71-26772 *	NASA-CASE-XMS-04533	c 15	N71-23086 *
NASA-CASE-XMF-01779	c 12	N71-20815 *	NASA-CASE-XMF-07808	c 15	N71-23812 *	NASA-CASE-XMS-04545	c 15	N71-22878 *
NASA-CASE-XMF-01813	c 28	N70-41582 *	NASA-CASE-XMF-08217	c 03	N71-23239 *	NASA-CASE-XMS-04625	c 05	N71-20718 *
NASA-CASE-XMF-01887	c 15	N71-10617 *	NASA-CASE-XMF-08522	c 15	N71-19486 *	NASA-CASE-XMS-04670	c 54	N78-17678 *
NASA-CASE-XMF-01892	c 10	N71-22986 *	NASA-CASE-XMF-08523	c 31	N71-20396 *	NASA-CASE-XMS-04798	c 11	N71-21474 *
NASA-CASE-XMF-01899	c 31	N70-41948 *	NASA-CASE-XMF-08651	c 06	N71-11236 *	NASA-CASE-XMS-04826	c 28	N71-28849 *
NASA-CASE-XMF-01973	c 31	N70-41588 *	NASA-CASE-XMF-08652	c 06	N71-11243 *	NASA-CASE-XMS-04843	c 03	N69-21469 *
NASA-CASE-XMF-01974	c 14	N71-22752 *	NASA-CASE-XMF-08655	c 06	N71-11239 *	NASA-CASE-XMS-04890-1	c 15	N70-22192 *
NASA-CASE-XMF-02039	c 15	N71-15871 *	NASA-CASE-XMF-08656	c 06	N71-11242 *	NASA-CASE-XMS-04917	c 14	N69-24257 *
NASA-CASE-XMF-02107	c 15	N71-10809 *	NASA-CASE-XMF-08665	c 10	N71-19467 *	NASA-CASE-XMS-04919	c 09	N71-23270 *
NASA-CASE-XMF-02108	c 31	N70-36845 *	NASA-CASE-XMF-08674	c 06	N71-28807 *	NASA-CASE-XMS-04928	c 54	N78-17679 *
NASA-CASE-XMF-02221	c 18	N71-27170 *	NASA-CASE-XMF-08804	c 09	N71-24717 *	NASA-CASE-XMS-04935	c 05	N71-11190 *
NASA-CASE-XMF-02263	c 05	N74-10907 *	NASA-CASE-XMF-09422	c 07	N71-19436 *	NASA-CASE-XMS-05303	c 07	N69-27462 *
NASA-CASE-XMF-02303	c 17	N71-23828 *	NASA-CASE-XMF-09902	c 15	N72-11387 *	NASA-CASE-XMS-05304	c 05	N71-12336 *
NASA-CASE-XMF-02307	c 14	N71-10779 *	NASA-CASE-XMF-10040	c 15	N71-22877 *	NASA-CASE-XMS-05307	c 09	N69-24330 *
NASA-CASE-XMF-02330	c 15	N71-23798 *	NASA-CASE-XMF-10289	c 14	N71-23699 *	NASA-CASE-XMS-05365	c 14	N71-22993 *
NASA-CASE-XMF-02392	c 32	N71-24285 *	NASA-CASE-XMF-10753	c 06	N71-11237 *	NASA-CASE-XMS-05454-1	c 07	N71-12391 *
NASA-CASE-XMF-02433	c 14	N71-10616 *	NASA-CASE-XMF-10968	c 14	N71-24234 *	NASA-CASE-XMS-05516	c 15	N71-17803 *
NASA-CASE-XMF-02526-1	c 27	N79-21190 *	NASA-CASE-XMF-14032	c 20	N71-16340 *	NASA-CASE-XMS-05562-1	c 09	N69-39986 *
NASA-CASE-XMF-02527-1	c 27	N79-21190 *	NASA-CASE-XMF-14301	c 09	N71-23188 *	NASA-CASE-XMS-05605-1	c 10	N71-19468 *
NASA-CASE-XMF-02584	c 06	N71-20905 *	NASA-CASE-XMS-00259	c 18	N70-36400 *	NASA-CASE-XMS-05731	c 35	N75-29382 *
NASA-CASE-XMF-02783-1	c 27	N79-21190 *	NASA-CASE-XMS-00486	c 33	N70-33344 *	NASA-CASE-XMS-05890	c 09	N71-23191 *
NASA-CASE-XMF-02786	c 17	N71-20743 *	NASA-CASE-XMS-00583	c 28	N70-38504 *	NASA-CASE-XMS-05894-1	c 15	N69-21924 *
NASA-CASE-XMF-02822	c 14	N70-41994 *	NASA-CASE-XMS-00784	c 05	N71-12335 *	NASA-CASE-XMS-05909-1	c 14	N69-27459 *
NASA-CASE-XMF-02853	c 31	N70-36654 *	NASA-CASE-XMS-00863	c 05	N70-34957 *	NASA-CASE-XMS-05936	c 14	N70-41682 *
NASA-CASE-XMF-02964	c 14	N71-17659 *	NASA-CASE-XMS-00864	c 05	N70-36493 *	NASA-CASE-XMS-06056-1	c 23	N71-24857 *
NASA-CASE-XMF-02966	c 10	N71-24863 *	NASA-CASE-XMS-00893	c 07	N70-36493 *	NASA-CASE-XMS-06061	c 05	N71-23317 *
NASA-CASE-XMF-03074	c 06	N71-24740 *	NASA-CASE-XMS-00907	c 02	N70-41630 *	NASA-CASE-XMS-06064	c 05	N71-23096 *
NASA-CASE-XMF-03169	c 31	N71-15675 *	NASA-CASE-XMS-00913	c 10	N71-23543 *	NASA-CASE-XMS-06162	c 31	N71-28851 *
NASA-CASE-XMF-03198	c 30	N70-40353 *	NASA-CASE-XMS-00945	c 09	N71-10798 *	NASA-CASE-XMS-06238	c 14	N71-21007 *
NASA-CASE-XMF-03212	c 15	N71-22721 *	NASA-CASE-XMS-01077-1	c 37	N79-33467 *	NASA-CASE-XMS-06329-1	c 15	N71-20441 *
NASA-CASE-XMF-03248	c 11	N71-10604 *	NASA-CASE-XMS-01108	c 15	N69-24322 *	NASA-CASE-XMS-06497	c 14	N71-26244 *
NASA-CASE-XMF-03287	c 15	N71-15607 *	NASA-CASE-XMS-01115	c 05	N70-39922 *	NASA-CASE-XMS-06740-1	c 07	N71-26579 *
NASA-CASE-XMF-03290	c 15	N71-23256 *	NASA-CASE-XMS-01177	c 05	N71-19440 *	NASA-CASE-XMS-06761	c 05	N69-23192 *
NASA-CASE-XMF-03498	c 15	N71-15986 *	NASA-CASE-XMS-01240	c 05	N70-35152 *	NASA-CASE-XMS-06767-1	c 14	N71-20435 *
NASA-CASE-XMF-03511	c 15	N71-22799 *	NASA-CASE-XMS-01244-1	c 33	N79-33393 *	NASA-CASE-XMS-06782	c 32	N71-15974 *
NASA-CASE-XMF-03793	c 15	N71-24833 *	NASA-CASE-XMS-01295-1	c 37	N79-21345 *	NASA-CASE-XMS-06876	c 15	N71-21536 *
NASA-CASE-XMF-03844-1	c 14	N71-26474 *	NASA-CASE-XMS-01315	c 09	N70-41675 *	NASA-CASE-XMS-06949	c 09	N69-21467 *
NASA-CASE-XMF-03856	c 31	N70-34159 *	NASA-CASE-XMS-01330	c 37	N75-27376 *	NASA-CASE-XMS-07168	c 07	N71-11300 *
						NASA-CASE-XMS-07487	c 15	N71-23255 *



## REPORT NUMBER INDEX

## NASA-CASE-XNP-09802

NASA-CASE-XMS-07846-1	c 09	N69-21927 * #	NASA-CASE-XNP-01458	c 04	N78-17031 *	NASA-CASE-XNP-04816	c 06	N69-39936 * #
NASA-CASE-XMS-08589-1	c 09	N71-20569 *	NASA-CASE-XNP-01464	c 03	N71-10728 *	NASA-CASE-XNP-04817	c 14	N71-23225 *
NASA-CASE-XMS-09310	c 15	N71-22706 *	NASA-CASE-XNP-01466	c 10	N71-26434 *	NASA-CASE-XNP-04819	c 08	N71-23295 *
NASA-CASE-XMS-09352	c 09	N71-23316 *	NASA-CASE-XNP-01472	c 14	N70-41807 *	NASA-CASE-XNP-04969	c 11	N69-27466 * #
NASA-CASE-XMS-09571	c 05	N71-19439 *	NASA-CASE-XNP-01501	c 21	N70-41300 *	NASA-CASE-XNP-05082	c 15	N70-41960 *
NASA-CASE-XMS-09610	c 07	N71-24625 *	NASA-CASE-XNP-01567	c 15	N70-41310 *	NASA-CASE-XNP-05219	c 16	N71-15550 *
NASA-CASE-XMS-09632-1	c 05	N71-11203 *	NASA-CASE-XNP-01641	c 15	N71-22997 *	NASA-CASE-XNP-05231	c 14	N73-28491 *
NASA-CASE-XMS-09635	c 05	N71-24623 *	NASA-CASE-XNP-01659	c 14	N71-23039 *	NASA-CASE-XNP-05254	c 07	N71-20791 *
NASA-CASE-XMS-09636	c 05	N71-12344 *	NASA-CASE-XNP-01660	c 14	N71-23036 *	NASA-CASE-XNP-05297	c 15	N71-23811 *
NASA-CASE-XMS-09637-1	c 05	N71-24730 *	NASA-CASE-XNP-01735	c 07	N71-22750 *	NASA-CASE-XNP-05381	c 09	N71-20842 *
NASA-CASE-XMS-09652-1	c 05	N71-26333 *	NASA-CASE-XNP-01747	c 15	N71-23024 *	NASA-CASE-XNP-05382	c 10	N71-23544 *
NASA-CASE-XMS-09653	c 54	N78-17680 *	NASA-CASE-XNP-01749	c 27	N70-41897 *	NASA-CASE-XNP-05415	c 08	N71-12505 *
NASA-CASE-XMS-09690	c 33	N72-25913 *	NASA-CASE-XNP-01753	c 08	N71-22897 *	NASA-CASE-XNP-05429	c 26	N71-21824 *
NASA-CASE-XMS-09691-1	c 18	N71-15545 *	NASA-CASE-XNP-01848	c 15	N71-28959 *	NASA-CASE-XNP-05524	c 33	N71-24876 *
NASA-CASE-XMS-10269	c 05	N71-24147 *	NASA-CASE-XNP-01855	c 15	N71-28937 *	NASA-CASE-XNP-05530	c 14	N73-32321 *
NASA-CASE-XMS-10660-1	c 15	N71-25975 *	NASA-CASE-XNP-01951	c 09	N70-41929 *	NASA-CASE-XNP-05535	c 14	N71-23040 *
NASA-CASE-XMS-10984-1	c 10	N71-19417 *	NASA-CASE-XNP-01954	c 28	N71-28850 *	NASA-CASE-XNP-05612	c 09	N69-21468 * #
NASA-CASE-XMS-10993	c 15	N71-28936 *	NASA-CASE-XNP-01959	c 26	N71-23043 *	NASA-CASE-XNP-05634	c 15	N71-24834 *
NASA-CASE-XMS-12158-1	c 31	N69-27499 * #	NASA-CASE-XNP-01960	c 09	N71-23027 *	NASA-CASE-XNP-05821	c 03	N71-11056 *
NASA-CASE-XMS-13052	c 14	N71-20427 *	NASA-CASE-XNP-01961	c 26	N71-29156 *	NASA-CASE-XNP-05875	c 15	N69-23185 * #
			NASA-CASE-XNP-01962	c 32	N70-41370 *	NASA-CASE-XNP-06028	c 09	N71-23189 *
NASA-CASE-XNP-00214	c 15	N70-36908 *	NASA-CASE-XNP-02029	c 14	N71-41955 *	NASA-CASE-XNP-06031	c 15	N71-15606 *
NASA-CASE-XNP-00217	c 28	N70-38181 *	NASA-CASE-XNP-02092	c 15	N70-42033 *	NASA-CASE-XNP-06032	c 09	N69-21926 * #
NASA-CASE-XNP-00234	c 28	N70-38645 *	NASA-CASE-XNP-02139	c 18	N71-24184 *	NASA-CASE-XNP-06234	c 10	N71-27137 *
NASA-CASE-XNP-00249	c 28	N70-38249 *	NASA-CASE-XNP-02140	c 09	N71-23097 *	NASA-CASE-XNP-06503	c 23	N71-29049 *
NASA-CASE-XNP-00250	c 11	N71-28779 *	NASA-CASE-XNP-02251	c 12	N71-20896 *	NASA-CASE-XNP-06505	c 10	N71-24799 *
NASA-CASE-XNP-00294	c 21	N70-36938 *	NASA-CASE-XNP-02278	c 15	N71-28951 *	NASA-CASE-XNP-06506	c 03	N71-11050 *
NASA-CASE-XNP-00384	c 09	N71-13530 *	NASA-CASE-XNP-02340	c 23	N69-24332 * #	NASA-CASE-XNP-06507	c 09	N71-23548 *
NASA-CASE-XNP-00416	c 15	N70-36947 *	NASA-CASE-XNP-02341	c 15	N71-21531 *	NASA-CASE-XNP-06508	c 18	N69-39895 * #
NASA-CASE-XNP-00425	c 11	N70-38202 *	NASA-CASE-XNP-02389	c 07	N71-28900 *	NASA-CASE-XNP-06509	c 14	N71-23226 *
NASA-CASE-XNP-00431	c 09	N70-38998 *	NASA-CASE-XNP-02500	c 18	N71-27397 *	NASA-CASE-XNP-06510	c 14	N71-23797 *
NASA-CASE-XNP-00432	c 08	N70-35423 *	NASA-CASE-XNP-02507	c 31	N71-17679 *	NASA-CASE-XNP-06611	c 07	N71-26102 *
NASA-CASE-XNP-00438	c 21	N70-35089 *	NASA-CASE-XNP-02588	c 15	N71-18613 *	NASA-CASE-XNP-06914	c 15	N71-21489 *
NASA-CASE-XNP-00449	c 14	N70-35220 *	NASA-CASE-XNP-02592	c 24	N71-20518 *	NASA-CASE-XNP-06933	c 14	N73-32321 *
NASA-CASE-XNP-00450	c 15	N70-38603 *	NASA-CASE-XNP-02595	c 31	N71-21881 *	NASA-CASE-XNP-06936	c 15	N71-24895 *
NASA-CASE-XNP-00459	c 11	N70-38675 *	NASA-CASE-XNP-02654	c 10	N70-42032 *	NASA-CASE-XNP-06937	c 09	N71-19516 *
NASA-CASE-XNP-00463	c 33	N70-38847 *	NASA-CASE-XNP-02713	c 10	N69-39888 * #	NASA-CASE-XNP-06942	c 28	N71-23293 *
NASA-CASE-XNP-00465	c 21	N70-35395 *	NASA-CASE-XNP-02723	c 07	N70-41680 *	NASA-CASE-XNP-06957	c 14	N71-21088 *
NASA-CASE-XNP-00476	c 15	N70-38620 *	NASA-CASE-XNP-02748	c 08	N71-22749 *	NASA-CASE-XNP-07040	c 08	N71-12500 *
NASA-CASE-XNP-00477	c 08	N73-28045 *	NASA-CASE-XNP-02778	c 08	N71-22710 *	NASA-CASE-XNP-07169	c 15	N73-32362 *
NASA-CASE-XNP-00540	c 09	N70-35382 *	NASA-CASE-XNP-02791	c 07	N71-23026 *	NASA-CASE-XNP-07477	c 09	N71-26092 *
NASA-CASE-XNP-00595	c 15	N70-34067 *	NASA-CASE-XNP-02792	c 14	N71-28958 *	NASA-CASE-XNP-07478	c 14	N69-21923 * #
NASA-CASE-XNP-00597	c 18	N71-23088 *	NASA-CASE-XNP-02839	c 28	N70-41922 *	NASA-CASE-XNP-07481	c 25	N69-21929 * #
NASA-CASE-XNP-00610	c 28	N70-36910 *	NASA-CASE-XNP-02862-1	c 15	N71-26294 *	NASA-CASE-XNP-07659	c 06	N71-22975 *
NASA-CASE-XNP-00611	c 09	N70-35219 *	NASA-CASE-XNP-02888	c 18	N71-21068 *	NASA-CASE-XNP-08124-2	c 06	N73-13129 *
NASA-CASE-XNP-00612	c 11	N70-38182 *	NASA-CASE-XNP-02899-1	c 33	N79-21655 *	NASA-CASE-XNP-08124	c 15	N71-27184 *
NASA-CASE-XNP-00614	c 14	N70-36907 *	NASA-CASE-XNP-02923	c 28	N71-23081 *	NASA-CASE-XNP-08274	c 10	N71-13537 *
NASA-CASE-XNP-00637	c 14	N70-40273 *	NASA-CASE-XNP-02982	c 31	N70-41855 *	NASA-CASE-XNP-08567	c 09	N71-26000 *
NASA-CASE-XNP-00644	c 03	N70-36803 *	NASA-CASE-XNP-02983	c 14	N71-21091 *	NASA-CASE-XNP-08680	c 14	N71-22995 *
NASA-CASE-XNP-00646	c 14	N70-35666 *	NASA-CASE-XNP-03063	c 17	N71-23365 *	NASA-CASE-XNP-08832	c 08	N71-12506 *
NASA-CASE-XNP-00650	c 27	N71-28929 *	NASA-CASE-XNP-03128	c 10	N70-41991 *	NASA-CASE-XNP-08835-1	c 37	N80-14395 *
NASA-CASE-XNP-00676	c 15	N70-38996 *	NASA-CASE-XNP-03134	c 07	N71-10676 *	NASA-CASE-XNP-08836	c 09	N71-12515 *
NASA-CASE-XNP-00683	c 09	N70-35425 *	NASA-CASE-XNP-03250	c 06	N71-23500 *	NASA-CASE-XNP-08837	c 18	N71-16210 *
NASA-CASE-XNP-00708	c 14	N70-35394 *	NASA-CASE-XNP-03263	c 09	N71-18843 *	NASA-CASE-XNP-08840	c 23	N71-16365 *
NASA-CASE-XNP-00710	c 15	N71-10778 *	NASA-CASE-XNP-03282	c 28	N72-20758 *	NASA-CASE-XNP-08875	c 10	N71-23099 *
NASA-CASE-XNP-00732	c 28	N70-41447 *	NASA-CASE-XNP-03332	c 09	N71-10618 *	NASA-CASE-XNP-08876	c 17	N73-28573 *
NASA-CASE-XNP-00733	c 06	N70-34946 *	NASA-CASE-XNP-03378	c 03	N71-11051 *	NASA-CASE-XNP-08877	c 15	N71-23025 *
NASA-CASE-XNP-00738	c 09	N70-38201 *	NASA-CASE-XNP-03413	c 03	N71-26726 *	NASA-CASE-XNP-08880	c 09	N71-24808 *
NASA-CASE-XNP-00745	c 10	N71-28960 *	NASA-CASE-XNP-03459-2	c 18	N71-15688 *	NASA-CASE-XNP-08881	c 17	N71-28747 *
NASA-CASE-XNP-00746	c 07	N71-21476 *	NASA-CASE-XNP-03459	c 15	N71-21078 *	NASA-CASE-XNP-08882	c 15	N69-39935 * #
NASA-CASE-XNP-00748	c 07	N70-36911 *	NASA-CASE-XNP-03578	c 11	N71-23030 *	NASA-CASE-XNP-08883	c 23	N71-16101 *
NASA-CASE-XNP-00777	c 10	N71-19469 *	NASA-CASE-XNP-03623	c 09	N73-28084 *	NASA-CASE-XNP-08897	c 15	N71-17694 *
NASA-CASE-XNP-00816	c 28	N71-28928 *	NASA-CASE-XNP-03637	c 15	N71-21311 *	NASA-CASE-XNP-08907	c 23	N71-29123 *
NASA-CASE-XNP-00826	c 03	N71-20895 *	NASA-CASE-XNP-03692	c 28	N71-24321 *	NASA-CASE-XNP-08961	c 14	N71-24809 *
NASA-CASE-XNP-00840	c 15	N70-38225 *	NASA-CASE-XNP-03744	c 10	N71-20448 *	NASA-CASE-XNP-09205	c 14	N71-17657 *
NASA-CASE-XNP-00876	c 28	N70-41311 *	NASA-CASE-XNP-03796	c 23	N71-15467 *	NASA-CASE-XNP-09225	c 09	N69-24333 * #
NASA-CASE-XNP-00911	c 08	N70-41961 *	NASA-CASE-XNP-03835	c 06	N71-23499 *	NASA-CASE-XNP-09227	c 15	N69-24319 * #
NASA-CASE-XNP-00920	c 15	N71-15906 *	NASA-CASE-XNP-03853	c 23	N71-21882 *	NASA-CASE-XNP-09228	c 09	N69-27500 * #
NASA-CASE-XNP-00952	c 10	N71-23271 *	NASA-CASE-XNP-03878	c 26	N75-27127 *	NASA-CASE-XNP-09450	c 10	N71-18723 *
NASA-CASE-XNP-01012	c 08	N71-28925 *	NASA-CASE-XNP-03914	c 21	N71-10771 *	NASA-CASE-XNP-09451	c 06	N71-26754 *
NASA-CASE-XNP-01020	c 03	N71-12260 *	NASA-CASE-XNP-03916	c 09	N71-28810 *	NASA-CASE-XNP-09452	c 15	N69-27504 * #
NASA-CASE-XNP-01056	c 14	N71-23041 *	NASA-CASE-XNP-03918	c 14	N71-23087 *	NASA-CASE-XNP-09453	c 08	N71-19420 *
NASA-CASE-XNP-01057	c 07	N71-15907 *	NASA-CASE-XNP-03930	c 14	N69-24331 * #	NASA-CASE-XNP-09461	c 28	N72-23809 *
NASA-CASE-XNP-01058	c 09	N71-12540 *	NASA-CASE-XNP-03972	c 15	N71-23048 *	NASA-CASE-XNP-09462	c 14	N71-17584 *
NASA-CASE-XNP-01059	c 23	N71-21821 *	NASA-CASE-XNP-04023	c 06	N71-28808 *	NASA-CASE-XNP-09469	c 24	N71-25555 *
NASA-CASE-XNP-01068	c 10	N71-28739 *	NASA-CASE-XNP-04067	c 08	N71-22707 *	NASA-CASE-XNP-09572	c 14	N71-15621 *
NASA-CASE-XNP-01104	c 28	N70-39931 *	NASA-CASE-XNP-04111	c 14	N71-15622 *	NASA-CASE-XNP-09698	c 15	N71-18580 *
NASA-CASE-XNP-01107	c 10	N71-28859 *	NASA-CASE-XNP-04124	c 28	N71-21822 *	NASA-CASE-XNP-09699	c 06	N71-24607 *
NASA-CASE-XNP-01152	c 15	N70-41811 *	NASA-CASE-XNP-04148	c 17	N71-24830 *	NASA-CASE-XNP-09701	c 14	N71-26475 *
NASA-CASE-XNP-01153	c 32	N71-17645 *	NASA-CASE-XNP-04161	c 14	N71-15599 *	NASA-CASE-XNP-09702	c 15	N71-17654 *
NASA-CASE-XNP-01185	c 26	N73-28710 *	NASA-CASE-XNP-04162-1	c 08	N70-34675 * #	NASA-CASE-XNP-09704	c 12	N71-18615 *
NASA-CASE-XNP-01187	c 15	N73-28516 *	NASA-CASE-XNP-04167-2	c 25	N72-24753 *	NASA-CASE-XNP-09744	c 27	N71-16392 *
NASA-CASE-XNP-01188	c 15	N73-32361 *	NASA-CASE-XNP-04167-3	c 36	N77-19416 *	NASA-CASE-XNP-09750	c 14	N69-39937 * #
NASA-CASE-XNP-01193	c 10	N71-16057 *	NASA-CASE-XNP-04180	c 07	N69-39736 * #	NASA-CASE-XNP-09752	c 14	N69-21541 * #
NASA-CASE-XNP-01263-2	c 15	N71-26312 *	NASA-CASE-XNP-04183	c 09	N69-24329 * #	NASA-CASE-XNP-09755	c 46	N74-23069 *
NASA-CASE-XNP-01296	c 33	N75-27250 *	NASA-CASE-XNP-04231	c 14	N73-32325 *	NASA-CASE-XNP-09759	c 08	N71-24891 *
NASA-CASE-XNP-01306-2	c 09	N71-24596 *	NASA-CASE-XNP-04262-2	c 17	N71-26773 *	NASA-CASE-XNP-09763	c 14	N71-20461 *
NASA-CASE-XNP-01306	c 07	N71-20814 *	NASA-CASE-XNP-04264	c 03	N69-21337 * #	NASA-CASE-XNP-09768	c 09	N71-12516 *
NASA-CASE-XNP-01307	c 21	N70-41856 *	NASA-CASE-XNP-04338	c 17	N71-23046 *	NASA-CASE-XNP-09770-2	c 15	N72-22483 *
NASA-CASE-XNP-01310	c 33	N71-28852 *	NASA-CASE-XNP-04339	c 17	N71-29137 *	NASA-CASE-XNP-09770-3	c 11	N71-27036 *
NASA-CASE-XNP-01311	c 26	N75-29236 *	NASA-CASE-XNP-04389	c 28	N71-20942 *	NASA-CASE-XNP-09770	c 15	N71-20440 *
NASA-CASE-XNP-01318	c 10	N71-23033 *	NASA-CASE-XNP-04623	c 10	N71-26103 *	NASA-CASE-XNP-09771	c 09	N71-24841 *
NASA-CASE-XNP-01328	c 26	N71-18064 *	NASA-CASE-XNP-04731	c 15	N71-24042 *	NASA-CASE-XNP-09775	c 09	N71-20445 *
NASA-CASE-XNP-01383	c 09	N71-10659 *	NASA-CASE-XNP-04732	c 09	N71-20851 *	NASA-CASE-XNP-09776	c 09	N69-39929 * #
NASA-CASE-XNP-01390	c 28	N70-41275 *	NASA-CASE-XNP-04758	c 03	N71-24605 *	NASA-CASE-XNP-09785	c 08	N69-21928 * #
NASA-CASE-XNP-01412	c 15	N70-42034 *	NASA-CASE-XNP-04780	c 08	N71-19687 *	NASA-CASE-XNP-09802	c 33	N71-15641 *



## NASA-CASE-XNP-09808

## REPORT NUMBER INDEX

NASA-CASE-XNP-09808	c 09	N71-12518 *	US-PATENT-APPL-SN-028301	c 27	N81-17262 *	US-PATENT-APPL-SN-057466	c 71	N81-15767 *
NASA-CASE-XNP-09830	c 14	N71-26266 *	US-PATENT-APPL-SN-028301	c 27	N81-24256 *	US-PATENT-APPL-SN-057526	c 52	N81-25662 *
NASA-CASE-XNP-09832	c 30	N71-23723 *	US-PATENT-APPL-SN-028301	c 27	N82-24338 *	US-PATENT-APPL-SN-060182	c 27	N89-12741 *
NASA-CASE-XNP-10007-1	c 46	N74-23068 *	US-PATENT-APPL-SN-028831	c 27	N89-14337 *	US-PATENT-APPL-SN-060196	c 32	N89-11961 *
NASA-CASE-XNP-10475	c 15	N71-24679 *	US-PATENT-APPL-SN-028832	c 05	N89-11738 *	US-PATENT-APPL-SN-060200	c 09	N88-28939 *
NASA-CASE-XNP-10830	c 07	N71-11281 *	US-PATENT-APPL-SN-029520	c 82	N93-28130 *	US-PATENT-APPL-SN-060201	c 62	N87-25803 *
NASA-CASE-XNP-10843	c 07	N71-11267 *	US-PATENT-APPL-SN-029808	c 53	N93-28128 *	US-PATENT-APPL-SN-060435	c 44	N81-24520 *
NASA-CASE-XNP-10854	c 10	N71-26331 *	US-PATENT-APPL-SN-030831	c 25	N82-23282 *	US-PATENT-APPL-SN-060449	c 07	N82-32366 *
NASA-TM-76884	c 24	N85-25436 *	US-PATENT-APPL-SN-030894	c 33	N93-29173 *	US-PATENT-APPL-SN-060617	c 38	N93-30414 *
US PATENT-CLASS-244-162	c 54	N93-14713 *	US-PATENT-APPL-SN-032305	c 15	N82-24272 *	US-PATENT-APPL-SN-061327	c 32	N83-13323 *
US-Patent-4,884,770	c 16	N90-22584 *	US-PATENT-APPL-SN-032307	c 44	N81-24519 *	US-PATENT-APPL-SN-061555	c 44	N81-29524 *
US-Patent-4,885,633	c 35	N90-22770 *	US-PATENT-APPL-SN-032679	c 34	N88-23958 *	US-PATENT-APPL-SN-061556	c 35	N81-19427 *
US-Patent-4,886,222	c 35	N90-22769 *	US-PATENT-APPL-SN-032685	c 35	N87-25555 *	US-PATENT-APPL-SN-061822	c 74	N83-19597 *
US-Patent-4,886,646	c 76	N90-23242 *	US-PATENT-APPL-SN-032818	c 37	N88-29180 *	US-PATENT-APPL-SN-064324	c 37	N93-29175 *
US-Patent-4,890,036	c 33	N90-22724 *	US-PATENT-APPL-SN-032819	c 33	N89-28713 *	US-PATENT-APPL-SN-065676	c 35	N80-18364 *
US-PATENT-APPL-SN-000064	c 06	N93-19023 *	US-PATENT-APPL-SN-033512	c 74	N93-29848 *	US-PATENT-APPL-SN-065676	c 44	N81-12542 *
US-PATENT-APPL-SN-000692	c 23	N89-12667 *	US-PATENT-APPL-SN-034104	c 08	N81-19130 *	US-PATENT-APPL-SN-065794	c 27	N93-28425 *
US-PATENT-APPL-SN-002002	c 24	N93-19022 *	US-PATENT-APPL-SN-034452	c 20	N93-28950 *	US-PATENT-APPL-SN-066450	c 29	N93-25489 *
US-PATENT-APPL-SN-003676	c 02	N88-23759 *	US-PATENT-APPL-SN-034531	c 52	N81-28740 *	US-PATENT-APPL-SN-066829	c 20	N93-28424 *
US-PATENT-APPL-SN-003693	c 52	N81-14612 *	US-PATENT-APPL-SN-034607	c 37	N93-28129 *	US-PATENT-APPL-SN-067184	c 26	N93-29172 *
US-PATENT-APPL-SN-004162	c 33	N93-19330 *	US-PATENT-APPL-SN-034608	c 37	N93-28954 *	US-PATENT-APPL-SN-067595	c 08	N82-24205 *
US-PATENT-APPL-SN-004282	c 60	N88-29310 *	US-PATENT-APPL-SN-035345	c 54	N93-29845 *	US-PATENT-APPL-SN-067596	c 51	N81-28698 *
US-PATENT-APPL-SN-004304	c 05	N91-14345 *	US-PATENT-APPL-SN-035401	c 31	N87-25495 *	US-PATENT-APPL-SN-067844	c 34	N89-14392 *
US-PATENT-APPL-SN-006952	c 27	N81-14077 *	US-PATENT-APPL-SN-035401	c 54	N91-14723 *	US-PATENT-APPL-SN-067846	c 31	N90-21216 *
US-PATENT-APPL-SN-007083	c 26	N80-32484 *	US-PATENT-APPL-SN-035401	c 54	N91-14724 *	US-PATENT-APPL-SN-069481	c 37	N93-29846 *
US-PATENT-APPL-SN-007874	c 37	N93-19027 *	US-PATENT-APPL-SN-035430	c 27	N91-26747 *	US-PATENT-APPL-SN-069485	c 33	N82-24420 *
US-PATENT-APPL-SN-008026	c 72	N93-19026 *	US-PATENT-APPL-SN-035430	c 25	N87-25474 *	US-PATENT-APPL-SN-070132	c 37	N93-28951 *
US-PATENT-APPL-SN-008199	c 25	N87-23713 *	US-PATENT-APPL-SN-035430	c 25	N92-16043 *	US-PATENT-APPL-SN-070366	c 35	N82-11431 *
US-PATENT-APPL-SN-008207	c 32	N80-23524 *	US-PATENT-APPL-SN-037066	c 25	N81-14016 *	US-PATENT-APPL-SN-070771	c 27	N81-17260 *
US-PATENT-APPL-SN-008208	c 37	N81-17432 *	US-PATENT-APPL-SN-037072	c 31	N81-33319 *	US-PATENT-APPL-SN-070774	c 33	N82-26571 *
US-PATENT-APPL-SN-008209	c 32	N81-25278 *	US-PATENT-APPL-SN-037194	c 37	N84-28081 *	US-PATENT-APPL-SN-071686	c 27	N90-16950 *
US-PATENT-APPL-SN-008210	c 05	N81-26114 *	US-PATENT-APPL-SN-037560	c 74	N81-29963 *	US-PATENT-APPL-SN-072857	c 24	N82-32417 *
US-PATENT-APPL-SN-008211	c 74	N81-17887 *	US-PATENT-APPL-SN-038550	c 33	N83-18996 *	US-PATENT-APPL-SN-073477	c 36	N82-32712 *
US-PATENT-APPL-SN-008212	c 44	N80-24741 *	US-PATENT-APPL-SN-038560	c 27	N89-29538 *	US-PATENT-APPL-SN-073539	c 18	N87-29586 *
US-PATENT-APPL-SN-008242	c 27	N87-23737 *	US-PATENT-APPL-SN-038748	c 37	N93-28501 *	US-PATENT-APPL-SN-073541	c 33	N90-19492 *
US-PATENT-APPL-SN-008895	c 08	N88-23809 *	US-PATENT-APPL-SN-038980	c 07	N81-14999 *	US-PATENT-APPL-SN-073579	c 33	N82-24415 *
US-PATENT-APPL-SN-009886	c 31	N80-32583 *	US-PATENT-APPL-SN-039031	c 32	N80-28578 *	US-PATENT-APPL-SN-074792	c 35	N88-30108 *
US-PATENT-APPL-SN-009887	c 28	N81-14103 *	US-PATENT-APPL-SN-039602	c 31	N93-28136 *	US-PATENT-APPL-SN-076643	c 32	N81-29308 *
US-PATENT-APPL-SN-009888	c 37	N81-14320 *	US-PATENT-APPL-SN-039735	c 37	N93-28127 *	US-PATENT-APPL-SN-076955	c 16	N90-22584 *
US-PATENT-APPL-SN-009889	c 33	N81-27396 *	US-PATENT-APPL-SN-041141	c 36	N82-13415 *	US-PATENT-APPL-SN-076956	c 35	N88-29151 *
US-PATENT-APPL-SN-009908	c 27	N93-30565 *	US-PATENT-APPL-SN-041142	c 32	N81-15179 *	US-PATENT-APPL-SN-078521	c 32	N81-14186 *
US-PATENT-APPL-SN-009909	c 37	N93-30567 *	US-PATENT-APPL-SN-041143	c 60	N81-15179 *	US-PATENT-APPL-SN-078611	c 04	N81-21047 *
US-PATENT-APPL-SN-010030	c 37	N93-28326 *	US-PATENT-APPL-SN-041145	c 25	N82-12166 *	US-PATENT-APPL-SN-078612	c 46	N82-12685 *
US-PATENT-APPL-SN-010034	c 20	N93-28324 *	US-PATENT-APPL-SN-041164	c 33	N81-19392 *	US-PATENT-APPL-SN-079316	c 26	N87-29650 *
US-PATENT-APPL-SN-010037	c 20	N93-29847 *	US-PATENT-APPL-SN-041389	c 35	N91-21494 *	US-PATENT-APPL-SN-079317	c 37	N88-30131 *
US-PATENT-APPL-SN-010942	c 37	N88-14362 *	US-PATENT-APPL-SN-042486	c 62	N93-28427 *	US-PATENT-APPL-SN-079320	c 27	N87-29622 *
US-PATENT-APPL-SN-010943	c 35	N89-12841 *	US-PATENT-APPL-SN-043911	c 05	N82-26277 *	US-PATENT-APPL-SN-079913	c 05	N82-28279 *
US-PATENT-APPL-SN-010949	c 35	N90-23713 *	US-PATENT-APPL-SN-043912	c 43	N81-17499 *	US-PATENT-APPL-SN-081180	c 27	N93-28423 *
US-PATENT-APPL-SN-010950	c 37	N88-14361 *	US-PATENT-APPL-SN-043913	c 54	N81-27806 *	US-PATENT-APPL-SN-081890	c 37	N93-31292 *
US-PATENT-APPL-SN-011693	c 27	N87-24575 *	US-PATENT-APPL-SN-043941	c 44	N81-19558 *	US-PATENT-APPL-SN-081910	c 27	N93-31316 *
US-PATENT-APPL-SN-011737	c 27	N81-14078 *	US-PATENT-APPL-SN-043942	c 06	N82-16075 *	US-PATENT-APPL-SN-082766	c 09	N90-20096 *
US-PATENT-APPL-SN-013801	c 05	N88-23765 *	US-PATENT-APPL-SN-043943	c 33	N82-24419 *	US-PATENT-APPL-SN-082766	c 04	N91-31120 *
US-PATENT-APPL-SN-013802	c 35	N88-23967 *	US-PATENT-APPL-SN-043944	c 06	N82-24296 *	US-PATENT-APPL-SN-083246	c 27	N93-31300 *
US-PATENT-APPL-SN-013803	c 33	N88-24862 *	US-PATENT-APPL-SN-043945	c 47	N82-24779 *	US-PATENT-APPL-SN-084058	c 24	N93-31299 *
US-PATENT-APPL-SN-014663	c 31	N81-25259 *	US-PATENT-APPL-SN-044180	c 35	N87-25558 *	US-PATENT-APPL-SN-084062	c 35	N90-20351 *
US-PATENT-APPL-SN-014664	c 44	N81-14389 *	US-PATENT-APPL-SN-044181	c 37	N88-23980 *	US-PATENT-APPL-SN-084064	c 27	N92-29157 *
US-PATENT-APPL-SN-014985	c 02	N93-22017 *	US-PATENT-APPL-SN-044183	c 27	N88-29539 *	US-PATENT-APPL-SN-084770	c 32	N88-29076 *
US-PATENT-APPL-SN-015983	c 82	N80-28300 *	US-PATENT-APPL-SN-044431	c 33	N81-27395 *	US-PATENT-APPL-SN-085833	c 62	N91-14772 *
US-PATENT-APPL-SN-015995	c 08	N81-26152 *	US-PATENT-APPL-SN-044432	c 52	N81-20703 *	US-PATENT-APPL-SN-085854	c 35	N93-31298 *
US-PATENT-APPL-SN-015996	c 08	N81-24106 *	US-PATENT-APPL-SN-044449	c 35	N93-30422 *	US-PATENT-APPL-SN-087281	c 52	N90-20616 *
US-PATENT-APPL-SN-017402	c 24	N93-20568 *	US-PATENT-APPL-SN-044668	c 36	N93-30415 *	US-PATENT-APPL-SN-087282	c 31	N89-12785 *
US-PATENT-APPL-SN-017885	c 32	N79-19195 *	US-PATENT-APPL-SN-045142	c 51	N93-29174 *	US-PATENT-APPL-SN-087283	c 71	N89-13236 *
US-PATENT-APPL-SN-017886	c 33	N81-33405 *	US-PATENT-APPL-SN-045343	c 25	N93-31459 *	US-PATENT-APPL-SN-087358	c 51	N91-14703 *
US-PATENT-APPL-SN-017887	c 33	N81-26358 *	US-PATENT-APPL-SN-045743	c 35	N88-24927 *	US-PATENT-APPL-SN-087359	c 35	N89-14422 *
US-PATENT-APPL-SN-017888	c 51	N80-16715 *	US-PATENT-APPL-SN-045984	c 36	N88-24958 *	US-PATENT-APPL-SN-087375	c 27	N90-23545 *
US-PATENT-APPL-SN-017889	c 02	N84-28732 *	US-PATENT-APPL-SN-046256	c 71	N93-28953 *	US-PATENT-APPL-SN-087376	c 23	N91-14419 *
US-PATENT-APPL-SN-017890	c 33	N81-15192 *	US-PATENT-APPL-SN-046331	c 74	N93-28133 *	US-PATENT-APPL-SN-087376	c 27	N91-14489 *
US-PATENT-APPL-SN-018844	c 14	N93-22016 *	US-PATENT-APPL-SN-046341	c 20	N89-25279 *	US-PATENT-APPL-SN-088663	c 28	N82-18401 *
US-PATENT-APPL-SN-019541	c 02	N81-14968 *	US-PATENT-APPL-SN-046739	c 54	N81-24724 *	US-PATENT-APPL-SN-089779	c 26	N81-25188 *
US-PATENT-APPL-SN-020813	c 74	N93-28428 *	US-PATENT-APPL-SN-047135	c 38	N93-30413 *	US-PATENT-APPL-SN-090584	c 74	N81-19896 *
US-PATENT-APPL-SN-021100	c 72	N88-24253 *	US-PATENT-APPL-SN-048871	c 37	N93-28131 *	US-PATENT-APPL-SN-090838	c 20	N93-31295 *
US-PATENT-APPL-SN-021569	c 35	N89-15379 *	US-PATENT-APPL-SN-051269	c 32	N81-24338 *	US-PATENT-APPL-SN-090874	c 25	N90-20180 *
US-PATENT-APPL-SN-022298	c 31	N89-12786 *	US-PATENT-APPL-SN-051270	c 32	N80-32604 *	US-PATENT-APPL-SN-0914	c 28	N70-38711 *
US-PATENT-APPL-SN-022582	c 74	N93-22039 *	US-PATENT-APPL-SN-051271	c 33	N81-26359 *	US-PATENT-APPL-SN-092141	c 27	N81-29229 *
US-PATENT-APPL-SN-023252	c 36	N93-28132 *	US-PATENT-APPL-SN-051274	c 34	N81-26402 *	US-PATENT-APPL-SN-092142	c 27	N82-11206 *
US-PATENT-APPL-SN-023253	c 63	N93-29176 *	US-PATENT-APPL-SN-051275	c 44	N82-24640 *	US-PATENT-APPL-SN-092143	c 32	N82-18443 *
US-PATENT-APPL-SN-023436	c 07	N80-32392 *	US-PATENT-APPL-SN-051276	c 33	N81-33404 *	US-PATENT-APPL-SN-092145	c 37	N82-12442 *
US-PATENT-APPL-SN-023437	c 62	N81-24779 *	US-PATENT-APPL-SN-052419	c 27	N93-28426 *	US-PATENT-APPL-SN-093417	c 37	N90-17154 *
US-PATENT-APPL-SN-023439	c 37	N81-27519 *	US-PATENT-APPL-SN-052940	c 37	N89-13786 *	US-PATENT-APPL-SN-093714	c 44	N81-29525 *
US-PATENT-APPL-SN-023484	c 33	N81-20352 *	US-PATENT-APPL-SN-052941	c 35	N87-25561 *	US-PATENT-APPL-SN-094732	c 24	N93-31296 *
US-PATENT-APPL-SN-023485	c 33	N82-24418 *	US-PATENT-APPL-SN-053566	c 09	N82-24212 *	US-PATENT-APPL-SN-095217	c 74	N81-19989 *
US-PATENT-APPL-SN-023501	c 26	N80-28492 *	US-PATENT-APPL-SN-053571	c 31	N81-19426 *	US-PATENT-APPL-SN-096255	c 37	N80-18400 *
US-PATENT-APPL-SN-024547	c 51	N93-28952 *	US-PATENT-APPL-SN-053572	c 32	N81-19343 *	US-PATENT-APPL-SN-096257	c 37	N82-19540 *
US-PATENT-APPL-SN-025039	c 37	N88-14360 *	US-PATENT-APPL-SN-053652	c 33	N82-23376 *	US-PATENT-APPL-SN-098568	c 33	N82-24490 *
US-PATENT-APPL-SN-025162	c 35	N81-14287 *	US-PATENT-APPL-SN-054501	c 23	N82-18494 *	US-PATENT-APPL-SN-098569	c 44	N82-16474 *
US-PATENT-APPL-SN-025163	c 74	N80-33210 *	US-PATENT-APPL-SN-054980	c 35	N88-29149 *	US-PATENT-APPL-SN-098570	c 44	N82-18686 *
US-PATENT-APPL-SN-025301	c 07	N82-26293 *	US-PATENT-APPL-SN-054982	c 23	N90-23475 *	US-PATENT-APPL-SN-100611	c 37	N82-32732 *
US-PATENT-APPL-SN-027557	c 27	N81-19296 *	US-PATENT-APPL-SN-054985	c 37	N82-25585 *	US-PATENT-APPL-SN-100639	c 14	N72-32452 *
US-PATENT-APPL-SN-027558	c 36	N81-24422 *	US-PATENT-APPL-SN-055809	c 33	N90-20133 *	US-PATENT-APPL-SN-100774	c 06	N72-25151 *
US-PATENT-APPL-SN-027559	c 44	N81-17518 *	US-PATENT-APPL-SN-056018	c 32	N92-16197 *	US-PATENT-APPL-SN-100774	c 06	N73-32030 *
US-PATENT-APPL-SN-027981	c 76	N87-25868 *	US-PATENT-APPL-SN-056503	c 06	N93-30416 *	US-PATENT-APPL-SN-100996	c 08	N73-13187 *
US-PATENT-APPL-SN-028300	c 27	N81-17259 *	US-PATENT-APPL-SN-056930	c 37	N88-23979 *	US-PATENT-APPL-SN-101029	c 31	N70-38676 *
			US-PATENT-APPL-SN-057465	c 37	N81-17433 *	US-PATENT-APPL-SN-101214	c 14	N73-26430 *
						US-PATENT-APPL-SN-101354	c 10	N73-16205 *

## REPORT NUMBER INDEX

## US-PATENT-APPL-SN-154663

US-PATENT-APPL-SN-10161	c 33	N72-20915 *	US-PATENT-APPL-SN-118993	c 52	N90-21519 *	US-PATENT-APPL-SN-139007	c 28	N70-37425 *
US-PATENT-APPL-SN-102001	c 36	N82-16396 *	US-PATENT-APPL-SN-118993	c 52	N92-11621 *	US-PATENT-APPL-SN-139012	c 03	N70-38713 *
US-PATENT-APPL-SN-102002	c 18	N81-29152 *	US-PATENT-APPL-SN-118995	c 32	N89-25363 *	US-PATENT-APPL-SN-139094	c 05	N73-32011 *
US-PATENT-APPL-SN-102003	c 26	N82-29415 *	US-PATENT-APPL-SN-119282	c 03	N72-23048 *	US-PATENT-APPL-SN-139250	c 04	N73-27052 *
US-PATENT-APPL-SN-102003	c 26	N82-30371 *	US-PATENT-APPL-SN-119334	c 31	N88-29052 *	US-PATENT-APPL-SN-139528	c 03	N72-25020 *
US-PATENT-APPL-SN-102004	c 37	N81-26447 *	US-PATENT-APPL-SN-119335	c 37	N82-24494 *	US-PATENT-APPL-SN-139596	c 33	N77-13315 *
US-PATENT-APPL-SN-102412	c 25	N72-33696 *	US-PATENT-APPL-SN-119336	c 33	N82-24421 *	US-PATENT-APPL-SN-140185	c 76	N91-21911 *
US-PATENT-APPL-SN-102593	c 37	N82-16408 *	US-PATENT-APPL-SN-119337	c 24	N81-33235 *	US-PATENT-APPL-SN-140185	c 74	N91-31950 *
US-PATENT-APPL-SN-102705	c 35	N88-29150 *	US-PATENT-APPL-SN-119339	c 36	N82-28616 *	US-PATENT-APPL-SN-140185	c 74	N92-29158 *
US-PATENT-APPL-SN-102934	c 76	N92-21499 *	US-PATENT-APPL-SN-119340	c 35	N82-11432 *	US-PATENT-APPL-SN-140185	c 33	N93-20119 *
US-PATENT-APPL-SN-103077	c 25	N72-32688 *	US-PATENT-APPL-SN-120241	c 15	N73-24513 *	US-PATENT-APPL-SN-140439	c 33	N75-19518 *
US-PATENT-APPL-SN-103078	c 15	N73-12486 *	US-PATENT-APPL-SN-120795	c 07	N70-40202 *	US-PATENT-APPL-SN-140443	c 09	N70-35219 *
US-PATENT-APPL-SN-103091	c 37	N74-23070 *	US-PATENT-APPL-SN-120797	c 14	N70-36824 *	US-PATENT-APPL-SN-140509	c 09	N70-35382 *
US-PATENT-APPL-SN-103229	c 14	N72-22439 *	US-PATENT-APPL-SN-120803	c 08	N70-34743 *	US-PATENT-APPL-SN-140946	c 18	N73-26572 *
US-PATENT-APPL-SN-103230	c 15	N73-14468 *	US-PATENT-APPL-SN-121328	c 23	N72-11568 *	US-PATENT-APPL-SN-140946	c 27	N74-27037 *
US-PATENT-APPL-SN-103239	c 09	N72-25251 *	US-PATENT-APPL-SN-122740	c 35	N88-23959 *	US-PATENT-APPL-SN-141220	c 33	N70-37979 *
US-PATENT-APPL-SN-103551	c 31	N73-14854 *	US-PATENT-APPL-SN-122965	c 35	N81-26431 *	US-PATENT-APPL-SN-142583	c 37	N79-33469 *
US-PATENT-APPL-SN-103836	c 37	N81-24443 *	US-PATENT-APPL-SN-122966	c 33	N82-26568 *	US-PATENT-APPL-SN-142662	c 23	N73-13661 *
US-PATENT-APPL-SN-104047	c 15	N72-31483 *	US-PATENT-APPL-SN-122967	c 24	N81-26179 *	US-PATENT-APPL-SN-142719	c 14	N73-14429 *
US-PATENT-APPL-SN-104048	c 31	N73-14855 *	US-PATENT-APPL-SN-123253	c 10	N73-12244 *	US-PATENT-APPL-SN-143078	c 08	N72-33172 *
US-PATENT-APPL-SN-104187	c 14	N70-36618 *	US-PATENT-APPL-SN-123597	c 21	N70-34297 *	US-PATENT-APPL-SN-143434	c 60	N90-21525 *
US-PATENT-APPL-SN-104188	c 09	N70-34819 *	US-PATENT-APPL-SN-124909	c 14	N73-16483 *	US-PATENT-APPL-SN-143436	c 35	N89-14423 *
US-PATENT-APPL-SN-104346	c 14	N73-28488 *	US-PATENT-APPL-SN-125021	c 74	N89-14077 *	US-PATENT-APPL-SN-143508	c 33	N74-12913 *
US-PATENT-APPL-SN-104884	c 15	N72-33476 *	US-PATENT-APPL-SN-125234	c 07	N73-16121 *	US-PATENT-APPL-SN-144139	c 11	N73-26238 *
US-PATENT-APPL-SN-104885	c 14	N73-24472 *	US-PATENT-APPL-SN-125235	c 51	N77-25769 *	US-PATENT-APPL-SN-144803	c 11	N70-34844 *
US-PATENT-APPL-SN-104951	c 37	N93-31314 *	US-PATENT-APPL-SN-125236	c 14	N73-26431 *	US-PATENT-APPL-SN-144804	c 14	N70-39898 *
US-PATENT-APPL-SN-105518	c 23	N71-15978 *	US-PATENT-APPL-SN-125666	c 32	N89-28676 *	US-PATENT-APPL-SN-144888	c 09	N70-38995 *
US-PATENT-APPL-SN-105841	c 18	N89-28553 *	US-PATENT-APPL-SN-125676	c 35	N90-17118 *	US-PATENT-APPL-SN-144958	c 09	N72-20206 *
US-PATENT-APPL-SN-105846	c 24	N91-25200 *	US-PATENT-APPL-SN-125678	c 32	N90-20280 *	US-PATENT-APPL-SN-145007	c 18	N70-36400 *
US-PATENT-APPL-SN-105847	c 31	N89-14351 *	US-PATENT-APPL-SN-125979	c 38	N90-23756 *	US-PATENT-APPL-SN-145026	c 06	N72-25152 *
US-PATENT-APPL-SN-106106	c 91	N74-13130 *	US-PATENT-APPL-SN-126063	c 09	N72-25255 *	US-PATENT-APPL-SN-145027	c 06	N73-32029 *
US-PATENT-APPL-SN-106118	c 32	N80-16261 *	US-PATENT-APPL-SN-126064	c 44	N83-10501 *	US-PATENT-APPL-SN-145107	c 27	N82-16238 *
US-PATENT-APPL-SN-106119	c 35	N82-15381 *	US-PATENT-APPL-SN-126064	c 33	N82-18493 *	US-PATENT-APPL-SN-145206	c 32	N82-11336 *
US-PATENT-APPL-SN-106135	c 28	N70-34294 *	US-PATENT-APPL-SN-126138	c 34	N82-13376 *	US-PATENT-APPL-SN-145207	c 25	N82-28368 *
US-PATENT-APPL-SN-106136	c 33	N82-26572 *	US-PATENT-APPL-SN-12661	c 14	N72-22437 *	US-PATENT-APPL-SN-145208	c 34	N83-34221 *
US-PATENT-APPL-SN-106188	c 27	N80-16163 *	US-PATENT-APPL-SN-127234	c 08	N70-35423 *	US-PATENT-APPL-SN-145209	c 27	N82-29453 *
US-PATENT-APPL-SN-106192	c 34	N83-28356 *	US-PATENT-APPL-SN-127480	c 37	N75-26371 *	US-PATENT-APPL-SN-145210	c 09	N82-23254 *
US-PATENT-APPL-SN-106424	c 17	N73-24569 *	US-PATENT-APPL-SN-127481	c 24	N75-28135 *	US-PATENT-APPL-SN-145271	c 23	N81-29160 *
US-PATENT-APPL-SN-106465	c 30	N73-12884 *	US-PATENT-APPL-SN-127618	c 02	N73-13008 *	US-PATENT-APPL-SN-145272	c 33	N82-28545 *
US-PATENT-APPL-SN-107298	c 32	N73-13921 *	US-PATENT-APPL-SN-127647	c 15	N73-27405 *	US-PATENT-APPL-SN-145273	c 51	N81-32829 *
US-PATENT-APPL-SN-107376	c 15	N72-25513 *	US-PATENT-APPL-SN-127915	c 02	N73-26004 *	US-PATENT-APPL-SN-145282	c 74	N82-24072 *
US-PATENT-APPL-SN-107379	c 10	N72-33230 *	US-PATENT-APPL-SN-127984	c 33	N75-27250 *	US-PATENT-APPL-SN-145283	c 27	N81-24256 *
US-PATENT-APPL-SN-107380	c 28	N73-13773 *	US-PATENT-APPL-SN-128229	c 35	N82-24471 *	US-PATENT-APPL-SN-145284	c 27	N82-24338 *
US-PATENT-APPL-SN-107659	c 23	N73-20741 *	US-PATENT-APPL-SN-128230	c 60	N84-28491 *	US-PATENT-APPL-SN-145719	c 25	N90-20154 *
US-PATENT-APPL-SN-107866	c 17	N70-36616 *	US-PATENT-APPL-SN-128419	c 14	N73-20477 *	US-PATENT-APPL-SN-146217	c 14	N71-34389 *
US-PATENT-APPL-SN-107870	c 15	N70-36411 *	US-PATENT-APPL-SN-129071	c 09	N72-25254 *	US-PATENT-APPL-SN-146935	c 14	N73-20475 *
US-PATENT-APPL-SN-108107	c 37	N82-18601 *	US-PATENT-APPL-SN-129072	c 15	N73-13467 *	US-PATENT-APPL-SN-146938	c 35	N88-23963 *
US-PATENT-APPL-SN-108127	c 28	N70-40367 *	US-PATENT-APPL-SN-129073	c 15	N73-13464 *	US-PATENT-APPL-SN-146939	c 73	N75-30876 *
US-PATENT-APPL-SN-10827	c 14	N72-28436 *	US-PATENT-APPL-SN-129379	c 37	N79-33468 *	US-PATENT-APPL-SN-146939	c 35	N92-21710 *
US-PATENT-APPL-SN-108331	c 26	N89-14303 *	US-PATENT-APPL-SN-129579	c 28	N70-35381 *	US-PATENT-APPL-SN-146939	c 09	N93-11057 *
US-PATENT-APPL-SN-108810	c 33	N77-22386 *	US-PATENT-APPL-SN-129778	c 60	N82-24839 *	US-PATENT-APPL-SN-146940	c 05	N73-32014 *
US-PATENT-APPL-SN-108824	c 31	N73-13898 *	US-PATENT-APPL-SN-129779	c 60	N82-16747 *	US-PATENT-APPL-SN-147099	c 14	N73-13417 *
US-PATENT-APPL-SN-109789	c 09	N70-34596 *	US-PATENT-APPL-SN-129780	c 44	N82-24639 *	US-PATENT-APPL-SN-147103	c 10	N73-20253 *
US-PATENT-APPL-SN-110388	c 18	N90-16860 *	US-PATENT-APPL-SN-129783	c 04	N82-23231 *	US-PATENT-APPL-SN-147695	c 32	N84-27952 *
US-PATENT-APPL-SN-110402	c 09	N72-27226 *	US-PATENT-APPL-SN-129793	c 33	N82-16340 *	US-PATENT-APPL-SN-147700	c 27	N82-24339 *
US-PATENT-APPL-SN-110591	c 15	N70-39896 *	US-PATENT-APPL-SN-129798	c 27	N81-27721 *	US-PATENT-APPL-SN-147922	c 28	N73-19793 *
US-PATENT-APPL-SN-111436	c 33	N82-26569 *	US-PATENT-APPL-SN-129799	c 27	N82-18389 *	US-PATENT-APPL-SN-147940	c 14	N72-10375 *
US-PATENT-APPL-SN-111438	c 35	N81-29407 *	US-PATENT-APPL-SN-130058	c 33	N90-22724 *	US-PATENT-APPL-SN-147996	c 28	N73-24784 *
US-PATENT-APPL-SN-111439	c 74	N81-24900 *	US-PATENT-APPL-SN-130353	c 31	N73-14853 *	US-PATENT-APPL-SN-147997	c 15	N72-33477 *
US-PATENT-APPL-SN-111998	c 21	N73-30640 *	US-PATENT-APPL-SN-130496	c 36	N83-10417 *	US-PATENT-APPL-SN-148001	c 14	N70-34298 *
US-PATENT-APPL-SN-11220	c 14	N73-30389 *	US-PATENT-APPL-SN-132364	c 07	N83-36029 *	US-PATENT-APPL-SN-148756	c 15	N73-13466 *
US-PATENT-APPL-SN-112366	c 06	N72-10138 *	US-PATENT-APPL-SN-13266	c 05	N72-23085 *	US-PATENT-APPL-SN-149283	c 35	N74-17153 *
US-PATENT-APPL-SN-112988	c 07	N72-32169 *	US-PATENT-APPL-SN-133412	c 33	N89-29681 *	US-PATENT-APPL-SN-149526	c 52	N82-33996 *
US-PATENT-APPL-SN-112998	c 14	N73-12445 *	US-PATENT-APPL-SN-133413	c 27	N90-23544 *	US-PATENT-APPL-SN-149821	c 31	N88-23917 *
US-PATENT-APPL-SN-112999	c 23	N72-25619 *	US-PATENT-APPL-SN-134479	c 14	N70-33179 *	US-PATENT-APPL-SN-149822	c 35	N89-26202 *
US-PATENT-APPL-SN-112999	c 32	N79-19186 *	US-PATENT-APPL-SN-134481	c 11	N70-34815 *	US-PATENT-APPL-SN-149830	c 37	N88-23974 *
US-PATENT-APPL-SN-113014	c 27	N81-24257 *	US-PATENT-APPL-SN-134567	c 14	N73-16484 *	US-PATENT-APPL-SN-149893	c 31	N72-21893 *
US-PATENT-APPL-SN-113015	c 37	N82-24491 *	US-PATENT-APPL-SN-134568	c 06	N72-31141 *	US-PATENT-APPL-SN-150040	c 36	N82-29589 *
US-PATENT-APPL-SN-113954	c 33	N90-23636 *	US-PATENT-APPL-SN-134571	c 21	N73-13644 *	US-PATENT-APPL-SN-150115	c 44	N82-16475 *
US-PATENT-APPL-SN-113956	c 60	N90-21527 *	US-PATENT-APPL-SN-134573	c 09	N72-25257 *	US-PATENT-APPL-SN-150169	c 25	N91-31258 *
US-PATENT-APPL-SN-114772	c 04	N76-26175 *	US-PATENT-APPL-SN-134619	c 35	N79-33449 *	US-PATENT-APPL-SN-15019	c 15	N72-17455 *
US-PATENT-APPL-SN-114846	c 14	N73-12444 *	US-PATENT-APPL-SN-134658	c 15	N73-28515 *	US-PATENT-APPL-SN-15020	c 14	N70-34697 *
US-PATENT-APPL-SN-114847	c 15	N72-28496 *	US-PATENT-APPL-SN-134782	c 09	N70-36494 *	US-PATENT-APPL-SN-150215	c 33	N73-25952 *
US-PATENT-APPL-SN-114848	c 11	N72-23215 *	US-PATENT-APPL-SN-134855	c 44	N81-24521 *	US-PATENT-APPL-SN-15022	c 15	N72-21465 *
US-PATENT-APPL-SN-114849	c 09	N72-27227 *	US-PATENT-APPL-SN-135038	c 33	N83-31954 *	US-PATENT-APPL-SN-15023	c 15	N70-34699 *
US-PATENT-APPL-SN-114873	c 09	N73-28083 *	US-PATENT-APPL-SN-135039	c 33	N82-24416 *	US-PATENT-APPL-SN-15024	c 09	N72-21245 *
US-PATENT-APPL-SN-115082	c 18	N73-13562 *	US-PATENT-APPL-SN-135040	c 09	N82-11088 *	US-PATENT-APPL-SN-15025	c 03	N72-20033 *
US-PATENT-APPL-SN-115083	c 07	N73-25160 *	US-PATENT-APPL-SN-135056	c 37	N81-33483 *	US-PATENT-APPL-SN-150690	c 35	N79-33450 *
US-PATENT-APPL-SN-115134	c 06	N73-13128 *	US-PATENT-APPL-SN-135057	c 08	N82-32373 *	US-PATENT-APPL-SN-151112	c 15	N70-34814 *
US-PATENT-APPL-SN-115536	c 33	N82-24417 *	US-PATENT-APPL-SN-135058	c 25	N82-26396 *	US-PATENT-APPL-SN-151114	c 31	N70-34176 *
US-PATENT-APPL-SN-115944	c 03	N71-34044 *	US-PATENT-APPL-SN-135120	c 37	N88-23973 *	US-PATENT-APPL-SN-151411	c 07	N73-26118 *
US-PATENT-APPL-SN-116777	c 09	N73-19235 *	US-PATENT-APPL-SN-136006	c 09	N72-28225 *	US-PATENT-APPL-SN-151412	c 09	N73-32112 *
US-PATENT-APPL-SN-116778	c 09	N72-33205 *	US-PATENT-APPL-SN-136007	c 09	N71-34212 *	US-PATENT-APPL-SN-151413	c 14	N73-12447 *
US-PATENT-APPL-SN-116786	c 07	N72-25172 *	US-PATENT-APPL-SN-136008	c 27	N74-13270 *	US-PATENT-APPL-SN-151598	c 03	N70-34134 *
US-PATENT-APPL-SN-116790	c 14	N73-30388 *	US-PATENT-APPL-SN-136085	c 17	N73-12547 *	US-PATENT-APPL-SN-15222	c 18	N72-25539 *
US-PATENT-APPL-SN-116810	c 33	N88-26596 *	US-PATENT-APPL-SN-136086	c 15	N73-19457 *	US-PATENT-APPL-SN-152328	c 02	N74-20646 *
US-PATENT-APPL-SN-116811	c 35	N90-21358 *	US-PATENT-APPL-SN-136253	c 27	N74-12814 *	US-PATENT-APPL-SN-152849	c 15	N73-30457 *
US-PATENT-APPL-SN-117575	c 08	N73-12177 *	US-PATENT-APPL-SN-136652	c 07	N84-24577 *	US-PATENT-APPL-SN-153240	c 33	N86-19515 *
US-PATENT-APPL-SN-118169	c 14	N70-35220 *	US-PATENT-APPL-SN-136660	c 31	N83-34073 *	US-PATENT-APPL-SN-153245	c 74	N83-29032 *
US-PATENT-APPL-SN-118200	c 15	N70-34247 *	US-PATENT-APPL-SN-137391	c 36	N75-31426 *	US-PATENT-APPL-SN-153246	c 52	N82-29863 *
US-PATENT-APPL-SN-118202	c 28	N70-38710 *	US-PATENT-APPL-SN-137912	c 06	N72-21105 *	US-PATENT-APPL-SN-153266	c 02	N70-38011 *
US-PATENT-APPL-SN-118203	c 14	N70-38602 *	US-PATENT-APPL-SN-138227	c 26	N72-27784 *	US-PATENT-APPL-SN-153542	c 28	N73-32606 *
US-PATENT-APPL-SN-118269	c 33	N73-26958 *	US-PATENT-APPL-SN-138229	c 15	N72-32487 *	US-PATENT-APPL-SN-153543	c 08	N73-26176 *
US-PATENT-APPL-SN								

## US-PATENT-APPL-SN-154663

## REPORT NUMBER INDEX

US-PATENT-APPL-SN-154663	c 09	N82-29330 *	US-PATENT-APPL-SN-172807	c 07	N73-28012 *	US-PATENT-APPL-SN-188594	c 15	N70-34967 *
US-PATENT-APPL-SN-154711	c 33	N88-24863 *	US-PATENT-APPL-SN-173081	c 28	N70-36806 *	US-PATENT-APPL-SN-188836	c 35	N74-34857 *
US-PATENT-APPL-SN-154712	c 37	N88-24969 *	US-PATENT-APPL-SN-173178	c 33	N77-21315 *	US-PATENT-APPL-SN-188927	c 08	N73-32081 *
US-PATENT-APPL-SN-154713	c 72	N89-29169 *	US-PATENT-APPL-SN-173185	c 23	N73-13660 *	US-PATENT-APPL-SN-188928	c 08	N74-13178 *
US-PATENT-APPL-SN-154716	c 74	N88-25302 *	US-PATENT-APPL-SN-173190	c 05	N73-32015 *	US-PATENT-APPL-SN-189290	c 14	N73-27379 *
US-PATENT-APPL-SN-154718	c 74	N88-25301 *	US-PATENT-APPL-SN-173518	c 60	N82-29013 *	US-PATENT-APPL-SN-189375	c 18	N73-14584 *
US-PATENT-APPL-SN-154725	c 37	N82-24493 *	US-PATENT-APPL-SN-173519	c 44	N82-26776 *	US-PATENT-APPL-SN-189438	c 35	N76-15431 *
US-PATENT-APPL-SN-154726	c 25	N81-25159 *	US-PATENT-APPL-SN-173520	c 31	N83-27058 *	US-PATENT-APPL-SN-189648	c 32	N70-36536 *
US-PATENT-APPL-SN-154930	c 44	N76-14600 *	US-PATENT-APPL-SN-173524	c 35	N82-32659 *	US-PATENT-APPL-SN-18982	c 28	N72-11708 *
US-PATENT-APPL-SN-154933	c 14	N73-25463 *	US-PATENT-APPL-SN-173981	c 14	N70-35666 *	US-PATENT-APPL-SN-190185	c 74	N88-25304 *
US-PATENT-APPL-SN-154935	c 11	N72-27262 *	US-PATENT-APPL-SN-174684	c 33	N75-31331 *	US-PATENT-APPL-SN-190316	c 17	N73-32414 *
US-PATENT-APPL-SN-155565	c 08	N73-25206 *	US-PATENT-APPL-SN-175267	c 14	N73-28486 *	US-PATENT-APPL-SN-191301	c 25	N74-12813 *
US-PATENT-APPL-SN-155584	c 09	N70-40123 *	US-PATENT-APPL-SN-175452	c 27	N81-27272 *	US-PATENT-APPL-SN-191744	c 33	N82-29538 *
US-PATENT-APPL-SN-155595	c 26	N73-28710 *	US-PATENT-APPL-SN-175452	c 27	N85-21347 *	US-PATENT-APPL-SN-191746	c 26	N81-16209 *
US-PATENT-APPL-SN-155596	c 15	N73-32361 *	US-PATENT-APPL-SN-175453	c 85	N82-33288 *	US-PATENT-APPL-SN-191746	c 26	N82-30371 *
US-PATENT-APPL-SN-155598	c 15	N73-28516 *	US-PATENT-APPL-SN-175497	c 08	N82-32648 *	US-PATENT-APPL-SN-191748	c 35	N82-31659 *
US-PATENT-APPL-SN-156059	c 37	N90-19602 *	US-PATENT-APPL-SN-175852	c 25	N73-25760 *	US-PATENT-APPL-SN-192016	c 03	N70-36778 *
US-PATENT-APPL-SN-156393	c 35	N88-24941 *	US-PATENT-APPL-SN-175881	c 09	N73-15235 *	US-PATENT-APPL-SN-192101	c 10	N73-20254 *
US-PATENT-APPL-SN-156518	c 74	N89-25689 *	US-PATENT-APPL-SN-175981	c 16	N73-30476 *	US-PATENT-APPL-SN-192141	c 07	N73-24176 *
US-PATENT-APPL-SN-156724	c 21	N73-13643 *	US-PATENT-APPL-SN-175983	c 31	N73-32750 *	US-PATENT-APPL-SN-192562	c 04	N91-31120 *
US-PATENT-APPL-SN-156725	c 14	N73-27377 *	US-PATENT-APPL-SN-176545	c 31	N88-24817 *	US-PATENT-APPL-SN-192563	c 05	N90-23390 *
US-PATENT-APPL-SN-156778	c 17	N72-28535 *	US-PATENT-APPL-SN-176547	c 76	N90-24168 *	US-PATENT-APPL-SN-192803	c 07	N73-22076 *
US-PATENT-APPL-SN-156790	c 25	N82-29371 *	US-PATENT-APPL-SN-176587	c 20	N88-24684 *	US-PATENT-APPL-SN-192803	c 35	N76-16391 *
US-PATENT-APPL-SN-157150	c 37	N84-33808 *	US-PATENT-APPL-SN-176587	c 37	N91-32508 *	US-PATENT-APPL-SN-192970	c 23	N73-30665 *
US-PATENT-APPL-SN-158530	c 27	N83-19900 *	US-PATENT-APPL-SN-177684	c 28	N70-34860 *	US-PATENT-APPL-SN-193456	c 10	N73-25243 *
US-PATENT-APPL-SN-158914	c 11	N70-36913 *	US-PATENT-APPL-SN-177753	c 07	N72-20154 *	US-PATENT-APPL-SN-193612	c 37	N91-17388 *
US-PATENT-APPL-SN-158916	c 05	N70-41819 *	US-PATENT-APPL-SN-177985	c 35	N74-15831 *	US-PATENT-APPL-SN-193671	c 15	N73-12488 *
US-PATENT-APPL-SN-159071	c 25	N90-23497 *	US-PATENT-APPL-SN-178192	c 25	N83-33977 *	US-PATENT-APPL-SN-193672	c 54	N74-14845 *
US-PATENT-APPL-SN-159071	c 23	N91-17141 *	US-PATENT-APPL-SN-178193	c 52	N82-29862 *	US-PATENT-APPL-SN-193814	c 14	N73-30393 *
US-PATENT-APPL-SN-159072	c 18	N89-25266 *	US-PATENT-APPL-SN-178195	c 35	N82-24470 *	US-PATENT-APPL-SN-193947	c 14	N73-13420 *
US-PATENT-APPL-SN-159613	c 35	N88-24943 *	US-PATENT-APPL-SN-178213	c 25	N70-33267 *	US-PATENT-APPL-SN-193980	c 31	N74-13177 *
US-PATENT-APPL-SN-159613	c 36	N90-17132 *	US-PATENT-APPL-SN-178215	c 25	N70-34661 *	US-PATENT-APPL-SN-195061	c 05	N73-25125 *
US-PATENT-APPL-SN-159804	c 11	N70-38196 *	US-PATENT-APPL-SN-178721	c 03	N70-35408 *	US-PATENT-APPL-SN-195222	c 31	N91-15423 *
US-PATENT-APPL-SN-159857	c 05	N73-26072 *	US-PATENT-APPL-SN-178771	c 23	N75-14834 *	US-PATENT-APPL-SN-195223	c 35	N83-21311 *
US-PATENT-APPL-SN-159966	c 31	N73-26876 *	US-PATENT-APPL-SN-180230	c 33	N83-18996 *	US-PATENT-APPL-SN-195225	c 32	N88-26541 *
US-PATENT-APPL-SN-160093	c 04	N78-17031 *	US-PATENT-APPL-SN-180370	c 28	N70-33375 *	US-PATENT-APPL-SN-195226	c 31	N83-31895 *
US-PATENT-APPL-SN-160859	c 32	N73-26910 *	US-PATENT-APPL-SN-180374	c 28	N70-38181 *	US-PATENT-APPL-SN-195226	c 17	N90-21061 *
US-PATENT-APPL-SN-160860	c 18	N73-32437 *	US-PATENT-APPL-SN-180377	c 15	N70-36908 *	US-PATENT-APPL-SN-195227	c 74	N83-32577 *
US-PATENT-APPL-SN-161028	c 14	N73-19420 *	US-PATENT-APPL-SN-180379	c 21	N70-35395 *	US-PATENT-APPL-SN-195228	c 74	N83-10900 *
US-PATENT-APPL-SN-161254	c 27	N82-28441 *	US-PATENT-APPL-SN-180380	c 09	N70-38998 *	US-PATENT-APPL-SN-195346	c 15	N70-36492 *
US-PATENT-APPL-SN-161255	c 28	N81-24280 *	US-PATENT-APPL-SN-180381	c 21	N70-35089 *	US-PATENT-APPL-SN-195347	c 31	N70-34135 *
US-PATENT-APPL-SN-161256	c 44	N82-32841 *	US-PATENT-APPL-SN-180382	c 28	N70-38645 *	US-PATENT-APPL-SN-195547	c 32	N83-18975 *
US-PATENT-APPL-SN-161257	c 37	N85-29282 *	US-PATENT-APPL-SN-180384	c 11	N70-38675 *	US-PATENT-APPL-SN-195563	c 09	N91-14357 *
US-PATENT-APPL-SN-161681	c 76	N90-24169 *	US-PATENT-APPL-SN-180391	c 28	N70-38249 *	US-PATENT-APPL-SN-19572	c 35	N77-27368 *
US-PATENT-APPL-SN-161682	c 37	N91-14613 *	US-PATENT-APPL-SN-180392	c 09	N71-13530 *	US-PATENT-APPL-SN-19585	c 15	N72-25455 *
US-PATENT-APPL-SN-162100	c 33	N74-14939 *	US-PATENT-APPL-SN-180394	c 15	N70-38603 *	US-PATENT-APPL-SN-196399	c 07	N73-25161 *
US-PATENT-APPL-SN-162101	c 14	N73-24473 *	US-PATENT-APPL-SN-180395	c 15	N70-36947 *	US-PATENT-APPL-SN-196877	c 35	N84-17555 *
US-PATENT-APPL-SN-162230	c 26	N72-28761 *	US-PATENT-APPL-SN-180396	c 11	N70-38202 *	US-PATENT-APPL-SN-196898	c 38	N74-15130 *
US-PATENT-APPL-SN-162380	c 36	N74-21091 *	US-PATENT-APPL-SN-180473	c 28	N73-27699 *	US-PATENT-APPL-SN-196931	c 35	N74-17885 *
US-PATENT-APPL-SN-163122	c 07	N83-31603 *	US-PATENT-APPL-SN-180683	c 10	N73-25241 *	US-PATENT-APPL-SN-196970	c 15	N73-33383 *
US-PATENT-APPL-SN-163151	c 74	N75-25706 *	US-PATENT-APPL-SN-180963	c 14	N73-27378 *	US-PATENT-APPL-SN-197183	c 02	N76-22154 *
US-PATENT-APPL-SN-163152	c 17	N73-27446 *	US-PATENT-APPL-SN-181023	c 15	N73-26472 *	US-PATENT-APPL-SN-197191	c 32	N89-28672 *
US-PATENT-APPL-SN-163837	c 47	N83-32232 *	US-PATENT-APPL-SN-181024	c 07	N73-26117 *	US-PATENT-APPL-SN-197548	c 09	N70-34502 *
US-PATENT-APPL-SN-163838	c 23	N82-28353 *	US-PATENT-APPL-SN-181828	c 02	N70-34858 *	US-PATENT-APPL-SN-197551	c 31	N70-34296 *
US-PATENT-APPL-SN-163840	c 37	N81-33482 *	US-PATENT-APPL-SN-181829	c 31	N70-38010 *	US-PATENT-APPL-SN-197553	c 08	N70-34778 *
US-PATENT-APPL-SN-163928	c 27	N90-16949 *	US-PATENT-APPL-SN-182000	c 16	N88-24660 *	US-PATENT-APPL-SN-197554	c 14	N70-35368 *
US-PATENT-APPL-SN-164-584	c 24	N83-33950 *	US-PATENT-APPL-SN-182033	c 33	N73-27796 *	US-PATENT-APPL-SN-197689	c 31	N74-14133 *
US-PATENT-APPL-SN-164428	c 09	N70-35440 *	US-PATENT-APPL-SN-182266	c 17	N91-14371 *	US-PATENT-APPL-SN-197689	c 31	N75-13111 *
US-PATENT-APPL-SN-164617	c 06	N81-17057 *	US-PATENT-APPL-SN-182399	c 07	N73-28013 *	US-PATENT-APPL-SN-197870	c 14	N73-32322 *
US-PATENT-APPL-SN-165910	c 32	N83-31918 *	US-PATENT-APPL-SN-182692	c 15	N70-36535 *	US-PATENT-APPL-SN-198093	c 39	N83-20280 *
US-PATENT-APPL-SN-165943	c 37	N89-28831 *	US-PATENT-APPL-SN-182696	c 21	N70-36938 *	US-PATENT-APPL-SN-198285	c 09	N73-13208 *
US-PATENT-APPL-SN-165945	c 35	N90-22025 *	US-PATENT-APPL-SN-182698	c 15	N70-38620 *	US-PATENT-APPL-SN-198289	c 14	N73-32326 *
US-PATENT-APPL-SN-165946	c 20	N90-19298 *	US-PATENT-APPL-SN-182699	c 28	N70-38504 *	US-PATENT-APPL-SN-198355	c 05	N72-15098 *
US-PATENT-APPL-SN-165956	c 18	N90-19278 *	US-PATENT-APPL-SN-182879	c 37	N82-32730 *	US-PATENT-APPL-SN-198362	c 14	N73-28489 *
US-PATENT-APPL-SN-166487	c 11	N73-32152 *	US-PATENT-APPL-SN-182880	c 37	N83-19091 *	US-PATENT-APPL-SN-198379	c 15	N73-32359 *
US-PATENT-APPL-SN-166541	c 14	N73-13415 *	US-PATENT-APPL-SN-182881	c 18	N83-28064 *	US-PATENT-APPL-SN-198472	c 27	N74-12812 *
US-PATENT-APPL-SN-166969	c 15	N70-34249 *	US-PATENT-APPL-SN-182977	c 39	N74-13131 *	US-PATENT-APPL-SN-198763	c 31	N74-18124 *
US-PATENT-APPL-SN-166970	c 15	N70-36409 *	US-PATENT-APPL-SN-182978	c 16	N73-13489 *	US-PATENT-APPL-SN-198763	c 31	N74-32920 *
US-PATENT-APPL-SN-167719	c 16	N73-33397 *	US-PATENT-APPL-SN-183240	c 06	N73-30098 *	US-PATENT-APPL-SN-198885	c 05	N73-27062 *
US-PATENT-APPL-SN-168065	c 35	N91-14590 *	US-PATENT-APPL-SN-183475	c 52	N91-14709 *	US-PATENT-APPL-SN-199199	c 25	N71-29184 *
US-PATENT-APPL-SN-16808	c 14	N72-22445 *	US-PATENT-APPL-SN-183707	c 23	N85-33187 *	US-PATENT-APPL-SN-199202	c 14	N70-40239 *
US-PATENT-APPL-SN-168560	c 02	N70-34856 *	US-PATENT-APPL-SN-183977	c 28	N70-38505 *	US-PATENT-APPL-SN-19971	c 09	N70-33312 *
US-PATENT-APPL-SN-168650	c 14	N73-13416 *	US-PATENT-APPL-SN-183978	c 15	N70-38020 *	US-PATENT-APPL-SN-199765	c 33	N81-12330 *
US-PATENT-APPL-SN-168943	c 54	N82-26987 *	US-PATENT-APPL-SN-184090	c 14	N73-32327 *	US-PATENT-APPL-SN-199766	c 36	N84-28065 *
US-PATENT-APPL-SN-168944	c 37	N82-32731 *	US-PATENT-APPL-SN-184233	c 18	N89-28554 *	US-PATENT-APPL-SN-199767	c 33	N83-16626 *
US-PATENT-APPL-SN-169671	c 10	N73-30205 *	US-PATENT-APPL-SN-184234	c 76	N90-19884 *	US-PATENT-APPL-SN-199768	c 27	N84-22746 *
US-PATENT-APPL-SN-169962	c 34	N74-30608 *	US-PATENT-APPL-SN-184235	c 32	N90-17005 *	US-PATENT-APPL-SN-199768	c 27	N85-20123 *
US-PATENT-APPL-SN-169977	c 14	N70-34794 *	US-PATENT-APPL-SN-184236	c 37	N90-17153 *	US-PATENT-APPL-SN-199769	c 26	N82-31505 *
US-PATENT-APPL-SN-170440	c 15	N73-13462 *	US-PATENT-APPL-SN-18427	c 09	N72-23172 *	US-PATENT-APPL-SN-199957	c 10	N73-26229 *
US-PATENT-APPL-SN-170544	c 36	N77-19416 *	US-PATENT-APPL-SN-184649	c 07	N70-36911 *	US-PATENT-APPL-SN-200040	c 52	N74-10975 *
US-PATENT-APPL-SN-170680	c 34	N74-15652 *	US-PATENT-APPL-SN-184960	c 06	N73-27980 *	US-PATENT-APPL-SN-200085	c 26	N73-26751 *
US-PATENT-APPL-SN-170681	c 10	N73-25240 *	US-PATENT-APPL-SN-185865	c 52	N80-33081 *	US-PATENT-APPL-SN-200634	c 34	N83-27144 *
US-PATENT-APPL-SN-17101	c 28	N72-18766 *	US-PATENT-APPL-SN-185867	c 44	N82-26777 *	US-PATENT-APPL-SN-200682	c 07	N73-14130 *
US-PATENT-APPL-SN-171928	c 33	N82-26570 *	US-PATENT-APPL-SN-185868	c 24	N84-16262 *	US-PATENT-APPL-SN-200717	c 09	N73-19234 *
US-PATENT-APPL-SN-171933	c 37	N82-12441 *	US-PATENT-APPL-SN-185869	c 71	N82-16300 *	US-PATENT-APPL-SN-200762	c 03	N73-20040 *
US-PATENT-APPL-SN-171934	c 35	N82-26628 *	US-PATENT-APPL-SN-186700	c 32	N74-12912 *	US-PATENT-APPL-SN-200770	c 09	N79-21084 *
US-PATENT-APPL-SN-172098	c 33	N80-29583 *	US-PATENT-APPL-SN-186701	c 74	N82-30071 *	US-PATENT-APPL-SN-200874	c 17	N88-28946 *
US-PATENT-APPL-SN-172099	c 32	N82-27558 *	US-PATENT-APPL-SN-187106	c 74	N83-17305 *	US-PATENT-APPL-SN-201700	c 33	N74-17930 *
US-PATENT-APPL-SN-172100	c 27	N82-33520 *	US-PATENT-APPL-SN-187143	c 36	N74-33205 *	US-PATENT-APPL-SN-201782	c 15	N73-19458 *
US-PATENT-APPL-SN-172100	c 31	N90-21215 *	US-PATENT-APPL-SN-187262	c 15	N73-27406 *	US-PATENT-APPL-SN-201904	c 15	N73-30458 *
US-PATENT-APPL-SN-172101	c 76	N90-23242 *	US-PATENT-APPL-SN-187365	c 35	N74-15127 *	US-PATENT-APPL-SN-201904	c 37	N74-15128 *
US-PATENT-APPL-SN-172102	c 26	N89-28621 *	US-PATENT-APPL-SN-187446	c 31	N70-37924 *	US-PATENT-APPL-SN-201904	c 37	N74-21064 *
US-PATENT-APPL-SN-172105	c 33	N91-31528 *	US-PATENT-APPL-SN-187716	c 74	N88-25305 *	US-PATENT-APPL-SN-202024	c 14	N70-34156 *
US-PATENT-APPL-SN-172105	c 63	N91-31885 *	US-PATENT-APPL-SN-18776	c 28	N73-33284 *	US-PATENT-APPL-SN-202029	c 11	N70-34786 *
US-PATENT-APPL-SN-172459	c 06	N73-16106 *	US-PATENT-APPL-SN-18780	c 12				

## REPORT NUMBER INDEX

## US-PATENT-APPL-SN-245941

US-PATENT-APPL-SN-202228	c 34	N85-29179 *	US-PATENT-APPL-SN-219295	c 61	N91-14741 *	US-PATENT-APPL-SN-234223	c 35	N83-21312 *
US-PATENT-APPL-SN-202750	c 19	N74-21015 *	US-PATENT-APPL-SN-219435	c 24	N74-27035 *	US-PATENT-APPL-SN-234224	c 36	N83-34304 *
US-PATENT-APPL-SN-202769	c 05	N73-27941 *	US-PATENT-APPL-SN-219436	c 15	N72-21489 *	US-PATENT-APPL-SN-234225	c 33	N83-36357 *
US-PATENT-APPL-SN-203177	c 39	N88-25011 #	US-PATENT-APPL-SN-219590	c 06	N73-32030 *	US-PATENT-APPL-SN-234568	c 28	N70-34788 *
US-PATENT-APPL-SN-203178	c 34	N90-19534 *	US-PATENT-APPL-SN-219640	c 74	N83-13978 *	US-PATENT-APPL-SN-235150	c 36	N91-15528 *
US-PATENT-APPL-SN-203178	c 34	N91-31596 *	US-PATENT-APPL-SN-219677	c 44	N82-31764 *	US-PATENT-APPL-SN-235162	c 08	N71-12501 *
US-PATENT-APPL-SN-203271	c 51	N74-15778 *	US-PATENT-APPL-SN-219678	c 44	N82-29709 *	US-PATENT-APPL-SN-235266	c 26	N73-32571 *
US-PATENT-APPL-SN-203374	c 32	N91-25316 *	US-PATENT-APPL-SN-219680	c 27	N82-28442 *	US-PATENT-APPL-SN-235268	c 36	N74-15145 *
US-PATENT-APPL-SN-203405	c 02	N73-26006 *	US-PATENT-APPL-SN-219681	c 24	N82-29362 *	US-PATENT-APPL-SN-235269	c 09	N73-30181 *
US-PATENT-APPL-SN-203409	c 28	N70-38197 *	US-PATENT-APPL-SN-219681	c 54	N84-11758 *	US-PATENT-APPL-SN-235295	c 09	N73-30185 *
US-PATENT-APPL-SN-203411	c 33	N70-34812 *	US-PATENT-APPL-SN-219722	c 03	N75-30132 *	US-PATENT-APPL-SN-235322	c 07	N72-21117 *
US-PATENT-APPL-SN-20370	c 33	N79-33393 *	US-PATENT-APPL-SN-219806	c 07	N74-28226 *	US-PATENT-APPL-SN-235338	c 71	N74-31148 *
US-PATENT-APPL-SN-204015	c 09	N70-38201 *	US-PATENT-APPL-SN-219968	c 33	N83-27126 *	US-PATENT-APPL-SN-235472	c 60	N84-28492 *
US-PATENT-APPL-SN-205047	c 15	N73-32360 *	US-PATENT-APPL-SN-220212	c 33	N83-31952 *	US-PATENT-APPL-SN-235588	c 28	N71-28928 *
US-PATENT-APPL-SN-205047	c 08	N71-18752 *	US-PATENT-APPL-SN-220213	c 37	N85-20337 *	US-PATENT-APPL-SN-235796	c 35	N82-28604 *
US-PATENT-APPL-SN-205047	c 14	N73-30386 *	US-PATENT-APPL-SN-220214	c 44	N82-29710 *	US-PATENT-APPL-SN-235797	c 44	N83-32175 *
US-PATENT-APPL-SN-205675	c 08	N73-30386 *	US-PATENT-APPL-SN-220251	c 37	N74-15125 *	US-PATENT-APPL-SN-235868	c 34	N83-29625 *
US-PATENT-APPL-SN-205771	c 31	N89-29578 *	US-PATENT-APPL-SN-220274	c 31	N72-20840 *	US-PATENT-APPL-SN-235957	c 14	N73-27376 #
US-PATENT-APPL-SN-205898	c 09	N90-23415 *	US-PATENT-APPL-SN-220274	c 18	N74-22136 *	US-PATENT-APPL-SN-235962	c 36	N74-11313 *
US-PATENT-APPL-SN-205899	c 35	N90-22769 *	US-PATENT-APPL-SN-220785	c 85	N74-34672 *	US-PATENT-APPL-SN-236052	c 14	N72-25428 #
US-PATENT-APPL-SN-205900	c 35	N90-22770 *	US-PATENT-APPL-SN-221093	c 17	N73-32415 *	US-PATENT-APPL-SN-236281	c 09	N73-20232 *
US-PATENT-APPL-SN-206266	c 76	N74-20329 *	US-PATENT-APPL-SN-221276	c 14	N70-41955 *	US-PATENT-APPL-SN-236285	c 08	N73-26175 *
US-PATENT-APPL-SN-206266	c 76	N75-25730 *	US-PATENT-APPL-SN-221386	c 23	N90-21118 *	US-PATENT-APPL-SN-236748	c 14	N70-40157 *
US-PATENT-APPL-SN-206279	c 02	N73-26005 *	US-PATENT-APPL-SN-221386	c 23	N91-14418 *	US-PATENT-APPL-SN-236749	c 15	N70-40180 *
US-PATENT-APPL-SN-206279	c 05	N76-29217 *	US-PATENT-APPL-SN-221388	c 37	N90-24048 *	US-PATENT-APPL-SN-236985	c 44	N74-19692 *
US-PATENT-APPL-SN-206506	c 33	N82-24422 *	US-PATENT-APPL-SN-221472	c 54	N89-13889 #	US-PATENT-APPL-SN-237029	c 09	N73-32108 *
US-PATENT-APPL-SN-206698	c 15	N73-30459 *	US-PATENT-APPL-SN-221634	c 05	N70-34857 *	US-PATENT-APPL-SN-237035	c 35	N91-15512 *
US-PATENT-APPL-SN-207135	c 35	N83-27184 *	US-PATENT-APPL-SN-221637	c 26	N70-36805 *	US-PATENT-APPL-SN-237036	c 34	N90-20323 *
US-PATENT-APPL-SN-207211	c 07	N73-30113 *	US-PATENT-APPL-SN-221670	c 35	N77-14408 *	US-PATENT-APPL-SN-237491	c 05	N75-12930 *
US-PATENT-APPL-SN-209478	c 07	N70-38200 *	US-PATENT-APPL-SN-221685	c 35	N74-21062 *	US-PATENT-APPL-SN-237657	c 31	N90-21216 *
US-PATENT-APPL-SN-209479	c 15	N70-34850 *	US-PATENT-APPL-SN-221714	c 09	N73-32110 *	US-PATENT-APPL-SN-237694	c 35	N74-11284 *
US-PATENT-APPL-SN-209535	c 28	N73-24783 *	US-PATENT-APPL-SN-221833	c 09	N73-27150 #	US-PATENT-APPL-SN-238047	c 33	N74-12951 *
US-PATENT-APPL-SN-20960	c 15	N72-17453 *	US-PATENT-APPL-SN-221945	c 31	N70-36410 *	US-PATENT-APPL-SN-238257	c 07	N84-33410 *
US-PATENT-APPL-SN-209618	c 33	N75-19520 *	US-PATENT-APPL-SN-222655	c 14	N72-21405 *	US-PATENT-APPL-SN-238263	c 35	N74-10415 *
US-PATENT-APPL-SN-209618	c 33	N75-25041 *	US-PATENT-APPL-SN-223003	c 33	N70-36846 *	US-PATENT-APPL-SN-238264	c 37	N74-21061 *
US-PATENT-APPL-SN-209801	c 08	N70-40125 *	US-PATENT-APPL-SN-223122	c 37	N91-14614 *	US-PATENT-APPL-SN-238264	c 37	N74-32921 *
US-PATENT-APPL-SN-210277	c 39	N88-30160 #	US-PATENT-APPL-SN-223124	c 31	N90-19427 *	US-PATENT-APPL-SN-238264	c 37	N76-15461 *
US-PATENT-APPL-SN-210405	c 74	N84-11921 *	US-PATENT-APPL-SN-22320	c 14	N72-11365 *	US-PATENT-APPL-SN-238421	c 28	N71-29153 *
US-PATENT-APPL-SN-210480	c 05	N90-20078 *	US-PATENT-APPL-SN-223560	c 10	N73-32144 *	US-PATENT-APPL-SN-238785	c 44	N83-14693 *
US-PATENT-APPL-SN-210486	c 26	N90-21170 *	US-PATENT-APPL-SN-224231	c 06	N83-10040 *	US-PATENT-APPL-SN-238786	c 37	N83-26078 *
US-PATENT-APPL-SN-210486	c 39	N92-28757 *	US-PATENT-APPL-SN-224231	c 06	N84-34443 *	US-PATENT-APPL-SN-238790	c 44	N82-29708 *
US-PATENT-APPL-SN-210486	c 39	N92-29101 *	US-PATENT-APPL-SN-224232	c 36	N83-29680 *	US-PATENT-APPL-SN-238791	c 71	N84-14873 *
US-PATENT-APPL-SN-210486	c 39	N92-29155 *	US-PATENT-APPL-SN-224489	c 31	N74-18089 *	US-PATENT-APPL-SN-238826	c 28	N77-10213 *
US-PATENT-APPL-SN-210487	c 35	N90-17117 *	US-PATENT-APPL-SN-225427	c 37	N91-15544 *	US-PATENT-APPL-SN-238887	c 37	N81-22360 #
US-PATENT-APPL-SN-210498	c 35	N84-12444 *	US-PATENT-APPL-SN-225499	c 37	N84-12491 *	US-PATENT-APPL-SN-238888	c 37	N84-28082 *
US-PATENT-APPL-SN-210506	c 39	N83-32081 *	US-PATENT-APPL-SN-225501	c 44	N82-28780 *	US-PATENT-APPL-SN-239259	c 27	N90-23546 *
US-PATENT-APPL-SN-210632	c 26	N83-10170 *	US-PATENT-APPL-SN-226476	c 10	N73-32143 *	US-PATENT-APPL-SN-239260	c 37	N89-12867 #
US-PATENT-APPL-SN-211332	c 02	N74-10034 *	US-PATENT-APPL-SN-226477	c 74	N74-27866 *	US-PATENT-APPL-SN-239573	c 33	N74-10223 *
US-PATENT-APPL-SN-211411	c 11	N73-20267 *	US-PATENT-APPL-SN-226551	c 06	N73-26100 *	US-PATENT-APPL-SN-239574	c 09	N73-32107 *
US-PATENT-APPL-SN-211464	c 28	N70-36910 *	US-PATENT-APPL-SN-227682	c 14	N70-34161 *	US-PATENT-APPL-SN-239575	c 09	N74-19528 *
US-PATENT-APPL-SN-212028	c 09	N73-14214 *	US-PATENT-APPL-SN-227683	c 02	N70-36804 *	US-PATENT-APPL-SN-239576	c 33	N74-14935 *
US-PATENT-APPL-SN-212165	c 14	N73-25460 *	US-PATENT-APPL-SN-227692	c 14	N70-40003 *	US-PATENT-APPL-SN-239577	c 35	N74-13132 *
US-PATENT-APPL-SN-212173	c 02	N71-13421 *	US-PATENT-APPL-SN-227977	c 25	N76-18245 *	US-PATENT-APPL-SN-239803	c 70	N74-13436 *
US-PATENT-APPL-SN-212174	c 15	N70-34859 *	US-PATENT-APPL-SN-228049	c 37	N79-33467 *	US-PATENT-APPL-SN-240760	c 15	N71-16075 *
US-PATENT-APPL-SN-212496	c 03	N70-36803 *	US-PATENT-APPL-SN-228150	c 05	N73-32013 *	US-PATENT-APPL-SN-241061	c 06	N72-27151 #
US-PATENT-APPL-SN-212497	c 11	N71-28779 *	US-PATENT-APPL-SN-228163	c 44	N74-19693 *	US-PATENT-APPL-SN-241061	c 06	N73-30076 *
US-PATENT-APPL-SN-21263	c 01	N71-12217 #	US-PATENT-APPL-SN-228189	c 35	N74-11283 *	US-PATENT-APPL-SN-241085	c 14	N70-40238 *
US-PATENT-APPL-SN-212900	c 14	N73-25462 *	US-PATENT-APPL-SN-228190	c 23	N73-30666 *	US-PATENT-APPL-SN-241154	c 04	N84-27713 *
US-PATENT-APPL-SN-212921	c 07	N73-20176 *	US-PATENT-APPL-SN-228229	c 27	N77-31308 *	US-PATENT-APPL-SN-241155	c 27	N84-14324 *
US-PATENT-APPL-SN-212949	c 35	N83-35338 *	US-PATENT-APPL-SN-228507	c 11	N70-38182 *	US-PATENT-APPL-SN-241554	c 15	N70-35679 #
US-PATENT-APPL-SN-212977	c 15	N73-30460 *	US-PATENT-APPL-SN-228569	c 14	N71-16014 *	US-PATENT-APPL-SN-241554	c 15	N72-17450 *
US-PATENT-APPL-SN-213004	c 14	N73-19421 *	US-PATENT-APPL-SN-229128	c 14	N73-28490 *	US-PATENT-APPL-SN-241555	c 14	N73-26432 *
US-PATENT-APPL-SN-213392	c 27	N90-23566 *	US-PATENT-APPL-SN-229143	c 09	N72-21248 #	US-PATENT-APPL-SN-241614	c 10	N73-27171 *
US-PATENT-APPL-SN-213558	c 51	N91-30667 *	US-PATENT-APPL-SN-229143	c 33	N77-26387 *	US-PATENT-APPL-SN-241615	c 09	N73-32111 *
US-PATENT-APPL-SN-213558	c 51	N92-34229 *	US-PATENT-APPL-SN-229231	c 35	N83-34272 *	US-PATENT-APPL-SN-242027	c 52	N74-12778 *
US-PATENT-APPL-SN-213558	c 51	N92-34231 *	US-PATENT-APPL-SN-229233	c 27	N83-31855 *	US-PATENT-APPL-SN-242028	c 21	N73-30641 *
US-PATENT-APPL-SN-213558	c 51	N93-10110 *	US-PATENT-APPL-SN-229239	c 31	N83-31897 *	US-PATENT-APPL-SN-242224	c 09	N72-20200 *
US-PATENT-APPL-SN-213559	c 51	N91-21700 *	US-PATENT-APPL-SN-229286	c 33	N71-29052 *	US-PATENT-APPL-SN-242253	c 03	N91-15142 *
US-PATENT-APPL-SN-213559	c 51	N92-34229 *	US-PATENT-APPL-SN-229287	c 35	N78-29421 *	US-PATENT-APPL-SN-242254	c 33	N91-31530 *
US-PATENT-APPL-SN-213559	c 51	N92-34231 *	US-PATENT-APPL-SN-229354	c 62	N74-14920 *	US-PATENT-APPL-SN-242662	c 74	N74-15095 *
US-PATENT-APPL-SN-213559	c 51	N93-10109 *	US-PATENT-APPL-SN-229413	c 14	N73-32323 *	US-PATENT-APPL-SN-242790	c 06	N83-33882 *
US-PATENT-APPL-SN-213836	c 15	N70-38601 *	US-PATENT-APPL-SN-229693	c 37	N84-22958 *	US-PATENT-APPL-SN-242795	c 18	N83-20996 *
US-PATENT-APPL-SN-213880	c 54	N90-25498 *	US-PATENT-APPL-SN-229916	c 46	N74-13011 *	US-PATENT-APPL-SN-242795	c 37	N84-22957 *
US-PATENT-APPL-SN-213949	c 07	N73-20175 *	US-PATENT-APPL-SN-230613	c 05	N83-27975 *	US-PATENT-APPL-SN-242796	c 44	N83-13579 *
US-PATENT-APPL-SN-214006	c 37	N74-18126 *	US-PATENT-APPL-SN-231025	c 33	N88-29095 #	US-PATENT-APPL-SN-242797	c 74	N85-22139 *
US-PATENT-APPL-SN-214084	c 37	N74-18123 *	US-PATENT-APPL-SN-231026	c 27	N91-15402 *	US-PATENT-APPL-SN-243374	c 15	N77-10112 *
US-PATENT-APPL-SN-214086	c 14	N73-30395 *	US-PATENT-APPL-SN-231027	c 27	N90-21177 *	US-PATENT-APPL-SN-243682	c 74	N83-19596 *
US-PATENT-APPL-SN-214089	c 35	N74-21018 *	US-PATENT-APPL-SN-231332	c 08	N72-22163 *	US-PATENT-APPL-SN-243683	c 33	N81-22280 #
US-PATENT-APPL-SN-214361	c 37	N83-32067 *	US-PATENT-APPL-SN-231520	c 27	N71-29155 *	US-PATENT-APPL-SN-243683	c 33	N83-28319 *
US-PATENT-APPL-SN-21508	c 08	N72-20176 *	US-PATENT-APPL-SN-231543	c 07	N83-20944 *	US-PATENT-APPL-SN-243683	c 33	N84-14424 *
US-PATENT-APPL-SN-21644	c 05	N72-22092 *	US-PATENT-APPL-SN-231604	c 28	N70-39925 *	US-PATENT-APPL-SN-243683	c 33	N84-33660 *
US-PATENT-APPL-SN-216710	c 12	N70-38997 *	US-PATENT-APPL-SN-231662	c 14	N73-30392 *	US-PATENT-APPL-SN-243684	c 37	N84-12492 *
US-PATENT-APPL-SN-216711	c 03	N70-34157 *	US-PATENT-APPL-SN-232021	c 04	N74-13420 *	US-PATENT-APPL-SN-243685	c 05	N91-14345 *
US-PATENT-APPL-SN-216939	c 14	N70-40400 *	US-PATENT-APPL-SN-232318	c 11	N71-15960 *	US-PATENT-APPL-SN-244158	c 32	N74-20863 *
US-PATENT-APPL-SN-217213	c 37	N74-11301 *	US-PATENT-APPL-SN-232734	c 29	N90-20236 *	US-PATENT-APPL-SN-244367	c 74	N89-13253 #
US-PATENT-APPL-SN-21732	c 15	N70-26819 #	US-PATENT-APPL-SN-232735	c 76	N90-24150 *	US-PATENT-APPL-SN-244369	c 29	N90-21209 *
US-PATENT-APPL-SN-217336	c 27	N82-29456 *	US-PATENT-APPL-SN-232914	c 15	N70-36412 *	US-PATENT-APPL-SN-244377	c 31	N91-15424 *
US-PATENT-APPL-SN-217533	c 76	N88-29602 #	US-PATENT-APPL-SN-233098	c 12	N73-25262 *	US-PATENT-APPL-SN-244440	c 21	N73-19630 #
US-PATENT-APPL-SN-217725	c 35	N91-15511 *	US-PATENT-APPL-SN-233173	c 12	N73-28144 *	US-PATENT-APPL-SN-244440	c 14	N73-32320 *
US-PATENT-APPL-SN-218585	c 27	N82-24340 *	US-PATENT-APPL-SN-233269	c 76	N82-30105 *	US-PATENT-APPL-SN-244519	c 37	N74-18125 *
US-PATENT-APPL-SN-218586	c 36	N81-22344 #	US-PATENT-APPL-SN-233270	c 52	N83-27578 *	US-PATENT-APPL-SN-244523	c 31	N73-30829 *
US-PATENT-APPL-SN-218587	c 27	N82-28440 *	US-PATENT-APPL-SN-233271	c 27	N83-34043 *	US-PATENT-APPL-SN-244566	c 74	N74-20008 *
US-PATENT-APPL-SN-218588	c 27	N82-33521 *	US-PATENT-APPL-SN-233519	c 20	N74-13502 *	US-PATENT-APPL-SN-245053	c 33	N74-1

## US-PATENT-APPL-SN-246032

## REPORT NUMBER INDEX

US-PATENT-APPL-SN-246032	c 32	N91-14523 *	US-PATENT-APPL-SN-259487	c 33	N70-36847 *	US-PATENT-APPL-SN-274708	c 35	N84-22929 *
US-PATENT-APPL-SN-246056	c 38	N74-15395 *	US-PATENT-APPL-SN-260087	c 21	N71-21688 *	US-PATENT-APPL-SN-275118	c 35	N74-18088 *
US-PATENT-APPL-SN-246294	c 27	N82-29454 *	US-PATENT-APPL-SN-260093	c 25	N74-26948 *	US-PATENT-APPL-SN-275909	c 33	N85-21491 *
US-PATENT-APPL-SN-246295	c 27	N82-29452 *	US-PATENT-APPL-SN-260241	c 74	N74-21304 *	US-PATENT-APPL-SN-276076	c 72	N84-16959 *
US-PATENT-APPL-SN-246594	c 37	N90-23742 *	US-PATENT-APPL-SN-260762	c 72	N91-14813 *	US-PATENT-APPL-SN-276599	c 74	N81-19896 *
US-PATENT-APPL-SN-246595	c 35	N89-12842 *	US-PATENT-APPL-SN-261183	c 09	N74-30597 *	US-PATENT-APPL-SN-276748	c 33	N83-34189 *
US-PATENT-APPL-SN-246772	c 44	N83-10494 *	US-PATENT-APPL-SN-261912	c 14	N70-34818 *	US-PATENT-APPL-SN-276749	c 74	N84-23247 *
US-PATENT-APPL-SN-246773	c 35	N83-29650 *	US-PATENT-APPL-SN-261917	c 09	N70-40272 *	US-PATENT-APPL-SN-277404	c 05	N70-39922 *
US-PATENT-APPL-SN-246774	c 34	N83-31993 *	US-PATENT-APPL-SN-261918	c 28	N70-41447 *	US-PATENT-APPL-SN-277436	c 37	N74-25968 *
US-PATENT-APPL-SN-246777	c 45	N83-25217 *	US-PATENT-APPL-SN-262268	c 24	N91-25200 *	US-PATENT-APPL-SN-277833	c 03	N70-41580 *
US-PATENT-APPL-SN-246778	c 36	N83-35350 *	US-PATENT-APPL-SN-262430	c 35	N74-18323 *	US-PATENT-APPL-SN-277904	c 28	N74-27425 *
US-PATENT-APPL-SN-247055	c 37	N74-11300 *	US-PATENT-APPL-SN-262596	c 14	N71-28958 *	US-PATENT-APPL-SN-277961	c 33	N70-36617 *
US-PATENT-APPL-SN-247090	c 37	N74-18128 *	US-PATENT-APPL-SN-262596	c 62	N76-31946 *	US-PATENT-APPL-SN-278137	c 51	N91-21701 *
US-PATENT-APPL-SN-247136	c 14	N71-30265 *	US-PATENT-APPL-SN-262851	c 74	N90-22383 *	US-PATENT-APPL-SN-278790	c 15	N70-34664 *
US-PATENT-APPL-SN-247419	c 14	N70-36907 *	US-PATENT-APPL-SN-263230	c 33	N74-20860 *	US-PATENT-APPL-SN-279170	c 34	N92-16243 *
US-PATENT-APPL-SN-247423	c 01	N71-13410 *	US-PATENT-APPL-SN-263498	c 34	N74-27859 *	US-PATENT-APPL-SN-2792	c 14	N70-33386 *
US-PATENT-APPL-SN-247434	c 25	N76-29379 *	US-PATENT-APPL-SN-26375	c 02	N70-33286 *	US-PATENT-APPL-SN-279624	c 24	N89-23623 *
US-PATENT-APPL-SN-247434	c 25	N76-27383 *	US-PATENT-APPL-SN-26375	c 02	N70-34858 *	US-PATENT-APPL-SN-279625	c 31	N90-23586 *
US-PATENT-APPL-SN-247481	c 05	N73-26071 *	US-PATENT-APPL-SN-263815	c 09	N74-17955 *	US-PATENT-APPL-SN-279630	c 60	N90-25583 *
US-PATENT-APPL-SN-248009	c 23	N91-27220 *	US-PATENT-APPL-SN-263828	c 34	N83-19015 *	US-PATENT-APPL-SN-279646	c 08	N71-21042 *
US-PATENT-APPL-SN-248010	c 37	N89-12866 *	US-PATENT-APPL-SN-263829	c 05	N84-12154 *	US-PATENT-APPL-SN-279676	c 33	N89-29679 *
US-PATENT-APPL-SN-248018	c 24	N90-25197 *	US-PATENT-APPL-SN-263930	c 44	N83-28573 *	US-PATENT-APPL-SN-279677	c 31	N90-26168 *
US-PATENT-APPL-SN-248019	c 76	N89-14120 *	US-PATENT-APPL-SN-263957	c 52	N83-25346 *	US-PATENT-APPL-SN-280029	c 35	N74-15126 *
US-PATENT-APPL-SN-248020	c 35	N90-23706 *	US-PATENT-APPL-SN-264107	c 35	N90-22023 *	US-PATENT-APPL-SN-280031	c 26	N73-26752 *
US-PATENT-APPL-SN-248469	c 14	N73-32318 *	US-PATENT-APPL-SN-264268	c 31	N78-17238 *	US-PATENT-APPL-SN-280032	c 35	N74-15093 *
US-PATENT-APPL-SN-248471	c 31	N74-27902 *	US-PATENT-APPL-SN-264326	c 63	N91-31885 *	US-PATENT-APPL-SN-280151	c 27	N83-36220 *
US-PATENT-APPL-SN-248474	c 05	N83-19737 *	US-PATENT-APPL-SN-264378	c 24	N83-10117 *	US-PATENT-APPL-SN-280152	c 54	N86-22112 *
US-PATENT-APPL-SN-248475	c 18	N83-29303 *	US-PATENT-APPL-SN-264378	c 70	N84-28565 *	US-PATENT-APPL-SN-280153	c 51	N83-17045 *
US-PATENT-APPL-SN-248476	c 37	N83-36482 *	US-PATENT-APPL-SN-264380	c 44	N83-14692 *	US-PATENT-APPL-SN-280154	c 33	N83-10345 *
US-PATENT-APPL-SN-248761	c 15	N74-27360 *	US-PATENT-APPL-SN-264381	c 52	N84-28388 *	US-PATENT-APPL-SN-280155	c 24	N84-11214 *
US-PATENT-APPL-SN-248985	c 03	N71-29129 *	US-PATENT-APPL-SN-264381	c 52	N84-28389 *	US-PATENT-APPL-SN-280305	c 34	N74-23039 *
US-PATENT-APPL-SN-249304	c 35	N84-14491 *	US-PATENT-APPL-SN-264728	c 30	N70-40016 *	US-PATENT-APPL-SN-280362	c 14	N71-28935 *
US-PATENT-APPL-SN-249537	c 14	N71-10797 *	US-PATENT-APPL-SN-264729	c 33	N70-34540 *	US-PATENT-APPL-SN-280390	c 37	N74-15128 *
US-PATENT-APPL-SN-249539	c 28	N71-15658 *	US-PATENT-APPL-SN-264731	c 09	N70-41655 *	US-PATENT-APPL-SN-280580	c 12	N71-21089 *
US-PATENT-APPL-SN-249540	c 15	N70-34861 *	US-PATENT-APPL-SN-264735	c 28	N70-33265 *	US-PATENT-APPL-SN-280776	c 14	N70-40273 *
US-PATENT-APPL-SN-249542	c 28	N70-41576 *	US-PATENT-APPL-SN-264736	c 28	N70-36802 *	US-PATENT-APPL-SN-280777	c 08	N70-41961 *
US-PATENT-APPL-SN-250195	c 34	N90-23700 *	US-PATENT-APPL-SN-264993	c 05	N91-14345 *	US-PATENT-APPL-SN-281069	c 14	N70-35394 *
US-PATENT-APPL-SN-250196	c 37	N89-12868 *	US-PATENT-APPL-SN-26573	c 31	N72-22874 *	US-PATENT-APPL-SN-28175	c 21	N70-33279 *
US-PATENT-APPL-SN-250451	c 08	N70-34787 *	US-PATENT-APPL-SN-266045	c 27	N91-15403 *	US-PATENT-APPL-SN-281875	c 25	N74-18551 *
US-PATENT-APPL-SN-250468	c 05	N91-27156 *	US-PATENT-APPL-SN-266107	c 11	N71-15925 *	US-PATENT-APPL-SN-281876	c 52	N74-20726 *
US-PATENT-APPL-SN-250469	c 37	N90-22042 *	US-PATENT-APPL-SN-266253	c 04	N84-22546 *	US-PATENT-APPL-SN-281877	c 35	N74-15146 *
US-PATENT-APPL-SN-250480	c 27	N92-22044 *	US-PATENT-APPL-SN-266254	c 24	N83-13172 *	US-PATENT-APPL-SN-281908	c 25	N75-12086 *
US-PATENT-APPL-SN-250567	c 33	N71-24876 *	US-PATENT-APPL-SN-266255	c 44	N83-27344 *	US-PATENT-APPL-SN-282129	c 24	N83-25789 *
US-PATENT-APPL-SN-250585	c 32	N85-21428 *	US-PATENT-APPL-SN-266256	c 24	N83-13171 *	US-PATENT-APPL-SN-282191	c 35	N83-29651 *
US-PATENT-APPL-SN-250661	c 23	N89-11814 *	US-PATENT-APPL-SN-266687	c 32	N84-22820 *	US-PATENT-APPL-SN-282192	c 74	N83-21949 *
US-PATENT-APPL-SN-250662	c 37	N91-14615 *	US-PATENT-APPL-SN-266688	c 37	N83-36483 *	US-PATENT-APPL-SN-282298	c 33	N85-29144 *
US-PATENT-APPL-SN-250766	c 07	N73-30115 *	US-PATENT-APPL-SN-266771	c 37	N74-18127 *	US-PATENT-APPL-SN-28235	c 10	N72-17171 *
US-PATENT-APPL-SN-250974	c 31	N71-15664 *	US-PATENT-APPL-SN-266820	c 07	N74-31270 *	US-PATENT-APPL-SN-282817	c 15	N70-40156 *
US-PATENT-APPL-SN-251009	c 33	N84-16452 *	US-PATENT-APPL-SN-266822	c 32	N74-10132 *	US-PATENT-APPL-SN-282818	c 14	N71-14996 *
US-PATENT-APPL-SN-251073	c 35	N90-23713 *	US-PATENT-APPL-SN-266832	c 33	N74-10195 *	US-PATENT-APPL-SN-283092	c 35	N91-21496 *
US-PATENT-APPL-SN-251111	c 09	N91-14356 *	US-PATENT-APPL-SN-266866	c 33	N73-32818 *	US-PATENT-APPL-SN-283106	c 62	N91-14769 *
US-PATENT-APPL-SN-251438	c 35	N90-23707 *	US-PATENT-APPL-SN-266899	c 60	N74-12888 *	US-PATENT-APPL-SN-283431	c 36	N91-17360 *
US-PATENT-APPL-SN-251439	c 31	N90-20254 *	US-PATENT-APPL-SN-266911	c 36	N74-20009 *	US-PATENT-APPL-SN-283443	c 35	N93-19837 *
US-PATENT-APPL-SN-251449	c 07	N70-40063 *	US-PATENT-APPL-SN-266912	c 32	N74-19788 *	US-PATENT-APPL-SN-283502	c 37	N74-21060 *
US-PATENT-APPL-SN-251451	c 09	N70-35425 *	US-PATENT-APPL-SN-266913	c 54	N74-23065 *	US-PATENT-APPL-SN-283673	c 33	N91-14551 *
US-PATENT-APPL-SN-251499	c 24	N91-15320 *	US-PATENT-APPL-SN-266925	c 51	N74-17853 *	US-PATENT-APPL-SN-284245	c 33	N74-17928 *
US-PATENT-APPL-SN-251500	c 54	N92-29129 *	US-PATENT-APPL-SN-266928	c 26	N74-10521 *	US-PATENT-APPL-SN-284265	c 14	N70-34799 *
US-PATENT-APPL-SN-251609	c 05	N73-30078 *	US-PATENT-APPL-SN-266930	c 54	N74-12779 *	US-PATENT-APPL-SN-284266	c 15	N71-16077 *
US-PATENT-APPL-SN-251621	c 16	N73-32391 *	US-PATENT-APPL-SN-266940	c 32	N74-32598 *	US-PATENT-APPL-SN-284286	c 44	N84-28203 *
US-PATENT-APPL-SN-251752	c 24	N74-30001 *	US-PATENT-APPL-SN-266943	c 72	N74-19310 *	US-PATENT-APPL-SN-284287	c 32	N84-27951 *
US-PATENT-APPL-SN-251753	c 28	N70-39895 *	US-PATENT-APPL-SN-267146	c 37	N90-20409 *	US-PATENT-APPL-SN-284288	c 33	N83-36356 *
US-PATENT-APPL-SN-252077	c 34	N90-21999 *	US-PATENT-APPL-SN-267178	c 74	N84-11920 *	US-PATENT-APPL-SN-284289	c 34	N84-22903 *
US-PATENT-APPL-SN-252078	c 24	N90-23480 *	US-PATENT-APPL-SN-267179	c 35	N84-12445 *	US-PATENT-APPL-SN-284290	c 33	N83-34191 *
US-PATENT-APPL-SN-252081	c 05	N90-20079 *	US-PATENT-APPL-SN-267572	c 73	N74-26767 *	US-PATENT-APPL-SN-284314	c 33	N84-16454 *
US-PATENT-APPL-SN-252259	c 33	N70-34545 *	US-PATENT-APPL-SN-267768	c 70	N74-21300 *	US-PATENT-APPL-SN-285705	c 37	N74-21056 *
US-PATENT-APPL-SN-253249	c 33	N74-11050 *	US-PATENT-APPL-SN-267862	c 33	N74-21851 *	US-PATENT-APPL-SN-286620	c 15	N71-30028 *
US-PATENT-APPL-SN-253405	c 10	N73-26228 *	US-PATENT-APPL-SN-267935	c 71	N83-17235 *	US-PATENT-APPL-SN-286824	c 44	N79-19447 *
US-PATENT-APPL-SN-253725	c 35	N74-13129 *	US-PATENT-APPL-SN-269073	c 52	N74-26625 *	US-PATENT-APPL-SN-287149	c 35	N74-32878 *
US-PATENT-APPL-SN-253774	c 25	N70-36946 *	US-PATENT-APPL-SN-269212	c 07	N71-10775 *	US-PATENT-APPL-SN-287150	c 37	N74-21065 *
US-PATENT-APPL-SN-254052	c 54	N93-14713 *	US-PATENT-APPL-SN-269215	c 14	N70-41332 *	US-PATENT-APPL-SN-288267	c 27	N83-31854 *
US-PATENT-APPL-SN-254173	c 35	N75-13213 *	US-PATENT-APPL-SN-269222	c 15	N70-38225 *	US-PATENT-APPL-SN-288267	c 27	N84-22745 *
US-PATENT-APPL-SN-254177	c 10	N73-26230 *	US-PATENT-APPL-SN-269450	c 36	N76-18427 *	US-PATENT-APPL-SN-288267	c 27	N85-21347 *
US-PATENT-APPL-SN-254323	c 35	N76-15434 *	US-PATENT-APPL-SN-270118	c 33	N71-17610 *	US-PATENT-APPL-SN-288847	c 33	N74-27862 *
US-PATENT-APPL-SN-254575	c 25	N83-10126 *	US-PATENT-APPL-SN-270189	c 07	N89-23466 *	US-PATENT-APPL-SN-288856	c 33	N74-20859 *
US-PATENT-APPL-SN-254688	c 52	N83-27577 *	US-PATENT-APPL-SN-270763	c 36	N84-14509 *	US-PATENT-APPL-SN-288857	c 14	N73-33361 *
US-PATENT-APPL-SN-254847	c 15	N71-22874 *	US-PATENT-APPL-SN-271265	c 71	N91-14807 *	US-PATENT-APPL-SN-289017	c 37	N74-27905 *
US-PATENT-APPL-SN-25487	c 08	N72-21197 *	US-PATENT-APPL-SN-271821	c 15	N71-10778 *	US-PATENT-APPL-SN-289018	c 08	N74-30421 *
US-PATENT-APPL-SN-25488	c 08	N72-25206 *	US-PATENT-APPL-SN-271822	c 15	N71-15967 *	US-PATENT-APPL-SN-289033	c 15	N73-32358 *
US-PATENT-APPL-SN-255132	c 14	N71-15598 *	US-PATENT-APPL-SN-271823	c 27	N71-28929 *	US-PATENT-APPL-SN-289033	c 37	N74-21055 *
US-PATENT-APPL-SN-256317	c 52	N74-26626 *	US-PATENT-APPL-SN-271824	c 07	N71-21476 *	US-PATENT-APPL-SN-289048	c 37	N74-21057 *
US-PATENT-APPL-SN-256484	c 06	N70-34946 *	US-PATENT-APPL-SN-271951	c 35	N74-15092 *	US-PATENT-APPL-SN-289049	c 19	N74-15089 *
US-PATENT-APPL-SN-256493	c 20	N77-17143 *	US-PATENT-APPL-SN-272152	c 27	N83-29388 *	US-PATENT-APPL-SN-289050	c 20	N74-32919 *
US-PATENT-APPL-SN-257346	c 15	N70-36901 *	US-PATENT-APPL-SN-272233	c 44	N81-27615 *	US-PATENT-APPL-SN-290021	c 37	N74-23064 *
US-PATENT-APPL-SN-257593	c 36	N90-25340 *	US-PATENT-APPL-SN-272234	c 25	N83-13188 *	US-PATENT-APPL-SN-290022	c 09	N73-12214 *
US-PATENT-APPL-SN-258152	c 35	N74-15090 *	US-PATENT-APPL-SN-272406	c 33	N84-14422 *	US-PATENT-APPL-SN-290030	c 33	N74-12887 *
US-PATENT-APPL-SN-258171	c 34	N74-27744 *	US-PATENT-APPL-SN-272407	c 52	N83-21785 *	US-PATENT-APPL-SN-290043	c 18	N75-27040 *
US-PATENT-APPL-SN-258331	c 03	N73-31988 *	US-PATENT-APPL-SN-272837	c 71	N83-36846 *	US-PATENT-APPL-SN-290867	c 28	N70-39931 *
US-PATENT-APPL-SN-258623	c 60	N83-32342 *	US-PATENT-APPL-SN-273222	c 33	N74-27683 *	US-PATENT-APPL-SN-290868	c 31	N70-34966 *
US-PATENT-APPL-SN-258931	c 14	N70-40203 *	US-PATENT-APPL-SN-273240	c 35	N74-16135 *	US-PATENT-APPL-SN-290870	c 15	N70-38996 *
US-PATENT-APPL-SN-258932	c 05	N70-36493 *	US-PATENT-APPL-SN-273400	c 15	N72-20442 *	US-PATENT-APPL-SN-290873	c 10	N71-16058 *
US-PATENT-APPL-SN-259056	c 27	N82-29455 *	US-PATENT-APPL-SN-273519	c 35	N75-25122 *	US-PATENT-APPL-SN-290915	c 32	N74-11000 *
US-PATENT-APPL-SN-259208	c 44	N85-30474 *	US-PATENT-APPL-SN-273534	c 09	N70-38712 *	US-PATENT-APPL-SN-291131	c 33	N83-31953 *
US-PATENT-APPL-SN-259209	c 01	N83-35992 *	US-PATENT-APPL-SN-274348	c 60	N76-18800 *	US-PATENT-APPL-SN-291132	c 33	N83-35227 *
US-PATENT-APPL-SN-259210	c 32	N83-27085 *	US-PATENT-APPL-SN-274360	c 32	N74-20809 *	US-PATENT-APPL-SN-291645	c 60	N85-21992 *
US-PATENT-APPL-SN-259211	c 44	N84-14583 *	US-PATENT-APPL-SN-274705	c 44</				



## REPORT NUMBER INDEX

## US-PATENT-APPL-SN-3418

US-PATENT-APPL-SN-292047	c 37	N89-29750 *	#	US-PATENT-APPL-SN-308009	c 33	N83-36355 *	US-PATENT-APPL-SN-323236	c 24	N90-21822 *
US-PATENT-APPL-SN-292049	c 23	N91-17141 *		US-PATENT-APPL-SN-308201	c 27	N83-28240 *	US-PATENT-APPL-SN-323748	c 61	N93-18855 *
US-PATENT-APPL-SN-292049	c 23	N91-25185 *		US-PATENT-APPL-SN-308201	c 27	N85-21349 *	US-PATENT-APPL-SN-324029	c 32	N74-27612 *
US-PATENT-APPL-SN-292121	c 18	N90-11798 *	#	US-PATENT-APPL-SN-308203	c 34	N84-12406 *	US-PATENT-APPL-SN-32496	c 15	N70-37925 *
US-PATENT-APPL-SN-292123	c 18	N90-20126 *		US-PATENT-APPL-SN-308204	c 44	N83-28574 *	US-PATENT-APPL-SN-325082	c 35	N83-29652 *
US-PATENT-APPL-SN-292124	c 62	N91-25693 *	#	US-PATENT-APPL-SN-308918	c 27	N71-15634 *	US-PATENT-APPL-SN-325932	c 33	N84-16456 *
US-PATENT-APPL-SN-292130	c 32	N91-25317 *		US-PATENT-APPL-SN-309291	c 37	N88-23982 *	US-PATENT-APPL-SN-325784	c 24	N76-14204 *
US-PATENT-APPL-SN-292131	c 18	N91-14374 *		US-PATENT-APPL-SN-309292	c 37	N84-28085 *	US-PATENT-APPL-SN-325885	c 35	N82-25484 *
US-PATENT-APPL-SN-292146	c 37	N90-23751 *		US-PATENT-APPL-SN-309293	c 25	N83-13187 *	US-PATENT-APPL-SN-325886	c 33	N83-34190 *
US-PATENT-APPL-SN-292340	c 52	N79-21750 *		US-PATENT-APPL-SN-309354	c 11	N71-15926 *	US-PATENT-APPL-SN-325931	c 37	N82-26674 *
US-PATENT-APPL-SN-292382	c 27	N74-17283 *		US-PATENT-APPL-SN-310034	c 32	N74-30524 *	US-PATENT-APPL-SN-325932	c 33	N84-16455 *
US-PATENT-APPL-SN-292477	c 15	N73-12495 *	#	US-PATENT-APPL-SN-310193	c 33	N74-27682 *	US-PATENT-APPL-SN-325933	c 76	N83-20789 *
US-PATENT-APPL-SN-292596	c 10	N71-29135 *		US-PATENT-APPL-SN-310506	c 10	N71-16042 *	US-PATENT-APPL-SN-326198	c 35	N75-12272 *
US-PATENT-APPL-SN-292681	c 33	N74-10194 *		US-PATENT-APPL-SN-310507	c 07	N71-11298 *	US-PATENT-APPL-SN-326298	c 14	N71-22765 *
US-PATENT-APPL-SN-292682	c 14	N73-32319 *		US-PATENT-APPL-SN-310615	c 37	N74-27901 *	US-PATENT-APPL-SN-326299	c 26	N71-17818 *
US-PATENT-APPL-SN-292685	c 32	N74-20864 *		US-PATENT-APPL-SN-310616	c 35	N74-21017 *	US-PATENT-APPL-SN-326326	c 35	N74-32879 *
US-PATENT-APPL-SN-292686	c 20	N74-31269 *		US-PATENT-APPL-SN-310624	c 33	N74-17929 *	US-PATENT-APPL-SN-326327	c 44	N74-27519 *
US-PATENT-APPL-SN-292698	c 09	N73-32109 *		US-PATENT-APPL-SN-310714	c 33	N82-11360 *	US-PATENT-APPL-SN-326364	c 51	N75-13502 *
US-PATENT-APPL-SN-293412	c 27	N83-34039 *		US-PATENT-APPL-SN-310992	c 74	N91-26918 *	US-PATENT-APPL-SN-32664	c 11	N72-25287 *
US-PATENT-APPL-SN-293414	c 37	N84-16560 *		US-PATENT-APPL-SN-311024	c 60	N91-31810 *	US-PATENT-APPL-SN-32665	c 14	N72-22444 *
US-PATENT-APPL-SN-293417	c 37	N82-26673 *	#	US-PATENT-APPL-SN-311175	c 35	N74-22771 *	US-PATENT-APPL-SN-326756	c 71	N91-14808 *
US-PATENT-APPL-SN-293418	c 26	N83-31795 *		US-PATENT-APPL-SN-311234	c 52	N74-23040 *	US-PATENT-APPL-SN-326757	c 24	N90-23493 *
US-PATENT-APPL-SN-293419	c 33	N82-24427 *	#	US-PATENT-APPL-SN-311376	c 76	N92-21499 *	US-PATENT-APPL-SN-326757	c 24	N91-17145 *
US-PATENT-APPL-SN-293725	c 89	N74-30886 *		US-PATENT-APPL-SN-311387	c 23	N71-30027 *	US-PATENT-APPL-SN-326766	c 35	N90-22024 *
US-PATENT-APPL-SN-293726	c 37	N74-21055 *		US-PATENT-APPL-SN-311551	c 23	N91-14418 *	US-PATENT-APPL-SN-326820	c 35	N91-17350 *
US-PATENT-APPL-SN-293727	c 33	N74-14956 *		US-PATENT-APPL-SN-311552	c 33	N92-16196 *	US-PATENT-APPL-SN-326863	c 37	N91-17387 *
US-PATENT-APPL-SN-293739	c 35	N74-28097 *		US-PATENT-APPL-SN-312269	c 28	N71-14043 *	US-PATENT-APPL-SN-327163	c 03	N71-20895 *
US-PATENT-APPL-SN-294727	c 73	N77-18891 *		US-PATENT-APPL-SN-312424	c 28	N70-33374 *	US-PATENT-APPL-SN-327565	c 02	N70-36825 *
US-PATENT-APPL-SN-294738	c 73	N78-28913 *		US-PATENT-APPL-SN-312443	c 10	N71-21473 *	US-PATENT-APPL-SN-327921	c 54	N75-13231 *
US-PATENT-APPL-SN-295855	c 23	N71-17802 *		US-PATENT-APPL-SN-313132	c 28	N70-34175 *	US-PATENT-APPL-SN-327969	c 35	N75-13213 *
US-PATENT-APPL-SN-296137	c 74	N84-28590 *		US-PATENT-APPL-SN-313135	c 15	N70-35087 *	US-PATENT-APPL-SN-328140	c 18	N71-21651 *
US-PATENT-APPL-SN-296622	c 44	N76-31666 *		US-PATENT-APPL-SN-313136	c 09	N71-12540 *	US-PATENT-APPL-SN-328392	c 27	N90-23545 *
US-PATENT-APPL-SN-296879	c 26	N71-18064 *		US-PATENT-APPL-SN-313381	c 35	N74-15091 *	US-PATENT-APPL-SN-328392	c 23	N91-14419 *
US-PATENT-APPL-SN-297127	c 33	N74-27705 *		US-PATENT-APPL-SN-313839	c 37	N90-21390 *	US-PATENT-APPL-SN-328760	c 31	N83-35177 *
US-PATENT-APPL-SN-297128	c 32	N74-26654 *		US-PATENT-APPL-SN-314074	c 15	N71-16079 *	US-PATENT-APPL-SN-328792	c 35	N75-12273 *
US-PATENT-APPL-SN-297436	c 33	N79-11314 *		US-PATENT-APPL-SN-314570	c 10	N71-28960 *	US-PATENT-APPL-SN-329237	c 33	N74-34638 *
US-PATENT-APPL-SN-297486	c 35	N83-24828 *		US-PATENT-APPL-SN-314572	c 14	N71-15992 *	US-PATENT-APPL-SN-329243	c 28	N74-33209 *
US-PATENT-APPL-SN-297488	c 37	N84-16561 *		US-PATENT-APPL-SN-314656	c 51	N77-25769 *	US-PATENT-APPL-SN-329331	c 15	N71-15906 *
US-PATENT-APPL-SN-297524	c 33	N84-14424 *		US-PATENT-APPL-SN-314702	c 71	N84-16940 *	US-PATENT-APPL-SN-329595	c 05	N70-41329 *
US-PATENT-APPL-SN-297524	c 33	N84-22886 *		US-PATENT-APPL-SN-314928	c 32	N84-34651 *	US-PATENT-APPL-SN-329958	c 33	N74-22885 *
US-PATENT-APPL-SN-298149	c 24	N92-16026 *		US-PATENT-APPL-SN-314929	c 71	N83-32515 *	US-PATENT-APPL-SN-330209	c 15	N70-41646 *
US-PATENT-APPL-SN-298150	c 25	N90-23517 *		US-PATENT-APPL-SN-315048	c 34	N74-27730 *	US-PATENT-APPL-SN-330210	c 14	N71-21090 *
US-PATENT-APPL-SN-298150	c 25	N91-21270 *		US-PATENT-APPL-SN-315069	c 33	N74-20862 *	US-PATENT-APPL-SN-331119	c 37	N92-29151 *
US-PATENT-APPL-SN-298156	c 37	N75-13261 *		US-PATENT-APPL-SN-315070	c 60	N76-23850 *	US-PATENT-APPL-SN-331323	c 07	N71-16088 *
US-PATENT-APPL-SN-298156	c 26	N75-19408 *		US-PATENT-APPL-SN-315096	c 12	N70-40124 *	US-PATENT-APPL-SN-331324	c 05	N70-35152 *
US-PATENT-APPL-SN-298157	c 33	N74-21850 *		US-PATENT-APPL-SN-3151	c 05	N72-27102 *	US-PATENT-APPL-SN-331551	c 60	N92-16563 *
US-PATENT-APPL-SN-298799	c 14	N71-15962 *		US-PATENT-APPL-SN-315278	c 35	N83-28849 *	US-PATENT-APPL-SN-331559	c 10	N72-11256 *
US-PATENT-APPL-SN-298800	c 14	N70-34705 *		US-PATENT-APPL-SN-315583	c 51	N84-33769 *	US-PATENT-APPL-SN-331759	c 07	N76-18117 *
US-PATENT-APPL-SN-299042	c 15	N71-15918 *		US-PATENT-APPL-SN-315584	c 23	N84-16255 *	US-PATENT-APPL-SN-331760	c 35	N74-27860 *
US-PATENT-APPL-SN-29917	c 15	N73-13465 *		US-PATENT-APPL-SN-315587	c 25	N83-31743 *	US-PATENT-APPL-SN-332123	c 27	N80-32514 *
US-PATENT-APPL-SN-29917	c 26	N74-10521 *		US-PATENT-APPL-SN-315588	c 05	N84-22551 *	US-PATENT-APPL-SN-332313	c 21	N71-10678 *
US-PATENT-APPL-SN-29917	c 37	N74-13179 *		US-PATENT-APPL-SN-316477	c 18	N71-10772 *	US-PATENT-APPL-SN-332339	c 07	N71-11284 *
US-PATENT-APPL-SN-29979	c 09	N75-15662 *		US-PATENT-APPL-SN-316618	c 07	N74-15453 *	US-PATENT-APPL-SN-332677	c 33	N90-21951 *
US-PATENT-APPL-SN-300113	c 33	N70-33344 *		US-PATENT-APPL-SN-31702	c 16	N73-16536 *	US-PATENT-APPL-SN-333535	c 74	N83-36898 *
US-PATENT-APPL-SN-300712	c 15	N70-35407 *		US-PATENT-APPL-SN-31703	c 09	N72-21244 *	US-PATENT-APPL-SN-333537	c 44	N83-32176 *
US-PATENT-APPL-SN-300957	c 33	N71-29053 *		US-PATENT-APPL-SN-317310	c 36	N77-25502 *	US-PATENT-APPL-SN-333766	c 31	N71-15663 *
US-PATENT-APPL-SN-301039	c 37	N74-27903 *		US-PATENT-APPL-SN-317389	c 18	N70-41583 *	US-PATENT-APPL-SN-333770	c 21	N71-15583 *
US-PATENT-APPL-SN-301075	c 25	N83-29324 *		US-PATENT-APPL-SN-317391	c 15	N71-15968 *	US-PATENT-APPL-SN-333912	c 32	N74-19790 *
US-PATENT-APPL-SN-301077	c 33	N84-14421 *		US-PATENT-APPL-SN-317567	c 36	N75-15029 *	US-PATENT-APPL-SN-33398	c 14	N70-35587 *
US-PATENT-APPL-SN-301078	c 08	N85-19985 *		US-PATENT-APPL-SN-317658	c 36	N84-16542 *	US-PATENT-APPL-SN-334349	c 35	N75-19611 *
US-PATENT-APPL-SN-301417	c 71	N74-21014 *		US-PATENT-APPL-SN-317776	c 51	N92-34429 *	US-PATENT-APPL-SN-334672	c 14	N70-41330 *
US-PATENT-APPL-SN-301418	c 52	N76-29894 *		US-PATENT-APPL-SN-317776	c 51	N92-34231 *	US-PATENT-APPL-SN-334678	c 11	N71-10777 *
US-PATENT-APPL-SN-301419	c 34	N76-17317 *		US-PATENT-APPL-SN-317931	c 51	N92-34229 *	US-PATENT-APPL-SN-335036	c 45	N84-12654 *
US-PATENT-APPL-SN-301683	c 07	N71-15907 *		US-PATENT-APPL-SN-317977	c 25	N83-36118 *	US-PATENT-APPL-SN-335201	c 33	N74-17927 *
US-PATENT-APPL-SN-301925	c 27	N92-21711 *		US-PATENT-APPL-SN-318151	c 75	N74-30156 *	US-PATENT-APPL-SN-33535	c 06	N72-17093 *
US-PATENT-APPL-SN-301925	c 27	N93-11059 *		US-PATENT-APPL-SN-318152	c 52	N74-20728 *	US-PATENT-APPL-SN-335441	c 14	N71-23268 *
US-PATENT-APPL-SN-302681	c 37	N75-12326 *		US-PATENT-APPL-SN-318217	c 35	N91-13694 *	US-PATENT-APPL-SN-336103	c 16	N71-15550 *
US-PATENT-APPL-SN-302749	c 14	N70-40201 *		US-PATENT-APPL-SN-318357	c 35	N74-21019 *	US-PATENT-APPL-SN-336319	c 44	N74-33379 *
US-PATENT-APPL-SN-302913	c 76	N79-16678 *		US-PATENT-APPL-SN-318358	c 27	N74-27037 *	US-PATENT-APPL-SN-336320	c 15	N71-15966 *
US-PATENT-APPL-SN-303670	c 37	N82-11469 *	#	US-PATENT-APPL-SN-318443	c 03	N70-34667 *	US-PATENT-APPL-SN-336607	c 10	N71-15910 *
US-PATENT-APPL-SN-303671	c 31	N83-31896 *		US-PATENT-APPL-SN-318848	c 35	N77-14408 *	US-PATENT-APPL-SN-336608	c 32	N71-17645 *
US-PATENT-APPL-SN-303672	c 71	N83-32516 *		US-PATENT-APPL-SN-31885	c 10	N72-17172 *	US-PATENT-APPL-SN-337487	c 33	N74-26977 *
US-PATENT-APPL-SN-304147	c 27	N90-23541 *		US-PATENT-APPL-SN-318981	c 33	N92-16197 *	US-PATENT-APPL-SN-337767	c 31	N90-23587 *
US-PATENT-APPL-SN-304149	c 31	N89-29577 *	#	US-PATENT-APPL-SN-319150	c 33	N75-19519 *	US-PATENT-APPL-SN-337768	c 74	N92-29158 *
US-PATENT-APPL-SN-304154	c 37	N91-14607 *		US-PATENT-APPL-SN-319410	c 37	N74-20063 *	US-PATENT-APPL-SN-337768	c 33	N93-20119 *
US-PATENT-APPL-SN-304155	c 74	N91-14835 *		US-PATENT-APPL-SN-319892	c 07	N71-10609 *	US-PATENT-APPL-SN-337816	c 35	N75-15931 *
US-PATENT-APPL-SN-304430	c 52	N74-27864 *		US-PATENT-APPL-SN-319893	c 14	N70-41647 *	US-PATENT-APPL-SN-338379	c 76	N91-21911 *
US-PATENT-APPL-SN-304698	c 32	N70-41579 *		US-PATENT-APPL-SN-319894	c 03	N71-11053 *	US-PATENT-APPL-SN-338386	c 15	N84-16231 *
US-PATENT-APPL-SN-304705	c 32	N74-20810 *		US-PATENT-APPL-SN-319905	c 14	N71-10781 *	US-PATENT-APPL-SN-338484	c 32	N74-20811 *
US-PATENT-APPL-SN-304749	c 11	N71-16028 *		US-PATENT-APPL-SN-320233	c 33	N71-15625 *	US-PATENT-APPL-SN-339040	c 31	N70-41373 *
US-PATENT-APPL-SN-30498	c 37	N74-21063 *		US-PATENT-APPL-SN-320595	c 26	N70-40015 *	US-PATENT-APPL-SN-339086	c 07	N74-27490 *
US-PATENT-APPL-SN-305012	c 35	N74-15094 *		US-PATENT-APPL-SN-320621	c 27	N83-34040 *	US-PATENT-APPL-SN-339821	c 17	N70-33288 *
US-PATENT-APPL-SN-305013	c 14	N73-13435 *	#	US-PATENT-APPL-SN-321179	c 27	N74-21156 *	US-PATENT-APPL-SN-339825	c 28	N71-15660 *
US-PATENT-APPL-SN-305020	c 21	N70-34295 *		US-PATENT-APPL-SN-321180	c 05	N76-29217 *	US-PATENT-APPL-SN-340113	c 16	N70-41578 *
US-PATENT-APPL-SN-305638	c 34	N74-23066 *		US-PATENT-APPL-SN-321656	c 14	N70-41807 *	US-PATENT-APPL-SN-340791	c 35	N74-26945 *
US-PATENT-APPL-SN-305639	c 37	N74-27904 *		US-PATENT-APPL-SN-322312	c 25	N84-22709 *	US-PATENT-APPL-SN-340862	c 33	N77-26387 *
US-PATENT-APPL-SN-305675	c 33	N91-31529 *		US-PATENT-APPL-SN-322314	c 35	N84-12443 *	US-PATENT-APPL-SN-340863	c 25	N76-27383 *
US-PATENT-APPL-SN-306652	c 33	N74-32712 *		US-PATENT-APPL-SN-322316	c 31	N83-19947 *	US-PATENT-APPL-SN-340864	c 31	N74-21059 *
US-PATENT-APPL-SN-307269	c 24	N71-10560 *		US-PATENT-APPL-SN-322317	c 46	N85-21846 *	US-PATENT-APPL-SN-340871	c 44	N74-19870 *
US-PATENT-APPL-SN-307270	c 10	N71-16030 *		US-PATENT-APPL-SN-322321	c 37	N85-21651 *	US-PATENT-APPL-SN-341406	c 71	N83-35781 *
US-PATENT-APPL-SN-307271	c 09	N71-22999 *							



US-PATENT-APPL-SN-342572	c 02	N71-16087 *	US-PATENT-APPL-SN-358029	c 37	N91-32508 *	US-PATENT-APPL-SN-370582	c 18	N76-14186 *
US-PATENT-APPL-SN-342574	c 03	N71-20904 *	US-PATENT-APPL-SN-358088	c 35	N84-33767 *	US-PATENT-APPL-SN-370872	c 37	N74-32918 *
US-PATENT-APPL-SN-342828	c 74	N85-29749 *	US-PATENT-APPL-SN-358089	c 71	N84-23233 *	US-PATENT-APPL-SN-370989	c 23	N71-29049 *
US-PATENT-APPL-SN-342857	c 72	N84-28575 *	US-PATENT-APPL-SN-358127	c 05	N71-12335 *	US-PATENT-APPL-SN-370999	c 74	N78-15879 *
US-PATENT-APPL-SN-342871	c 27	N84-33589 *	US-PATENT-APPL-SN-358213	c 52	N92-11621 *	US-PATENT-APPL-SN-371322	c 44	N76-14600 *
US-PATENT-APPL-SN-343308	c 19	N74-29410 *	US-PATENT-APPL-SN-358398	c 36	N84-22944 *	US-PATENT-APPL-SN-371351	c 76	N84-35113 *
US-PATENT-APPL-SN-343425	c 11	N70-35383 *	US-PATENT-APPL-SN-359039	c 32	N74-30523 *	US-PATENT-APPL-SN-371352	c 52	N84-11744 *
US-PATENT-APPL-SN-343426	c 07	N71-20814 *	US-PATENT-APPL-SN-359156	c 14	N75-24794 *	US-PATENT-APPL-SN-371856	c 15	N70-42033 *
US-PATENT-APPL-SN-343607	c 18	N74-27397 *	US-PATENT-APPL-SN-359157	c 35	N74-18090 *	US-PATENT-APPL-SN-371857	c 07	N70-41680 *
US-PATENT-APPL-SN-343652	c 33	N91-14537 *	US-PATENT-APPL-SN-359382	c 32	N85-34327 *	US-PATENT-APPL-SN-372148	c 35	N74-26949 *
US-PATENT-APPL-SN-343656	c 76	N91-14872 *	US-PATENT-APPL-SN-359388	c 44	N83-32177 *	US-PATENT-APPL-SN-372149	c 37	N75-15050 *
US-PATENT-APPL-SN-343760	c 07	N71-28979 *	US-PATENT-APPL-SN-359459	c 36	N89-28817 *	US-PATENT-APPL-SN-372279	c 35	N84-28019 *
US-PATENT-APPL-SN-344410	c 07	N74-33218 *	US-PATENT-APPL-SN-359460	c 36	N92-31788 *	US-PATENT-APPL-SN-372438	c 30	N71-17788 *
US-PATENT-APPL-SN-344793	c 03	N71-11058 *	US-PATENT-APPL-SN-359532	c 15	N71-28959 *	US-PATENT-APPL-SN-372648	c 27	N71-16348 *
US-PATENT-APPL-SN-344872	c 18	N91-27201 *	US-PATENT-APPL-SN-359626	c 35	N84-28018 *	US-PATENT-APPL-SN-372727	c 31	N70-36845 *
US-PATENT-APPL-SN-344877	c 24	N90-15148 *	US-PATENT-APPL-SN-359627	c 35	N82-26631 *	US-PATENT-APPL-SN-372730	c 28	N71-28850 *
US-PATENT-APPL-SN-345372	c 33	N74-22814 *	US-PATENT-APPL-SN-359627	c 35	N85-29214 *	US-PATENT-APPL-SN-373587	c 33	N74-32711 *
US-PATENT-APPL-SN-346356	c 14	N70-41676 *	US-PATENT-APPL-SN-359801	c 74	N91-27957 *	US-PATENT-APPL-SN-373588	c 33	N75-19515 *
US-PATENT-APPL-SN-346361	c 37	N74-21064 *	US-PATENT-APPL-SN-359957	c 07	N74-32418 *	US-PATENT-APPL-SN-373591	c 31	N71-15692 *
US-PATENT-APPL-SN-346372	c 35	N75-12270 *	US-PATENT-APPL-SN-359958	c 37	N74-26976 *	US-PATENT-APPL-SN-373770	c 35	N84-34705 *
US-PATENT-APPL-SN-346483	c 37	N74-32921 *	US-PATENT-APPL-SN-360180	c 17	N71-16026 *	US-PATENT-APPL-SN-373771	c 35	N84-22934 *
US-PATENT-APPL-SN-346483	c 37	N76-15461 *	US-PATENT-APPL-SN-360182	c 31	N70-36654 *	US-PATENT-APPL-SN-373839	c 33	N84-22887 *
US-PATENT-APPL-SN-347101	c 09	N74-16757 *	US-PATENT-APPL-SN-360878	c 03	N71-11051 *	US-PATENT-APPL-SN-374421	c 27	N76-24405 *
US-PATENT-APPL-SN-347558	c 27	N91-31307 *	US-PATENT-APPL-SN-361200	c 18	N89-28556 *	US-PATENT-APPL-SN-374422	c 32	N75-24982 *
US-PATENT-APPL-SN-347591	c 25	N91-31258 *	US-PATENT-APPL-SN-361215	c 27	N84-14323 *	US-PATENT-APPL-SN-374423	c 36	N75-31427 *
US-PATENT-APPL-SN-347626	c 15	N70-40204 *	US-PATENT-APPL-SN-361216	c 35	N84-28016 *	US-PATENT-APPL-SN-374424	c 74	N75-12732 *
US-PATENT-APPL-SN-347952	c 37	N75-13265 *	US-PATENT-APPL-SN-361217	c 71	N85-22104 *	US-PATENT-APPL-SN-374441	c 35	N75-19616 *
US-PATENT-APPL-SN-347953	c 05	N75-24716 *	US-PATENT-APPL-SN-361471	c 27	N92-34160 *	US-PATENT-APPL-SN-374583	c 33	N74-29556 *
US-PATENT-APPL-SN-347960	c 03	N70-39930 *	US-PATENT-APPL-SN-361479	c 14	N91-21175 *	US-PATENT-APPL-SN-374810	c 27	N80-32514 *
US-PATENT-APPL-SN-348223	c 34	N91-31596 *	US-PATENT-APPL-SN-361531	c 35	N89-28795 *	US-PATENT-APPL-SN-375401	c 17	N71-16025 *
US-PATENT-APPL-SN-348422	c 27	N76-15311 *	US-PATENT-APPL-SN-361666	c 33	N75-30428 *	US-PATENT-APPL-SN-375405	c 31	N71-15675 *
US-PATENT-APPL-SN-348600	c 28	N71-29154 *	US-PATENT-APPL-SN-361711	c 24	N82-26387 *	US-PATENT-APPL-SN-375620	c 43	N85-21723 *
US-PATENT-APPL-SN-348787	c 33	N75-19521 *	US-PATENT-APPL-SN-361711	c 24	N84-16622 *	US-PATENT-APPL-SN-375674	c 28	N70-41582 *
US-PATENT-APPL-SN-349778	c 09	N70-40234 *	US-PATENT-APPL-SN-361906	c 33	N74-20861 *	US-PATENT-APPL-SN-375680	c 10	N71-28739 *
US-PATENT-APPL-SN-349781	c 31	N71-15647 *	US-PATENT-APPL-SN-361907	c 35	N74-27865 *	US-PATENT-APPL-SN-375682	c 31	N70-41588 *
US-PATENT-APPL-SN-349782	c 09	N71-16086 *	US-PATENT-APPL-SN-362145	c 32	N75-26194 *	US-PATENT-APPL-SN-375684	c 44	N85-21769 *
US-PATENT-APPL-SN-349899	c 36	N74-13205 *	US-PATENT-APPL-SN-362146	c 33	N75-18479 *	US-PATENT-APPL-SN-375784	c 24	N85-21266 *
US-PATENT-APPL-SN-350249	c 36	N75-15028 *	US-PATENT-APPL-SN-362261	c 14	N73-32325 *	US-PATENT-APPL-SN-375784	c 24	N85-35233 *
US-PATENT-APPL-SN-350250	c 27	N75-27160 *	US-PATENT-APPL-SN-362278	c 37	N78-17385 *	US-PATENT-APPL-SN-376306	c 25	N84-12262 *
US-PATENT-APPL-SN-350300	c 31	N74-32920 *	US-PATENT-APPL-SN-363130	c 25	N81-19244 *	US-PATENT-APPL-SN-376487	c 25	N89-28603 *
US-PATENT-APPL-SN-350471	c 35	N85-29213 *	US-PATENT-APPL-SN-363348	c 05	N70-41581 *	US-PATENT-APPL-SN-376487	c 25	N92-28728 *
US-PATENT-APPL-SN-350472	c 33	N84-14424 *	US-PATENT-APPL-SN-363653	c 07	N70-41331 *	US-PATENT-APPL-SN-376488	c 75	N91-25875 *
US-PATENT-APPL-SN-350473	c 07	N84-22559 *	US-PATENT-APPL-SN-363654	c 07	N70-41372 *	US-PATENT-APPL-SN-376738	c 35	N92-21723 *
US-PATENT-APPL-SN-350474	c 35	N84-22928 *	US-PATENT-APPL-SN-363691	c 20	N76-14190 *	US-PATENT-APPL-SN-377146	c 14	N71-23041 *
US-PATENT-APPL-SN-350475	c 35	N84-28017 *	US-PATENT-APPL-SN-363807	c 35	N91-27522 *	US-PATENT-APPL-SN-377777	c 32	N70-42003 *
US-PATENT-APPL-SN-350476	c 26	N84-22734 *	US-PATENT-APPL-SN-363815	c 33	N91-21432 *	US-PATENT-APPL-SN-377780	c 11	N71-10604 *
US-PATENT-APPL-SN-350477	c 35	N84-37675 *	US-PATENT-APPL-SN-364041	c 76	N85-30923 *	US-PATENT-APPL-SN-377784	c 28	N70-41311 *
US-PATENT-APPL-SN-350813	c 32	N92-21712 *	US-PATENT-APPL-SN-364072	c 70	N84-28565 *	US-PATENT-APPL-SN-377891	c 52	N84-34913 *
US-PATENT-APPL-SN-351259	c 15	N71-10672 *	US-PATENT-APPL-SN-364092	c 76	N83-35888 *	US-PATENT-APPL-SN-377892	c 33	N83-24763 *
US-PATENT-APPL-SN-351929	c 33	N75-14957 *	US-PATENT-APPL-SN-364093	c 37	N83-34323 *	US-PATENT-APPL-SN-378080	c 12	N71-24692 *
US-PATENT-APPL-SN-351950	c 33	N75-27249 *	US-PATENT-APPL-SN-364094	c 37	N84-28083 *	US-PATENT-APPL-SN-378126	c 44	N76-18643 *
US-PATENT-APPL-SN-352381	c 20	N75-18310 *	US-PATENT-APPL-SN-364097	c 71	N82-27086 *	US-PATENT-APPL-SN-378127	c 44	N76-18641 *
US-PATENT-APPL-SN-352381	c 37	N76-14461 *	US-PATENT-APPL-SN-364126	c 36	N84-22943 *	US-PATENT-APPL-SN-378533	c 37	N84-11497 *
US-PATENT-APPL-SN-352382	c 60	N75-13539 *	US-PATENT-APPL-SN-364743	c 37	N91-14608 *	US-PATENT-APPL-SN-378535	c 74	N84-23248 *
US-PATENT-APPL-SN-352383	c 35	N75-16783 *	US-PATENT-APPL-SN-364774	c 37	N91-14616 *	US-PATENT-APPL-SN-378548	c 54	N91-31803 *
US-PATENT-APPL-SN-352400	c 26	N71-10607 *	US-PATENT-APPL-SN-364867	c 09	N71-10673 *	US-PATENT-APPL-SN-379019	c 09	N75-12969 *
US-PATENT-APPL-SN-352821	c 44	N84-28205 *	US-PATENT-APPL-SN-365244	c 37	N78-17386 *	US-PATENT-APPL-SN-379049	c 31	N75-13111 *
US-PATENT-APPL-SN-352827	c 35	N84-28015 *	US-PATENT-APPL-SN-365244	c 07	N72-25174 *	US-PATENT-APPL-SN-379072	c 15	N71-16078 *
US-PATENT-APPL-SN-352827	c 35	N85-21598 *	US-PATENT-APPL-SN-365534	c 21	N73-14692 *	US-PATENT-APPL-SN-379417	c 02	N70-41863 *
US-PATENT-APPL-SN-352831	c 35	N84-16523 *	US-PATENT-APPL-SN-36554	c 35	N77-27367 *	US-PATENT-APPL-SN-379601	c 71	N85-30765 *
US-PATENT-APPL-SN-353162	c 33	N75-26243 *	US-PATENT-APPL-SN-365644	c 35	N74-26946 *	US-PATENT-APPL-SN-379602	c 44	N84-23018 *
US-PATENT-APPL-SN-353411	c 37	N89-28846 *	US-PATENT-APPL-SN-365950	c 27	N83-18908 *	US-PATENT-APPL-SN-379768	c 28	N71-10780 *
US-PATENT-APPL-SN-353632	c 15	N71-13789 *	US-PATENT-APPL-SN-366025	c 27	N84-22744 *	US-PATENT-APPL-SN-379771	c 33	N71-28852 *
US-PATENT-APPL-SN-353634	c 15	N70-41829 *	US-PATENT-APPL-SN-366103	c 76	N84-35112 *	US-PATENT-APPL-SN-380046	c 25	N76-29379 *
US-PATENT-APPL-SN-353637	c 02	N70-34160 *	US-PATENT-APPL-SN-366205	c 35	N91-14590 *	US-PATENT-APPL-SN-380630	c 37	N75-21631 *
US-PATENT-APPL-SN-353644	c 07	N71-23098 *	US-PATENT-APPL-SN-366226	c 10	N71-16057 *	US-PATENT-APPL-SN-380960	c 15	N70-41993 *
US-PATENT-APPL-SN-353645	c 15	N71-15922 *	US-PATENT-APPL-SN-366957	c 27	N90-10261 *	US-PATENT-APPL-SN-380965	c 10	N71-23033 *
US-PATENT-APPL-SN-354060	c 74	N76-19935 *	US-PATENT-APPL-SN-367132	c 32	N85-21427 *	US-PATENT-APPL-SN-381239	c 09	N91-21157 *
US-PATENT-APPL-SN-354126	c 37	N82-22496 *	US-PATENT-APPL-SN-367134	c 44	N83-34449 *	US-PATENT-APPL-SN-381240	c 27	N91-25296 *
US-PATENT-APPL-SN-354182	c 10	N71-20841 *	US-PATENT-APPL-SN-367136	c 35	N85-21596 *	US-PATENT-APPL-SN-381940	c 09	N71-20705 *
US-PATENT-APPL-SN-354406	c 52	N76-14757 *	US-PATENT-APPL-SN-367187	c 04	N84-14132 *	US-PATENT-APPL-SN-382261	c 35	N76-14430 *
US-PATENT-APPL-SN-354407	c 33	N74-22865 *	US-PATENT-APPL-SN-367268	c 05	N75-25914 *	US-PATENT-APPL-SN-382262	c 37	N74-21058 *
US-PATENT-APPL-SN-354408	c 35	N75-19614 *	US-PATENT-APPL-SN-367293	c 36	N75-19655 *	US-PATENT-APPL-SN-38262	c 28	N70-35422 *
US-PATENT-APPL-SN-354611	c 25	N74-26947 *	US-PATENT-APPL-SN-367294	c 76	N75-12810 *	US-PATENT-APPL-SN-382885	c 14	N91-27175 *
US-PATENT-APPL-SN-354612	c 35	N75-30504 *	US-PATENT-APPL-SN-367606	c 75	N75-13625 *	US-PATENT-APPL-SN-382976	c 15	N71-21179 *
US-PATENT-APPL-SN-355126	c 17	N71-15644 *	US-PATENT-APPL-SN-367606	c 75	N76-17951 *	US-PATENT-APPL-SN-383063	c 37	N84-12493 *
US-PATENT-APPL-SN-355129	c 14	N70-41957 *	US-PATENT-APPL-SN-368123	c 09	N71-10618 *	US-PATENT-APPL-SN-383068	c 44	N84-34792 *
US-PATENT-APPL-SN-355130	c 15	N70-40354 *	US-PATENT-APPL-SN-368187	c 54	N84-11758 *	US-PATENT-APPL-SN-383083	c 33	N84-16453 *
US-PATENT-APPL-SN-356488	c 08	N71-19544 *	US-PATENT-APPL-SN-368188	c 33	N84-33663 *	US-PATENT-APPL-SN-383086	c 36	N85-21639 *
US-PATENT-APPL-SN-356554	c 24	N75-33181 *	US-PATENT-APPL-SN-368189	c 18	N84-22605 *	US-PATENT-APPL-SN-383384	c 06	N84-27733 *
US-PATENT-APPL-SN-356555	c 37	N75-19685 *	US-PATENT-APPL-SN-36819	c 23	N72-22673 *	US-PATENT-APPL-SN-384010	c 10	N71-28859 *
US-PATENT-APPL-SN-356664	c 31	N75-12161 *	US-PATENT-APPL-SN-369171	c 36	N93-18287 *	US-PATENT-APPL-SN-384547	c 36	N85-29264 *
US-PATENT-APPL-SN-356692	c 15	N70-41371 *	US-PATENT-APPL-SN-36926	c 28	N72-23810 *	US-PATENT-APPL-SN-384773	c 15	N76-14158 *
US-PATENT-APPL-SN-357126	c 35	N74-34857 *	US-PATENT-APPL-SN-369334	c 21	N71-22380 *	US-PATENT-APPL-SN-384811	c 15	N71-10809 *
US-PATENT-APPL-SN-357312	c 27	N76-16229 *	US-PATENT-APPL-SN-369336	c 09	N71-10659 *	US-PATENT-APPL-SN-385013	c 35	N75-19613 *
US-PATENT-APPL-SN-357334	c 03	N71-12258 *	US-PATENT-APPL-SN-369337	c 15	N70-41811 *	US-PATENT-APPL-SN-385059	c 33	N77-21315 *
US-PATENT-APPL-SN-357336	c 03	N71-12259 *	US-PATENT-APPL-SN-369338	c 08	N71-28925 *	US-PATENT-APPL-SN-385220	c 36	N85-30305 *
US-PATENT-APPL-SN-357337	c 15	N71-10782 *	US-PATENT-APPL-SN-369403	c 35	N91-14588 *	US-PATENT-APPL-SN-385520	c 14	N71-23037 *
US-PATENT-APPL-SN-357340	c 23	N71-15673 *	US-PATENT-APPL-SN-369490	c 19	N91-14412 *	US-PATENT-APPL-SN-385522	c 34	N75-33342 *
US-PATENT-APPL-SN-357757	c 14	N91-21176 *	US-PATENT-APPL-SN-369640	c 32	N70-41370 *	US-PATENT-APPL-SN-385526	c 12	N71-16031 *
US-PATENT-APPL-SN-357758	c 76	N91-28014 *	US-PATENT-APPL-SN-3696	c 10	N72-20224 *	US-PATENT-APPL-SN-385527	c 31	N71-17729 *
US-PATENT-APPL-SN-357759	c 62	N92-15620 *	US-PATENT-APPL-SN-370134	c 30	N70-40353 *	US-PATENT-APPL-SN-385530	c 09	N71-10798 *
US-PATENT-APPL-SN-357928	c 60	N92-29132 *	US-PATENT-APPL-SN-370135	c 11	N70-41677 *	US-PATENT-APPL-SN-386172	c 24	N91-14430 *
US-PATENT-APPL-SN-357938	c 45	N91-14662 *	US-PATENT-APPL-SN-370255	c 33	N75-18477 *	US-PATENT-APPL-SN-386174	c 75	N90-10717 *
US-PATENT-APPL-SN-358027	c 35	N91-14587 *	US-PATENT-APPL-SN-370271	c				

# REPORT NUMBER INDEX

# US-PATENT-APPL-SN-426455

US-PATENT-APPL-SN-386789	c 35	N75-12271 *	US-PATENT-APPL-SN-397281	c 76	N83-34796 *	US-PATENT-APPL-SN-41345	c 09	N72-29172 *
US-PATENT-APPL-SN-386790	c 09	N75-12968 *	US-PATENT-APPL-SN-397476	c 34	N75-12222 *	US-PATENT-APPL-SN-41346	c 15	N72-24522 *
US-PATENT-APPL-SN-386793	c 35	N75-25124 *	US-PATENT-APPL-SN-397477	c 33	N75-19517 *	US-PATENT-APPL-SN-41347	c 09	N72-25256 *
US-PATENT-APPL-SN-386800	c 15	N71-21404 *	US-PATENT-APPL-SN-397478	c 52	N75-33640 *	US-PATENT-APPL-SN-41348	c 09	N72-23173 *
US-PATENT-APPL-SN-387094	c 37	N77-19457 *	US-PATENT-APPL-SN-397555	c 08	N72-21198 *	US-PATENT-APPL-SN-413661	c 15	N71-23024 *
US-PATENT-APPL-SN-387095	c 37	N75-33395 *	US-PATENT-APPL-SN-397665	c 10	N70-41991 *	US-PATENT-APPL-SN-413662	c 09	N70-41929 *
US-PATENT-APPL-SN-387266	c 35	N75-27328 *	US-PATENT-APPL-SN-398131	c 05	N70-41297 *	US-PATENT-APPL-SN-414042	c 35	N79-17192 *
US-PATENT-APPL-SN-387332	c 15	N70-33226 *	US-PATENT-APPL-SN-398132	c 15	N70-41808 *	US-PATENT-APPL-SN-414043	c 27	N76-32315 *
US-PATENT-APPL-SN-387342	c 37	N76-18457 *	US-PATENT-APPL-SN-398885	c 27	N76-15310 *	US-PATENT-APPL-SN-414044	c 03	N73-20039 *
US-PATENT-APPL-SN-387646	c 37	N85-30336 *	US-PATENT-APPL-SN-398886	c 07	N75-24736 *	US-PATENT-APPL-SN-414106	c 54	N84-16803 *
US-PATENT-APPL-SN-387647	c 33	N85-34333 *	US-PATENT-APPL-SN-398901	c 37	N75-25186 *	US-PATENT-APPL-SN-414107	c 35	N84-22932 *
US-PATENT-APPL-SN-387648	c 37	N85-21650 *	US-PATENT-APPL-SN-399074	c 33	N88-14271 *	US-PATENT-APPL-SN-414237	c 35	N85-30282 *
US-PATENT-APPL-SN-387649	c 09	N85-19990 *	US-PATENT-APPL-SN-399419	c 21	N71-23289 *	US-PATENT-APPL-SN-41430	c 10	N72-20221 *
US-PATENT-APPL-SN-387728	c 37	N84-28084 *	US-PATENT-APPL-SN-400467	c 33	N75-30431 *	US-PATENT-APPL-SN-41431	c 37	N77-27400 *
US-PATENT-APPL-SN-387928	c 76	N90-17456 *	US-PATENT-APPL-SN-400613	c 15	N71-21528 *	US-PATENT-APPL-SN-414482	c 10	N71-10578 *
US-PATENT-APPL-SN-387928	c 76	N92-22040 *	US-PATENT-APPL-SN-400617	c 31	N71-17629 *	US-PATENT-APPL-SN-41455	c 02	N70-33255 *
US-PATENT-APPL-SN-387928	c 76	N92-22041 *	US-PATENT-APPL-SN-400857	c 31	N79-21225 *	US-PATENT-APPL-SN-414811	c 32	N92-22033 *
US-PATENT-APPL-SN-388023	c 10	N70-41964 *	US-PATENT-APPL-SN-401224	c 38	N78-17396 *	US-PATENT-APPL-SN-414812	c 35	N90-17104 *
US-PATENT-APPL-SN-388024	c 32	N71-17609 *	US-PATENT-APPL-SN-401225	c 38	N78-17395 *	US-PATENT-APPL-SN-414815	c 33	N91-26438 *
US-PATENT-APPL-SN-38814	c 15	N72-11385 *	US-PATENT-APPL-SN-401282	c 18	N85-29991 *	US-PATENT-APPL-SN-414816	c 37	N91-14617 *
US-PATENT-APPL-SN-38816	c 70	N74-13436 *	US-PATENT-APPL-SN-401288	c 37	N84-28081 *	US-PATENT-APPL-SN-414820	c 33	N90-17010 *
US-PATENT-APPL-SN-38816	c 74	N78-15879 *	US-PATENT-APPL-SN-401466	c 09	N75-24758 *	US-PATENT-APPL-SN-415486	c 37	N75-19683 *
US-PATENT-APPL-SN-388264	c 37	N91-14614 *	US-PATENT-APPL-SN-401919	c 24	N76-24363 *	US-PATENT-APPL-SN-415878	c 08	N86-27288 *
US-PATENT-APPL-SN-388966	c 31	N70-41855 *	US-PATENT-APPL-SN-401920	c 37	N75-25185 *	US-PATENT-APPL-SN-415879	c 37	N85-21652 *
US-PATENT-APPL-SN-388967	c 10	N71-23271 *	US-PATENT-APPL-SN-401921	c 24	N76-14203 *	US-PATENT-APPL-SN-415880	c 27	N84-27884 *
US-PATENT-APPL-SN-389916	c 18	N75-27041 *	US-PATENT-APPL-SN-402205	c 33	N85-30187 *	US-PATENT-APPL-SN-415960	c 37	N85-20337 *
US-PATENT-APPL-SN-389929	c 33	N75-25040 *	US-PATENT-APPL-SN-402365	c 31	N71-17730 *	US-PATENT-APPL-SN-416135	c 32	N75-15854 *
US-PATENT-APPL-SN-390049	c 37	N76-16446 *	US-PATENT-APPL-SN-402865	c 33	N74-32660 *	US-PATENT-APPL-SN-416938	c 11	N71-10746 *
US-PATENT-APPL-SN-390049	c 44	N76-29700 *	US-PATENT-APPL-SN-402867	c 35	N75-33367 *	US-PATENT-APPL-SN-416940	c 21	N71-21708 *
US-PATENT-APPL-SN-390250	c 21	N70-41856 *	US-PATENT-APPL-SN-402868	c 35	N75-19612 *	US-PATENT-APPL-SN-416941	c 31	N70-34159 *
US-PATENT-APPL-SN-390251	c 07	N71-23026 *	US-PATENT-APPL-SN-402978	c 10	N71-23084 *	US-PATENT-APPL-SN-416943	c 14	N71-23269 *
US-PATENT-APPL-SN-390466	c 24	N75-13032 *	US-PATENT-APPL-SN-403154	c 37	N77-22480 *	US-PATENT-APPL-SN-416945	c 10	N71-23543 *
US-PATENT-APPL-SN-390468	c 36	N75-19652 *	US-PATENT-APPL-SN-403371	c 27	N82-33523 *	US-PATENT-APPL-SN-416946	c 28	N71-15563 *
US-PATENT-APPL-SN-391343	c 05	N69-21473 *	US-PATENT-APPL-SN-403378	c 26	N84-33555 *	US-PATENT-APPL-SN-417253	c 11	N71-23042 *
US-PATENT-APPL-SN-391692	c 23	N91-14419 *	US-PATENT-APPL-SN-403694	c 54	N75-12616 *	US-PATENT-APPL-SN-418137	c 16	N84-22601 *
US-PATENT-APPL-SN-39185	c 16	N72-25485 *	US-PATENT-APPL-SN-403695	c 35	N77-20399 *	US-PATENT-APPL-SN-418138	c 16	N84-27784 *
US-PATENT-APPL-SN-391896	c 43	N91-32546 *	US-PATENT-APPL-SN-403847	c 31	N83-35176 *	US-PATENT-APPL-SN-418139	c 24	N84-27829 *
US-PATENT-APPL-SN-391911	c 54	N91-14724 *	US-PATENT-APPL-SN-403848	c 33	N85-21493 *	US-PATENT-APPL-SN-418320	c 03	N91-31113 *
US-PATENT-APPL-SN-392092	c 51	N84-28361 *	US-PATENT-APPL-SN-403849	c 35	N87-21304 *	US-PATENT-APPL-SN-418362	c 14	N71-20741 *
US-PATENT-APPL-SN-392093	c 33	N88-23941 *	US-PATENT-APPL-SN-403958	c 14	N70-41994 *	US-PATENT-APPL-SN-418372	c 27	N91-13562 *
US-PATENT-APPL-SN-392094	c 37	N85-29283 *	US-PATENT-APPL-SN-403960	c 14	N70-41366 *	US-PATENT-APPL-SN-418373	c 33	N91-27479 *
US-PATENT-APPL-SN-392096	c 02	N84-11136 *	US-PATENT-APPL-SN-404212	c 14	N73-32324 *	US-PATENT-APPL-SN-418374	c 35	N91-14591 *
US-PATENT-APPL-SN-392103	c 44	N84-28204 *	US-PATENT-APPL-SN-404288	c 33	N91-14536 *	US-PATENT-APPL-SN-418611	c 27	N91-27372 *
US-PATENT-APPL-SN-392104	c 37	N85-20338 *	US-PATENT-APPL-SN-404289	c 26	N91-14462 *	US-PATENT-APPL-SN-418612	c 33	N91-14550 *
US-PATENT-APPL-SN-392165	c 71	N91-27913 *	US-PATENT-APPL-SN-404290	c 34	N91-14563 *	US-PATENT-APPL-SN-418931	c 05	N70-42000 *
US-PATENT-APPL-SN-392166	c 24	N92-18561 *	US-PATENT-APPL-SN-404291	c 74	N91-21871 *	US-PATENT-APPL-SN-418933	c 15	N71-23022 *
US-PATENT-APPL-SN-392174	c 54	N91-26747 *	US-PATENT-APPL-SN-404292	c 37	N91-14609 *	US-PATENT-APPL-SN-419319	c 34	N76-17317 *
US-PATENT-APPL-SN-392228	c 54	N91-14723 *	US-PATENT-APPL-SN-404293	c 32	N90-16104 *	US-PATENT-APPL-SN-419554	c 23	N91-25185 *
US-PATENT-APPL-SN-392235	c 37	N91-21542 *	US-PATENT-APPL-SN-404809	c 27	N84-27885 *	US-PATENT-APPL-SN-419747	c 17	N76-21250 *
US-PATENT-APPL-SN-392239	c 33	N91-14552 *	US-PATENT-APPL-SN-404809	c 25	N85-28982 *	US-PATENT-APPL-SN-419748	c 27	N76-14264 *
US-PATENT-APPL-SN-392823	c 25	N74-33378 *	US-PATENT-APPL-SN-405154	c 37	N91-21539 *	US-PATENT-APPL-SN-419831	c 35	N75-21582 *
US-PATENT-APPL-SN-392944	c 76	N85-29800 *	US-PATENT-APPL-SN-405168	c 70	N91-21824 *	US-PATENT-APPL-SN-419831	c 35	N77-17426 *
US-PATENT-APPL-SN-392965	c 18	N71-22998 *	US-PATENT-APPL-SN-405169	c 33	N91-14538 *	US-PATENT-APPL-SN-420022	c 15	N70-35409 *
US-PATENT-APPL-SN-392969	c 09	N71-23573 *	US-PATENT-APPL-SN-405341	c 37	N76-15460 *	US-PATENT-APPL-SN-420245	c 08	N71-22749 *
US-PATENT-APPL-SN-392970	c 32	N70-41367 *	US-PATENT-APPL-SN-405342	c 35	N75-19615 *	US-PATENT-APPL-SN-420250	c 15	N71-23051 *
US-PATENT-APPL-SN-392973	c 07	N71-23001 *	US-PATENT-APPL-SN-405346	c 37	N75-30562 *	US-PATENT-APPL-SN-420424	c 34	N75-26282 *
US-PATENT-APPL-SN-392992	c 15	N71-23052 *	US-PATENT-APPL-SN-405629	c 09	N71-10677 *	US-PATENT-APPL-SN-420466	c 14	N71-23092 *
US-PATENT-APPL-SN-39342	c 09	N72-25252 *	US-PATENT-APPL-SN-405630	c 14	N71-10616 *	US-PATENT-APPL-SN-420813	c 36	N75-32441 *
US-PATENT-APPL-SN-39343	c 34	N74-18552 *	US-PATENT-APPL-SN-405632	c 21	N71-15582 *	US-PATENT-APPL-SN-42088	c 34	N78-17336 *
US-PATENT-APPL-SN-39344	c 14	N72-25409 *	US-PATENT-APPL-SN-406097	c 14	N71-21088 *	US-PATENT-APPL-SN-421702	c 44	N75-32581 *
US-PATENT-APPL-SN-393451	c 02	N70-42016 *	US-PATENT-APPL-SN-406296	c 25	N79-10163 *	US-PATENT-APPL-SN-421702	c 44	N76-23675 *
US-PATENT-APPL-SN-393456	c 33	N83-16633 *	US-PATENT-APPL-SN-406715	c 35	N75-15014 *	US-PATENT-APPL-SN-422092	c 14	N71-22989 *
US-PATENT-APPL-SN-393461	c 31	N71-17691 *	US-PATENT-APPL-SN-406820	c 74	N86-32266 *	US-PATENT-APPL-SN-422095	c 07	N71-10676 *
US-PATENT-APPL-SN-393464	c 23	N71-21821 *	US-PATENT-APPL-SN-407240	c 27	N83-34041 *	US-PATENT-APPL-SN-422096	c 03	N71-29044 *
US-PATENT-APPL-SN-393523	c 12	N75-24774 *	US-PATENT-APPL-SN-407240	c 27	N85-20124 *	US-PATENT-APPL-SN-422097	c 11	N71-21481 *
US-PATENT-APPL-SN-393524	c 60	N76-21914 *	US-PATENT-APPL-SN-407323	c 32	N75-21485 *	US-PATENT-APPL-SN-422098	c 15	N71-22797 *
US-PATENT-APPL-SN-393525	c 31	N74-32917 *	US-PATENT-APPL-SN-407595	c 28	N70-41992 *	US-PATENT-APPL-SN-422099	c 14	N71-22964 *
US-PATENT-APPL-SN-393526	c 77	N75-20139 *	US-PATENT-APPL-SN-407599	c 14	N71-21091 *	US-PATENT-APPL-SN-422726	c 71	N91-27914 *
US-PATENT-APPL-SN-393527	c 15	N75-13007 *	US-PATENT-APPL-SN-407603	c 05	N71-11199 *	US-PATENT-APPL-SN-422864	c 05	N69-21925 *
US-PATENT-APPL-SN-393528	c 36	N75-19654 *	US-PATENT-APPL-SN-408435	c 15	N71-28937 *	US-PATENT-APPL-SN-422865	c 31	N70-41631 *
US-PATENT-APPL-SN-393581	c 54	N84-23113 *	US-PATENT-APPL-SN-408438	c 07	N71-22750 *	US-PATENT-APPL-SN-422867	c 15	N70-40062 *
US-PATENT-APPL-SN-393582	c 37	N85-21649 *	US-PATENT-APPL-SN-408442	c 10	N71-23662 *	US-PATENT-APPL-SN-422868	c 15	N71-10617 *
US-PATENT-APPL-SN-393583	c 27	N83-29392 *	US-PATENT-APPL-SN-408575	c 35	N83-32026 *	US-PATENT-APPL-SN-422869	c 14	N71-10779 *
US-PATENT-APPL-SN-393584	c 37	N85-30334 *	US-PATENT-APPL-SN-409126	c 18	N71-21068 *	US-PATENT-APPL-SN-423016	c 36	N85-21631 *
US-PATENT-APPL-SN-393585	c 37	N82-31690 *	US-PATENT-APPL-SN-409678	c 09	N84-27749 *	US-PATENT-APPL-SN-423412	c 08	N71-22897 *
US-PATENT-APPL-SN-393586	c 54	N84-28484 *	US-PATENT-APPL-SN-409679	c 33	N82-33634 *	US-PATENT-APPL-SN-424013	c 34	N76-27517 *
US-PATENT-APPL-SN-393588	c 25	N84-16276 *	US-PATENT-APPL-SN-409679	c 33	N84-22884 *	US-PATENT-APPL-SN-424038	c 24	N75-30260 *
US-PATENT-APPL-SN-394149	c 35	N75-25123 *	US-PATENT-APPL-SN-409680	c 35	N85-20294 *	US-PATENT-APPL-SN-424153	c 15	N71-21234 *
US-PATENT-APPL-SN-394206	c 76	N75-25730 *	US-PATENT-APPL-SN-409990	c 35	N75-27330 *	US-PATENT-APPL-SN-424156	c 02	N71-23007 *
US-PATENT-APPL-SN-394207	c 25	N78-27226 *	US-PATENT-APPL-SN-409991	c 33	N75-13139 *	US-PATENT-APPL-SN-424157	c 28	N70-41275 *
US-PATENT-APPL-SN-394280	c 54	N82-29002 *	US-PATENT-APPL-SN-410325	c 18	N71-23088 *	US-PATENT-APPL-SN-425096	c 05	N71-23080 *
US-PATENT-APPL-SN-394343	c 52	N91-14709 *	US-PATENT-APPL-SN-410326	c 09	N71-21449 *	US-PATENT-APPL-SN-425201	c 04	N86-19304 *
US-PATENT-APPL-SN-394638	c 28	N70-34162 *	US-PATENT-APPL-SN-410330	c 26	N71-23043 *	US-PATENT-APPL-SN-425202	c 74	N85-34629 *
US-PATENT-APPL-SN-394898	c 07	N77-28118 *	US-PATENT-APPL-SN-410331	c 02	N70-41589 *	US-PATENT-APPL-SN-425203	c 35	N84-22930 *
US-PATENT-APPL-SN-395348	c 15	N71-22713 *	US-PATENT-APPL-SN-410332	c 14	N71-23039 *	US-PATENT-APPL-SN-425204	c 32	N85-29117 *
US-PATENT-APPL-SN-395493	c 37	N79-13364 *	US-PATENT-APPL-SN-410572	c 27	N90-15259 *	US-PATENT-APPL-SN-425205	c 35	N85-21595 *
US-PATENT-APPL-SN-395495	c 54	N75-27759 *	US-PATENT-APPL-SN-410576	c 24	N91-31236 *	US-PATENT-APPL-SN-425362	c 15	N71-10658 *
US-PATENT-APPL-SN-395687	c 37	N75-18573 *	US-PATENT-APPL-SN-411572	c 35	N75-15932 *	US-PATENT-APPL-SN-425363	c 09	N71-20658 *
US-PATENT-APPL-SN-395688	c 33	N75-19516 *	US-PATENT-APPL-SN-411944	c 15	N70-41629 *	US-PATENT-APPL-SN-425364	c 33	N71-15623 *
US-PATENT-APPL-SN-395895	c 36	N78-17366 *	US-PATENT-APPL-SN-411945	c 18	N71-23047 *	US-PATENT-APPL-SN-425365	c 32	N71-21045 *
US-PATENT-APPL-SN-396262	c 31	N91-14508 *	US-PATENT-APPL-SN-411949	c 27	N71-15635 *	US-PATENT-APPL-SN-425972	c 03	N71-23006 *
US-PATENT-APPL-SN-396263	c 35	N90-23712 *	US-PATENT-APPL-SN-412039	c 06	N84-34443 *	US-PATENT-APPL-SN-426155	c 33	N75-15874 *
US-PATENT-APPL-SN-396443	c 15	N71-15986 *	US-PATENT-APPL-SN-412079	c 37	N75-13266 *	US-PATENT-APPL-SN-426345	c 25	N90-15161 *

## US-PATENT-APPL-SN-426702

## REPORT NUMBER INDEX

US-PATENT-APPL-SN-426702	c 15	N70-42034 *	US-PATENT-APPL-SN-441936	c 14	N69-39975 *	US-PATENT-APPL-SN-458280	c 60	N93-29608 *
US-PATENT-APPL-SN-427395	c 54	N75-27760 *	US-PATENT-APPL-SN-442558	c 15	N71-10799 *	US-PATENT-APPL-SN-458467	c 76	N90-17454 *
US-PATENT-APPL-SN-427775	c 27	N76-22376 *	US-PATENT-APPL-SN-442815	c 76	N87-23286 *	US-PATENT-APPL-SN-458476	c 18	N92-21999 *
US-PATENT-APPL-SN-427990	c 06	N71-23527 *	US-PATENT-APPL-SN-442835	c 26	N71-29156 *	US-PATENT-APPL-SN-458484	c 44	N76-14595 *
US-PATENT-APPL-SN-428444	c 44	N76-18642 *	US-PATENT-APPL-SN-443289	c 27	N92-10090 *	US-PATENT-APPL-SN-459029	c 37	N91-21544 *
US-PATENT-APPL-SN-428444	c 44	N76-29704 *	US-PATENT-APPL-SN-443297	c 33	N91-14539 *	US-PATENT-APPL-SN-459138	c 14	N71-10773 *
US-PATENT-APPL-SN-428882	c 31	N70-41948 *	US-PATENT-APPL-SN-443406	c 25	N91-21270 *	US-PATENT-APPL-SN-459407	c 14	N73-30391 *
US-PATENT-APPL-SN-428887	c 33	N71-29051 *	US-PATENT-APPL-SN-443414	c 27	N92-10091 *	US-PATENT-APPL-SN-459736	c 33	N75-26245 *
US-PATENT-APPL-SN-428890	c 02	N70-41630 *	US-PATENT-APPL-SN-443522	c 33	N92-22042 *	US-PATENT-APPL-SN-459842	c 35	N85-30281 *
US-PATENT-APPL-SN-428992	c 34	N77-18382 *	US-PATENT-APPL-SN-443523	c 20	N92-10054 *	US-PATENT-APPL-SN-460509	c 37	N84-33807 *
US-PATENT-APPL-SN-428993	c 45	N75-27585 *	US-PATENT-APPL-SN-443539	c 32	N91-25318 *	US-PATENT-APPL-SN-460733	c 37	N83-20154 *
US-PATENT-APPL-SN-428994	c 32	N75-21486 *	US-PATENT-APPL-SN-444087	c 02	N71-11041 *	US-PATENT-APPL-SN-460876	c 09	N69-21470 *
US-PATENT-APPL-SN-428994	c 32	N76-16249 *	US-PATENT-APPL-SN-444124	c 52	N84-23095 *	US-PATENT-APPL-SN-460877	c 33	N71-23085 *
US-PATENT-APPL-SN-428995	c 51	N75-25503 *	US-PATENT-APPL-SN-444125	c 20	N83-17588 *	US-PATENT-APPL-SN-461073	c 33	N75-26246 *
US-PATENT-APPL-SN-429437	c 35	N75-23910 *	US-PATENT-APPL-SN-444149	c 47	N84-28292 *	US-PATENT-APPL-SN-461477	c 37	N75-19686 *
US-PATENT-APPL-SN-429514	c 24	N93-13416 *	US-PATENT-APPL-SN-444150	c 35	N84-22933 *	US-PATENT-APPL-SN-461724	c 31	N85-21404 *
US-PATENT-APPL-SN-429515	c 14	N92-15081 *	US-PATENT-APPL-SN-445178	c 37	N76-15461 *	US-PATENT-APPL-SN-461765	c 17	N71-23046 *
US-PATENT-APPL-SN-429516	c 05	N92-21587 *	US-PATENT-APPL-SN-445292	c 11	N71-23030 *	US-PATENT-APPL-SN-461788	c 27	N85-21349 *
US-PATENT-APPL-SN-429574	c 27	N93-29083 *	US-PATENT-APPL-SN-445398	c 74	N78-15880 *	US-PATENT-APPL-SN-462341	c 44	N76-31666 *
US-PATENT-APPL-SN-429734	c 04	N91-14321 *	US-PATENT-APPL-SN-445807	c 14	N71-22996 *	US-PATENT-APPL-SN-462424	c 24	N77-19171 *
US-PATENT-APPL-SN-429737	c 34	N90-27071 *	US-PATENT-APPL-SN-446071	c 25	N82-29370 *	US-PATENT-APPL-SN-462497	c 25	N85-21279 *
US-PATENT-APPL-SN-429739	c 25	N92-33009 *	US-PATENT-APPL-SN-446131	c 14	N71-22992 *	US-PATENT-APPL-SN-462508	c 35	N86-19580 *
US-PATENT-APPL-SN-429739	c 24	N93-29023 *	US-PATENT-APPL-SN-446560	c 12	N76-15189 *	US-PATENT-APPL-SN-462705	c 37	N75-19684 *
US-PATENT-APPL-SN-429932	c 05	N71-20268 *	US-PATENT-APPL-SN-446562	c 36	N76-14447 *	US-PATENT-APPL-SN-462762	c 12	N69-21466 *
US-PATENT-APPL-SN-430192	c 18	N71-27170 *	US-PATENT-APPL-SN-446564	c 35	N75-26334 *	US-PATENT-APPL-SN-462763	c 14	N71-22991 *
US-PATENT-APPL-SN-430226	c 18	N71-23658 *	US-PATENT-APPL-SN-446567	c 34	N76-27515 *	US-PATENT-APPL-SN-462844	c 33	N75-19520 *
US-PATENT-APPL-SN-430470	c 27	N90-26955 *	US-PATENT-APPL-SN-446568	c 37	N76-23570 *	US-PATENT-APPL-SN-462903	c 37	N76-14641 *
US-PATENT-APPL-SN-430496	c 26	N75-29236 *	US-PATENT-APPL-SN-446569	c 77	N75-20140 *	US-PATENT-APPL-SN-463456	c 37	N85-30333 *
US-PATENT-APPL-SN-430748	c 76	N79-21910 *	US-PATENT-APPL-SN-447124	c 35	N75-30503 *	US-PATENT-APPL-SN-463720	c 62	N91-32852 *
US-PATENT-APPL-SN-430776	c 03	N70-41954 *	US-PATENT-APPL-SN-447371	c 27	N84-22746 *	US-PATENT-APPL-SN-463925	c 74	N76-30053 *
US-PATENT-APPL-SN-430777	c 18	N71-24184 *	US-PATENT-APPL-SN-447927	c 11	N71-10776 *	US-PATENT-APPL-SN-464720	c 32	N76-16249 *
US-PATENT-APPL-SN-430778	c 03	N71-10728 *	US-PATENT-APPL-SN-447928	c 15	N71-10577 *	US-PATENT-APPL-SN-464721	c 37	N76-16249 *
US-PATENT-APPL-SN-430780	c 03	N71-12260 *	US-PATENT-APPL-SN-447930	c 14	N69-39896 *	US-PATENT-APPL-SN-464722	c 35	N76-22509 *
US-PATENT-APPL-SN-431235	c 15	N71-16052 *	US-PATENT-APPL-SN-447933	c 03	N69-21337 *	US-PATENT-APPL-SN-464723	c 33	N75-30429 *
US-PATENT-APPL-SN-431420	c 37	N85-29282 *	US-PATENT-APPL-SN-448320	c 91	N76-30131 *	US-PATENT-APPL-SN-464878	c 10	N71-22986 *
US-PATENT-APPL-SN-431448	c 37	N84-22957 *	US-PATENT-APPL-SN-448321	c 27	N78-32261 *	US-PATENT-APPL-SN-464879	c 14	N71-21072 *
US-PATENT-APPL-SN-431538	c 18	N91-27200 *	US-PATENT-APPL-SN-448323	c 18	N76-17185 *	US-PATENT-APPL-SN-464880	c 33	N71-21586 *
US-PATENT-APPL-SN-431886	c 18	N84-27787 *	US-PATENT-APPL-SN-448325	c 33	N75-26244 *	US-PATENT-APPL-SN-464885	c 15	N71-22997 *
US-PATENT-APPL-SN-432025	c 15	N71-21531 *	US-PATENT-APPL-SN-448365	c 10	N71-26414 *	US-PATENT-APPL-SN-465363	c 52	N84-28389 *
US-PATENT-APPL-SN-432026	c 07	N71-23405 *	US-PATENT-APPL-SN-448881	c 32	N85-29118 *	US-PATENT-APPL-SN-465364	c 44	N85-20530 *
US-PATENT-APPL-SN-432027	c 21	N70-41930 *	US-PATENT-APPL-SN-448898	c 15	N70-41310 *	US-PATENT-APPL-SN-465365	c 43	N86-19711 *
US-PATENT-APPL-SN-432028	c 15	N71-22723 *	US-PATENT-APPL-SN-449118	c 33	N75-19524 *	US-PATENT-APPL-SN-465366	c 27	N85-20126 *
US-PATENT-APPL-SN-432030	c 12	N71-20896 *	US-PATENT-APPL-SN-449153	c 54	N75-27761 *	US-PATENT-APPL-SN-465367	c 27	N84-22748 *
US-PATENT-APPL-SN-432032	c 15	N69-24322 *	US-PATENT-APPL-SN-449209	c 39	N92-29155 *	US-PATENT-APPL-SN-465369	c 76	N86-28760 *
US-PATENT-APPL-SN-432057	c 33	N84-14423 *	US-PATENT-APPL-SN-449210	c 27	N90-26956 *	US-PATENT-APPL-SN-465370	c 52	N83-29991 *
US-PATENT-APPL-SN-432433	c 15	N71-22705 *	US-PATENT-APPL-SN-449211	c 39	N92-29101 *	US-PATENT-APPL-SN-466390	c 28	N71-20330 *
US-PATENT-APPL-SN-433196	c 44	N84-23019 *	US-PATENT-APPL-SN-449211	c 39	N92-29101 *	US-PATENT-APPL-SN-466686	c 22	N71-23599 *
US-PATENT-APPL-SN-433227	c 15	N72-26371 *	US-PATENT-APPL-SN-449901	c 28	N70-41967 *	US-PATENT-APPL-SN-466873	c 17	N71-20743 *
US-PATENT-APPL-SN-433598	c 27	N84-22747 *	US-PATENT-APPL-SN-449902	c 14	N70-41681 *	US-PATENT-APPL-SN-466875	c 08	N71-22707 *
US-PATENT-APPL-SN-433804	c 16	N90-16781 *	US-PATENT-APPL-SN-450166	c 33	N84-27975 *	US-PATENT-APPL-SN-467820	c 28	N71-26779 *
US-PATENT-APPL-SN-433812	c 27	N92-33008 *	US-PATENT-APPL-SN-450319	c 33	N84-33661 *	US-PATENT-APPL-SN-468614	c 60	N77-14751 *
US-PATENT-APPL-SN-433821	c 09	N71-16089 *	US-PATENT-APPL-SN-450500	c 37	N76-18455 *	US-PATENT-APPL-SN-468614	c 60	N77-32731 *
US-PATENT-APPL-SN-433863	c 24	N91-17145 *	US-PATENT-APPL-SN-450502	c 37	N76-18456 *	US-PATENT-APPL-SN-468614	c 60	N78-10709 *
US-PATENT-APPL-SN-433881	c 37	N92-10197 *	US-PATENT-APPL-SN-450504	c 23	N77-17161 *	US-PATENT-APPL-SN-468647	c 21	N71-10771 *
US-PATENT-APPL-SN-433968	c 33	N75-25041 *	US-PATENT-APPL-SN-450505	c 37	N75-31446 *	US-PATENT-APPL-SN-468655	c 15	N69-21471 *
US-PATENT-APPL-SN-434084	c 33	N84-27974 *	US-PATENT-APPL-SN-450505	c 33	N75-31330 *	US-PATENT-APPL-SN-469011	c 11	N69-21540 *
US-PATENT-APPL-SN-434085	c 33	N85-29145 *	US-PATENT-APPL-SN-451596	c 17	N71-29137 *	US-PATENT-APPL-SN-469012	c 25	N71-20747 *
US-PATENT-APPL-SN-434087	c 27	N86-19457 *	US-PATENT-APPL-SN-451896	c 26	N86-32513 *	US-PATENT-APPL-SN-469013	c 14	N69-27423 *
US-PATENT-APPL-SN-434143	c 15	N71-15871 *	US-PATENT-APPL-SN-452464	c 24	N84-11213 *	US-PATENT-APPL-SN-469371	c 05	N86-19310 *
US-PATENT-APPL-SN-434148	c 31	N71-24750 *	US-PATENT-APPL-SN-452465	c 25	N90-11824 *	US-PATENT-APPL-SN-469864	c 37	N86-19605 *
US-PATENT-APPL-SN-434195	c 27	N92-22044 *	US-PATENT-APPL-SN-452466	c 03	N84-33394 *	US-PATENT-APPL-SN-469866	c 27	N84-22749 *
US-PATENT-APPL-SN-434672	c 34	N84-14461 *	US-PATENT-APPL-SN-452761	c 33	N75-19522 *	US-PATENT-APPL-SN-470113	c 17	N87-16863 *
US-PATENT-APPL-SN-434674	c 34	N83-35307 *	US-PATENT-APPL-SN-452767	c 05	N75-25915 *	US-PATENT-APPL-SN-470114	c 25	N83-24572 *
US-PATENT-APPL-SN-435387	c 10	N70-42032 *	US-PATENT-APPL-SN-452768	c 52	N76-30793 *	US-PATENT-APPL-SN-470428	c 33	N76-16332 *
US-PATENT-APPL-SN-435433	c 14	N71-30026 *	US-PATENT-APPL-SN-452769	c 44	N76-16612 *	US-PATENT-APPL-SN-470429	c 33	N75-31329 *
US-PATENT-APPL-SN-435511	c 27	N84-27886 *	US-PATENT-APPL-SN-452770	c 33	N75-31332 *	US-PATENT-APPL-SN-470480	c 20	N92-15122 *
US-PATENT-APPL-SN-435756	c 12	N71-16894 *	US-PATENT-APPL-SN-452944	c 18	N71-24183 *	US-PATENT-APPL-SN-47061	c 26	N72-25680 *
US-PATENT-APPL-SN-436313	c 54	N77-32721 *	US-PATENT-APPL-SN-452945	c 18	N69-39979 *	US-PATENT-APPL-SN-47062	c 15	N72-17451 *
US-PATENT-APPL-SN-436315	c 26	N75-19408 *	US-PATENT-APPL-SN-453115	c 32	N76-14321 *	US-PATENT-APPL-SN-47063	c 33	N72-25911 *
US-PATENT-APPL-SN-436316	c 20	N76-14191 *	US-PATENT-APPL-SN-453225	c 15	N71-24833 *	US-PATENT-APPL-SN-47063	c 33	N73-25952 *
US-PATENT-APPL-SN-436317	c 37	N76-24575 *	US-PATENT-APPL-SN-453227	c 31	N71-10582 *	US-PATENT-APPL-SN-470663	c 37	N91-21543 *
US-PATENT-APPL-SN-437556	c 27	N76-16230 *	US-PATENT-APPL-SN-453229	c 17	N71-23828 *	US-PATENT-APPL-SN-470665	c 43	N91-14642 *
US-PATENT-APPL-SN-437611	c 09	N71-22796 *	US-PATENT-APPL-SN-453231	c 23	N71-15467 *	US-PATENT-APPL-SN-470902	c 06	N71-28808 *
US-PATENT-APPL-SN-437912	c 33	N85-29142 *	US-PATENT-APPL-SN-453232	c 15	N71-21311 *	US-PATENT-APPL-SN-471154	c 09	N73-28084 *
US-PATENT-APPL-SN-437917	c 60	N85-33701 *	US-PATENT-APPL-SN-453232	c 18	N75-19329 *	US-PATENT-APPL-SN-47120	c 31	N70-33242 *
US-PATENT-APPL-SN-438135	c 09	N71-23027 *	US-PATENT-APPL-SN-453241	c 33	N75-29318 *	US-PATENT-APPL-SN-47121	c 09	N70-39915 *
US-PATENT-APPL-SN-438147	c 75	N76-14931 *	US-PATENT-APPL-SN-455163	c 32	N75-26195 *	US-PATENT-APPL-SN-47122	c 14	N70-34813 *
US-PATENT-APPL-SN-438446	c 74	N86-20126 *	US-PATENT-APPL-SN-455165	c 36	N75-30524 *	US-PATENT-APPL-SN-47123	c 15	N70-34817 *
US-PATENT-APPL-SN-438797	c 14	N71-10500 *	US-PATENT-APPL-SN-45519	c 14	N72-25410 *	US-PATENT-APPL-SN-472066	c 31	N70-42075 *
US-PATENT-APPL-SN-43883	c 18	N73-30532 *	US-PATENT-APPL-SN-455352	c 33	N71-20834 *	US-PATENT-APPL-SN-472372	c 07	N71-20791 *
US-PATENT-APPL-SN-43884	c 15	N72-25457 *	US-PATENT-APPL-SN-455477	c 08	N71-19687 *	US-PATENT-APPL-SN-472643	c 33	N79-21285 *
US-PATENT-APPL-SN-439317	c 27	N92-31792 *	US-PATENT-APPL-SN-45549	c 27	N76-16228 *	US-PATENT-APPL-SN-472747	c 31	N71-16081 *
US-PATENT-APPL-SN-439489	c 09	N70-41717 *	US-PATENT-APPL-SN-455640	c 26	N84-27855 *	US-PATENT-APPL-SN-472775	c 35	N75-33369 *
US-PATENT-APPL-SN-439490	c 23	N69-24332 *	US-PATENT-APPL-SN-455678	c 07	N70-41678 *	US-PATENT-APPL-SN-472939	c 74	N92-16810 *
US-PATENT-APPL-SN-440033	c 27	N70-41897 *	US-PATENT-APPL-SN-455681	c 09	N71-23021 *	US-PATENT-APPL-SN-473030	c 37	N90-27116 *
US-PATENT-APPL-SN-440036	c 09	N71-23097 *	US-PATENT-APPL-SN-456874	c 06	N71-23499 *	US-PATENT-APPL-SN-473064	c 37	N90-27112 *
US-PATENT-APPL-SN-440039	c 09	N71-22888 *	US-PATENT-APPL-SN-457295	c 20	N75-24837 *	US-PATENT-APPL-SN-473065	c 34	N91-21473 *
US-PATENT-APPL-SN-440656	c 27	N85-21348 *	US-PATENT-APPL-SN-457874	c 09	N71-23545 *	US-PATENT-APPL-SN-473242	c 33	N91-25380 *
US-PATENT-APPL-SN-440916	c 33	N75-27252 *	US-PATENT-APPL-SN-457875	c 31	N70-42015 *	US-PATENT-APPL-SN-473498	c 20	N85-21256 *
US-PATENT-APPL-SN-440917	c 37	N76-18459 *	US-PATENT-APPL-SN-457876	c 02	N71-12243 *	US-PATENT-APPL-SN-473499	c 74	N86-21348 *
US-PATENT-APPL-SN-441279	c 35	N75-29382 *	US-PATENT-APPL-SN-457879	c 15	N71-21078 *	US-PATENT-APPL-SN-473535	c 31	N71-15637 *
US-PATENT-APPL-SN-441672	c 37	N91-27560 *	US-PATENT-APPL-SN-457990	c 85	N85-34722 *	US-PATENT-APPL-SN-473537	c 08	N71-15908 *
US-PATENT-APPL-SN-441673	c 37	N91-21541 *	US-PATENT-APPL-SN-457992	c 35	N85-29212 *	US-PATENT-APPL-SN-473827	c 35	N86-32698 *
US-PATENT-APPL-SN-441896	c 76	N90-20896 *	US-PATENT-APPL-SN-458065	c 37	N91-13731 *	US-PATENT-APPL-SN-473973	c 02	N77-10001 *
US-PATENT-APPL-SN-441897	c 35	N84-33768 *	US-PATENT-APPL-SN-458258	c 35				

## REPORT NUMBER INDEX

## US-PATENT-APPL-SN-518544

US-PATENT-APPL-SN-47443	c 09	N72-17152 *	US-PATENT-APPL-SN-491059	c 09	N71-23015 *	US-PATENT-APPL-SN-506137	c 15	N71-23049 *
US-PATENT-APPL-SN-474531	c 31	N71-23009 *	US-PATENT-APPL-SN-491113	c 35	N86-19581 *	US-PATENT-APPL-SN-506137	c 76	N90-26685 *
US-PATENT-APPL-SN-474744	c 35	N76-14431 *	US-PATENT-APPL-SN-491125	c 27	N84-22750 *	US-PATENT-APPL-SN-506477	c 33	N85-29146 *
US-PATENT-APPL-SN-474745	c 37	N76-14463 *	US-PATENT-APPL-SN-491416	c 35	N75-33368 *	US-PATENT-APPL-SN-506636	c 74	N92-29133 *
US-PATENT-APPL-SN-474815	c 33	N79-21264 *	US-PATENT-APPL-SN-491417	c 37	N76-19437 *	US-PATENT-APPL-SN-506803	c 24	N79-25143 *
US-PATENT-APPL-SN-475299	c 31	N71-17679 *	US-PATENT-APPL-SN-491418	c 31	N76-31365 *	US-PATENT-APPL-SN-506804	c 35	N76-18402 *
US-PATENT-APPL-SN-475336	c 54	N75-27758 *	US-PATENT-APPL-SN-491419	c 32	N76-15330 *	US-PATENT-APPL-SN-506908	c 09	N71-18843 *
US-PATENT-APPL-SN-475337	c 51	N76-29891 *	US-PATENT-APPL-SN-491845	c 28	N71-15659 *	US-PATENT-APPL-SN-507254	c 14	N71-22990 *
US-PATENT-APPL-SN-475338	c 35	N76-15431 *	US-PATENT-APPL-SN-492282	c 27	N85-20124 *	US-PATENT-APPL-SN-507257	c 09	N71-19449 *
US-PATENT-APPL-SN-476244	c 33	N84-22885 *	US-PATENT-APPL-SN-492344	c 05	N71-22896 *	US-PATENT-APPL-SN-507523	c 34	N91-27504 *
US-PATENT-APPL-SN-476759	c 03	N70-42073 *	US-PATENT-APPL-SN-492964	c 25	N85-21280 *	US-PATENT-APPL-SN-507623	c 31	N85-29083 *
US-PATENT-APPL-SN-476761	c 11	N71-10748 *	US-PATENT-APPL-SN-493179	c 23	N85-35227 *	US-PATENT-APPL-SN-507624	c 76	N85-30922 *
US-PATENT-APPL-SN-476763	c 09	N69-21313 *	US-PATENT-APPL-SN-493190	c 43	N91-21621 *	US-PATENT-APPL-SN-507625	c 76	N86-20150 *
US-PATENT-APPL-SN-477333	c 28	N70-41922 *	US-PATENT-APPL-SN-493359	c 20	N76-21275 *	US-PATENT-APPL-SN-507626	c 34	N85-29179 *
US-PATENT-APPL-SN-478129	c 25	N86-27431 *	US-PATENT-APPL-SN-493363	c 33	N76-21390 *	US-PATENT-APPL-SN-508154	c 54	N91-32795 *
US-PATENT-APPL-SN-478130	c 74	N85-23396 *	US-PATENT-APPL-SN-493529	c 51	N91-31755 *	US-PATENT-APPL-SN-508169	c 18	N71-27397 *
US-PATENT-APPL-SN-478131	c 26	N87-14482 *	US-PATENT-APPL-SN-493864	c 23	N90-20133 *	US-PATENT-APPL-SN-508170	c 08	N71-22710 *
US-PATENT-APPL-SN-478491	c 14	N69-21363 *	US-PATENT-APPL-SN-493864	c 23	N90-23475 *	US-PATENT-APPL-SN-508316	c 27	N92-28751 *
US-PATENT-APPL-SN-478800	c 37	N76-19436 *	US-PATENT-APPL-SN-493865	c 24	N86-19380 *	US-PATENT-APPL-SN-508371	c 05	N85-21147 *
US-PATENT-APPL-SN-478802	c 35	N75-29381 *	US-PATENT-APPL-SN-493866	c 71	N84-28568 *	US-PATENT-APPL-SN-508372	c 43	N83-29783 *
US-PATENT-APPL-SN-478803	c 31	N76-14284 *	US-PATENT-APPL-SN-493942	c 14	N71-17659 *	US-PATENT-APPL-SN-508386	c 25	N92-10073 *
US-PATENT-APPL-SN-479353	c 15	N71-23256 *	US-PATENT-APPL-SN-493943	c 15	N71-21529 *	US-PATENT-APPL-SN-508601	c 15	N71-22878 *
US-PATENT-APPL-SN-479357	c 36	N77-19416 *	US-PATENT-APPL-SN-494280	c 28	N71-23081 *	US-PATENT-APPL-SN-508784	c 76	N76-25049 *
US-PATENT-APPL-SN-479485	c 27	N92-16121 *	US-PATENT-APPL-SN-494282	c 15	N69-39735 *	US-PATENT-APPL-SN-508873	c 14	N71-23240 *
US-PATENT-APPL-SN-480210	c 11	N71-21474 *	US-PATENT-APPL-SN-494283	c 31	N71-24035 *	US-PATENT-APPL-SN-509460	c 01	N71-13411 *
US-PATENT-APPL-SN-480211	c 14	N71-26135 *	US-PATENT-APPL-SN-494287	c 03	N71-22974 *	US-PATENT-APPL-SN-510136	c 18	N84-33450 *
US-PATENT-APPL-SN-480385	c 74	N92-16808 *	US-PATENT-APPL-SN-494739	c 07	N71-26291 *	US-PATENT-APPL-SN-510137	c 37	N85-34401 *
US-PATENT-APPL-SN-480449	c 33	N92-33011 *	US-PATENT-APPL-SN-495021	c 44	N78-13526 *	US-PATENT-APPL-SN-510150	c 10	N76-26103 *
US-PATENT-APPL-SN-480985	c 18	N91-21222 *	US-PATENT-APPL-SN-495022	c 60	N77-12721 *	US-PATENT-APPL-SN-510155	c 06	N71-11235 *
US-PATENT-APPL-SN-481013	c 60	N92-33057 *	US-PATENT-APPL-SN-495380	c 37	N85-29285 *	US-PATENT-APPL-SN-510474	c 15	N71-23810 *
US-PATENT-APPL-SN-481020	c 36	N83-29681 *	US-PATENT-APPL-SN-495380	c 37	N87-22976 *	US-PATENT-APPL-SN-510475	c 14	N71-23087 *
US-PATENT-APPL-SN-481086	c 33	N84-33660 *	US-PATENT-APPL-SN-495381	c 24	N84-22695 *	US-PATENT-APPL-SN-510677	c 44	N77-19571 *
US-PATENT-APPL-SN-481106	c 09	N84-34448 *	US-PATENT-APPL-SN-495381	c 24	N85-21267 *	US-PATENT-APPL-SN-511299	c 15	N71-22798 *
US-PATENT-APPL-SN-481537	c 18	N92-28750 *	US-PATENT-APPL-SN-495969	c 44	N91-27614 *	US-PATENT-APPL-SN-511334	c 36	N77-32478 *
US-PATENT-APPL-SN-482104	c 27	N76-22377 *	US-PATENT-APPL-SN-496205	c 14	N71-22965 *	US-PATENT-APPL-SN-511346	c 15	N77-10113 *
US-PATENT-APPL-SN-482105	c 27	N76-23426 *	US-PATENT-APPL-SN-496779	c 05	N76-29217 *	US-PATENT-APPL-SN-511362	c 33	N85-29147 *
US-PATENT-APPL-SN-482307	c 15	N71-21060 *	US-PATENT-APPL-SN-498167	c 03	N71-10608 *	US-PATENT-APPL-SN-511363	c 25	N88-23846 *
US-PATENT-APPL-SN-482311	c 05	N71-22748 *	US-PATENT-APPL-SN-498168	c 28	N71-21822 *	US-PATENT-APPL-SN-5114	c 06	N72-25150 *
US-PATENT-APPL-SN-482313	c 11	N69-24321 *	US-PATENT-APPL-SN-499122	c 15	N71-24164 *	US-PATENT-APPL-SN-511564	c 09	N69-39885 *
US-PATENT-APPL-SN-482670	c 14	N71-21007 *	US-PATENT-APPL-SN-499126	c 23	N86-19376 *	US-PATENT-APPL-SN-511567	c 05	N71-12336 *
US-PATENT-APPL-SN-482952	c 09	N71-28926 *	US-PATENT-APPL-SN-500044	c 35	N85-21597 *	US-PATENT-APPL-SN-511887	c 35	N76-15436 *
US-PATENT-APPL-SN-482953	c 74	N76-18913 *	US-PATENT-APPL-SN-500046	c 31	N85-19189 *	US-PATENT-APPL-SN-511894	c 03	N76-32140 *
US-PATENT-APPL-SN-482967	c 34	N76-18364 *	US-PATENT-APPL-SN-500435	c 14	N71-21082 *	US-PATENT-APPL-SN-512352	c 15	N70-33330 *
US-PATENT-APPL-SN-483301	c 36	N77-26477 *	US-PATENT-APPL-SN-500446	c 10	N71-23029 *	US-PATENT-APPL-SN-512509	c 26	N75-27125 *
US-PATENT-APPL-SN-483817	c 27	N79-21190 *	US-PATENT-APPL-SN-500651	c 07	N85-35195 *	US-PATENT-APPL-SN-512559	c 23	N71-22881 *
US-PATENT-APPL-SN-483850	c 37	N76-14460 *	US-PATENT-APPL-SN-500979	c 32	N76-18295 *	US-PATENT-APPL-SN-512561	c 16	N71-25914 *
US-PATENT-APPL-SN-483851	c 35	N76-15435 *	US-PATENT-APPL-SN-500980	c 72	N76-15860 *	US-PATENT-APPL-SN-512562	c 16	N71-24074 *
US-PATENT-APPL-SN-483852	c 33	N75-30430 *	US-PATENT-APPL-SN-500981	c 35	N77-10492 *	US-PATENT-APPL-SN-512795	c 27	N84-22745 *
US-PATENT-APPL-SN-483857	c 44	N76-14601 *	US-PATENT-APPL-SN-500982	c 75	N76-17951 *	US-PATENT-APPL-SN-512825	c 32	N76-15329 *
US-PATENT-APPL-SN-483858	c 35	N76-18400 *	US-PATENT-APPL-SN-501011	c 33	N76-18345 *	US-PATENT-APPL-SN-51317	c 14	N73-30389 *
US-PATENT-APPL-SN-483885	c 04	N71-23185 *	US-PATENT-APPL-SN-501012	c 33	N76-14373 *	US-PATENT-APPL-SN-513346	c 07	N79-14095 *
US-PATENT-APPL-SN-483886	c 09	N71-22988 *	US-PATENT-APPL-SN-501060	c 60	N84-28491 *	US-PATENT-APPL-SN-513389	c 25	N75-12087 *
US-PATENT-APPL-SN-483891	c 14	N69-39982 *	US-PATENT-APPL-SN-501892	c 32	N93-29507 *	US-PATENT-APPL-SN-513576	c 35	N76-29552 *
US-PATENT-APPL-SN-484156	c 11	N71-21475 *	US-PATENT-APPL-SN-501893	c 34	N91-13668 *	US-PATENT-APPL-SN-513611	c 24	N76-22309 *
US-PATENT-APPL-SN-484208	c 35	N75-30502 *	US-PATENT-APPL-SN-501893	c 24	N93-29614 *	US-PATENT-APPL-SN-513611	c 24	N80-33482 *
US-PATENT-APPL-SN-484209	c 35	N76-18403 *	US-PATENT-APPL-SN-501908	c 51	N93-25994 *	US-PATENT-APPL-SN-513612	c 05	N77-17029 *
US-PATENT-APPL-SN-484485	c 01	N71-23497 *	US-PATENT-APPL-SN-501909	c 34	N92-28752 *	US-PATENT-APPL-SN-513613	c 27	N78-15276 *
US-PATENT-APPL-SN-484489	c 10	N71-15909 *	US-PATENT-APPL-SN-501910	c 37	N91-14614 *	US-PATENT-APPL-SN-513690	c 37	N76-20480 *
US-PATENT-APPL-SN-484490	c 24	N71-20518 *	US-PATENT-APPL-SN-50206	c 07	N72-17109 *	US-PATENT-APPL-SN-514117	c 27	N86-19455 *
US-PATENT-APPL-SN-484745	c 35	N85-20295 *	US-PATENT-APPL-SN-50207	c 07	N72-20141 *	US-PATENT-APPL-SN-514407	c 18	N71-22894 *
US-PATENT-APPL-SN-484855	c 09	N71-19480 *	US-PATENT-APPL-SN-50208	c 14	N73-13418 *	US-PATENT-APPL-SN-514546	c 74	N76-20958 *
US-PATENT-APPL-SN-485058	c 06	N71-23500 *	US-PATENT-APPL-SN-502124	c 35	N76-16393 *	US-PATENT-APPL-SN-51473	c 02	N70-33266 *
US-PATENT-APPL-SN-485656	c 28	N71-10574 *	US-PATENT-APPL-SN-502135	c 35	N76-15433 *	US-PATENT-APPL-SN-51477	c 14	N72-25412 *
US-PATENT-APPL-SN-485957	c 25	N71-21694 *	US-PATENT-APPL-SN-502136	c 35	N75-27331 *	US-PATENT-APPL-SN-51484	c 14	N71-22993 *
US-PATENT-APPL-SN-485958	c 15	N71-24047 *	US-PATENT-APPL-SN-502137	c 37	N76-21554 *	US-PATENT-APPL-SN-516087	c 27	N85-20125 *
US-PATENT-APPL-SN-485960	c 15	N70-42017 *	US-PATENT-APPL-SN-502138	c 43	N77-10584 *	US-PATENT-APPL-SN-516150	c 05	N71-19440 *
US-PATENT-APPL-SN-48621	c 20	N78-32179 *	US-PATENT-APPL-SN-502693	c 15	N71-20739 *	US-PATENT-APPL-SN-516151	c 15	N70-41679 *
US-PATENT-APPL-SN-486455	c 35	N91-21495 *	US-PATENT-APPL-SN-502701	c 08	N71-23295 *	US-PATENT-APPL-SN-516152	c 14	N71-23225 *
US-PATENT-APPL-SN-486458	c 37	N91-31655 *	US-PATENT-APPL-SN-502709	c 31	N71-21881 *	US-PATENT-APPL-SN-516153	c 10	N71-28783 *
US-PATENT-APPL-SN-486470	c 44	N85-21768 *	US-PATENT-APPL-SN-502710	c 15	N71-23048 *	US-PATENT-APPL-SN-516154	c 09	N69-24330 *
US-PATENT-APPL-SN-486471	c 33	N85-21492 *	US-PATENT-APPL-SN-502729	c 31	N70-41871 *	US-PATENT-APPL-SN-516155	c 09	N71-23270 *
US-PATENT-APPL-SN-486573	c 10	N71-19469 *	US-PATENT-APPL-SN-502739	c 09	N71-23311 *	US-PATENT-APPL-SN-516158	c 09	N71-19479 *
US-PATENT-APPL-SN-486668	c 24	N91-25199 *	US-PATENT-APPL-SN-502740	c 14	N69-27485 *	US-PATENT-APPL-SN-516159	c 14	N70-41812 *
US-PATENT-APPL-SN-486884	c 15	N73-32362 *	US-PATENT-APPL-SN-502746	c 08	N71-19435 *	US-PATENT-APPL-SN-516160	c 33	N71-16277 *
US-PATENT-APPL-SN-487156	c 44	N77-10636 *	US-PATENT-APPL-SN-502750	c 03	N69-39898 *	US-PATENT-APPL-SN-516162	c 07	N71-28900 *
US-PATENT-APPL-SN-487341	c 14	N71-19431 *	US-PATENT-APPL-SN-502750	c 09	N71-19466 *	US-PATENT-APPL-SN-516217	c 27	N85-21350 *
US-PATENT-APPL-SN-487342	c 09	N71-21583 *	US-PATENT-APPL-SN-502753	c 07	N69-39978 *	US-PATENT-APPL-SN-516217	c 27	N85-21351 *
US-PATENT-APPL-SN-487343	c 03	N69-39890 *	US-PATENT-APPL-SN-502756	c 03	N71-23336 *	US-PATENT-APPL-SN-516217	c 27	N85-21352 *
US-PATENT-APPL-SN-487344	c 15	N69-21472 *	US-PATENT-APPL-SN-502820	c 27	N85-21347 *	US-PATENT-APPL-SN-516217	c 25	N85-28982 *
US-PATENT-APPL-SN-487352	c 14	N71-18699 *	US-PATENT-APPL-SN-503039	c 04	N72-33072 *	US-PATENT-APPL-SN-516217	c 25	N85-30039 *
US-PATENT-APPL-SN-487852	c 23	N76-15268 *	US-PATENT-APPL-SN-503048	c 74	N91-13999 *	US-PATENT-APPL-SN-516489	c 25	N92-16043 *
US-PATENT-APPL-SN-487929	c 33	N74-20859 *	US-PATENT-APPL-SN-503049	c 33	N91-27478 *	US-PATENT-APPL-SN-516573	c 18	N92-15114 *
US-PATENT-APPL-SN-487934	c 15	N71-21530 *	US-PATENT-APPL-SN-5030410	c 37	N91-14610 *	US-PATENT-APPL-SN-516793	c 16	N71-22895 *
US-PATENT-APPL-SN-487939	c 14	N71-23040 *	US-PATENT-APPL-SN-503418	c 37	N91-27561 *	US-PATENT-APPL-SN-516794	c 14	N70-42074 *
US-PATENT-APPL-SN-487940	c 10	N71-26434 *	US-PATENT-APPL-SN-503486	c 44	N92-22037 *	US-PATENT-APPL-SN-516856	c 18	N91-21221 *
US-PATENT-APPL-SN-488381	c 14	N73-32321 *	US-PATENT-APPL-SN-503487	c 24	N93-14700 *	US-PATENT-APPL-SN-517100	c 28	N70-33241 *
US-PATENT-APPL-SN-488578	c 76	N92-22035 *	US-PATENT-APPL-SN-504225	c 35	N76-16392 *	US-PATENT-APPL-SN-517114	c 32	N90-27016 *
US-PATENT-APPL-SN-488616	c 07	N76-18117 *	US-PATENT-APPL-SN-504266	c 31	N71-21064 *	US-PATENT-APPL-SN-517156	c 14	N71-23093 *
US-PATENT-APPL-SN-488745	c 26	N75-27127 *	US-PATENT-APPL-SN-504345	c 33	N85-22877 *	US-PATENT-APPL-SN-517157	c 15	N71-22722 *
US-PATENT-APPL-SN-489008	c 23	N75-30256 *	US-PATENT-APPL-SN-505320	c 16	N71-18614 *	US-PATENT-APPL-SN-517158	c 14	N71-23401 *
US-PATENT-APPL-SN-489009	c 33	N76-19339 *	US-PATENT-APPL-SN-505321	c 10	N71-22962 *	US-PATENT-APPL-SN-517159	c 15	N71-20740 *
US-PATENT-APPL-SN-489442	c 25	N69-39884 *	US-PATENT-APPL-SN-505765	c 15	N71-23816 *	US-PATENT-APPL-SN-517858	c 14	N71-21006 *
US-PATENT-APPL-SN-489675	c 05	N85-29947 *	US-PATENT-APPL-SN-505819	c 33	N76-16331 *	US-PATENT-APPL-SN-517869	c 15	N71-23050 *
US-PATENT-APPL								

## US-PATENT-APPL-SN-518545

## REPORT NUMBER INDEX

US-PATENT-APPL-SN-518545	c 19	N76-22284 *	US-PATENT-APPL-SN-531647	c 04	N77-19056 *	US-PATENT-APPL-SN-54540	c 15	N72-29488 *
US-PATENT-APPL-SN-518546	c 26	N76-18257 *	US-PATENT-APPL-SN-532006	c 23	N71-24857 *	US-PATENT-APPL-SN-54540	c 37	N74-15125 *
US-PATENT-APPL-SN-518684	c 44	N76-22657 *	US-PATENT-APPL-SN-532342	c 08	N85-35200 *	US-PATENT-APPL-SN-54552	c 27	N70-34783 *
US-PATENT-APPL-SN-518685	c 35	N76-14429 *	US-PATENT-APPL-SN-532784	c 27	N75-29263 *	US-PATENT-APPL-SN-54552	c 20	N77-17143 *
US-PATENT-APPL-SN-519160	c 18	N71-20742 *	US-PATENT-APPL-SN-532784	c 27	N78-17205 *	US-PATENT-APPL-SN-545535	c 03	N69-21539 *
US-PATENT-APPL-SN-519161	c 05	N71-20718 *	US-PATENT-APPL-SN-533555	c 36	N76-18428 *	US-PATENT-APPL-SN-545793	c 20	N80-14188 *
US-PATENT-APPL-SN-519395	c 09	N69-24317 *	US-PATENT-APPL-SN-533556	c 36	N76-29575 *	US-PATENT-APPL-SN-545805	c 15	N71-21744 *
US-PATENT-APPL-SN-520472	c 27	N93-25997 *	US-PATENT-APPL-SN-533608	c 32	N76-21366 *	US-PATENT-APPL-SN-546142	c 09	N69-24329 *
US-PATENT-APPL-SN-520838	c 08	N71-18595 *	US-PATENT-APPL-SN-533650	c 35	N75-27329 *	US-PATENT-APPL-SN-546148	c 11	N71-22875 *
US-PATENT-APPL-SN-520839	c 10	N71-19472 *	US-PATENT-APPL-SN-533659	c 14	N73-30390 *	US-PATENT-APPL-SN-546149	c 16	N71-24170 *
US-PATENT-APPL-SN-521006	c 34	N77-10463 *	US-PATENT-APPL-SN-533734	c 33	N77-10428 *	US-PATENT-APPL-SN-547072	c 15	N71-24043 *
US-PATENT-APPL-SN-521601	c 60	N76-14818 *	US-PATENT-APPL-SN-534265	c 32	N76-21365 *	US-PATENT-APPL-SN-547072	c 35	N78-32397 *
US-PATENT-APPL-SN-521602	c 37	N76-18454 *	US-PATENT-APPL-SN-534266	c 35	N76-24523 *	US-PATENT-APPL-SN-547175	c 76	N84-12968 *
US-PATENT-APPL-SN-521603	c 35	N75-29380 *	US-PATENT-APPL-SN-534295	c 15	N71-21076 *	US-PATENT-APPL-SN-547176	c 37	N85-29286 *
US-PATENT-APPL-SN-521620	c 09	N77-10071 *	US-PATENT-APPL-SN-534564	c 10	N71-22961 *	US-PATENT-APPL-SN-547643	c 33	N79-33392 *
US-PATENT-APPL-SN-521753	c 15	N70-41960 *	US-PATENT-APPL-SN-534901	c 14	N70-36807 *	US-PATENT-APPL-SN-547677	c 10	N70-34687 *
US-PATENT-APPL-SN-521754	c 07	N71-22984 *	US-PATENT-APPL-SN-534931	c 37	N80-14395 *	US-PATENT-APPL-SN-548468	c 37	N76-27567 *
US-PATENT-APPL-SN-521755	c 28	N71-28849 *	US-PATENT-APPL-SN-534966	c 15	N71-24042 *	US-PATENT-APPL-SN-548559	c 44	N76-29700 *
US-PATENT-APPL-SN-521816	c 35	N77-19385 *	US-PATENT-APPL-SN-534975	c 14	N71-24232 *	US-PATENT-APPL-SN-548582	c 39	N86-20841 *
US-PATENT-APPL-SN-521817	c 45	N76-21742 *	US-PATENT-APPL-SN-535169	c 54	N78-17678 *	US-PATENT-APPL-SN-548583	c 27	N85-34282 *
US-PATENT-APPL-SN-521994	c 17	N71-23365 *	US-PATENT-APPL-SN-535304	c 09	N71-28810 *	US-PATENT-APPL-SN-548584	c 24	N84-34571 *
US-PATENT-APPL-SN-521996	c 15	N69-27871 *	US-PATENT-APPL-SN-535410	c 37	N76-15457 *	US-PATENT-APPL-SN-548808	c 14	N71-23227 *
US-PATENT-APPL-SN-521998	c 07	N69-24323 *	US-PATENT-APPL-SN-536210	c 17	N71-24830 *	US-PATENT-APPL-SN-549418	c 36	N76-31512 *
US-PATENT-APPL-SN-521999	c 12	N71-20815 *	US-PATENT-APPL-SN-536216	c 10	N71-23315 *	US-PATENT-APPL-SN-549860	c 03	N71-19438 *
US-PATENT-APPL-SN-522109	c 07	N78-17056 *	US-PATENT-APPL-SN-536217	c 10	N71-23544 *	US-PATENT-APPL-SN-550088	c 07	N71-24612 *
US-PATENT-APPL-SN-522551	c 76	N76-20994 *	US-PATENT-APPL-SN-536535	c 33	N76-14371 *	US-PATENT-APPL-SN-550681	c 02	N87-16793 *
US-PATENT-APPL-SN-522552	c 35	N76-16390 *	US-PATENT-APPL-SN-536761	c 33	N76-19338 *	US-PATENT-APPL-SN-550775	c 32	N91-13595 *
US-PATENT-APPL-SN-522556	c 35	N76-15432 *	US-PATENT-APPL-SN-536762	c 37	N76-22540 *	US-PATENT-APPL-SN-551182	c 03	N71-23187 *
US-PATENT-APPL-SN-522629	c 23	N90-20133 *	US-PATENT-APPL-SN-536785	c 33	N73-31409 *	US-PATENT-APPL-SN-551184	c 37	N76-22541 *
US-PATENT-APPL-SN-522629	c 23	N90-23475 *	US-PATENT-APPL-SN-536786	c 44	N77-32581 *	US-PATENT-APPL-SN-551536	c 04	N86-27250 *
US-PATENT-APPL-SN-522628	c 08	N85-19885 *	US-PATENT-APPL-SN-537024	c 44	N76-27664 *	US-PATENT-APPL-SN-551694	c 31	N71-18611 *
US-PATENT-APPL-SN-522794	c 09	N71-23190 *	US-PATENT-APPL-SN-537480	c 45	N76-31714 *	US-PATENT-APPL-SN-551815	c 02	N71-11038 *
US-PATENT-APPL-SN-522795	c 20	N71-16281 *	US-PATENT-APPL-SN-537614	c 33	N86-20672 *	US-PATENT-APPL-SN-551846	c 03	N71-20492 *
US-PATENT-APPL-SN-522949	c 37	N92-22036 *	US-PATENT-APPL-SN-537615	c 28	N71-22983 *	US-PATENT-APPL-SN-551933	c 33	N71-14032 *
US-PATENT-APPL-SN-522971	c 54	N76-24900 *	US-PATENT-APPL-SN-537615	c 37	N85-33489 *	US-PATENT-APPL-SN-551961	c 15	N70-33376 *
US-PATENT-APPL-SN-523297	c 24	N85-21266 *	US-PATENT-APPL-SN-537616	c 26	N85-29005 *	US-PATENT-APPL-SN-552108	c 07	N79-14096 *
US-PATENT-APPL-SN-523297	c 24	N85-35233 *	US-PATENT-APPL-SN-537617	c 09	N71-22987 *	US-PATENT-APPL-SN-552344	c 09	N69-27463 *
US-PATENT-APPL-SN-523511	c 28	N71-20942 *	US-PATENT-APPL-SN-537757	c 37	N86-20789 *	US-PATENT-APPL-SN-552454	c 35	N76-24525 *
US-PATENT-APPL-SN-523559	c 74	N85-29750 *	US-PATENT-APPL-SN-537979	c 37	N77-11397 *	US-PATENT-APPL-SN-552670	c 35	N92-33016 *
US-PATENT-APPL-SN-523560	c 60	N86-21154 *	US-PATENT-APPL-SN-538047	c 37	N76-27568 *	US-PATENT-APPL-SN-553339	c 27	N86-20560 *
US-PATENT-APPL-SN-523632	c 33	N78-17293 *	US-PATENT-APPL-SN-538063	c 37	N86-19603 *	US-PATENT-APPL-SN-553339	c 27	N87-22845 *
US-PATENT-APPL-SN-523675	c 37	N91-21545 *	US-PATENT-APPL-SN-538166	c 15	N71-21177 *	US-PATENT-APPL-SN-553333	c 10	N73-16206 *
US-PATENT-APPL-SN-523991	c 35	N86-20751 *	US-PATENT-APPL-SN-538168	c 23	N71-16098 *	US-PATENT-APPL-SN-553687	c 44	N76-29704 *
US-PATENT-APPL-SN-524108	c 09	N93-11057 *	US-PATENT-APPL-SN-538863	c 54	N78-17680 *	US-PATENT-APPL-SN-553891	c 23	N71-16341 *
US-PATENT-APPL-SN-524109	c 24	N92-10070 *	US-PATENT-APPL-SN-538905	c 08	N71-18594 *	US-PATENT-APPL-SN-554277	c 07	N71-26579 *
US-PATENT-APPL-SN-524110	c 37	N91-13729 *	US-PATENT-APPL-SN-538907	c 33	N71-28903 *	US-PATENT-APPL-SN-554897	c 15	N71-22982 *
US-PATENT-APPL-SN-524746	c 14	N73-28491 *	US-PATENT-APPL-SN-538908	c 33	N71-22890 *	US-PATENT-APPL-SN-554899	c 15	N70-33382 *
US-PATENT-APPL-SN-524959	c 76	N90-27518 *	US-PATENT-APPL-SN-538911	c 33	N71-22792 *	US-PATENT-APPL-SN-554949	c 06	N71-20717 *
US-PATENT-APPL-SN-526438	c 25	N76-22323 *	US-PATENT-APPL-SN-538913	c 14	N71-17627 *	US-PATENT-APPL-SN-554950	c 17	N71-23248 *
US-PATENT-APPL-SN-526448	c 44	N76-14602 *	US-PATENT-APPL-SN-538982	c 33	N77-14333 *	US-PATENT-APPL-SN-554959	c 27	N79-21191 *
US-PATENT-APPL-SN-526449	c 54	N76-14804 *	US-PATENT-APPL-SN-538983	c 33	N76-18353 *	US-PATENT-APPL-SN-555189	c 08	N71-27255 *
US-PATENT-APPL-SN-526450	c 35	N77-14409 *	US-PATENT-APPL-SN-539230	c 37	N85-30335 *	US-PATENT-APPL-SN-555336	c 33	N76-27473 *
US-PATENT-APPL-SN-526631	c 10	N71-19471 *	US-PATENT-APPL-SN-539237	c 33	N71-16278 *	US-PATENT-APPL-SN-55534	c 11	N72-25288 *
US-PATENT-APPL-SN-526664	c 07	N69-24334 *	US-PATENT-APPL-SN-539255	c 18	N71-26153 *	US-PATENT-APPL-SN-55535	c 14	N73-20474 *
US-PATENT-APPL-SN-526665	c 14	N69-24331 *	US-PATENT-APPL-SN-539255	c 17	N72-28536 *	US-PATENT-APPL-SN-55536	c 14	N72-29464 *
US-PATENT-APPL-SN-526739	c 37	N87-23970 *	US-PATENT-APPL-SN-540414	c 15	N71-22799 *	US-PATENT-APPL-SN-55537	c 18	N72-25540 *
US-PATENT-APPL-SN-526741	c 09	N84-12193 *	US-PATENT-APPL-SN-540779	c 33	N79-12331 *	US-PATENT-APPL-SN-555641	c 51	N76-29891 *
US-PATENT-APPL-SN-526750	c 71	N85-22105 *	US-PATENT-APPL-SN-540976	c 32	N91-13598 *	US-PATENT-APPL-SN-555750	c 27	N79-12221 *
US-PATENT-APPL-SN-526768	c 25	N85-35253 *	US-PATENT-APPL-SN-540976	c 32	N92-10128 *	US-PATENT-APPL-SN-555864	c 26	N93-14705 *
US-PATENT-APPL-SN-526770	c 35	N85-21598 *	US-PATENT-APPL-SN-541399	c 14	N71-20428 *	US-PATENT-APPL-SN-555865	c 33	N91-13622 *
US-PATENT-APPL-SN-527331	c 17	N73-28573 *	US-PATENT-APPL-SN-541526	c 33	N87-14594 *	US-PATENT-APPL-SN-556481	c 74	N86-26190 *
US-PATENT-APPL-SN-527462	c 35	N92-33010 *	US-PATENT-APPL-SN-542157	c 20	N76-21276 *	US-PATENT-APPL-SN-556512	c 37	N86-25789 *
US-PATENT-APPL-SN-527508	c 37	N91-32514 *	US-PATENT-APPL-SN-542192	c 26	N75-27126 *	US-PATENT-APPL-SN-556513	c 33	N85-29143 *
US-PATENT-APPL-SN-527509	c 74	N92-22034 *	US-PATENT-APPL-SN-542232	c 33	N86-19516 *	US-PATENT-APPL-SN-556514	c 35	N86-25753 *
US-PATENT-APPL-SN-527613	c 37	N86-19604 *	US-PATENT-APPL-SN-542557	c 44	N85-30474 *	US-PATENT-APPL-SN-556784	c 09	N71-20447 *
US-PATENT-APPL-SN-527727	c 02	N76-16014 *	US-PATENT-APPL-SN-54270	c 07	N72-25173 *	US-PATENT-APPL-SN-556830	c 15	N71-26294 *
US-PATENT-APPL-SN-527728	c 37	N76-18458 *	US-PATENT-APPL-SN-542713	c 23	N71-23976 *	US-PATENT-APPL-SN-557016	c 15	N71-23086 *
US-PATENT-APPL-SN-527790	c 33	N76-14372 *	US-PATENT-APPL-SN-54271	c 02	N73-19004 *	US-PATENT-APPL-SN-557430	c 52	N77-14737 *
US-PATENT-APPL-SN-527914	c 27	N86-21675 *	US-PATENT-APPL-SN-542754	c 34	N76-18374 *	US-PATENT-APPL-SN-557448	c 45	N76-17656 *
US-PATENT-APPL-SN-527918	c 09	N85-21178 *	US-PATENT-APPL-SN-543206	c 05	N71-23159 *	US-PATENT-APPL-SN-557565	c 24	N77-27187 *
US-PATENT-APPL-SN-528031	c 10	N69-39888 *	US-PATENT-APPL-SN-543774	c 06	N69-39733 *	US-PATENT-APPL-SN-557584	c 09	N71-20851 *
US-PATENT-APPL-SN-528666	c 27	N93-19327 *	US-PATENT-APPL-SN-543915	c 60	N93-22032 *	US-PATENT-APPL-SN-557861	c 03	N71-24605 *
US-PATENT-APPL-SN-528666	c 27	N93-19388 *	US-PATENT-APPL-SN-543926	c 37	N91-27562 *	US-PATENT-APPL-SN-557868	c 14	N70-41682 *
US-PATENT-APPL-SN-529427	c 54	N92-29137 *	US-PATENT-APPL-SN-544293	c 32	N91-13594 *	US-PATENT-APPL-SN-557871	c 10	N71-21483 *
US-PATENT-APPL-SN-529593	c 27	N71-21819 *	US-PATENT-APPL-SN-544611	c 33	N76-15373 *	US-PATENT-APPL-SN-55806	c 06	N72-31140 *
US-PATENT-APPL-SN-529594	c 15	N69-27483 *	US-PATENT-APPL-SN-544895	c 07	N71-28809 *	US-PATENT-APPL-SN-558600	c 74	N77-10899 *
US-PATENT-APPL-SN-529594	c 33	N71-29152 *	US-PATENT-APPL-SN-544899	c 09	N71-20569 *	US-PATENT-APPL-SN-559055	c 33	N71-29046 *
US-PATENT-APPL-SN-529609	c 09	N69-39986 *	US-PATENT-APPL-SN-545008	c 89	N92-33012 *	US-PATENT-APPL-SN-559349	c 33	N71-24145 *
US-PATENT-APPL-SN-529803	c 33	N86-20668 *	US-PATENT-APPL-SN-545014	c 43	N90-26384 *	US-PATENT-APPL-SN-559350	c 33	N71-28892 *
US-PATENT-APPL-SN-529884	c 54	N78-18761 *	US-PATENT-APPL-SN-545016	c 76	N92-10681 *	US-PATENT-APPL-SN-559351	c 14	N69-39895 *
US-PATENT-APPL-SN-530185	c 32	N86-20647 *	US-PATENT-APPL-SN-545019	c 60	N93-14704 *	US-PATENT-APPL-SN-559845	c 35	N76-29551 *
US-PATENT-APPL-SN-530339	c 31	N86-19479 *	US-PATENT-APPL-SN-545089	c 89	N90-27594 *	US-PATENT-APPL-SN-559846	c 34	N79-13289 *
US-PATENT-APPL-SN-530958	c 09	N71-22985 *	US-PATENT-APPL-SN-545170	c 61	N90-27400 *	US-PATENT-APPL-SN-559846	c 34	N80-24573 *
US-PATENT-APPL-SN-531372	c 72	N91-27936 *	US-PATENT-APPL-SN-545177	c 74	N91-32922 *	US-PATENT-APPL-SN-559847	c 34	N79-13288 *
US-PATENT-APPL-SN-531373	c 74	N92-16811 *	US-PATENT-APPL-SN-545178	c 37	N91-13733 *	US-PATENT-APPL-SN-559988	c 71	N85-29693 *
US-PATENT-APPL-SN-531374	c 37	N92-28754 *	US-PATENT-APPL-SN-545220	c 89	N91-14096 *	US-PATENT-APPL-SN-560035	c 24	N85-30027 *
US-PATENT-APPL-SN-531375	c 26	N90-26940 *	US-PATENT-APPL-SN-545223	c 03	N71-11056 *	US-PATENT-APPL-SN-560091	c 32	N91-27439 *
US-PATENT-APPL-SN-531433	c 35	N91-31608 *	US-PATENT-APPL-SN-545224	c 15	N69-21362 *	US-PATENT-APPL-SN-560717	c 27	N92-33014 *
US-PATENT-APPL-SN-531433	c 35	N92-22038 *	US-PATENT-APPL-SN-545228	c 07	N69-39736 *	US-PATENT-APPL-SN-560891	c 73	N78-19920 *
US-PATENT-APPL-SN-531434	c 34	N92-21724 *	US-PATENT-APPL-SN-545229	c 03	N69-21469 *	US-PATENT-APPL-SN-560908	c 31	N91-27385 *
US-PATENT-APPL-SN-531565	c 36	N76-24553 *	US-PATENT-APPL-SN-545233	c 51	N93-10109 *	US-PATENT-APPL-SN-560923	c 02	N92-28729 *
US-PATENT-APPL-SN-53156	c 10	N71-28860 *	US-PATENT-APPL-SN-545235	c 63	N91-13944 *	US-PATENT-APPL-SN-560924	c 74	N91-25840 *
US-PATENT-APPL-SN-531572	c 66	N76-19888 *	US-PATENT-APPL-SN-545236	c 31	N92-15203 *	US-PATENT-APPL-SN-560926	c 24	N92-21725 *
US-PATENT-APPL-SN-531575	c 32	N76-31372 *	US-PATENT-APPL-SN-545282	c 35	N76-24524 *	US-PATENT-APPL-SN-560967	c 15	N69-21922 *
US-PATENT-APPL-SN-531642	c 25	N71-21693 *	US-PATENT-APPL-SN-545283	c 32				



## REPORT NUMBER INDEX

## US-PATENT-APPL-SN-59956

US-PATENT-APPL-SN-561020	c 44	N76-23675 *	US-PATENT-APPL-SN-574280	c 15	N69-21460 *	US-PATENT-APPL-SN-587749	c 60	N88-29310 *
US-PATENT-APPL-SN-561223	c 14	N71-20427 *	US-PATENT-APPL-SN-574282	c 15	N69-23190 *	US-PATENT-APPL-SN-587764	c 18	N86-24729 *
US-PATENT-APPL-SN-561369	c 35	N84-33766 *	US-PATENT-APPL-SN-574283	c 15	N71-23025 *	US-PATENT-APPL-SN-587890	c 25	N92-25399 *
US-PATENT-APPL-SN-561429	c 27	N85-21351 *	US-PATENT-APPL-SN-574284	c 14	N69-24257 *	US-PATENT-APPL-SN-587919	c 54	N91-13879 *
US-PATENT-APPL-SN-561431	c 27	N85-21350 *	US-PATENT-APPL-SN-574290	c 08	N71-19763 *	US-PATENT-APPL-SN-587921	c 74	N92-28571 *
US-PATENT-APPL-SN-561432	c 20	N86-26368 *	US-PATENT-APPL-SN-575291	c 33	N71-20439 *	US-PATENT-APPL-SN-587922	c 61	N91-13911 *
US-PATENT-APPL-SN-561433	c 35	N86-20752 *	US-PATENT-APPL-SN-575475	c 05	N71-29151 *	US-PATENT-APPL-SN-587922	c 61	N93-18282 *
US-PATENT-APPL-SN-561434	c 25	N85-30039 *	US-PATENT-APPL-SN-575694	c 76	N69-23192 *	US-PATENT-APPL-SN-588036	c 18	N84-22612 *
US-PATENT-APPL-SN-561435	c 27	N85-21352 *	US-PATENT-APPL-SN-575699	c 35	N91-14066 *	US-PATENT-APPL-SN-588039	c 18	N87-14373 *
US-PATENT-APPL-SN-561764	c 32	N77-10392 *	US-PATENT-APPL-SN-575699	c 35	N92-21586 *	US-PATENT-APPL-SN-588164	c 31	N85-29082 *
US-PATENT-APPL-SN-561956	c 35	N77-17426 *	US-PATENT-APPL-SN-575697	c 39	N91-13767 *	US-PATENT-APPL-SN-588635	c 21	N71-15642 *
US-PATENT-APPL-SN-562095	c 52	N92-28755 *	US-PATENT-APPL-SN-575708	c 39	N93-24596 *	US-PATENT-APPL-SN-588651	c 31	N71-24813 *
US-PATENT-APPL-SN-562176	c 35	N93-19387 *	US-PATENT-APPL-SN-575736	c 76	N91-16815 *	US-PATENT-APPL-SN-588671	c 03	N71-23354 *
US-PATENT-APPL-SN-562443	c 09	N69-39734 *	US-PATENT-APPL-SN-575737	c 18	N92-25398 *	US-PATENT-APPL-SN-588721	c 27	N78-33228 *
US-PATENT-APPL-SN-562444	c 14	N71-22995 *	US-PATENT-APPL-SN-575737	c 76	N92-33013 *	US-PATENT-APPL-SN-589119	c 32	N77-32342 *
US-PATENT-APPL-SN-562445	c 14	N71-23797 *	US-PATENT-APPL-SN-575930	c 06	N71-23230 *	US-PATENT-APPL-SN-589172	c 27	N79-14214 *
US-PATENT-APPL-SN-562499	c 32	N77-31350 *	US-PATENT-APPL-SN-576182	c 33	N71-24276 *	US-PATENT-APPL-SN-589173	c 32	N77-12240 *
US-PATENT-APPL-SN-562558	c 31	N79-21227 *	US-PATENT-APPL-SN-576183	c 09	N71-23525 *	US-PATENT-APPL-SN-589233	c 33	N77-14335 *
US-PATENT-APPL-SN-562933	c 10	N71-24799 *	US-PATENT-APPL-SN-576195	c 14	N71-21079 *	US-PATENT-APPL-SN-589571	c 27	N92-33015 *
US-PATENT-APPL-SN-562934	c 09	N69-21468 *	US-PATENT-APPL-SN-576308	c 07	N85-35194 *	US-PATENT-APPL-SN-590141	c 03	N69-24267 *
US-PATENT-APPL-SN-562992	c 27	N78-32261 *	US-PATENT-APPL-SN-576488	c 44	N76-28635 *	US-PATENT-APPL-SN-590144	c 15	N71-15606 *
US-PATENT-APPL-SN-563049	c 17	N76-29347 *	US-PATENT-APPL-SN-576521	c 09	N71-20864 *	US-PATENT-APPL-SN-590145	c 07	N69-39980 *
US-PATENT-APPL-SN-563050	c 37	N76-31524 *	US-PATENT-APPL-SN-576774	c 60	N77-19760 *	US-PATENT-APPL-SN-590146	c 09	N69-21926 *
US-PATENT-APPL-SN-563283	c 35	N76-18401 *	US-PATENT-APPL-SN-576792	c 14	N71-26136 *	US-PATENT-APPL-SN-590147	c 15	N71-21489 *
US-PATENT-APPL-SN-563644	c 15	N71-18613 *	US-PATENT-APPL-SN-576797	c 09	N69-24318 *	US-PATENT-APPL-SN-590158	c 05	N71-24147 *
US-PATENT-APPL-SN-563646	c 05	N71-23096 *	US-PATENT-APPL-SN-577114	c 15	N69-24320 *	US-PATENT-APPL-SN-590159	c 09	N69-24324 *
US-PATENT-APPL-SN-563648	c 15	N71-17803 *	US-PATENT-APPL-SN-577115	c 15	N71-17647 *	US-PATENT-APPL-SN-590182	c 37	N76-29588 *
US-PATENT-APPL-SN-563650	c 25	N69-21929 *	US-PATENT-APPL-SN-577545	c 08	N71-18693 *	US-PATENT-APPL-SN-590183	c 74	N79-13855 *
US-PATENT-APPL-SN-563651	c 28	N71-23293 *	US-PATENT-APPL-SN-577546	c 31	N71-23008 *	US-PATENT-APPL-SN-590921	c 71	N86-21276 *
US-PATENT-APPL-SN-563890	c 35	N85-34373 *	US-PATENT-APPL-SN-577548	c 09	N69-27422 *	US-PATENT-APPL-SN-590923	c 35	N85-34375 *
US-PATENT-APPL-SN-564622	c 37	N77-31497 *	US-PATENT-APPL-SN-577548	c 14	N72-28438 *	US-PATENT-APPL-SN-590925	c 26	N86-32550 *
US-PATENT-APPL-SN-564919	c 09	N71-23316 *	US-PATENT-APPL-SN-577549	c 15	N71-22721 *	US-PATENT-APPL-SN-590975	c 44	N78-31525 *
US-PATENT-APPL-SN-565090	c 05	N91-31140 *	US-PATENT-APPL-SN-577775	c 14	N71-17574 *	US-PATENT-APPL-SN-591000	c 15	N71-24044 *
US-PATENT-APPL-SN-565162	c 35	N79-14348 *	US-PATENT-APPL-SN-577778	c 03	N71-11050 *	US-PATENT-APPL-SN-591004	c 07	N71-11666 *
US-PATENT-APPL-SN-565289	c 38	N77-17495 *	US-PATENT-APPL-SN-578043	c 24	N91-15333 *	US-PATENT-APPL-SN-591007	c 16	N69-27491 *
US-PATENT-APPL-SN-565290	c 17	N76-22245 *	US-PATENT-APPL-SN-578240	c 34	N77-18382 *	US-PATENT-APPL-SN-591014	c 28	N71-24736 *
US-PATENT-APPL-SN-565481	c 09	N86-32447 *	US-PATENT-APPL-SN-578241	c 52	N76-29896 *	US-PATENT-APPL-SN-591089	c 24	N85-21267 *
US-PATENT-APPL-SN-566392	c 14	N71-23175 *	US-PATENT-APPL-SN-578387	c 06	N87-22678 *	US-PATENT-APPL-SN-591568	c 74	N76-31998 *
US-PATENT-APPL-SN-566397	c 05	N71-23161 *	US-PATENT-APPL-SN-578388	c 06	N86-27280 *	US-PATENT-APPL-SN-591569	c 37	N77-12402 *
US-PATENT-APPL-SN-566493	c 44	N76-29701 *	US-PATENT-APPL-SN-578390	c 44	N85-30475 *	US-PATENT-APPL-SN-591643	c 82	N91-23976 *
US-PATENT-APPL-SN-566494	c 32	N77-30309 *	US-PATENT-APPL-SN-578397	c 20	N79-21124 *	US-PATENT-APPL-SN-591644	c 31	N91-31476 *
US-PATENT-APPL-SN-566495	c 33	N77-17351 *	US-PATENT-APPL-SN-578700	c 43	N82-13465 *	US-PATENT-APPL-SN-591645	c 31	N92-16162 *
US-PATENT-APPL-SN-566717	c 14	N71-24233 *	US-PATENT-APPL-SN-578916	c 14	N71-23036 *	US-PATENT-APPL-SN-591930	c 03	N69-21330 *
US-PATENT-APPL-SN-567025	c 27	N91-13558 *	US-PATENT-APPL-SN-578923	c 15	N71-21403 *	US-PATENT-APPL-SN-592159	c 07	N76-27232 *
US-PATENT-APPL-SN-567686	c 15	N71-22994 *	US-PATENT-APPL-SN-578925	c 23	N71-16355 *	US-PATENT-APPL-SN-592680	c 15	N71-22877 *
US-PATENT-APPL-SN-567806	c 06	N71-22975 *	US-PATENT-APPL-SN-578926	c 06	N69-39936 *	US-PATENT-APPL-SN-592684	c 05	N71-12342 *
US-PATENT-APPL-SN-567931	c 10	N72-16172 *	US-PATENT-APPL-SN-578928	c 26	N71-21824 *	US-PATENT-APPL-SN-593142	c 37	N77-17464 *
US-PATENT-APPL-SN-568067	c 31	N71-22968 *	US-PATENT-APPL-SN-578931	c 23	N71-21882 *	US-PATENT-APPL-SN-593412	c 25	N91-32186 *
US-PATENT-APPL-SN-568071	c 14	N69-27461 *	US-PATENT-APPL-SN-578932	c 08	N71-12505 *	US-PATENT-APPL-SN-593593	c 06	N71-11239 *
US-PATENT-APPL-SN-568127	c 34	N91-13658 *	US-PATENT-APPL-SN-579121	c 15	N71-29136 *	US-PATENT-APPL-SN-593594	c 06	N71-11236 *
US-PATENT-APPL-SN-568128	c 27	N93-22033 *	US-PATENT-APPL-SN-579300	c 20	N79-21123 *	US-PATENT-APPL-SN-593595	c 06	N71-24740 *
US-PATENT-APPL-SN-568129	c 74	N91-13998 *	US-PATENT-APPL-SN-579375	c 07	N77-14025 *	US-PATENT-APPL-SN-593604	c 11	N69-27466 *
US-PATENT-APPL-SN-568130	c 44	N92-16457 *	US-PATENT-APPL-SN-579376	c 20	N79-21125 *	US-PATENT-APPL-SN-593605	c 06	N71-11242 *
US-PATENT-APPL-SN-568160	c 10	N71-18724 *	US-PATENT-APPL-SN-579989	c 34	N77-32413 *	US-PATENT-APPL-SN-593606	c 06	N71-11243 *
US-PATENT-APPL-SN-568346	c 04	N69-27487 *	US-PATENT-APPL-SN-580365	c 15	N71-23255 *	US-PATENT-APPL-SN-593607	c 07	N71-26102 *
US-PATENT-APPL-SN-568352	c 09	N71-20842 *	US-PATENT-APPL-SN-580397	c 37	N87-21333 *	US-PATENT-APPL-SN-594134	c 74	N86-20125 *
US-PATENT-APPL-SN-568354	c 14	N71-22752 *	US-PATENT-APPL-SN-580419	c 34	N85-33433 *	US-PATENT-APPL-SN-594584	c 14	N71-25892 *
US-PATENT-APPL-SN-568355	c 32	N71-23971 *	US-PATENT-APPL-SN-580573	c 44	N85-34441 *	US-PATENT-APPL-SN-594587	c 28	N71-21493 *
US-PATENT-APPL-SN-568356	c 14	N71-15599 *	US-PATENT-APPL-SN-580574	c 18	N84-22610 *	US-PATENT-APPL-SN-594633	c 15	N71-24046 *
US-PATENT-APPL-SN-568362	c 03	N69-39983 *	US-PATENT-APPL-SN-58147	c 28	N70-33356 *	US-PATENT-APPL-SN-595197	c 33	N77-10429 *
US-PATENT-APPL-SN-568364	c 10	N71-26418 *	US-PATENT-APPL-SN-581514	c 70	N75-26789 *	US-PATENT-APPL-SN-595254	c 17	N78-17140 *
US-PATENT-APPL-SN-568541	c 24	N77-28225 *	US-PATENT-APPL-SN-581750	c 07	N78-17055 *	US-PATENT-APPL-SN-595745	c 37	N77-32501 *
US-PATENT-APPL-SN-568541	c 27	N81-14077 *	US-PATENT-APPL-SN-581751	c 37	N78-10468 *	US-PATENT-APPL-SN-595747	c 37	N77-32500 *
US-PATENT-APPL-SN-568620	c 10	N71-26626 *	US-PATENT-APPL-SN-581843	c 31	N79-21226 *	US-PATENT-APPL-SN-596105	c 35	N91-15520 *
US-PATENT-APPL-SN-568697	c 10	N71-19547 *	US-PATENT-APPL-SN-582171	c 32	N71-16428 *	US-PATENT-APPL-SN-596133	c 74	N91-25841 *
US-PATENT-APPL-SN-569370	c 43	N84-23012 *	US-PATENT-APPL-SN-582213	c 32	N74-22096 *	US-PATENT-APPL-SN-596139	c 33	N92-28753 *
US-PATENT-APPL-SN-569372	c 76	N85-33826 *	US-PATENT-APPL-SN-582318	c 33	N76-27472 *	US-PATENT-APPL-SN-596338	c 09	N71-20816 *
US-PATENT-APPL-SN-569925	c 07	N77-17059 *	US-PATENT-APPL-SN-582492	c 52	N85-30618 *	US-PATENT-APPL-SN-596641	c 07	N77-23106 *
US-PATENT-APPL-SN-570093	c 06	N71-17705 *	US-PATENT-APPL-SN-582494	c 36	N84-25037 *	US-PATENT-APPL-SN-596641	c 37	N78-10467 *
US-PATENT-APPL-SN-570095	c 14	N71-23226 *	US-PATENT-APPL-SN-582495	c 44	N86-27706 *	US-PATENT-APPL-SN-596733	c 15	N72-11389 *
US-PATENT-APPL-SN-570097	c 15	N69-23185 *	US-PATENT-APPL-SN-582609	c 10	N71-19467 *	US-PATENT-APPL-SN-596735	c 32	N71-24285 *
US-PATENT-APPL-SN-570678	c 17	N71-25903 *	US-PATENT-APPL-SN-582643	c 35	N85-34374 *	US-PATENT-APPL-SN-596787	c 37	N77-19458 *
US-PATENT-APPL-SN-571058	c 24	N91-27244 *	US-PATENT-APPL-SN-583055	c 07	N78-18067 *	US-PATENT-APPL-SN-596787	c 37	N78-31426 *
US-PATENT-APPL-SN-571059	c 24	N91-13502 *	US-PATENT-APPL-SN-583056	c 37	N78-17384 *	US-PATENT-APPL-SN-596788	c 33	N76-21390 *
US-PATENT-APPL-SN-571062	c 37	N91-13732 *	US-PATENT-APPL-SN-583219	c 43	N82-13465 *	US-PATENT-APPL-SN-596905	c 24	N77-19170 *
US-PATENT-APPL-SN-571344	c 35	N92-10186 *	US-PATENT-APPL-SN-583485	c 33	N77-28385 *	US-PATENT-APPL-SN-596959	c 18	N84-22609 *
US-PATENT-APPL-SN-571458	c 44	N77-10635 *	US-PATENT-APPL-SN-583486	c 33	N77-26386 *	US-PATENT-APPL-SN-596959	c 18	N86-20469 *
US-PATENT-APPL-SN-571459	c 54	N78-14784 *	US-PATENT-APPL-SN-583487	c 52	N76-19785 *	US-PATENT-APPL-SN-596960	c 37	N85-33490 *
US-PATENT-APPL-SN-571613	c 74	N86-20124 *	US-PATENT-APPL-SN-584015	c 14	N71-26475 *	US-PATENT-APPL-SN-597430	c 44	N81-29525 *
US-PATENT-APPL-SN-571614	c 35	N86-20750 *	US-PATENT-APPL-SN-584018	c 35	N92-10185 *	US-PATENT-APPL-SN-597430	c 44	N82-28780 *
US-PATENT-APPL-SN-571615	c 74	N87-14971 *	US-PATENT-APPL-SN-584066	c 10	N71-20852 *	US-PATENT-APPL-SN-598118	c 15	N69-27490 *
US-PATENT-APPL-SN-571616	c 25	N86-19413 *	US-PATENT-APPL-SN-584067	c 07	N71-12392 *	US-PATENT-APPL-SN-598119	c 08	N71-19437 *
US-PATENT-APPL-SN-571617	c 26	N85-35267 *	US-PATENT-APPL-SN-584070	c 09	N69-27500 *	US-PATENT-APPL-SN-598120	c 08	N71-18602 *
US-PATENT-APPL-SN-571687	c 47	N91-15661 *	US-PATENT-APPL-SN-584071	c 26	N71-16037 *	US-PATENT-APPL-SN-598504	c 37	N77-14477 *
US-PATENT-APPL-SN-571821	c 20	N76-22296 *	US-PATENT-APPL-SN-584072	c 15	N69-39786 *	US-PATENT-APPL-SN-598777	c 27	N85-34281 *
US-PATENT-APPL-SN-572552	c 14	N72-25414 *	US-PATENT-APPL-SN-584094	c 26	N77-20201 *	US-PATENT-APPL-SN-598992	c 06	N73-30097 *
US-PATENT-APPL-SN-572553	c 18	N72-25541 *	US-PATENT-APPL-SN-584914	c 54	N78-17679 *	US-PATENT-APPL-SN-598992	c 15	N74-27360 *
US-PATENT-APPL-SN-572990	c 37	N78-16369 *	US-PATENT-APPL-SN-585217	c 54	N78-17677 *	US-PATENT-APPL-SN-598993	c 15	N72-25456 *
US-PATENT-APPL-SN-572991	c 51	N77-22794 *	US-PATENT-APPL-SN-585420	c 35	N76-31489 *	US-PATENT-APPL-SN-598994	c 23	N73-13662 *
US-PATENT-APPL-SN-573029	c 07	N79-14097 *	US-PATENT-APPL-SN-585627	c 52	N91-14709 *	US-PATENT-APPL-SN-598995	c 15	N72-20445 *
US-PATENT-APPL-SN-573162	c 37	N86-27630 *	US-PATENT-APPL-SN-585988	c 33	N75-29318 *	US-PATENT-APPL-SN-598997	c 31	N77-10229 *
US-PATENT-APPL-SN-573432	c 14	N71-23790 *	US-PATENT-APPL-SN-586324	c 05	N71-26293 *	US-PATENT-APPL-SN-598998	c 33	N77-17354 *
US-PATENT-APPL-SN-573999	c 03	N72-20034 *	US-PATENT-APPL-SN-586325	c 31	N71-24315 *	US-PATENT-APPL-SN-598999	c 44	N78-17460 *



## US-PATENT-APPL-SN-599601

## REPORT NUMBER INDEX

US-PATENT-APPL-SN-599601	c 25	N92-28728 *	US-PATENT-APPL-SN-613046	c 24	N93-24597 *	US-PATENT-APPL-SN-632162	c 14	N69-39937 *	#
US-PATENT-APPL-SN-59966	c 21	N72-25595 *	US-PATENT-APPL-SN-613139	c 27	N86-27450 *	US-PATENT-APPL-SN-632163	c 30	N71-23723 *	#
US-PATENT-APPL-SN-59968	c 15	N72-27484 *	US-PATENT-APPL-SN-613140	c 33	N86-20669 *	US-PATENT-APPL-SN-632164	c 15	N69-24319 *	#
US-PATENT-APPL-SN-59969	c 09	N72-25249 *	US-PATENT-APPL-SN-613188	c 37	N92-29151 *	US-PATENT-APPL-SN-632165	c 14	N71-26266 *	#
US-PATENT-APPL-SN-599975	c 08	N69-21928 *	US-PATENT-APPL-SN-613235	c 14	N73-30394 *	US-PATENT-APPL-SN-632408	c 74	N93-13711 *	#
US-PATENT-APPL-SN-600266	c 14	N71-20430 *	US-PATENT-APPL-SN-613299	c 31	N70-37986 *	US-PATENT-APPL-SN-633178	c 25	N84-32447 *	#
US-PATENT-APPL-SN-600682	c 14	N71-20461 *	US-PATENT-APPL-SN-613734	c 52	N77-14738 *	US-PATENT-APPL-SN-633179	c 34	N86-12547 *	#
US-PATENT-APPL-SN-601130	c 31	N86-21718 *	US-PATENT-APPL-SN-613979	c 33	N71-14035 *	US-PATENT-APPL-SN-633180	c 09	N89-25242 *	#
US-PATENT-APPL-SN-601228	c 15	N71-17652 *	US-PATENT-APPL-SN-615030	c 35	N78-19465 *	US-PATENT-APPL-SN-633363	c 25	N86-25428 *	#
US-PATENT-APPL-SN-601229	c 14	N71-26474 *	US-PATENT-APPL-SN-615535	c 15	N72-25453 *	US-PATENT-APPL-SN-633746	c 74	N92-33028 *	#
US-PATENT-APPL-SN-601954	c 76	N92-34171 *	US-PATENT-APPL-SN-615505	c 34	N85-29180 *	US-PATENT-APPL-SN-63383	c 08	N72-20177 *	#
US-PATENT-APPL-SN-601957	c 27	N91-15412 *	US-PATENT-APPL-SN-615668	c 63	N92-33019 *	US-PATENT-APPL-SN-63384	c 05	N72-22093 *	#
US-PATENT-APPL-SN-601957	c 24	N93-14706 *	US-PATENT-APPL-SN-616002	c 34	N86-27593 *	US-PATENT-APPL-SN-633876	c 27	N78-19302 *	#
US-PATENT-APPL-SN-602049	c 35	N86-32697 *	US-PATENT-APPL-SN-616332	c 24	N77-27188 *	US-PATENT-APPL-SN-633877	c 27	N77-13217 *	#
US-PATENT-APPL-SN-602617	c 37	N77-23483 *	US-PATENT-APPL-SN-616333	c 33	N76-32457 *	US-PATENT-APPL-SN-634038	c 25	N71-16073 *	#
US-PATENT-APPL-SN-602618	c 44	N76-31667 *	US-PATENT-APPL-SN-616472	c 74	N77-22951 *	US-PATENT-APPL-SN-634040	c 15	N71-19489 *	#
US-PATENT-APPL-SN-60276	c 22	N73-32528 *	US-PATENT-APPL-SN-616528	c 24	N80-33482 *	US-PATENT-APPL-SN-634060	c 09	N69-39897 *	#
US-PATENT-APPL-SN-602828	c 09	N71-13531 *	US-PATENT-APPL-SN-617021	c 23	N71-16101 *	US-PATENT-APPL-SN-634205	c 35	N77-14406 *	#
US-PATENT-APPL-SN-603052	c 31	N91-25305 *	US-PATENT-APPL-SN-617022	c 07	N69-27462 *	US-PATENT-APPL-SN-634214	c 73	N78-28913 *	#
US-PATENT-APPL-SN-603055	c 27	N91-13566 *	US-PATENT-APPL-SN-617202	c 74	N77-28933 *	US-PATENT-APPL-SN-634304	c 27	N79-18052 *	#
US-PATENT-APPL-SN-603335	c 02	N91-27139 *	US-PATENT-APPL-SN-617612	c 52	N77-10780 *	US-PATENT-APPL-SN-635325	c 14	N69-27431 *	#
US-PATENT-APPL-SN-603337	c 37	N91-32498 *	US-PATENT-APPL-SN-617752	c 37	N92-16318 *	US-PATENT-APPL-SN-635326	c 12	N71-18482 *	#
US-PATENT-APPL-SN-603374	c 37	N86-19606 *	US-PATENT-APPL-SN-617770	c 14	N71-23267 *	US-PATENT-APPL-SN-635327	c 14	N69-39988 *	#
US-PATENT-APPL-SN-603375	c 28	N91-14495 *	US-PATENT-APPL-SN-617774	c 18	N71-16124 *	US-PATENT-APPL-SN-635328	c 09	N69-21467 *	#
US-PATENT-APPL-SN-603396	c 14	N69-23191 *	US-PATENT-APPL-SN-617775	c 06	N71-28807 *	US-PATENT-APPL-SN-635332	c 08	N72-25209 *	#
US-PATENT-APPL-SN-603397	c 26	N71-23292 *	US-PATENT-APPL-SN-617776	c 18	N69-39895 *	US-PATENT-APPL-SN-635519	c 35	N77-24455 *	#
US-PATENT-APPL-SN-604337	c 27	N85-29044 *	US-PATENT-APPL-SN-617778	c 14	N71-26244 *	US-PATENT-APPL-SN-635531	c 33	N77-14334 *	#
US-PATENT-APPL-SN-604374	c 44	N76-29699 *	US-PATENT-APPL-SN-617779	c 09	N69-39929 *	US-PATENT-APPL-SN-635970	c 15	N69-21465 *	#
US-PATENT-APPL-SN-605090	c 15	N71-19485 *	US-PATENT-APPL-SN-617783	c 15	N69-24266 *	US-PATENT-APPL-SN-635972	c 38	N71-23710 *	#
US-PATENT-APPL-SN-605091	c 15	N71-26346 *	US-PATENT-APPL-SN-617871	c 27	N85-29043 *	US-PATENT-APPL-SN-636076	c 15	N92-29156 *	#
US-PATENT-APPL-SN-605092	c 05	N71-23317 *	US-PATENT-APPL-SN-617895	c 32	N77-14292 *	US-PATENT-APPL-SN-63610	c 06	N72-25147 *	#
US-PATENT-APPL-SN-605093	c 17	N71-24911 *	US-PATENT-APPL-SN-618594	c 37	N77-13418 *	US-PATENT-APPL-SN-636193	c 74	N78-15880 *	#
US-PATENT-APPL-SN-605094	c 09	N71-24808 *	US-PATENT-APPL-SN-618789	c 70	N92-29130 *	US-PATENT-APPL-SN-636459	c 44	N87-21410 *	#
US-PATENT-APPL-SN-605095	c 10	N71-19417 *	US-PATENT-APPL-SN-618790	c 47	N92-29148 *	US-PATENT-APPL-SN-636463	c 20	N87-16875 *	#
US-PATENT-APPL-SN-605096	c 15	N71-24834 *	US-PATENT-APPL-SN-618854	c 27	N92-16123 *	US-PATENT-APPL-SN-636465	c 37	N85-29824 *	#
US-PATENT-APPL-SN-605097	c 14	N69-21923 *	US-PATENT-APPL-SN-618994	c 12	N72-21310 *	US-PATENT-APPL-SN-636531	c 37	N92-33018 *	#
US-PATENT-APPL-SN-605098	c 09	N71-26092 *	US-PATENT-APPL-SN-618995	c 07	N72-33146 *	US-PATENT-APPL-SN-636532	c 37	N92-29140 *	#
US-PATENT-APPL-SN-605099	c 09	N71-23548 *	US-PATENT-APPL-SN-618969	c 05	N71-26333 *	US-PATENT-APPL-SN-636796	c 35	N78-17358 *	#
US-PATENT-APPL-SN-605100	c 15	N71-21536 *	US-PATENT-APPL-SN-619519	c 32	N71-16106 *	US-PATENT-APPL-SN-636878	c 14	N71-20442 *	#
US-PATENT-APPL-SN-605102	c 09	N69-39987 *	US-PATENT-APPL-SN-619520	c 05	N69-21380 *	US-PATENT-APPL-SN-637247	c 35	N77-10493 *	#
US-PATENT-APPL-SN-605331	c 28	N70-37980 *	US-PATENT-APPL-SN-619521	c 06	N69-39889 *	US-PATENT-APPL-SN-637249	c 38	N76-28563 *	#
US-PATENT-APPL-SN-605336	c 02	N70-38009 *	US-PATENT-APPL-SN-619903	c 15	N69-27505 *	US-PATENT-APPL-SN-637268	c 47	N77-10753 *	#
US-PATENT-APPL-SN-605518	c 15	N71-23023 *	US-PATENT-APPL-SN-619907	c 09	N69-21543 *	US-PATENT-APPL-SN-637269	c 52	N77-28717 *	#
US-PATENT-APPL-SN-605964	c 06	N73-30103 *	US-PATENT-APPL-SN-619908	c 08	N71-20571 *	US-PATENT-APPL-SN-637882	c 15	N71-17650 *	#
US-PATENT-APPL-SN-605994	c 06	N73-30101 *	US-PATENT-APPL-SN-619986	c 37	N75-32465 *	US-PATENT-APPL-SN-638192	c 10	N71-26415 *	#
US-PATENT-APPL-SN-606027	c 06	N73-30099 *	US-PATENT-APPL-SN-620675	c 35	N78-19466 *	US-PATENT-APPL-SN-638194	c 33	N71-21507 *	#
US-PATENT-APPL-SN-606036	c 06	N73-30100 *	US-PATENT-APPL-SN-621098	c 09	N71-20446 *	US-PATENT-APPL-SN-638541	c 33	N86-20671 *	#
US-PATENT-APPL-SN-606426	c 74	N86-29650 *	US-PATENT-APPL-SN-621144	c 02	N92-21588 *	US-PATENT-APPL-SN-638584	c 33	N86-20670 *	#
US-PATENT-APPL-SN-606431	c 37	N86-25791 *	US-PATENT-APPL-SN-621714	c 15	N71-19569 *	US-PATENT-APPL-SN-638586	c 32	N87-21027 *	#
US-PATENT-APPL-SN-606432	c 74	N87-21679 *	US-PATENT-APPL-SN-621715	c 05	N71-11207 *	US-PATENT-APPL-SN-638600	c 25	N92-33029 *	#
US-PATENT-APPL-SN-606462	c 08	N71-24891 *	US-PATENT-APPL-SN-621742	c 28	N71-23968 *	US-PATENT-APPL-SN-638707	c 14	N69-27486 *	#
US-PATENT-APPL-SN-606463	c 14	N71-24864 *	US-PATENT-APPL-SN-623156	c 04	N77-19056 *	US-PATENT-APPL-SN-639589	c 28	N70-33372 *	#
US-PATENT-APPL-SN-606464	c 15	N71-18579 *	US-PATENT-APPL-SN-623187	c 34	N77-19353 *	US-PATENT-APPL-SN-640154	c 09	N71-18600 *	#
US-PATENT-APPL-SN-606891	c 44	N77-14581 *	US-PATENT-APPL-SN-623188	c 54	N77-21844 *	US-PATENT-APPL-SN-640447	c 15	N71-19486 *	#
US-PATENT-APPL-SN-606988	c 35	N92-29135 *	US-PATENT-APPL-SN-623238	c 51	N77-25769 *	US-PATENT-APPL-SN-640448	c 08	N71-19420 *	#
US-PATENT-APPL-SN-607461	c 05	N71-12346 *	US-PATENT-APPL-SN-623389	c 31	N81-15154 *	US-PATENT-APPL-SN-640449	c 09	N71-19516 *	#
US-PATENT-APPL-SN-607484	c 09	N71-26002 *	US-PATENT-APPL-SN-623536	c 09	N78-18083 *	US-PATENT-APPL-SN-640450	c 15	N71-17694 *	#
US-PATENT-APPL-SN-607608	c 14	N69-27484 *	US-PATENT-APPL-SN-625077	c 44	N86-25874 *	US-PATENT-APPL-SN-640452	c 09	N71-12513 *	#
US-PATENT-APPL-SN-607969	c 09	N76-23273 *	US-PATENT-APPL-SN-625344	c 34	N92-16241 *	US-PATENT-APPL-SN-640453	c 23	N71-16099 *	#
US-PATENT-APPL-SN-608247	c 15	N71-20813 *	US-PATENT-APPL-SN-625345	c 51	N92-34232 *	US-PATENT-APPL-SN-640454	c 06	N71-11238 *	#
US-PATENT-APPL-SN-608452	c 74	N92-16809 *	US-PATENT-APPL-SN-625436	c 33	N90-20320 *	US-PATENT-APPL-SN-640455	c 10	N71-23099 *	#
US-PATENT-APPL-SN-608482	c 74	N77-20882 *	US-PATENT-APPL-SN-625732	c 35	N77-18417 *	US-PATENT-APPL-SN-640456	c 03	N71-26726 *	#
US-PATENT-APPL-SN-608483	c 09	N77-19076 *	US-PATENT-APPL-SN-625733	c 26	N77-28265 *	US-PATENT-APPL-SN-640457	c 03	N71-11052 *	#
US-PATENT-APPL-SN-608493	c 24	N92-16025 *	US-PATENT-APPL-SN-625734	c 35	N78-10428 *	US-PATENT-APPL-SN-640458	c 15	N71-23811 *	#
US-PATENT-APPL-SN-608493	c 24	N93-29609 *	US-PATENT-APPL-SN-625759	c 37	N77-14478 *	US-PATENT-APPL-SN-640459	c 10	N71-18723 *	#
US-PATENT-APPL-SN-608494	c 34	N91-23410 *	US-PATENT-APPL-SN-625781	c 33	N77-31404 *	US-PATENT-APPL-SN-640460	c 14	N69-21541 *	#
US-PATENT-APPL-SN-608504	c 39	N92-29101 *	US-PATENT-APPL-SN-626376	c 05	N71-11189 *	US-PATENT-APPL-SN-640462	c 15	N71-20443 *	#
US-PATENT-APPL-SN-608657	c 37	N91-31656 *	US-PATENT-APPL-SN-626942	c 51	N77-27677 *	US-PATENT-APPL-SN-640712	c 24	N85-35233 *	#
US-PATENT-APPL-SN-608658	c 37	N93-23078 *	US-PATENT-APPL-SN-627257	c 08	N71-12504 *	US-PATENT-APPL-SN-640775	c 35	N92-22039 *	#
US-PATENT-APPL-SN-608741	c 23	N85-28974 *	US-PATENT-APPL-SN-627537	c 71	N88-24241 *	US-PATENT-APPL-SN-640781	c 03	N69-25146 *	#
US-PATENT-APPL-SN-60876	c 15	N72-27485 *	US-PATENT-APPL-SN-627599	c 18	N71-16046 *	US-PATENT-APPL-SN-640783	c 09	N71-26000 *	#
US-PATENT-APPL-SN-60881	c 32	N72-25877 *	US-PATENT-APPL-SN-628062	c 25	N92-33611 *	US-PATENT-APPL-SN-640784	c 15	N69-39935 *	#
US-PATENT-APPL-SN-60882	c 05	N73-32011 *	US-PATENT-APPL-SN-628062	c 25	N93-20570 *	US-PATENT-APPL-SN-640785	c 09	N69-24333 *	#
US-PATENT-APPL-SN-60883	c 10	N73-13235 *	US-PATENT-APPL-SN-628094	c 16	N71-20400 *	US-PATENT-APPL-SN-640786	c 15	N71-24695 *	#
US-PATENT-APPL-SN-608944	c 15	N71-23798 *	US-PATENT-APPL-SN-628221	c 07	N78-18066 *	US-PATENT-APPL-SN-640787	c 28	N71-24321 *	#
US-PATENT-APPL-SN-60950	c 04	N73-27052 *	US-PATENT-APPL-SN-628246	c 15	N71-17687 *	US-PATENT-APPL-SN-640788	c 15	N69-27502 *	#
US-PATENT-APPL-SN-610723	c 14	N71-23755 *	US-PATENT-APPL-SN-628247	c 09	N69-21542 *	US-PATENT-APPL-SN-640789	c 15	N69-27504 *	#
US-PATENT-APPL-SN-610724	c 31	N71-28851 *	US-PATENT-APPL-SN-628248	c 14	N69-27432 *	US-PATENT-APPL-SN-641142	c 23	N86-32525 *	#
US-PATENT-APPL-SN-610728	c 31	N71-22969 *	US-PATENT-APPL-SN-628529	c 37	N92-29138 *	US-PATENT-APPL-SN-641143	c 27	N85-34280 *	#
US-PATENT-APPL-SN-610801	c 76	N77-32919 *	US-PATENT-APPL-SN-628866	c 31	N85-20153 *	US-PATENT-APPL-SN-641146	c 76	N87-13313 *	#
US-PATENT-APPL-SN-610802	c 35	N77-20400 *	US-PATENT-APPL-SN-629456	c 37	N77-14479 *	US-PATENT-APPL-SN-641147	c 27	N87-23751 *	#
US-PATENT-APPL-SN-610879	c 37	N92-22043 *	US-PATENT-APPL-SN-629457	c 35	N77-32454 *	US-PATENT-APPL-SN-641152	c 23	N87-28605 *	#
US-PATENT-APPL-SN-610883	c 37	N92-16122 *	US-PATENT-APPL-SN-629458	c 35	N78-17357 *	US-PATENT-APPL-SN-641152	c 23	N90-20133 *	#
US-PATENT-APPL-SN-611214	c 22	N92-10128 *	US-PATENT-APPL-SN-629740	c 29	N91-17250 *	US-PATENT-APPL-SN-641152	c 23	N90-23475 *	#
US-PATENT-APPL-SN-611414	c 46	N74-23068 *	US-PATENT-APPL-SN-629750	c 15	N71-16076 *	US-PATENT-APPL-SN-641153	c 27	N86-32568 *	#
US-PATENT-APPL-SN-611414	c 46	N74-23069 *	US-PATENT-APPL-SN-630579	c 35	N77-24454 *	US-PATENT-APPL-SN-641420	c 03	N71-23449 *	#
US-PATENT-APPL-SN-612265	c 14	N72-22442 *	US-PATENT-APPL-SN-630583	c 33	N77-24375 *	US-PATENT-APPL-SN-641431	c 30	N71-16090 *	#
US-PATENT-APPL-SN-612568	c 15	N71-28952 *	US-PATENT-APPL-SN-631341	c 60	N78-17691 *	US-PATENT-APPL-SN-641441	c 08	N71-18751 *	#
US-PATENT-APPL-SN-612740	c 25	N71-20563 *	US-PATENT-APPL-SN-631444	c 16	N72-28521 *	US-PATENT-APPL-SN-641784	c 37	N77-32499 *	#
US-PATENT-APPL-SN-612899	c 07	N77-18154 *	US-PATENT-APPL-SN-631848	c 09	N71-12514 *	US-PATENT-APPL-S			

## REPORT NUMBER INDEX

## US-PATENT-APPL-SN-681288

US-PATENT-APPL-SN-642765	c 76	N92-22040 *	US-PATENT-APPL-SN-657790	c 33	N92-29153 *	US-PATENT-APPL-SN-669336	c 15	N71-17651 *
US-PATENT-APPL-SN-643041	c 44	N78-19599 *	US-PATENT-APPL-SN-657903	c 07	N83-33884 *	US-PATENT-APPL-SN-669911	c 33	N78-17295 *
US-PATENT-APPL-SN-643043	c 35	N78-13400 *	US-PATENT-APPL-SN-657907	c 27	N78-17213 *	US-PATENT-APPL-SN-669928	c 44	N77-27607 *
US-PATENT-APPL-SN-643332	c 15	N71-14932 *	US-PATENT-APPL-SN-657995	c 35	N77-22450 *	US-PATENT-APPL-SN-670814	c 03	N71-19545 *
US-PATENT-APPL-SN-643522	c 16	N86-26352 *	US-PATENT-APPL-SN-657996	c 60	N78-10709 *	US-PATENT-APPL-SN-670829	c 28	N72-23809 *
US-PATENT-APPL-SN-643524	c 27	N86-29039 *	US-PATENT-APPL-SN-657997	c 60	N77-32731 *	US-PATENT-APPL-SN-671603	c 51	N93-18351 *
US-PATENT-APPL-SN-643589	c 27	N86-31727 *	US-PATENT-APPL-SN-657998	c 27	N78-32262 *	US-PATENT-APPL-SN-672209	c 52	N82-22875 *
US-PATENT-APPL-SN-643629	c 27	N92-34160 *	US-PATENT-APPL-SN-658132	c 44	N77-32580 *	US-PATENT-APPL-SN-672210	c 25	N78-10224 *
US-PATENT-APPL-SN-643897	c 73	N78-32848 *	US-PATENT-APPL-SN-658133	c 71	N78-10837 *	US-PATENT-APPL-SN-672219	c 37	N80-28711 *
US-PATENT-APPL-SN-64391	c 31	N72-25842 *	US-PATENT-APPL-SN-65840	c 10	N72-20225 *	US-PATENT-APPL-SN-672219	c 37	N81-26447 *
US-PATENT-APPL-SN-644444	c 09	N71-18721 *	US-PATENT-APPL-SN-658449	c 32	N77-20289 *	US-PATENT-APPL-SN-672220	c 31	N78-17237 *
US-PATENT-APPL-SN-644446	c 14	N71-24693 *	US-PATENT-APPL-SN-658450	c 37	N77-22482 *	US-PATENT-APPL-SN-672221	c 07	N78-27121 *
US-PATENT-APPL-SN-644447	c 14	N71-24234 *	US-PATENT-APPL-SN-658477	c 71	N93-13421 *	US-PATENT-APPL-SN-672222	c 07	N78-25090 *
US-PATENT-APPL-SN-644448	c 17	N69-25147 *	US-PATENT-APPL-SN-658487	c 37	N81-25371 *	US-PATENT-APPL-SN-672223	c 51	N78-27733 *
US-PATENT-APPL-SN-644799	c 17	N71-15468 *	US-PATENT-APPL-SN-658911	c 16	N92-16007 *	US-PATENT-APPL-SN-672224	c 37	N86-25790 *
US-PATENT-APPL-SN-645089	c 23	N92-29141 *	US-PATENT-APPL-SN-658955	c 14	N71-15605 *	US-PATENT-APPL-SN-672382	c 15	N71-23815 *
US-PATENT-APPL-SN-645500	c 74	N77-28932 *	US-PATENT-APPL-SN-658956	c 15	N71-15607 *	US-PATENT-APPL-SN-672383	c 15	N71-24045 *
US-PATENT-APPL-SN-645502	c 24	N79-25143 *	US-PATENT-APPL-SN-658957	c 14	N71-17584 *	US-PATENT-APPL-SN-672384	c 15	N71-27067 *
US-PATENT-APPL-SN-645507	c 26	N77-32280 *	US-PATENT-APPL-SN-658964	c 19	N71-26674 *	US-PATENT-APPL-SN-672388	c 26	N72-17820 *
US-PATENT-APPL-SN-645508	c 44	N77-14580 *	US-PATENT-APPL-SN-658999	c 44	N82-24645 *	US-PATENT-APPL-SN-672636	c 37	N79-11405 *
US-PATENT-APPL-SN-645510	c 32	N77-30308 *	US-PATENT-APPL-SN-659474	c 35	N86-26595 *	US-PATENT-APPL-SN-672695	c 27	N78-17206 *
US-PATENT-APPL-SN-645563	c 31	N71-20396 *	US-PATENT-APPL-SN-659475	c 31	N86-32587 *	US-PATENT-APPL-SN-672815	c 37	N77-23482 *
US-PATENT-APPL-SN-645571	c 35	N77-14407 *	US-PATENT-APPL-SN-659882	c 37	N78-13436 *	US-PATENT-APPL-SN-673226	c 08	N71-12502 *
US-PATENT-APPL-SN-645573	c 24	N71-25555 *	US-PATENT-APPL-SN-66004	c 15	N72-25450 *	US-PATENT-APPL-SN-673227	c 11	N71-24964 *
US-PATENT-APPL-SN-645584	c 08	N71-12494 *	US-PATENT-APPL-SN-660371	c 32	N92-29124 *	US-PATENT-APPL-SN-673228	c 07	N71-19433 *
US-PATENT-APPL-SN-645972	c 33	N92-15331 *	US-PATENT-APPL-SN-660380	c 09	N93-24601 *	US-PATENT-APPL-SN-673229	c 33	N71-15641 *
US-PATENT-APPL-SN-646044	c 37	N85-34403 *	US-PATENT-APPL-SN-660571	c 26	N71-23654 *	US-PATENT-APPL-SN-673685	c 60	N87-21591 *
US-PATENT-APPL-SN-646124	c 15	N71-23817 *	US-PATENT-APPL-SN-660572	c 15	N71-15571 *	US-PATENT-APPL-SN-674194	c 27	N78-17215 *
US-PATENT-APPL-SN-646333	c 35	N80-26635 *	US-PATENT-APPL-SN-660573	c 15	N71-28936 *	US-PATENT-APPL-SN-674195	c 74	N78-17866 *
US-PATENT-APPL-SN-646424	c 07	N69-27460 *	US-PATENT-APPL-SN-660755	c 37	N93-13417 *	US-PATENT-APPL-SN-674355	c 14	N71-20429 *
US-PATENT-APPL-SN-646704	c 36	N77-25499 *	US-PATENT-APPL-SN-660841	c 14	N71-15621 *	US-PATENT-APPL-SN-674356	c 14	N71-23699 *
US-PATENT-APPL-SN-646934	c 08	N71-18692 *	US-PATENT-APPL-SN-660842	c 14	N71-23726 *	US-PATENT-APPL-SN-674357	c 05	N71-12351 *
US-PATENT-APPL-SN-647097	c 63	N93-19024 *	US-PATENT-APPL-SN-660843	c 08	N71-24650 *	US-PATENT-APPL-SN-674395	c 76	N87-23286 *
US-PATENT-APPL-SN-647098	c 10	N72-28240 *	US-PATENT-APPL-SN-6610	c 15	N72-22492 *	US-PATENT-APPL-SN-674636	c 31	N91-25306 *
US-PATENT-APPL-SN-64723	c 07	N72-25170 *	US-PATENT-APPL-SN-661170	c 14	N71-24809 *	US-PATENT-APPL-SN-674700	c 27	N77-31308 *
US-PATENT-APPL-SN-647298	c 31	N71-16102 *	US-PATENT-APPL-SN-661481	c 26	N88-14179 *	US-PATENT-APPL-SN-674828	c 52	N92-33032 *
US-PATENT-APPL-SN-647902	c 07	N93-22034 *	US-PATENT-APPL-SN-6615	c 03	N72-25019 *	US-PATENT-APPL-SN-675238	c 10	N71-26374 *
US-PATENT-APPL-SN-648034	c 09	N79-21083 *	US-PATENT-APPL-SN-6616	c 03	N72-22042 *	US-PATENT-APPL-SN-675328	c 35	N78-15461 *
US-PATENT-APPL-SN-648700	c 74	N78-13874 *	US-PATENT-APPL-SN-6617	c 15	N72-22488 *	US-PATENT-APPL-SN-675351	c 35	N78-10429 *
US-PATENT-APPL-SN-648772	c 37	N92-21726 *	US-PATENT-APPL-SN-66206	c 11	N73-13257 *	US-PATENT-APPL-SN-675471	c 33	N90-20282 *
US-PATENT-APPL-SN-648933	c 25	N92-28756 *	US-PATENT-APPL-SN-662175	c 09	N77-27131 *	US-PATENT-APPL-SN-676012	c 05	N71-11193 *
US-PATENT-APPL-SN-649075	c 14	N71-15600 *	US-PATENT-APPL-SN-662176	c 32	N77-21267 *	US-PATENT-APPL-SN-676375	c 14	N71-18483 *
US-PATENT-APPL-SN-649076	c 08	N71-24890 *	US-PATENT-APPL-SN-662181	c 25	N82-21269 *	US-PATENT-APPL-SN-676386	c 08	N71-12507 *
US-PATENT-APPL-SN-649078	c 07	N71-19493 *	US-PATENT-APPL-SN-662182	c 37	N78-27424 *	US-PATENT-APPL-SN-676387	c 10	N71-25950 *
US-PATENT-APPL-SN-649327	c 33	N87-25531 *	US-PATENT-APPL-SN-662182	c 35	N79-26372 *	US-PATENT-APPL-SN-676391	c 21	N71-11766 *
US-PATENT-APPL-SN-649328	c 27	N86-19456 *	US-PATENT-APPL-SN-662263	c 15	N73-12489 *	US-PATENT-APPL-SN-676432	c 28	N78-24365 *
US-PATENT-APPL-SN-649329	c 05	N84-33400 *	US-PATENT-APPL-SN-662282	c 11	N71-18578 *	US-PATENT-APPL-SN-676432	c 28	N80-20402 *
US-PATENT-APPL-SN-649330	c 27	N86-19458 *	US-PATENT-APPL-SN-662289	c 15	N71-15597 *	US-PATENT-APPL-SN-676432	c 28	N81-14103 *
US-PATENT-APPL-SN-649356	c 09	N71-23189 *	US-PATENT-APPL-SN-663008	c 37	N77-28486 *	US-PATENT-APPL-SN-676433	c 52	N77-28716 *
US-PATENT-APPL-SN-649357	c 08	N71-12500 *	US-PATENT-APPL-SN-663180	c 10	N71-23663 *	US-PATENT-APPL-SN-676910	c 44	N92-29143 *
US-PATENT-APPL-SN-649358	c 07	N71-11267 *	US-PATENT-APPL-SN-663400	c 27	N86-20561 *	US-PATENT-APPL-SN-676957	c 32	N77-18307 *
US-PATENT-APPL-SN-649359	c 15	N71-18701 *	US-PATENT-APPL-SN-664008	c 54	N92-16559 *	US-PATENT-APPL-SN-676958	c 54	N76-22914 *
US-PATENT-APPL-SN-649360	c 23	N71-16365 *	US-PATENT-APPL-SN-664091	c 43	N79-17288 *	US-PATENT-APPL-SN-676958	c 52	N81-25661 *
US-PATENT-APPL-SN-650166	c 09	N71-23191 *	US-PATENT-APPL-SN-664194	c 39	N93-13420 *	US-PATENT-APPL-SN-677008	c 37	N92-21728 *
US-PATENT-APPL-SN-650336	c 23	N92-10066 *	US-PATENT-APPL-SN-664445	c 32	N93-29507 *	US-PATENT-APPL-SN-677059	c 60	N93-29504 *
US-PATENT-APPL-SN-650336	c 23	N93-18283 *	US-PATENT-APPL-SN-665032	c 74	N77-22950 *	US-PATENT-APPL-SN-677182	c 33	N92-33030 *
US-PATENT-APPL-SN-651002	c 08	N79-14108 *	US-PATENT-APPL-SN-665033	c 20	N77-20162 *	US-PATENT-APPL-SN-67730	c 15	N73-13463 *
US-PATENT-APPL-SN-651007	c 74	N78-17865 *	US-PATENT-APPL-SN-665209	c 14	N71-37325 *	US-PATENT-APPL-SN-677351	c 35	N77-32455 *
US-PATENT-APPL-SN-651009	c 26	N78-18182 *	US-PATENT-APPL-SN-665371	c 27	N93-11059 *	US-PATENT-APPL-SN-677352	c 43	N78-10529 *
US-PATENT-APPL-SN-651062	c 27	N93-14709 *	US-PATENT-APPL-SN-665509	c 74	N92-29122 *	US-PATENT-APPL-SN-677353	c 52	N78-14773 *
US-PATENT-APPL-SN-651627	c 26	N72-25679 *	US-PATENT-APPL-SN-665676	c 14	N71-19568 *	US-PATENT-APPL-SN-677373	c 24	N92-18561 *
US-PATENT-APPL-SN-651882	c 76	N93-11056 *	US-PATENT-APPL-SN-665679	c 15	N71-20395 *	US-PATENT-APPL-SN-677475	c 32	N71-26681 *
US-PATENT-APPL-SN-651972	c 27	N74-23125 *	US-PATENT-APPL-SN-665680	c 24	N71-16213 *	US-PATENT-APPL-SN-677476	c 14	N71-17586 *
US-PATENT-APPL-SN-652948	c 52	N77-14736 *	US-PATENT-APPL-SN-665681	c 15	N71-18616 *	US-PATENT-APPL-SN-677505	c 09	N71-13521 *
US-PATENT-APPL-SN-652979	c 45	N82-11634 *	US-PATENT-APPL-SN-665734	c 35	N78-18390 *	US-PATENT-APPL-SN-677506	c 16	N71-15567 *
US-PATENT-APPL-SN-653277	c 31	N71-23912 *	US-PATENT-APPL-SN-666536	c 33	N91-28490 *	US-PATENT-APPL-SN-677508	c 16	N71-15551 *
US-PATENT-APPL-SN-653278	c 14	N69-27503 *	US-PATENT-APPL-SN-666551	c 14	N71-23698 *	US-PATENT-APPL-SN-67815	c 28	N72-22771 *
US-PATENT-APPL-SN-653316	c 25	N77-32255 *	US-PATENT-APPL-SN-666553	c 03	N71-11055 *	US-PATENT-APPL-SN-678520	c 20	N78-24275 *
US-PATENT-APPL-SN-653422	c 35	N77-20401 *	US-PATENT-APPL-SN-666554	c 33	N71-16104 *	US-PATENT-APPL-SN-678551	c 37	N92-33031 *
US-PATENT-APPL-SN-653578	c 60	N92-12438 *	US-PATENT-APPL-SN-666555	c 07	N71-24614 *	US-PATENT-APPL-SN-678553	c 14	N91-28184 *
US-PATENT-APPL-SN-653605	c 74	N92-29117 *	US-PATENT-APPL-SN-666992	c 27	N77-30236 *	US-PATENT-APPL-SN-678553	c 14	N93-24598 *
US-PATENT-APPL-SN-653682	c 39	N78-10493 *	US-PATENT-APPL-SN-667010	c 34	N77-27345 *	US-PATENT-APPL-SN-678700	c 05	N71-19439 *
US-PATENT-APPL-SN-654454	c 37	N92-21500 *	US-PATENT-APPL-SN-667625	c 31	N71-15674 *	US-PATENT-APPL-SN-678780	c 09	N91-25155 *
US-PATENT-APPL-SN-654704	c 31	N92-16161 *	US-PATENT-APPL-SN-667636	c 03	N71-20491 *	US-PATENT-APPL-SN-678813	c 33	N81-29342 *
US-PATENT-APPL-SN-654787	c 07	N77-32148 *	US-PATENT-APPL-SN-667637	c 28	N71-14044 *	US-PATENT-APPL-SN-679055	c 08	N71-24633 *
US-PATENT-APPL-SN-655149	c 07	N77-23106 *	US-PATENT-APPL-SN-667928	c 35	N77-30436 *	US-PATENT-APPL-SN-679862	c 20	N71-16340 *
US-PATENT-APPL-SN-65548	c 18	N70-39897 *	US-PATENT-APPL-SN-667929	c 35	N79-14346 *	US-PATENT-APPL-SN-679885	c 09	N71-12521 *
US-PATENT-APPL-SN-655601	c 32	N86-27513 *	US-PATENT-APPL-SN-667930	c 32	N77-28346 *	US-PATENT-APPL-SN-679980	c 44	N82-24642 *
US-PATENT-APPL-SN-655605	c 52	N87-24874 *	US-PATENT-APPL-SN-668116	c 35	N76-16391 *	US-PATENT-APPL-SN-679987	c 44	N82-24644 *
US-PATENT-APPL-SN-655608	c 32	N89-14374 *	US-PATENT-APPL-SN-668238	c 15	N71-15608 *	US-PATENT-APPL-SN-679996	c 44	N82-24643 *
US-PATENT-APPL-SN-655675	c 17	N71-24142 *	US-PATENT-APPL-SN-668241	c 15	N71-17685 *	US-PATENT-APPL-SN-680015	c 52	N79-14750 *
US-PATENT-APPL-SN-655677	c 08	N71-19432 *	US-PATENT-APPL-SN-668242	c 10	N71-27272 *	US-PATENT-APPL-SN-680048	c 44	N82-24641 *
US-PATENT-APPL-SN-655724	c 15	N71-22706 *	US-PATENT-APPL-SN-668247	c 09	N71-20445 *	US-PATENT-APPL-SN-680067	c 07	N77-27116 *
US-PATENT-APPL-SN-656924	c 37	N93-18288 *	US-PATENT-APPL-SN-668248	c 10	N71-26331 *	US-PATENT-APPL-SN-68023	c 05	N72-33096 *
US-PATENT-APPL-SN-656924	c 37	N93-31317 *	US-PATENT-APPL-SN-668249	c 03	N71-20407 *	US-PATENT-APPL-SN-68024	c 17	N72-22535 *
US-PATENT-APPL-SN-656925	c 37	N93-23075 *	US-PATENT-APPL-SN-668257	c 23	N71-16100 *	US-PATENT-APPL-SN-680605	c 37	N91-14616 *
US-PATENT-APPL-SN-656952	c 09	N71-12519 *	US-PATENT-APPL-SN-668302	c 07	N71-12390 *	US-PATENT-APPL-SN-680938	c 74	N77-26942 *
US-PATENT-APPL-SN-656953	c 14	N71-17585 *	US-PATENT-APPL-SN-668432	c 35	N86-29174 *	US-PATENT-APPL-SN-680939	c 44	N78-10554 *
US-PATENT-APPL-SN-656993	c 09	N71-24843 *	US-PATENT-APPL-SN-668751	c 06	N71-11237 *	US-PATENT-APPL-SN-680957	c 35	N77-27366 *
US-PATENT-APPL-SN-656995	c 21	N71-14132 *	US-PATENT-APPL-SN-668755	c 15	N71-17693 *	US-PATENT-APPL-SN-680958	c 74	N78-18905 *
US-PATENT-APPL-SN-657238	c 24	N93-29614 *	US-PATENT-APPL-SN-668771	c 35	N78-32397 *	US-PATENT-APPL-SN-681000	c 34	N78-25350 *
US-PATENT-APPL-SN-657309	c 31	N86-29055 *	US-PATENT-APPL-SN-668783	c 28	N80-10374 *	US-PATENT-APPL-SN-681001	c 74	N77-22993 *
US-PATENT-APPL-SN-657310	c 35	N87-14670 *	US-PATENT-APPL-SN-668968	c 09	N71-12515 *	US-PATENT-APPL-SN-681017	c 44	N77-32583 *
US-PATENT-APPL-SN-65758								

## US-PATENT-APPL-SN-681687

## REPORT NUMBER INDEX

US-PATENT-APPL-SN-681687	c 03	N71-20273 *	US-PATENT-APPL-SN-692801	c 33	N92-16196 *	US-PATENT-APPL-SN-707125	c 39	N78-16387 *
US-PATENT-APPL-SN-681692	c 08	N71-12506 *	US-PATENT-APPL-SN-692802	c 37	N87-17034 *	US-PATENT-APPL-SN-707440	c 06	N73-30102 *
US-PATENT-APPL-SN-681693	c 09	N71-18598 *	US-PATENT-APPL-SN-692875	c 37	N86-20788 *	US-PATENT-APPL-SN-707495	c 11	N71-18773 *
US-PATENT-APPL-SN-681942	c 18	N71-15688 *	US-PATENT-APPL-SN-693049	c 74	N92-29158 *	US-PATENT-APPL-SN-708255	c 24	N93-14706 *
US-PATENT-APPL-SN-682151	c 28	N93-18274 *	US-PATENT-APPL-SN-693049	c 33	N93-20119 *	US-PATENT-APPL-SN-708658	c 33	N77-26385 *
US-PATENT-APPL-SN-682153	c 31	N93-22035 *	US-PATENT-APPL-SN-693074	c 44	N78-24609 *	US-PATENT-APPL-SN-708660	c 34	N78-27357 *
US-PATENT-APPL-SN-682160	c 27	N92-29090 *	US-PATENT-APPL-SN-693419	c 31	N71-16222 *	US-PATENT-APPL-SN-708771	c 26	N78-24333 *
US-PATENT-APPL-SN-682416	c 34	N77-24423 *	US-PATENT-APPL-SN-693420	c 31	N71-16080 *	US-PATENT-APPL-SN-708795	c 37	N77-28487 *
US-PATENT-APPL-SN-682435	c 27	N77-32308 *	US-PATENT-APPL-SN-694246	c 15	N71-26673 *	US-PATENT-APPL-SN-708796	c 36	N78-18410 *
US-PATENT-APPL-SN-683073	c 44	N81-29525 *	US-PATENT-APPL-SN-694247	c 09	N69-21927 *	US-PATENT-APPL-SN-708800	c 54	N78-17676 *
US-PATENT-APPL-SN-683073	c 44	N82-28780 *	US-PATENT-APPL-SN-694317	c 12	N71-20436 *	US-PATENT-APPL-SN-708951	c 27	N78-31232 *
US-PATENT-APPL-SN-683101	c 33	N87-21235 *	US-PATENT-APPL-SN-694340	c 11	N71-17600 *	US-PATENT-APPL-SN-709255	c 37	N86-32738 *
US-PATENT-APPL-SN-683111	c 33	N87-22894 *	US-PATENT-APPL-SN-694345	c 10	N71-23669 *	US-PATENT-APPL-SN-709257	c 32	N87-14559 *
US-PATENT-APPL-SN-683465	c 27	N82-29451 *	US-PATENT-APPL-SN-694406	c 35	N79-10389 *	US-PATENT-APPL-SN-709398	c 06	N71-13461 *
US-PATENT-APPL-SN-683507	c 15	N71-15609 *	US-PATENT-APPL-SN-694407	c 27	N80-23452 *	US-PATENT-APPL-SN-709399	c 16	N71-26154 *
US-PATENT-APPL-SN-683606	c 09	N71-24717 *	US-PATENT-APPL-SN-694855	c 33	N77-30365 *	US-PATENT-APPL-SN-709415	c 44	N78-27515 *
US-PATENT-APPL-SN-683612	c 01	N69-39981 *	US-PATENT-APPL-SN-694868	c 23	N75-14834 *	US-PATENT-APPL-SN-709622	c 33	N71-24858 *
US-PATENT-APPL-SN-683613	c 15	N71-15610 *	US-PATENT-APPL-SN-695513	c 07	N78-25089 *	US-PATENT-APPL-SN-709677	c 07	N73-13149 *
US-PATENT-APPL-SN-684045	c 07	N80-26298 *	US-PATENT-APPL-SN-695973	c 05	N71-12343 *	US-PATENT-APPL-SN-709677	c 32	N74-10132 *
US-PATENT-APPL-SN-684083	c 09	N71-24596 *	US-PATENT-APPL-SN-696374	c 44	N80-29835 *	US-PATENT-APPL-SN-709849	c 52	N77-25772 *
US-PATENT-APPL-SN-684171	c 26	N78-18183 *	US-PATENT-APPL-SN-696679	c 38	N79-14398 *	US-PATENT-APPL-SN-709907	c 20	N91-26200 *
US-PATENT-APPL-SN-684178	c 15	N71-23812 *	US-PATENT-APPL-SN-696989	c 27	N77-30237 *	US-PATENT-APPL-SN-710032	c 54	N77-30749 *
US-PATENT-APPL-SN-684186	c 35	N88-29150 *	US-PATENT-APPL-SN-697075	c 15	N71-27184 *	US-PATENT-APPL-SN-710035	c 44	N78-24608 *
US-PATENT-APPL-SN-684190	c 54	N86-28619 *	US-PATENT-APPL-SN-697341	c 09	N71-23188 *	US-PATENT-APPL-SN-710036	c 44	N78-32539 *
US-PATENT-APPL-SN-684192	c 54	N86-28620 *	US-PATENT-APPL-SN-698239	c 33	N78-17294 *	US-PATENT-APPL-SN-710192	c 33	N91-26459 *
US-PATENT-APPL-SN-684193	c 54	N86-28618 *	US-PATENT-APPL-SN-698279	c 37	N87-22976 *	US-PATENT-APPL-SN-710193	c 35	N91-25388 *
US-PATENT-APPL-SN-684194	c 35	N85-20300 *	US-PATENT-APPL-SN-698592	c 15	N71-18580 *	US-PATENT-APPL-SN-710424	c 36	N93-13418 *
US-PATENT-APPL-SN-684209	c 10	N71-19418 *	US-PATENT-APPL-SN-698629	c 09	N71-12516 *	US-PATENT-APPL-SN-71047	c 09	N72-21247 *
US-PATENT-APPL-SN-684807	c 75	N78-27913 *	US-PATENT-APPL-SN-698630	c 09	N71-24841 *	US-PATENT-APPL-SN-71048	c 18	N73-12604 *
US-PATENT-APPL-SN-684894	c 17	N71-26773 *	US-PATENT-APPL-SN-698641	c 74	N86-28732 *	US-PATENT-APPL-SN-710533	c 02	N71-11043 *
US-PATENT-APPL-SN-685027	c 25	N78-10225 *	US-PATENT-APPL-SN-698646	c 24	N78-15180 *	US-PATENT-APPL-SN-710561	c 09	N71-12517 *
US-PATENT-APPL-SN-685062	c 35	N92-22038 *	US-PATENT-APPL-SN-699002	c 32	N78-15323 *	US-PATENT-APPL-SN-710562	c 31	N71-16085 *
US-PATENT-APPL-SN-685463	c 15	N71-23254 *	US-PATENT-APPL-SN-699012	c 33	N78-27326 *	US-PATENT-APPL-SN-710621	c 06	N73-27086 *
US-PATENT-APPL-SN-685473	c 17	N71-16044 *	US-PATENT-APPL-SN-699130	c 27	N91-25298 *	US-PATENT-APPL-SN-710845	c 63	N93-14701 *
US-PATENT-APPL-SN-685497	c 07	N69-39974 *	US-PATENT-APPL-SN-699288	c 31	N92-33020 *	US-PATENT-APPL-SN-710945	c 33	N71-15568 *
US-PATENT-APPL-SN-685607	c 37	N86-21850 *	US-PATENT-APPL-SN-699289	c 36	N91-25392 *	US-PATENT-APPL-SN-710949	c 12	N71-17631 *
US-PATENT-APPL-SN-685748	c 07	N71-11282 *	US-PATENT-APPL-SN-699299	c 37	N91-32509 *	US-PATENT-APPL-SN-711898	c 18	N71-24934 *
US-PATENT-APPL-SN-685750	c 27	N71-16392 *	US-PATENT-APPL-SN-700040	c 18	N72-23581 *	US-PATENT-APPL-SN-711903	c 18	N71-26772 *
US-PATENT-APPL-SN-685764	c 14	N69-27459 *	US-PATENT-APPL-SN-700120	c 15	N71-20440 *	US-PATENT-APPL-SN-711921	c 18	N71-16105 *
US-PATENT-APPL-SN-685766	c 15	N69-21924 *	US-PATENT-APPL-SN-700142	c 21	N71-14159 *	US-PATENT-APPL-SN-711970	c 09	N71-18830 *
US-PATENT-APPL-SN-685787	c 14	N71-18625 *	US-PATENT-APPL-SN-700174	c 02	N71-20570 *	US-PATENT-APPL-SN-711971	c 09	N71-23598 *
US-PATENT-APPL-SN-686209	c 15	N71-23809 *	US-PATENT-APPL-SN-700255	c 33	N87-21234 *	US-PATENT-APPL-SN-711972	c 06	N71-24607 *
US-PATENT-APPL-SN-686248	c 14	N71-26774 *	US-PATENT-APPL-SN-70032	c 11	N73-12264 *	US-PATENT-APPL-SN-712065	c 08	N71-12503 *
US-PATENT-APPL-SN-686263	c 39	N92-28757 *	US-PATENT-APPL-SN-700379	c 74	N91-32924 *	US-PATENT-APPL-SN-712099	c 23	N71-24868 *
US-PATENT-APPL-SN-686296	c 18	N71-14014 *	US-PATENT-APPL-SN-700467	c 52	N79-14749 *	US-PATENT-APPL-SN-712270	c 52	N79-27836 *
US-PATENT-APPL-SN-686331	c 38	N78-32447 *	US-PATENT-APPL-SN-700541	c 10	N71-25139 *	US-PATENT-APPL-SN-712419	c 35	N78-14364 *
US-PATENT-APPL-SN-686344	c 15	N71-17688 *	US-PATENT-APPL-SN-700586	c 15	N71-19570 *	US-PATENT-APPL-SN-712658	c 07	N71-19773 *
US-PATENT-APPL-SN-686449	c 34	N78-18355 *	US-PATENT-APPL-SN-700673	c 39	N77-28511 *	US-PATENT-APPL-SN-712796	c 60	N91-32805 *
US-PATENT-APPL-SN-686796	c 15	N70-33311 *	US-PATENT-APPL-SN-700830	c 33	N92-10146 *	US-PATENT-APPL-SN-712981	c 31	N78-25256 *
US-PATENT-APPL-SN-686933	c 14	N71-17588 *	US-PATENT-APPL-SN-700984	c 11	N71-19494 *	US-PATENT-APPL-SN-713027	c 37	N79-10419 *
US-PATENT-APPL-SN-686959	c 02	N88-14071 *	US-PATENT-APPL-SN-700985	c 15	N69-23190 *	US-PATENT-APPL-SN-713162	c 06	N71-26754 *
US-PATENT-APPL-SN-687251	c 52	N79-12694 *	US-PATENT-APPL-SN-700986	c 12	N71-26387 *	US-PATENT-APPL-SN-713188	c 08	N71-33110 *
US-PATENT-APPL-SN-687605	c 51	N93-10110 *	US-PATENT-APPL-SN-700987	c 09	N71-19610 *	US-PATENT-APPL-SN-713449	c 74	N87-25843 *
US-PATENT-APPL-SN-687606	c 37	N92-29092 *	US-PATENT-APPL-SN-701244	c 05	N72-20096 *	US-PATENT-APPL-SN-713616	c 06	N71-27363 *
US-PATENT-APPL-SN-687822	c 44	N78-14625 *	US-PATENT-APPL-SN-701486	c 52	N78-10686 *	US-PATENT-APPL-SN-714051	c 33	N86-21742 *
US-PATENT-APPL-SN-688361	c 35	N93-14714 *	US-PATENT-APPL-SN-701486	c 31	N87-21159 *	US-PATENT-APPL-SN-714158	c 33	N78-13320 *
US-PATENT-APPL-SN-688742	c 15	N71-20441 *	US-PATENT-APPL-SN-701635	c 12	N71-17578 *	US-PATENT-APPL-SN-714296	c 14	N71-15604 *
US-PATENT-APPL-SN-688743	c 15	N71-20393 *	US-PATENT-APPL-SN-701654	c 03	N71-11049 *	US-PATENT-APPL-SN-714595	c 15	N71-17822 *
US-PATENT-APPL-SN-688805	c 14	N71-17701 *	US-PATENT-APPL-SN-701679	c 02	N71-19287 *	US-PATENT-APPL-SN-714814	c 37	N92-29120 *
US-PATENT-APPL-SN-688807	c 03	N71-23239 *	US-PATENT-APPL-SN-701679	c 07	N73-20174 *	US-PATENT-APPL-SN-715485	c 74	N78-14889 *
US-PATENT-APPL-SN-688852	c 44	N78-28594 *	US-PATENT-APPL-SN-701732	c 24	N71-16095 *	US-PATENT-APPL-SN-715975	c 06	N71-11240 *
US-PATENT-APPL-SN-688854	c 54	N77-32722 *	US-PATENT-APPL-SN-701733	c 10	N71-24844 *	US-PATENT-APPL-SN-716150	c 32	N92-10126 *
US-PATENT-APPL-SN-688856	c 54	N78-32720 *	US-PATENT-APPL-SN-701744	c 21	N71-13958 *	US-PATENT-APPL-SN-716150	c 32	N93-18284 *
US-PATENT-APPL-SN-688868	c 15	N71-17686 *	US-PATENT-APPL-SN-701767	c 07	N71-26101 *	US-PATENT-APPL-SN-716182	c 53	N93-29610 *
US-PATENT-APPL-SN-689455	c 54	N74-32546 *	US-PATENT-APPL-SN-702115	c 71	N79-14871 *	US-PATENT-APPL-SN-716183	c 15	N71-18132 *
US-PATENT-APPL-SN-690163	c 14	N71-18465 *	US-PATENT-APPL-SN-702396	c 31	N71-16345 *	US-PATENT-APPL-SN-716734	c 15	N71-17628 *
US-PATENT-APPL-SN-690172	c 11	N72-22245 *	US-PATENT-APPL-SN-702529	c 36	N91-28557 *	US-PATENT-APPL-SN-716795	c 14	N71-20435 *
US-PATENT-APPL-SN-690198	c 35	N92-29097 *	US-PATENT-APPL-SN-702911	c 15	N71-24875 *	US-PATENT-APPL-SN-716885	c 74	N78-33913 *
US-PATENT-APPL-SN-690273	c 20	N87-14420 *	US-PATENT-APPL-SN-702967	c 06	N71-24739 *	US-PATENT-APPL-SN-717052	c 14	N71-17626 *
US-PATENT-APPL-SN-690274	c 05	N87-14314 *	US-PATENT-APPL-SN-703107	c 37	N77-22479 *	US-PATENT-APPL-SN-717319	c 44	N77-31601 *
US-PATENT-APPL-SN-690815	c 32	N77-24328 *	US-PATENT-APPL-SN-703238	c 74	N92-11791 *	US-PATENT-APPL-SN-717320	c 44	N78-15560 *
US-PATENT-APPL-SN-690816	c 37	N78-25426 *	US-PATENT-APPL-SN-703435	c 74	N93-11058 *	US-PATENT-APPL-SN-717447	c 76	N93-14707 *
US-PATENT-APPL-SN-690997	c 16	N71-24828 *	US-PATENT-APPL-SN-703649	c 34	N92-11286 *	US-PATENT-APPL-SN-717755	c 39	N92-34174 *
US-PATENT-APPL-SN-690998	c 30	N71-15990 *	US-PATENT-APPL-SN-703847	c 72	N86-33127 *	US-PATENT-APPL-SN-717822	c 09	N71-25866 *
US-PATENT-APPL-SN-691046	c 36	N77-25501 *	US-PATENT-APPL-SN-703905	c 32	N80-14281 *	US-PATENT-APPL-SN-718046	c 26	N92-29094 *
US-PATENT-APPL-SN-691256	c 35	N77-31465 *	US-PATENT-APPL-SN-704180	c 36	N78-27402 *	US-PATENT-APPL-SN-718095	c 28	N70-39899 *
US-PATENT-APPL-SN-691609	c 37	N92-29099 *	US-PATENT-APPL-SN-704224	c 18	N71-15469 *	US-PATENT-APPL-SN-718137	c 44	N78-31527 *
US-PATENT-APPL-SN-691610	c 18	N91-25167 *	US-PATENT-APPL-SN-704299	c 10	N71-26577 *	US-PATENT-APPL-SN-718244	c 05	N78-32086 *
US-PATENT-APPL-SN-691647	c 52	N82-11770 *	US-PATENT-APPL-SN-704420	c 05	N71-11202 *	US-PATENT-APPL-SN-718266	c 74	N78-17867 *
US-PATENT-APPL-SN-691735	c 09	N71-12520 *	US-PATENT-APPL-SN-704446	c 10	N71-33407 *	US-PATENT-APPL-SN-718267	c 26	N77-29260 *
US-PATENT-APPL-SN-691736	c 18	N71-16210 *	US-PATENT-APPL-SN-704465	c 07	N71-24741 *	US-PATENT-APPL-SN-718268	c 44	N78-33526 *
US-PATENT-APPL-SN-691737	c 07	N71-24742 *	US-PATENT-APPL-SN-704468	c 25	N79-28253 *	US-PATENT-APPL-SN-718279	c 15	N71-26312 *
US-PATENT-APPL-SN-691738	c 08	N71-18694 *	US-PATENT-APPL-SN-704668	c 10	N71-12554 *	US-PATENT-APPL-SN-718313	c 02	N92-34172 *
US-PATENT-APPL-SN-691739	c 32	N71-15974 *	US-PATENT-APPL-SN-705474	c 39	N93-29612 *	US-PATENT-APPL-SN-718314	c 76	N91-26967 *
US-PATENT-APPL-SN-691909	c 05	N71-24606 *	US-PATENT-APPL-SN-706013	c 33	N71-27862 *	US-PATENT-APPL-SN-718315	c 76	N91-26966 *
US-PATENT-APPL-SN-691936	c 26	N77-32279 *	US-PATENT-APPL-SN-706073	c 76	N79-11920 *	US-PATENT-APPL-SN-718689	c 14	N71-17655 *
US-PATENT-APPL-SN-692009	c 15	N72-21463 *	US-PATENT-APPL-SN-706424	c 27	N78-32256 *	US-PATENT-APPL-SN-718752	c 03	N71-18698 *
US-PATENT-APPL-SN-692284	c 27	N78-14164 *	US-PATENT-APPL-SN-706424	c 27	N80-10358 *	US-PATENT-APPL-SN-718769	c 14	N71-17662 *
US-PATENT-APPL-SN-692331	c 10	N71-26326 *	US-PATENT-APPL-SN-706424	c 27	N80-24438 *	US-PATENT-APPL-SN-718798	c 76	N91-15898 *
US-PATENT-APPL-SN-692332	c 07	N71-11281 *	US-PATENT-APPL-SN-706425	c 33	N78-10376 *	US-PATENT-APPL-SN-719029	c 14	N71-27186 *
US-PATENT-APPL-SN-692413	c 25	N78-25148 *	US-PATENT-APPL-SN-706564	c 14	N71-17587 *	US-PATENT-APPL-SN-719173	c 28	N70-33331 *
US-PATENT-APPL-SN-692414	c 32	N77-24331 *	US-PATENT-APPL-SN-706564	c 76	N87-15882 *	US-PATENT-APPL-SN-719794	c 35	N86-32695 *
US-PATENT-APPL-SN-692471	c 09	N71-12518 *	US-PATENT-APPL-SN-706565	c 76	N87-25862 *	US-PATENT-APPL-SN-719796	c 24	N86-21590 *

## REPORT NUMBER INDEX

## US-PATENT-APPL-SN-763705

US-PATENT-APPL-SN-720041	c 05	N71-27234 *	US-PATENT-APPL-SN-738119	c 18	N71-15545 *	US-PATENT-APPL-SN-751644	c 85	N87-21755 *
US-PATENT-APPL-SN-720125	c 09	N71-12539 *	US-PATENT-APPL-SN-738218	c 37	N78-27425 *	US-PATENT-APPL-SN-751691	c 37	N87-21332 *
US-PATENT-APPL-SN-720133	c 27	N91-28423 *	US-PATENT-APPL-SN-738314	c 12	N71-17573 *	US-PATENT-APPL-SN-751695	c 71	N87-21652 *
US-PATENT-APPL-SN-720153	c 39	N92-11384 *	US-PATENT-APPL-SN-738315	c 14	N71-27334 *	US-PATENT-APPL-SN-752050	c 07	N81-19115 *
US-PATENT-APPL-SN-720224	c 09	N73-12211 *	US-PATENT-APPL-SN-738315	c 14	N72-31446 *	US-PATENT-APPL-SN-752246	c 27	N92-17676 *
US-PATENT-APPL-SN-720521	c 44	N78-25530 *	US-PATENT-APPL-SN-738334	c 15	N72-23497 *	US-PATENT-APPL-SN-752729	c 09	N71-26787 *
US-PATENT-APPL-SN-720546	c 18	N72-17532 *	US-PATENT-APPL-SN-738931	c 35	N86-20756 *	US-PATENT-APPL-SN-752748	c 35	N78-25391 *
US-PATENT-APPL-SN-721038	c 27	N93-25995 *	US-PATENT-APPL-SN-739072	c 33	N75-27251 *	US-PATENT-APPL-SN-752946	c 15	N71-29032 *
US-PATENT-APPL-SN-721039	c 09	N91-28175 *	US-PATENT-APPL-SN-73922	c 14	N73-25461 *	US-PATENT-APPL-SN-752947	c 31	N71-15689 *
US-PATENT-APPL-SN-721150	c 37	N78-17383 *	US-PATENT-APPL-SN-73932	c 15	N72-22485 *	US-PATENT-APPL-SN-753103	c 37	N80-14397 *
US-PATENT-APPL-SN-721607	c 18	N71-25881 *	US-PATENT-APPL-SN-739391	c 09	N72-17156 *	US-PATENT-APPL-SN-753452	c 07	N79-14096 *
US-PATENT-APPL-SN-722446	c 20	N93-18856 *	US-PATENT-APPL-SN-739760	c 27	N86-31726 *	US-PATENT-APPL-SN-753964	c 24	N78-27180 *
US-PATENT-APPL-SN-723264	c 24	N78-10214 *	US-PATENT-APPL-SN-739788	c 37	N88-14360 *	US-PATENT-APPL-SN-753965	c 54	N78-31735 *
US-PATENT-APPL-SN-723264	c 24	N78-17149 *	US-PATENT-APPL-SN-739789	c 34	N85-29182 *	US-PATENT-APPL-SN-753965	c 54	N79-24651 *
US-PATENT-APPL-SN-723465	c 15	N72-29488 *	US-PATENT-APPL-SN-739792	c 33	N87-28833 *	US-PATENT-APPL-SN-753971	c 71	N84-14873 *
US-PATENT-APPL-SN-723465	c 37	N74-15125 *	US-PATENT-APPL-SN-739908	c 15	N78-25119 *	US-PATENT-APPL-SN-753974	c 16	N71-33410 *
US-PATENT-APPL-SN-723476	c 05	N71-12341 *	US-PATENT-APPL-SN-739909	c 37	N78-24545 *	US-PATENT-APPL-SN-753976	c 54	N78-17675 *
US-PATENT-APPL-SN-723488	c 09	N71-28691 *	US-PATENT-APPL-SN-739914	c 33	N78-10375 *	US-PATENT-APPL-SN-753977	c 74	N79-12890 *
US-PATENT-APPL-SN-723804	c 09	N71-24806 *	US-PATENT-APPL-SN-739915	c 37	N78-24544 *	US-PATENT-APPL-SN-753978	c 54	N78-32721 *
US-PATENT-APPL-SN-723805	c 10	N71-26339 *	US-PATENT-APPL-SN-739927	c 32	N71-16103 *	US-PATENT-APPL-SN-754019	c 09	N71-25999 *
US-PATENT-APPL-SN-723827	c 10	N71-27137 *	US-PATENT-APPL-SN-740153	c 28	N79-11231 *	US-PATENT-APPL-SN-754020	c 12	N71-27332 *
US-PATENT-APPL-SN-724551	c 15	N71-17696 *	US-PATENT-APPL-SN-740155	c 74	N78-27904 *	US-PATENT-APPL-SN-754055	c 07	N71-24624 *
US-PATENT-APPL-SN-724874	c 76	N78-24950 *	US-PATENT-APPL-SN-740156	c 71	N78-14867 *	US-PATENT-APPL-SN-754066	c 39	N78-15512 *
US-PATENT-APPL-SN-725111	c 52	N93-14708 *	US-PATENT-APPL-SN-740457	c 35	N78-32395 *	US-PATENT-APPL-SN-754331	c 21	N87-21317 *
US-PATENT-APPL-SN-725405	c 15	N71-26134 *	US-PATENT-APPL-SN-740526	c 31	N93-26101 *	US-PATENT-APPL-SN-754362	c 27	N87-21112 *
US-PATENT-APPL-SN-725432	c 07	N71-24622 *	US-PATENT-APPL-SN-740675	c 38	N91-32515 *	US-PATENT-APPL-SN-754707	c 33	N87-22895 *
US-PATENT-APPL-SN-725475	c 31	N71-15643 *	US-PATENT-APPL-SN-741056	c 07	N81-19116 *	US-PATENT-APPL-SN-754828	c 37	N92-33634 *
US-PATENT-APPL-SN-725686	c 27	N87-15304 *	US-PATENT-APPL-SN-741405	c 23	N86-21582 *	US-PATENT-APPL-SN-754875	c 37	N92-23548 *
US-PATENT-APPL-SN-725689	c 37	N87-17037 *	US-PATENT-APPL-SN-741461	c 12	N71-18603 *	US-PATENT-APPL-SN-755207	c 27	N92-10105 *
US-PATENT-APPL-SN-725714	c 33	N89-14384 *	US-PATENT-APPL-SN-741749	c 52	N79-14751 *	US-PATENT-APPL-SN-755207	c 25	N92-10105 *
US-PATENT-APPL-SN-725719	c 15	N71-26243 *	US-PATENT-APPL-SN-741824	c 07	N71-12389 *	US-PATENT-APPL-SN-755288	c 34	N87-22950 *
US-PATENT-APPL-SN-725725	c 27	N87-16908 *	US-PATENT-APPL-SN-742034	c 33	N78-10377 *	US-PATENT-APPL-SN-755288	c 34	N88-23958 *
US-PATENT-APPL-SN-725727	c 27	N87-22845 *	US-PATENT-APPL-SN-742238	c 02	N93-18275 *	US-PATENT-APPL-SN-755310	c 25	N78-15210 *
US-PATENT-APPL-SN-726898	c 12	N71-17579 *	US-PATENT-APPL-SN-742816	c 14	N71-17656 *	US-PATENT-APPL-SN-755323	c 74	N79-11865 *
US-PATENT-APPL-SN-727034	c 35	N87-14669 *	US-PATENT-APPL-SN-743249	c 35	N77-32456 *	US-PATENT-APPL-SN-755960	c 31	N88-29052 *
US-PATENT-APPL-SN-727035	c 33	N86-32624 *	US-PATENT-APPL-SN-743429	c 07	N71-11285 *	US-PATENT-APPL-SN-756260	c 23	N71-26722 *
US-PATENT-APPL-SN-727444	c 31	N81-15154 *	US-PATENT-APPL-SN-743468	c 09	N93-25996 *	US-PATENT-APPL-SN-756266	c 15	N71-26145 *
US-PATENT-APPL-SN-727480	c 14	N71-17658 *	US-PATENT-APPL-SN-743469	c 16	N92-10035 *	US-PATENT-APPL-SN-756381	c 06	N71-25929 *
US-PATENT-APPL-SN-727503	c 08	N81-19130 *	US-PATENT-APPL-SN-743469	c 16	N93-20115 *	US-PATENT-APPL-SN-756511	c 09	N71-27016 *
US-PATENT-APPL-SN-727838	c 33	N86-20681 *	US-PATENT-APPL-SN-743485	c 37	N93-22384 *	US-PATENT-APPL-SN-756834	c 15	N72-21466 *
US-PATENT-APPL-SN-727931	c 33	N88-24862 *	US-PATENT-APPL-SN-743525	c 07	N71-28430 *	US-PATENT-APPL-SN-757017	c 35	N77-21393 *
US-PATENT-APPL-SN-728234	c 03	N71-12255 *	US-PATENT-APPL-SN-744042	c 60	N92-17884 *	US-PATENT-APPL-SN-757625	c 09	N71-26701 *
US-PATENT-APPL-SN-728369	c 52	N76-33835 *	US-PATENT-APPL-SN-744042	c 60	N93-20116 *	US-PATENT-APPL-SN-757857	c 10	N71-25900 *
US-PATENT-APPL-SN-728901	c 25	N93-22036 *	US-PATENT-APPL-SN-744118	c 37	N91-32510 *	US-PATENT-APPL-SN-757861	c 05	N71-11194 *
US-PATENT-APPL-SN-729107	c 75	N91-32947 *	US-PATENT-APPL-SN-744197	c 74	N93-13419 *	US-PATENT-APPL-SN-757875	c 09	N71-24805 *
US-PATENT-APPL-SN-729299	c 03	N72-15986 *	US-PATENT-APPL-SN-744477	c 33	N78-25319 *	US-PATENT-APPL-SN-758082	c 15	N71-17805 *
US-PATENT-APPL-SN-729704	c 37	N87-23983 *	US-PATENT-APPL-SN-744522	c 33	N77-21314 *	US-PATENT-APPL-SN-758390	c 28	N71-26642 *
US-PATENT-APPL-SN-729719	c 32	N87-25511 *	US-PATENT-APPL-SN-744573	c 44	N78-25531 *	US-PATENT-APPL-SN-758540	c 28	N73-27699 *
US-PATENT-APPL-SN-729766	c 09	N87-14355 *	US-PATENT-APPL-SN-744574	c 25	N78-14104 *	US-PATENT-APPL-SN-758721	c 52	N79-18580 *
US-PATENT-APPL-SN-729767	c 24	N87-27742 *	US-PATENT-APPL-SN-744577	c 35	N79-10391 *	US-PATENT-APPL-SN-758942	c 27	N71-14090 *
US-PATENT-APPL-SN-729768	c 72	N87-21660 *	US-PATENT-APPL-SN-744910	c 15	N71-17649 *	US-PATENT-APPL-SN-758977	c 38	N92-29154 *
US-PATENT-APPL-SN-730045	c 32	N78-24391 *	US-PATENT-APPL-SN-745337	c 28	N72-20758 *	US-PATENT-APPL-SN-759220	c 27	N78-17214 *
US-PATENT-APPL-SN-730046	c 35	N78-32396 *	US-PATENT-APPL-SN-745384	c 25	N79-11151 *	US-PATENT-APPL-SN-759256	c 07	N71-27233 *
US-PATENT-APPL-SN-730162	c 09	N71-18599 *	US-PATENT-APPL-SN-745766	c 37	N79-11403 *	US-PATENT-APPL-SN-759367	c 37	N92-29150 *
US-PATENT-APPL-SN-730468	c 25	N79-11152 *	US-PATENT-APPL-SN-745852	c 12	N71-17661 *	US-PATENT-APPL-SN-759457	c 33	N71-16357 *
US-PATENT-APPL-SN-730700	c 07	N71-24583 *	US-PATENT-APPL-SN-745973	c 36	N86-29204 *	US-PATENT-APPL-SN-759460	c 09	N71-24597 *
US-PATENT-APPL-SN-730701	c 12	N71-18615 *	US-PATENT-APPL-SN-745977	c 35	N87-14671 *	US-PATENT-APPL-SN-759665	c 14	N71-18481 *
US-PATENT-APPL-SN-730702	c 33	N71-16356 *	US-PATENT-APPL-SN-746160	c 37	N86-20797 *	US-PATENT-APPL-SN-759965	c 52	N79-26771 *
US-PATENT-APPL-SN-730703	c 10	N71-13537 *	US-PATENT-APPL-SN-746269	c 44	N78-25528 *	US-PATENT-APPL-SN-760057	c 44	N79-14527 *
US-PATENT-APPL-SN-730733	c 28	N71-16224 *	US-PATENT-APPL-SN-746578	c 12	N79-26075 *	US-PATENT-APPL-SN-760114	c 28	N72-17099 *
US-PATENT-APPL-SN-730734	c 15	N71-17654 *	US-PATENT-APPL-SN-746579	c 33	N81-27397 *	US-PATENT-APPL-SN-760374	c 27	N87-16909 *
US-PATENT-APPL-SN-730778	c 32	N79-10264 *	US-PATENT-APPL-SN-746580	c 34	N78-17335 *	US-PATENT-APPL-SN-760374	c 23	N88-24692 *
US-PATENT-APPL-SN-731388	c 15	N71-24835 *	US-PATENT-APPL-SN-746809	c 35	N87-22953 *	US-PATENT-APPL-SN-760378	c 37	N86-32737 *
US-PATENT-APPL-SN-731829	c 16	N91-28186 *	US-PATENT-APPL-SN-747059	c 74	N91-32925 *	US-PATENT-APPL-SN-760389	c 09	N71-24618 *
US-PATENT-APPL-SN-732321	c 33	N87-28832 *	US-PATENT-APPL-SN-747152	c 35	N92-11336 *	US-PATENT-APPL-SN-760633	c 52	N92-11627 *
US-PATENT-APPL-SN-732455	c 22	N71-28759 *	US-PATENT-APPL-SN-74759	c 14	N73-20478 *	US-PATENT-APPL-SN-760634	c 37	N92-24243 *
US-PATENT-APPL-SN-732630	c 36	N78-14380 *	US-PATENT-APPL-SN-747674	c 27	N80-26446 *	US-PATENT-APPL-SN-760670	c 27	N92-11186 *
US-PATENT-APPL-SN-73283	c 15	N72-28495 *	US-PATENT-APPL-SN-747675	c 37	N78-31426 *	US-PATENT-APPL-SN-760771	c 44	N79-14528 *
US-PATENT-APPL-SN-732884	c 27	N92-28751 *	US-PATENT-APPL-SN-748224	c 34	N92-17909 *	US-PATENT-APPL-SN-760790	c 36	N87-28006 *
US-PATENT-APPL-SN-732917	c 14	N71-17575 *	US-PATENT-APPL-SN-748536	c 33	N86-20680 *	US-PATENT-APPL-SN-760791	c 27	N87-14515 *
US-PATENT-APPL-SN-732921	c 10	N71-26544 *	US-PATENT-APPL-SN-74861	c 27	N72-25699 *	US-PATENT-APPL-SN-760797	c 27	N87-16907 *
US-PATENT-APPL-SN-732922	c 17	N71-28747 *	US-PATENT-APPL-SN-74862	c 27	N73-16764 *	US-PATENT-APPL-SN-760799	c 54	N87-29118 *
US-PATENT-APPL-SN-733039	c 07	N72-12081 *	US-PATENT-APPL-SN-748933	c 25	N91-23271 *	US-PATENT-APPL-SN-760809	c 24	N78-24290 *
US-PATENT-APPL-SN-73310	c 09	N72-25247 *	US-PATENT-APPL-SN-749121	c 07	N72-11149 *	US-PATENT-APPL-SN-760810	c 26	N78-32229 *
US-PATENT-APPL-SN-73367	c 14	N71-15969 *	US-PATENT-APPL-SN-749148	c 10	N71-19421 *	US-PATENT-APPL-SN-760819	c 14	N70-34820 *
US-PATENT-APPL-SN-733825	c 31	N79-11246 *	US-PATENT-APPL-SN-749149	c 15	N71-24897 *	US-PATENT-APPL-SN-760927	c 26	N71-25490 *
US-PATENT-APPL-SN-73422	c 15	N72-25454 *	US-PATENT-APPL-SN-749181	c 09	N71-24803 *	US-PATENT-APPL-SN-760928	c 15	N71-28582 *
US-PATENT-APPL-SN-734366	c 27	N87-22847 *	US-PATENT-APPL-SN-749320	c 14	N72-22443 *	US-PATENT-APPL-SN-761007	c 18	N71-26155 *
US-PATENT-APPL-SN-734805	c 14	N70-34816 *	US-PATENT-APPL-SN-749420	c 04	N82-16059 *	US-PATENT-APPL-SN-761235	c 27	N86-32569 *
US-PATENT-APPL-SN-734901	c 27	N78-17205 *	US-PATENT-APPL-SN-749548	c 10	N71-33129 *	US-PATENT-APPL-SN-761252	c 27	N80-32515 *
US-PATENT-APPL-SN-734902	c 24	N78-14096 *	US-PATENT-APPL-SN-749737	c 35	N93-20208 *	US-PATENT-APPL-SN-761298	c 74	N93-22008 *
US-PATENT-APPL-SN-735149	c 37	N92-34173 *	US-PATENT-APPL-SN-749819	c 61	N93-18858 *	US-PATENT-APPL-SN-761310	c 25	N88-23846 *
US-PATENT-APPL-SN-735548	c 24	N93-29609 *	US-PATENT-APPL-SN-750031	c 05	N73-32012 *	US-PATENT-APPL-SN-761404	c 09	N71-12526 *
US-PATENT-APPL-SN-735911	c 14	N70-41946 *	US-PATENT-APPL-SN-750158	c 27	N93-29085 *	US-PATENT-APPL-SN-761566	c 61	N92-10331 *
US-PATENT-APPL-SN-736145	c 34	N92-29125 *	US-PATENT-APPL-SN-750235	c 25	N75-14844 *	US-PATENT-APPL-SN-762362	c 44	N79-24433 *
US-PATENT-APPL-SN-736286	c 32	N79-11265 *	US-PATENT-APPL-SN-750655	c 74	N78-32854 *	US-PATENT-APPL-SN-762363	c 44	N79-24432 *
US-PATENT-APPL-SN-736667	c 27	N92-12121 *	US-PATENT-APPL-SN-750786	c 07	N71-27341 *	US-PATENT-APPL-SN-762438	c 12	N71-17569 *
US-PATENT-APPL-SN-736848	c 23	N71-16212 *	US-PATENT-APPL-SN-750787	c 10	N71-27126 *	US-PATENT-APPL-SN-762935	c 14	N71-29041 *
US-PATENT-APPL-SN-736880	c 27	N92-11201 *	US-PATENT-APPL-SN-750792	c 37	N79-11402 *	US-PATENT-APPL-SN-762936	c 31	N69-27499 *
US-PATENT-APPL-SN-736909	c 37	N79-11404 *	US-PATENT-APPL-SN-750798	c 85	N79-17747 *	US-PATENT-APPL-SN-762956	c 14	N71-26627 *
US-PATENT-APPL-SN-736910	c 27	N78-32260 *	US-PATENT-APPL-SN-751061	c 18	N71-29040 *	US-PATENT-APPL-SN-762957	c 08	N71-27210 *
US-PATENT-APPL-SN-736985	c 25	N92-30098 *	US-PATENT-APPL-SN-751198	c 03	N71-24718 *	US-PATENT-APPL-SN-763040	c 14	N72-28438 *
US-PATENT-APPL-SN-737018	c 37	N86-20801 *	US-PATENT-APPL-SN-751215	c 22	N72-20597 *	US-PATENT-APPL-SN-763355	c 06	N71-28620 *
US-PATENT-AP								

US-PATENT-APPL-SN-763706

REPORT NUMBER INDEX

US-PATENT-APPL-SN-763706	c 15	N71-24896 *	US-PATENT-APPL-SN-773376	c 33	N92-33021 *	US-PATENT-APPL-SN-785780	c 18	N71-28729 *
US-PATENT-APPL-SN-763729	c 12	N71-26546 *	US-PATENT-APPL-SN-773530	c 25	N75-29192 *	US-PATENT-APPL-SN-786322	c 32	N79-20296 *
US-PATENT-APPL-SN-763743	c 14	N72-21409 *	US-PATENT-APPL-SN-774151	c 15	N71-17692 *	US-PATENT-APPL-SN-786499	c 63	N92-17895 *
US-PATENT-APPL-SN-763744	c 10	N72-27246 *	US-PATENT-APPL-SN-774265	c 10	N71-27365 *	US-PATENT-APPL-SN-786612	c 29	N92-30083 *
US-PATENT-APPL-SN-763753	c 43	N78-14452 *	US-PATENT-APPL-SN-774266	c 15	N71-26185 *	US-PATENT-APPL-SN-786612	c 29	N93-24600 *
US-PATENT-APPL-SN-763868	c 15	N71-24679 *	US-PATENT-APPL-SN-774384	c 32	N79-10262 *	US-PATENT-APPL-SN-786618	c 74	N92-17892 *
US-PATENT-APPL-SN-763869	c 17	N71-16393 *	US-PATENT-APPL-SN-774691	c 10	N72-31273 *	US-PATENT-APPL-SN-7867	c 14	N72-17324 *
US-PATENT-APPL-SN-764245	c 24	N80-33482 *	US-PATENT-APPL-SN-774733	c 14	N72-24477 *	US-PATENT-APPL-SN-7868	c 10	N72-17173 *
US-PATENT-APPL-SN-764252	c 14	N71-25901 *	US-PATENT-APPL-SN-775072	c 16	N71-24831 *	US-PATENT-APPL-SN-786913	c 27	N79-12221 *
US-PATENT-APPL-SN-764470	c 16	N71-28554 *	US-PATENT-APPL-SN-775239	c 37	N79-14382 *	US-PATENT-APPL-SN-78703	c 15	N73-20514 *
US-PATENT-APPL-SN-764581	c 25	N93-29617 *	US-PATENT-APPL-SN-775404	c 54	N92-17910 *	US-PATENT-APPL-SN-78704	c 05	N72-25121 *
US-PATENT-APPL-SN-764805	c 37	N87-17036 *	US-PATENT-APPL-SN-775548	c 33	N87-21233 *	US-PATENT-APPL-SN-78717	c 05	N73-13114 *
US-PATENT-APPL-SN-764812	c 10	N71-19468 *	US-PATENT-APPL-SN-775870	c 09	N71-24800 *	US-PATENT-APPL-SN-787393	c 23	N71-26206 *
US-PATENT-APPL-SN-764812	c 76	N88-24543 *	US-PATENT-APPL-SN-775870	c 09	N72-22196 *	US-PATENT-APPL-SN-787410	c 15	N71-19213 *
US-PATENT-APPL-SN-764823	c 33	N78-17296 *	US-PATENT-APPL-SN-775877	c 02	N71-11039 *	US-PATENT-APPL-SN-78766	c 05	N74-10907 *
US-PATENT-APPL-SN-765069	c 37	N93-14710 *	US-PATENT-APPL-SN-775966	c 02	N71-11037 *	US-PATENT-APPL-SN-787846	c 23	N71-33229 *
US-PATENT-APPL-SN-765070	c 35	N92-33614 *	US-PATENT-APPL-SN-775968	c 31	N87-21160 *	US-PATENT-APPL-SN-787906	c 03	N71-26084 *
US-PATENT-APPL-SN-765123	c 31	N71-15687 *	US-PATENT-APPL-SN-775989	c 71	N87-21653 *	US-PATENT-APPL-SN-787911	c 03	N71-28579 *
US-PATENT-APPL-SN-765138	c 44	N79-10513 *	US-PATENT-APPL-SN-775990	c 17	N87-25348 *	US-PATENT-APPL-SN-787993	c 44	N92-23463 *
US-PATENT-APPL-SN-765139	c 44	N78-31526 *	US-PATENT-APPL-SN-776029	c 07	N79-10057 *	US-PATENT-APPL-SN-788045	c 24	N79-25142 *
US-PATENT-APPL-SN-765165	c 32	N79-11264 *	US-PATENT-APPL-SN-776146	c 44	N79-17313 *	US-PATENT-APPL-SN-788705	c 35	N78-24515 *
US-PATENT-APPL-SN-765167	c 32	N79-10263 *	US-PATENT-APPL-SN-776146	c 25	N82-21268 *	US-PATENT-APPL-SN-788908	c 08	N93-25998 *
US-PATENT-APPL-SN-765264	c 02	N71-29128 *	US-PATENT-APPL-SN-776185	c 03	N72-22041 *	US-PATENT-APPL-SN-789043	c 10	N71-26531 *
US-PATENT-APPL-SN-765273	c 54	N92-21589 *	US-PATENT-APPL-SN-776710	c 47	N93-10108 *	US-PATENT-APPL-SN-789044	c 14	N72-20381 *
US-PATENT-APPL-SN-765615	c 52	N92-11628 *	US-PATENT-APPL-SN-777764	c 15	N71-27214 *	US-PATENT-APPL-SN-789045	c 15	N72-22489 *
US-PATENT-APPL-SN-765738	c 03	N71-11057 *	US-PATENT-APPL-SN-777765	c 15	N71-29018 *	US-PATENT-APPL-SN-789266	c 71	N88-24241 *
US-PATENT-APPL-SN-765978	c 37	N87-21334 *	US-PATENT-APPL-SN-777765	c 14	N73-28487 *	US-PATENT-APPL-SN-789278	c 15	N71-24694 *
US-PATENT-APPL-SN-765979	c 89	N86-22459 *	US-PATENT-APPL-SN-777766	c 31	N71-16221 *	US-PATENT-APPL-SN-789567	c 63	N92-29955 *
US-PATENT-APPL-SN-765979	c 89	N92-33012 *	US-PATENT-APPL-SN-777818	c 09	N71-27364 *	US-PATENT-APPL-SN-789903	c 07	N71-28429 *
US-PATENT-APPL-SN-765980	c 27	N86-27451 *	US-PATENT-APPL-SN-777886	c 14	N72-27412 *	US-PATENT-APPL-SN-790420	c 09	N71-24595 *
US-PATENT-APPL-SN-765981	c 74	N87-28416 *	US-PATENT-APPL-SN-777893	c 32	N79-24210 *	US-PATENT-APPL-SN-790556	c 08	N87-20999 *
US-PATENT-APPL-SN-765991	c 35	N86-26598 *	US-PATENT-APPL-SN-778195	c 24	N79-16915 *	US-PATENT-APPL-SN-790594	c 36	N87-23961 *
US-PATENT-APPL-SN-766170	c 07	N71-24625 *	US-PATENT-APPL-SN-77869	c 37	N79-21345 *	US-PATENT-APPL-SN-790596	c 35	N88-24927 *
US-PATENT-APPL-SN-766244	c 15	N71-26721 *	US-PATENT-APPL-SN-779024	c 10	N71-27271 *	US-PATENT-APPL-SN-790597	c 37	N88-14359 *
US-PATENT-APPL-SN-766245	c 14	N71-27215 *	US-PATENT-APPL-SN-779025	c 09	N72-23171 *	US-PATENT-APPL-SN-790637	c 44	N78-25529 *
US-PATENT-APPL-SN-766593	c 44	N93-28974 *	US-PATENT-APPL-SN-779160	c 14	N72-16282 *	US-PATENT-APPL-SN-790723	c 32	N92-31257 *
US-PATENT-APPL-SN-766597	c 31	N93-18857 *	US-PATENT-APPL-SN-779169	c 09	N71-28618 *	US-PATENT-APPL-SN-790730	c 27	N92-29953 *
US-PATENT-APPL-SN-766609	c 31	N93-29611 *	US-PATENT-APPL-SN-779415	c 60	N79-20751 *	US-PATENT-APPL-SN-790731	c 32	N92-31150 *
US-PATENT-APPL-SN-766697	c 09	N71-33519 *	US-PATENT-APPL-SN-779428	c 34	N78-25351 *	US-PATENT-APPL-SN-791267	c 23	N72-17747 *
US-PATENT-APPL-SN-7668	c 15	N71-26611 *	US-PATENT-APPL-SN-779429	c 08	N79-14108 *	US-PATENT-APPL-SN-791268	c 33	N72-17947 *
US-PATENT-APPL-SN-766999	c 33	N80-23559 *	US-PATENT-APPL-SN-779744	c 74	N87-23259 *	US-PATENT-APPL-SN-791288	c 28	N71-25213 *
US-PATENT-APPL-SN-7669	c 31	N72-18859 *	US-PATENT-APPL-SN-779847	c 15	N71-27091 *	US-PATENT-APPL-SN-791364	c 14	N72-17328 *
US-PATENT-APPL-SN-767741	c 09	N72-27228 *	US-PATENT-APPL-SN-779871	c 33	N79-20314 *	US-PATENT-APPL-SN-791693	c 05	N71-11203 *
US-PATENT-APPL-SN-767911	c 09	N78-31129 *	US-PATENT-APPL-SN-779883	c 27	N79-18052 *	US-PATENT-APPL-SN-791728	c 37	N92-17677 *
US-PATENT-APPL-SN-767912	c 27	N79-14214 *	US-PATENT-APPL-SN-780064	c 15	N71-27372 *	US-PATENT-APPL-SN-791759	c 33	N93-18278 *
US-PATENT-APPL-SN-768094	c 09	N93-11057 *	US-PATENT-APPL-SN-780065	c 12	N71-28741 *	US-PATENT-APPL-SN-791888	c 23	N71-24725 *
US-PATENT-APPL-SN-768336	c 15	N71-17648 *	US-PATENT-APPL-SN-780512	c 37	N93-14702 *	US-PATENT-APPL-SN-792067	c 24	N78-17150 *
US-PATENT-APPL-SN-768470	c 09	N71-28421 *	US-PATENT-APPL-SN-780513	c 74	N92-17863 *	US-PATENT-APPL-SN-792068	c 51	N79-10693 *
US-PATENT-APPL-SN-768473	c 14	N71-17657 *	US-PATENT-APPL-SN-780569	c 54	N78-31736 *	US-PATENT-APPL-SN-792069	c 37	N79-10418 *
US-PATENT-APPL-SN-768662	c 07	N73-25160 *	US-PATENT-APPL-SN-78065	c 08	N72-22162 *	US-PATENT-APPL-SN-792501	c 61	N92-30543 *
US-PATENT-APPL-SN-768795	c 33	N79-10339 *	US-PATENT-APPL-SN-780728	c 32	N78-31321 *	US-PATENT-APPL-SN-792623	c 14	N72-23457 *
US-PATENT-APPL-SN-768942	c 46	N74-23068 *	US-PATENT-APPL-SN-780729	c 33	N79-22373 *	US-PATENT-APPL-SN-793006	c 52	N86-19885 *
US-PATENT-APPL-SN-76899	c 09	N72-22201 *	US-PATENT-APPL-SN-780873	c 32	N81-27341 *	US-PATENT-APPL-SN-793657	c 17	N72-28536 *
US-PATENT-APPL-SN-769148	c 52	N79-10724 *	US-PATENT-APPL-SN-780874	c 35	N78-28411 *	US-PATENT-APPL-SN-793770	c 25	N71-15562 *
US-PATENT-APPL-SN-769149	c 33	N78-32339 *	US-PATENT-APPL-SN-780938	c 54	N80-10799 *	US-PATENT-APPL-SN-793771	c 14	N72-22440 *
US-PATENT-APPL-SN-769592	c 15	N72-16330 *	US-PATENT-APPL-SN-781520	c 31	N93-13422 *	US-PATENT-APPL-SN-793772	c 10	N71-18722 *
US-PATENT-APPL-SN-769665	c 15	N72-11387 *	US-PATENT-APPL-SN-781521	c 33	N92-17865 *	US-PATENT-APPL-SN-793823	c 09	N71-33109 *
US-PATENT-APPL-SN-769788	c 07	N71-11300 *	US-PATENT-APPL-SN-781625	c 33	N93-18285 *	US-PATENT-APPL-SN-793974	c 37	N92-34212 *
US-PATENT-APPL-SN-770203	c 05	N71-11955 *	US-PATENT-APPL-SN-781812	c 18	N92-24444 *	US-PATENT-APPL-SN-794530	c 15	N72-11386 *
US-PATENT-APPL-SN-770209	c 08	N71-27057 *	US-PATENT-APPL-SN-781813	c 36	N87-23960 *	US-PATENT-APPL-SN-794968	c 15	N71-27146 *
US-PATENT-APPL-SN-770371	c 15	N71-24599 *	US-PATENT-APPL-SN-782009	c 27	N87-14516 *	US-PATENT-APPL-SN-795182	c 07	N71-24840 *
US-PATENT-APPL-SN-770398	c 06	N71-27254 *	US-PATENT-APPL-SN-782062	c 36	N93-14703 *	US-PATENT-APPL-SN-795217	c 33	N71-25351 *
US-PATENT-APPL-SN-770398	c 06	N72-27144 *	US-PATENT-APPL-SN-782463	c 33	N79-17133 *	US-PATENT-APPL-SN-795805	c 08	N88-23808 *
US-PATENT-APPL-SN-770417	c 06	N73-33076 *	US-PATENT-APPL-SN-782463	c 72	N79-13826 *	US-PATENT-APPL-SN-795945	c 37	N87-25573 *
US-PATENT-APPL-SN-770425	c 06	N72-20121 *	US-PATENT-APPL-SN-782464	c 32	N79-14267 *	US-PATENT-APPL-SN-796053	c 37	N87-22985 *
US-PATENT-APPL-SN-770509	c 37	N92-30097 *	US-PATENT-APPL-SN-782480	c 33	N78-32340 *	US-PATENT-APPL-SN-796256	c 52	N80-18691 *
US-PATENT-APPL-SN-770869	c 44	N78-25527 *	US-PATENT-APPL-SN-782481	c 44	N78-32542 *	US-PATENT-APPL-SN-796258	c 52	N82-22875 *
US-PATENT-APPL-SN-770920	c 37	N86-32736 *	US-PATENT-APPL-SN-782482	c 33	N79-11315 *	US-PATENT-APPL-SN-796263	c 27	N79-28307 *
US-PATENT-APPL-SN-771216	c 14	N72-17329 *	US-PATENT-APPL-SN-782544	c 14	N71-27325 *	US-PATENT-APPL-SN-796358	c 05	N72-11085 *
US-PATENT-APPL-SN-771245	c 27	N81-14076 *	US-PATENT-APPL-SN-782693	c 33	N79-10337 *	US-PATENT-APPL-SN-796360	c 15	N71-24696 *
US-PATENT-APPL-SN-771523	c 10	N71-18772 *	US-PATENT-APPL-SN-782955	c 07	N71-33108 *	US-PATENT-APPL-SN-796370	c 10	N71-27366 *
US-PATENT-APPL-SN-771530	c 09	N72-12136 *	US-PATENT-APPL-SN-782956	c 10	N71-25865 *	US-PATENT-APPL-SN-796405	c 14	N71-27185 *
US-PATENT-APPL-SN-771537	c 37	N87-23981 *	US-PATENT-APPL-SN-783374	c 15	N71-27147 *	US-PATENT-APPL-SN-796496	c 37	N92-23378 *
US-PATENT-APPL-SN-771537	c 35	N91-21494 *	US-PATENT-APPL-SN-783375	c 07	N71-24621 *	US-PATENT-APPL-SN-796496	c 37	N93-18286 *
US-PATENT-APPL-SN-771538	c 24	N86-25416 *	US-PATENT-APPL-SN-783377	c 05	N71-28619 *	US-PATENT-APPL-SN-796685	c 26	N72-28762 *
US-PATENT-APPL-SN-77169	c 14	N72-21408 *	US-PATENT-APPL-SN-783378	c 07	N71-19436 *	US-PATENT-APPL-SN-796690	c 07	N72-21119 *
US-PATENT-APPL-SN-771759	c 09	N71-29008 *	US-PATENT-APPL-SN-783379	c 15	N71-17653 *	US-PATENT-APPL-SN-796691	c 10	N71-26334 *
US-PATENT-APPL-SN-771760	c 10	N71-25917 *	US-PATENT-APPL-SN-783886	c 37	N87-17035 *	US-PATENT-APPL-SN-797056	c 15	N71-25975 *
US-PATENT-APPL-SN-771803	c 07	N71-12391 *	US-PATENT-APPL-SN-783887	c 36	N87-25567 *	US-PATENT-APPL-SN-797057	c 15	N70-22192 *
US-PATENT-APPL-SN-771937	c 10	N71-24862 *	US-PATENT-APPL-SN-783888	c 37	N87-25582 *	US-PATENT-APPL-SN-797058	c 05	N71-24738 *
US-PATENT-APPL-SN-772006	c 17	N71-33408 *	US-PATENT-APPL-SN-783890	c 74	N87-17493 *	US-PATENT-APPL-SN-797059	c 15	N71-28465 *
US-PATENT-APPL-SN-772165	c 74	N79-13855 *	US-PATENT-APPL-SN-784055	c 15	N72-11390 *	US-PATENT-APPL-SN-797210	c 28	N78-31255 *
US-PATENT-APPL-SN-772167	c 25	N79-22235 *	US-PATENT-APPL-SN-784521	c 14	N71-15620 *	US-PATENT-APPL-SN-797219	c 03	N71-33409 *
US-PATENT-APPL-SN-772168	c 37	N79-20377 *	US-PATENT-APPL-SN-784544	c 15	N72-12408 *	US-PATENT-APPL-SN-797507	c 39	N93-26102 *
US-PATENT-APPL-SN-772181	c 27	N91-32230 *	US-PATENT-APPL-SN-785078	c 03	N72-27053 *	US-PATENT-APPL-SN-797569	c 74	N92-33022 *
US-PATENT-APPL-SN-772200	c 37	N92-23377 *	US-PATENT-APPL-SN-785078	c 44	N79-14526 *	US-PATENT-APPL-SN-797794	c 07	N71-12396 *
US-PATENT-APPL-SN-77220	c 14	N72-27409 *	US-PATENT-APPL-SN-785257	c 27	N81-14077 *	US-PATENT-APPL-SN-797796	c 28	N71-27191 *
US-PATENT-APPL-SN-77221	c 08	N72-25210 *	US-PATENT-APPL-SN-785279	c 27	N81-14077 *	US-PATENT-APPL-SN-798277	c 23	N71-26654 *
US-PATENT-APPL-SN-772434	c 52	N80-14687 *	US-PATENT-APPL-SN-785546	c 10	N71-25882 *	US-PATENT-APPL-SN-798464	c 24	N92-17861 *
US-PATENT-APPL-SN-77251	c 25	N70-41628 *	US-PATENT-APPL-SN-785595	c 10	N71-24860 *	US-PATENT-APPL-SN-798713	c 28	N91-14495 *
US-PATENT-APPL-SN-77252	c 02	N70-37939 *	US-PATENT-APPL-SN-785611	c 15	N72-25119 *	US-PATENT-APPL-SN-798976	c 52	N81-25661 *
US-PATENT-APPL-SN-77256	c 15	N70-33323 *	US-PATENT-APPL-SN-785615	c 05	N72-20098 *	US-PATENT-APPL-SN-799013	c 09	N71-28468 *
US-PATENT-APPL-SN-772741	c 33	N92-23462 *	US-PATENT-APPL-SN-785615	c 05	N72-20098 *	US-PATENT-APPL-SN-799023	c 37	N79-10421 *
US-PATENT								



## REPORT NUMBER INDEX

## US-PATENT-APPL-SN-843653

US-PATENT-APPL-SN-799026	c 44	N79-11468 *	US-PATENT-APPL-SN-812998	c 28	N72-22769 *	US-PATENT-APPL-SN-829316	c 18	N79-11108 *
US-PATENT-APPL-SN-799353	c 09	N71-27232 *	US-PATENT-APPL-SN-812999	c 05	N71-12345 *	US-PATENT-APPL-SN-829317	c 52	N80-18690 *
US-PATENT-APPL-SN-799460	c 37	N92-23544 *	US-PATENT-APPL-SN-813338	c 18	N72-22566 *	US-PATENT-APPL-SN-829318	c 52	N80-14684 *
US-PATENT-APPL-SN-799460	c 37	N71-28467 *	US-PATENT-APPL-SN-813488	c 15	N71-28467 *	US-PATENT-APPL-SN-829390	c 44	N79-11469 *
US-PATENT-APPL-SN-799571	c 82	N92-30386 *	US-PATENT-APPL-SN-813494	c 08	N72-11171 *	US-PATENT-APPL-SN-829390	c 44	N80-16452 *
US-PATENT-APPL-SN-799832	c 33	N79-15245 *	US-PATENT-APPL-SN-813556	c 63	N92-30314 *	US-PATENT-APPL-SN-829825	c 03	N71-24681 *
US-PATENT-APPL-SN-799832	c 61	N93-14882 *	US-PATENT-APPL-SN-813558	c 37	N92-28727 *	US-PATENT-APPL-SN-830272	c 33	N81-29342 *
US-PATENT-APPL-SN-800193	c 37	N87-17038 *	US-PATENT-APPL-SN-813628	c 37	N93-29618 *	US-PATENT-APPL-SN-830366	c 16	N72-13437 *
US-PATENT-APPL-SN-800194	c 76	N88-14835 *	US-PATENT-APPL-SN-813629	c 54	N92-17866 *	US-PATENT-APPL-SN-830458	c 46	N79-23555 *
US-PATENT-APPL-SN-800204	c 06	N72-17094 *	US-PATENT-APPL-SN-814004	c 33	N79-18193 *	US-PATENT-APPL-SN-830562	c 39	N80-10507 *
US-PATENT-APPL-SN-800229	c 14	N73-32320 *	US-PATENT-APPL-SN-814005	c 76	N79-14906 *	US-PATENT-APPL-SN-830715	c 15	N71-24903 *
US-PATENT-APPL-SN-800229	c 74	N74-20008 *	US-PATENT-APPL-SN-814006	c 37	N79-22475 *	US-PATENT-APPL-SN-830846	c 31	N80-32584 *
US-PATENT-APPL-SN-800973	c 16	N71-24832 *	US-PATENT-APPL-SN-814212	c 14	N72-17326 *	US-PATENT-APPL-SN-830978	c 28	N71-26173 *
US-PATENT-APPL-SN-801141	c 39	N92-23549 *	US-PATENT-APPL-SN-814378	c 25	N79-10162 *	US-PATENT-APPL-SN-831118	c 08	N72-11172 *
US-PATENT-APPL-SN-801141	c 39	N93-20118 *	US-PATENT-APPL-SN-815059	c 60	N86-24224 *	US-PATENT-APPL-SN-831193	c 32	N88-26568 *
US-PATENT-APPL-SN-801290	c 37	N79-18318 *	US-PATENT-APPL-SN-815103	c 60	N89-26400 *	US-PATENT-APPL-SN-831371	c 31	N87-25492 *
US-PATENT-APPL-SN-801290	c 37	N80-26658 *	US-PATENT-APPL-SN-815106	c 60	N88-24169 *	US-PATENT-APPL-SN-831372	c 35	N88-30108 *
US-PATENT-APPL-SN-801290	c 37	N82-19540 *	US-PATENT-APPL-SN-815366	c 14	N71-28994 *	US-PATENT-APPL-SN-831377	c 37	N87-23982 *
US-PATENT-APPL-SN-801312	c 16	N71-15565 *	US-PATENT-APPL-SN-815367	c 14	N71-28863 *	US-PATENT-APPL-SN-831631	c 32	N79-20297 *
US-PATENT-APPL-SN-801336	c 02	N71-13422 *	US-PATENT-APPL-SN-815760	c 15	N71-27068 *	US-PATENT-APPL-SN-831632	c 07	N80-26298 *
US-PATENT-APPL-SN-801432	c 33	N78-32341 *	US-PATENT-APPL-SN-816733	c 15	N71-27084 *	US-PATENT-APPL-SN-831633	c 05	N80-14107 *
US-PATENT-APPL-SN-801452	c 44	N79-11471 *	US-PATENT-APPL-SN-816988	c 14	N71-26199 *	US-PATENT-APPL-SN-831634	c 05	N79-12061 *
US-PATENT-APPL-SN-801660	c 14	N71-26672 *	US-PATENT-APPL-SN-817413	c 33	N79-12321 *	US-PATENT-APPL-SN-832296	c 26	N87-28647 *
US-PATENT-APPL-SN-801867	c 27	N93-19388 *	US-PATENT-APPL-SN-817415	c 74	N79-20857 *	US-PATENT-APPL-SN-832569	c 54	N92-24044 *
US-PATENT-APPL-SN-801868	c 27	N93-19327 *	US-PATENT-APPL-SN-817481	c 09	N72-11225 *	US-PATENT-APPL-SN-832603	c 09	N72-22199 *
US-PATENT-APPL-SN-802078	c 32	N93-29087 *	US-PATENT-APPL-SN-817482	c 10	N71-27338 *	US-PATENT-APPL-SN-833049	c 06	N72-21094 *
US-PATENT-APPL-SN-802769	c 76	N86-25269 *	US-PATENT-APPL-SN-817569	c 06	N69-31244 *	US-PATENT-APPL-SN-833637	c 33	N79-24257 *
US-PATENT-APPL-SN-802812	c 10	N72-22235 *	US-PATENT-APPL-SN-818349	c 21	N71-19212 *	US-PATENT-APPL-SN-834257	c 32	N80-14281 *
US-PATENT-APPL-SN-802813	c 15	N72-22487 *	US-PATENT-APPL-SN-818916	c 05	N79-17847 *	US-PATENT-APPL-SN-834451	c 35	N92-23545 *
US-PATENT-APPL-SN-802816	c 31	N71-16346 *	US-PATENT-APPL-SN-818917	c 32	N79-13214 *	US-PATENT-APPL-SN-834977	c 27	N87-23736 *
US-PATENT-APPL-SN-802818	c 07	N71-29065 *	US-PATENT-APPL-SN-819029	c 20	N82-18314 *	US-PATENT-APPL-SN-834978	c 27	N86-24841 *
US-PATENT-APPL-SN-802820	c 10	N71-13545 *	US-PATENT-APPL-SN-819599	c 15	N71-19214 *	US-PATENT-APPL-SN-835058	c 21	N72-22619 *
US-PATENT-APPL-SN-802948	c 31	N71-33160 *	US-PATENT-APPL-SN-819898	c 30	N72-17873 *	US-PATENT-APPL-SN-835059	c 09	N71-26133 *
US-PATENT-APPL-SN-802972	c 09	N71-26678 *	US-PATENT-APPL-SN-8203	c 15	N70-33180 *	US-PATENT-APPL-SN-835060	c 02	N71-26110 *
US-PATENT-APPL-SN-803268	c 74	N93-14711 *	US-PATENT-APPL-SN-820431	c 34	N92-29954 *	US-PATENT-APPL-SN-835146	c 15	N70-33264 *
US-PATENT-APPL-SN-803658	c 09	N73-20231 *	US-PATENT-APPL-SN-820432	c 34	N92-29830 *	US-PATENT-APPL-SN-835152	c 28	N70-38199 *
US-PATENT-APPL-SN-803659	c 09	N72-22198 *	US-PATENT-APPL-SN-820453	c 03	N72-24037 *	US-PATENT-APPL-SN-835153	c 31	N71-17680 *
US-PATENT-APPL-SN-803822	c 26	N79-22271 *	US-PATENT-APPL-SN-820498	c 89	N79-10969 *	US-PATENT-APPL-SN-835419	c 33	N80-18285 *
US-PATENT-APPL-SN-803822	c 26	N80-32484 *	US-PATENT-APPL-SN-820499	c 76	N79-23798 *	US-PATENT-APPL-SN-835544	c 33	N79-14305 *
US-PATENT-APPL-SN-803823	c 44	N79-11467 *	US-PATENT-APPL-SN-8204	c 31	N70-37981 *	US-PATENT-APPL-SN-835628	c 35	N79-14347 *
US-PATENT-APPL-SN-803828	c 51	N92-24052 *	US-PATENT-APPL-SN-820963	c 07	N71-19854 *	US-PATENT-APPL-SN-836280	c 14	N73-14428 *
US-PATENT-APPL-SN-804035	c 35	N79-14348 *	US-PATENT-APPL-SN-820964	c 15	N71-28740 *	US-PATENT-APPL-SN-836280	c 35	N75-25122 *
US-PATENT-APPL-SN-804039	c 31	N87-25491 *	US-PATENT-APPL-SN-820965	c 09	N71-13486 *	US-PATENT-APPL-SN-836367	c 09	N71-24804 *
US-PATENT-APPL-SN-804040	c 32	N87-21206 *	US-PATENT-APPL-SN-821586	c 26	N71-14354 *	US-PATENT-APPL-SN-837259	c 54	N79-24652 *
US-PATENT-APPL-SN-804172	c 28	N71-26781 *	US-PATENT-APPL-SN-821681	c 35	N78-27384 *	US-PATENT-APPL-SN-837260	c 37	N78-27423 *
US-PATENT-APPL-SN-804196	c 33	N87-28831 *	US-PATENT-APPL-SN-822039	c 06	N72-25149 *	US-PATENT-APPL-SN-837377	c 15	N71-26148 *
US-PATENT-APPL-SN-805010	c 35	N87-23944 *	US-PATENT-APPL-SN-822088	c 15	N71-27135 *	US-PATENT-APPL-SN-837378	c 15	N71-24865 *
US-PATENT-APPL-SN-805011	c 54	N88-24163 *	US-PATENT-APPL-SN-822089	c 23	N72-23695 *	US-PATENT-APPL-SN-837513	c 44	N81-29525 *
US-PATENT-APPL-SN-805012	c 27	N87-21111 *	US-PATENT-APPL-SN-822090	c 16	N71-27183 *	US-PATENT-APPL-SN-837513	c 44	N82-28780 *
US-PATENT-APPL-SN-805298	c 10	N71-25899 *	US-PATENT-APPL-SN-822240	c 23	N92-17882 *	US-PATENT-APPL-SN-837794	c 28	N80-20402 *
US-PATENT-APPL-SN-805341	c 74	N93-29086 *	US-PATENT-APPL-SN-822457	c 37	N92-30388 *	US-PATENT-APPL-SN-837794	c 28	N81-14103 *
US-PATENT-APPL-SN-805405	c 14	N71-27323 *	US-PATENT-APPL-SN-822518	c 09	N71-13522 *	US-PATENT-APPL-SN-837795	c 36	N80-14384 *
US-PATENT-APPL-SN-805406	c 07	N71-24613 *	US-PATENT-APPL-SN-822519	c 14	N71-28992 *	US-PATENT-APPL-SN-837796	c 35	N79-14345 *
US-PATENT-APPL-SN-805549	c 35	N79-16246 *	US-PATENT-APPL-SN-822534	c 09	N72-11224 *	US-PATENT-APPL-SN-837825	c 15	N71-27006 *
US-PATENT-APPL-SN-806066	c 02	N93-22015 *	US-PATENT-APPL-SN-822779	c 03	N76-32140 *	US-PATENT-APPL-SN-837830	c 02	N71-27088 *
US-PATENT-APPL-SN-806149	c 27	N71-16223 *	US-PATENT-APPL-SN-822820	c 09	N72-25262 *	US-PATENT-APPL-SN-83816	c 44	N74-14784 *
US-PATENT-APPL-SN-806226	c 14	N71-27407 *	US-PATENT-APPL-SN-823061	c 44	N79-23481 *	US-PATENT-APPL-SN-838278	c 60	N74-20836 *
US-PATENT-APPL-SN-806440	c 51	N79-10694 *	US-PATENT-APPL-SN-823566	c 74	N79-14891 *	US-PATENT-APPL-SN-838308	c 52	N80-27072 *
US-PATENT-APPL-SN-806572	c 27	N87-25469 *	US-PATENT-APPL-SN-823712	c 44	N88-14492 *	US-PATENT-APPL-SN-838336	c 44	N79-11470 *
US-PATENT-APPL-SN-807597	c 52	N80-16725 *	US-PATENT-APPL-SN-823713	c 26	N88-14179 *	US-PATENT-APPL-SN-838337	c 31	N79-17029 *
US-PATENT-APPL-SN-807703	c 37	N78-27424 *	US-PATENT-APPL-SN-823805	c 34	N93-26000 *	US-PATENT-APPL-SN-838630	c 14	N71-28993 *
US-PATENT-APPL-SN-807762	c 27	N78-31233 *	US-PATENT-APPL-SN-823809	c 02	N93-11876 *	US-PATENT-APPL-SN-838648	c 33	N87-23879 *
US-PATENT-APPL-SN-808192	c 15	N71-27432 *	US-PATENT-APPL-SN-824024	c 44	N79-18443 *	US-PATENT-APPL-SN-838649	c 34	N91-14562 *
US-PATENT-APPL-SN-808193	c 31	N71-26537 *	US-PATENT-APPL-SN-824042	c 23	N71-29123 *	US-PATENT-APPL-SN-838654	c 27	N90-21198 *
US-PATENT-APPL-SN-808302	c 74	N93-22037 *	US-PATENT-APPL-SN-824126	c 37	N93-14712 *	US-PATENT-APPL-SN-838655	c 27	N87-22848 *
US-PATENT-APPL-SN-808462	c 10	N71-27136 *	US-PATENT-APPL-SN-824628	c 34	N78-17337 *	US-PATENT-APPL-SN-839934	c 07	N72-20140 *
US-PATENT-APPL-SN-808510	c 33	N78-32338 *	US-PATENT-APPL-SN-824755	c 09	N70-33182 *	US-PATENT-APPL-SN-839935	c 15	N71-24895 *
US-PATENT-APPL-SN-808576	c 15	N71-27754 *	US-PATENT-APPL-SN-824806	c 37	N92-24051 *	US-PATENT-APPL-SN-839941	c 07	N71-26181 *
US-PATENT-APPL-SN-808577	c 32	N71-25360 *	US-PATENT-APPL-SN-824858	c 27	N92-24053 *	US-PATENT-APPL-SN-839963	c 27	N79-33316 *
US-PATENT-APPL-SN-808822	c 14	N73-16483 *	US-PATENT-APPL-SN-825253	c 16	N69-31343 *	US-PATENT-APPL-SN-839963	c 27	N81-14078 *
US-PATENT-APPL-SN-808981	c 27	N92-25397 *	US-PATENT-APPL-SN-825258	c 26	N72-21701 *	US-PATENT-APPL-SN-839994	c 28	N71-28915 *
US-PATENT-APPL-SN-809822	c 28	N71-27585 *	US-PATENT-APPL-SN-825259	c 14	N71-26788 *	US-PATENT-APPL-SN-840002	c 08	N73-20217 *
US-PATENT-APPL-SN-809851	c 33	N87-23904 *	US-PATENT-APPL-SN-825489	c 27	N81-15104 *	US-PATENT-APPL-SN-840176	c 28	N71-27095 *
US-PATENT-APPL-SN-809890	c 44	N79-17314 *	US-PATENT-APPL-SN-825895	c 37	N92-24055 *	US-PATENT-APPL-SN-840308	c 07	N71-33613 *
US-PATENT-APPL-SN-809890	c 44	N80-14474 *	US-PATENT-APPL-SN-826202	c 37	N79-28551 *	US-PATENT-APPL-SN-840359	c 23	N71-29125 *
US-PATENT-APPL-SN-809975	c 44	N87-17399 *	US-PATENT-APPL-SN-826204	c 37	N79-10420 *	US-PATENT-APPL-SN-840816	c 27	N87-28657 *
US-PATENT-APPL-SN-810575	c 15	N71-27169 *	US-PATENT-APPL-SN-826326	c 46	N79-22679 *	US-PATENT-APPL-SN-840870	c 15	N71-26189 *
US-PATENT-APPL-SN-810576	c 15	N73-12492 *	US-PATENT-APPL-SN-82647	c 28	N72-22772 *	US-PATENT-APPL-SN-840900	c 26	N87-25455 *
US-PATENT-APPL-SN-810576	c 25	N82-21269 *	US-PATENT-APPL-SN-82648	c 12	N72-25292 *	US-PATENT-APPL-SN-840983	c 05	N70-33285 *
US-PATENT-APPL-SN-810579	c 09	N72-22203 *	US-PATENT-APPL-SN-82649	c 08	N73-30135 *	US-PATENT-APPL-SN-841278	c 33	N77-21316 *
US-PATENT-APPL-SN-810579	c 33	N74-22864 *	US-PATENT-APPL-SN-826547	c 37	N92-17678 *	US-PATENT-APPL-SN-841845	c 14	N73-32317 *
US-PATENT-APPL-SN-810815	c 06	N72-22107 *	US-PATENT-APPL-SN-82658	c 30	N70-40309 *	US-PATENT-APPL-SN-84212	c 27	N74-17283 *
US-PATENT-APPL-SN-81085	c 13	N72-25323 *	US-PATENT-APPL-SN-827185	c 52	N89-16256 *	US-PATENT-APPL-SN-842170	c 11	N70-33278 *
US-PATENT-APPL-SN-81096	c 14	N73-14427 *	US-PATENT-APPL-SN-827464	c 74	N79-34011 *	US-PATENT-APPL-SN-842171	c 11	N70-33299 *
US-PATENT-APPL-SN-811037	c 14	N71-26137 *	US-PATENT-APPL-SN-827579	c 15	N71-24984 *	US-PATENT-APPL-SN-842297	c 33	N92-23464 *
US-PATENT-APPL-SN-811038	c 14	N72-20380 *	US-PATENT-APPL-SN-827597	c 26	N69-33482 *	US-PATENT-APPL-SN-842300	c 74	N92-23551 *
US-PATENT-APPL-SN-811309	c 76	N90-20896 *	US-PATENT-APPL-SN-828262	c 37	N79-14383 *	US-PATENT-APPL-SN-842313	c 27	N92-23461 *
US-PATENT-APPL-SN-811401	c 31	N81-25258 *	US-PATENT-APPL-SN-828612	c 37	N93-31313 *	US-PATENT-APPL-SN-84289	c 15	N73-14669 *
US-PATENT-APPL-SN-811509	c 02	N70-33332 *	US-PATENT-APPL-SN-828909	c 28	N71-27094 *	US-PATENT-APPL-SN-84290	c 05	N73-20137 *
US-PATENT-APPL-SN-811542	c 21	N71-24948 *	US-PATENT-APPL-SN-828920	c 35	N74-22095 *	US-PATENT-APPL-SN-842956	c 82	N92-23550 *
US-PATENT-APPL-SN-811815	c 44	N78-31525 *	US-PATENT-APPL-SN-828921	c 09	N71-27001 *	US-PATENT-APPL-SN-843022	c 11	N70-33287 *
US-PATENT-APPL-SN-811892	c 14	N71-27090 *	US-PATENT-APPL-SN-828983	c 03	N71-24719 *	US-PATENT-APPL-SN-843032	c 28	N70-41818 *
US-PATENT-APPL-SN-812084	c 24	N92-17870 *	US-PATENT-APPL-SN-828984	c 08	N71-29033 *	US-PATENT-APPL-SN-843090	c 27	N79-22300 *
US-PATENT-APPL-SN-8								



## US-PATENT-APPL-SN-843861

## REPORT NUMBER INDEX

US-PATENT-APPL-SN-843861	c 37	N92-23547 *	#	US-PATENT-APPL-SN-856253	c 24	N74-19769 *	US-PATENT-APPL-SN-870689	c 06	N72-25148 *
US-PATENT-APPL-SN-844225	c 05	N72-25120 *		US-PATENT-APPL-SN-856258	c 05	N71-17599 *	US-PATENT-APPL-SN-871207	c 23	N86-32526 *
US-PATENT-APPL-SN-844243	c 37	N75-29426 *		US-PATENT-APPL-SN-856279	c 07	N72-21118 *	US-PATENT-APPL-SN-872222	c 05	N72-27103 *
US-PATENT-APPL-SN-844315	c 35	N77-21392 *		US-PATENT-APPL-SN-856282	c 08	N72-22166 *	US-PATENT-APPL-SN-872262	c 24	N93-31293 *
US-PATENT-APPL-SN-844344	c 24	N79-14156 *		US-PATENT-APPL-SN-856327	c 05	N72-16015 *	US-PATENT-APPL-SN-872602	c 09	N72-22200 *
US-PATENT-APPL-SN-844346	c 44	N79-11472 *		US-PATENT-APPL-SN-856328	c 14	N72-22441 *	US-PATENT-APPL-SN-872664	c 08	N70-34675 *
US-PATENT-APPL-SN-844355	c 03	N72-26031 *		US-PATENT-APPL-SN-856415	c 09	N71-26182 *	US-PATENT-APPL-SN-873045	c 14	N72-20379 *
US-PATENT-APPL-SN-845090	c 27	N93-25999 *		US-PATENT-APPL-SN-856460	c 25	N79-24073 *	US-PATENT-APPL-SN-873259	c 08	N72-21200 *
US-PATENT-APPL-SN-845283	c 63	N92-24245 *	#	US-PATENT-APPL-SN-856461	c 34	N79-12359 *	US-PATENT-APPL-SN-873260	c 33	N72-17948 *
US-PATENT-APPL-SN-845283	c 63	N93-24599 *		US-PATENT-APPL-SN-856462	c 34	N80-24573 *	US-PATENT-APPL-SN-873407	c 38	N93-12204 *
US-PATENT-APPL-SN-845365	c 09	N71-13518 *		US-PATENT-APPL-SN-856462	c 44	N81-24519 *	US-PATENT-APPL-SN-873793	c 14	N72-21407 *
US-PATENT-APPL-SN-845584	c 27	N73-22710 *		US-PATENT-APPL-SN-856464	c 36	N79-14362 *	US-PATENT-APPL-SN-873931	c 54	N93-14870 *
US-PATENT-APPL-SN-845807	c 15	N72-11391 *		US-PATENT-APPL-SN-856465	c 44	N80-14473 *	US-PATENT-APPL-SN-874177	c 11	N72-25284 *
US-PATENT-APPL-SN-845971	c 11	N71-28629 *		US-PATENT-APPL-SN-856466	c 72	N80-14877 *	US-PATENT-APPL-SN-874319	c 35	N88-23966 *
US-PATENT-APPL-SN-845972	c 09	N70-11148 *	#	US-PATENT-APPL-SN-857241	c 46	N74-23069 *	US-PATENT-APPL-SN-874435	c 11	N71-33612 *
US-PATENT-APPL-SN-845973	c 11	N71-24985 *		US-PATENT-APPL-SN-857445	c 05	N71-24728 *	US-PATENT-APPL-SN-874673	c 27	N82-29454 *
US-PATENT-APPL-SN-845974	c 33	N71-25353 *		US-PATENT-APPL-SN-857901	c 27	N92-30100 *	US-PATENT-APPL-SN-874674	c 27	N82-29452 *
US-PATENT-APPL-SN-845990	c 14	N71-27005 *		US-PATENT-APPL-SN-857967	c 15	N72-20443 *	US-PATENT-APPL-SN-874675	c 27	N82-29455 *
US-PATENT-APPL-SN-845991	c 14	N71-29134 *		US-PATENT-APPL-SN-858054	c 31	N91-32240 *	US-PATENT-APPL-SN-874732	c 09	N71-29139 *
US-PATENT-APPL-SN-846427	c 36	N88-14350 *		US-PATENT-APPL-SN-858176	c 33	N92-30389 *	US-PATENT-APPL-SN-874733	c 15	N71-26635 *
US-PATENT-APPL-SN-846428	c 34	N87-21255 *		US-PATENT-APPL-SN-858176	c 33	N93-20119 *	US-PATENT-APPL-SN-874958	c 31	N71-15566 *
US-PATENT-APPL-SN-846429	c 35	N88-29149 *		US-PATENT-APPL-SN-858596	c 35	N78-18395 *	US-PATENT-APPL-SN-875500	c 06	N72-25146 *
US-PATENT-APPL-SN-846430	c 82	N87-29372 *		US-PATENT-APPL-SN-858695	c 11	N72-22247 *	US-PATENT-APPL-SN-875551	c 33	N73-16918 *
US-PATENT-APPL-SN-846439	c 08	N87-23631 *		US-PATENT-APPL-SN-858762	c 08	N79-23097 *	US-PATENT-APPL-SN-875799	c 37	N88-23978 *
US-PATENT-APPL-SN-846462	c 07	N87-16828 *		US-PATENT-APPL-SN-858764	c 33	N79-10338 *	US-PATENT-APPL-SN-875799	c 34	N87-28867 *
US-PATENT-APPL-SN-847023	c 31	N70-37938 *		US-PATENT-APPL-SN-858765	c 33	N79-11313 *	US-PATENT-APPL-SN-875849	c 07	N71-33696 *
US-PATENT-APPL-SN-847027	c 03	N70-33343 *		US-PATENT-APPL-SN-858766	c 27	N79-14213 *	US-PATENT-APPL-SN-875891	c 31	N86-32589 *
US-PATENT-APPL-SN-847276	c 37	N81-32510 *		US-PATENT-APPL-SN-858767	c 32	N83-19968 *	US-PATENT-APPL-SN-875957	c 33	N74-22864 *
US-PATENT-APPL-SN-847277	c 31	N79-28370 *		US-PATENT-APPL-SN-858936	c 07	N80-18039 *	US-PATENT-APPL-SN-876299	c 44	N80-18552 *
US-PATENT-APPL-SN-847278	c 34	N79-20335 *		US-PATENT-APPL-SN-858950	c 35	N78-17359 *	US-PATENT-APPL-SN-876431	c 33	N79-24254 *
US-PATENT-APPL-SN-847596	c 15	N70-10867 *	#	US-PATENT-APPL-SN-86018	c 23	N71-30292 *	US-PATENT-APPL-SN-876432	c 36	N80-18372 *
US-PATENT-APPL-SN-847815	c 52	N75-15270 *		US-PATENT-APPL-SN-860404	c 37	N81-15364 *	US-PATENT-APPL-SN-876438	c 52	N79-26772 *
US-PATENT-APPL-SN-848282	c 15	N72-21462 *		US-PATENT-APPL-SN-860405	c 26	N79-22271 *	US-PATENT-APPL-SN-876440	c 51	N80-16714 *
US-PATENT-APPL-SN-848325	c 06	N70-11251 *	#	US-PATENT-APPL-SN-860406	c 24	N79-17916 *	US-PATENT-APPL-SN-876441	c 74	N79-20856 *
US-PATENT-APPL-SN-848351	c 06	N70-11252 *	#	US-PATENT-APPL-SN-860492	c 09	N72-20199 *	US-PATENT-APPL-SN-876588	c 15	N72-25452 *
US-PATENT-APPL-SN-848403	c 33	N74-20859 *		US-PATENT-APPL-SN-860493	c 14	N72-16283 *	US-PATENT-APPL-SN-876588	c 25	N74-30502 *
US-PATENT-APPL-SN-848403	c 36	N75-27364 *		US-PATENT-APPL-SN-860635	c 28	N72-17843 *	US-PATENT-APPL-SN-876592	c 35	N92-30030 *
US-PATENT-APPL-SN-848418	c 43	N79-26439 *		US-PATENT-APPL-SN-860750	c 08	N72-22165 *	US-PATENT-APPL-SN-877445	c 23	N82-29358 *
US-PATENT-APPL-SN-848419	c 43	N80-23711 *		US-PATENT-APPL-SN-860751	c 08	N72-18184 *	US-PATENT-APPL-SN-877717	c 14	N72-27410 *
US-PATENT-APPL-SN-848420	c 43	N79-25443 *		US-PATENT-APPL-SN-860781	c 18	N72-22567 *	US-PATENT-APPL-SN-877717	c 14	N73-13417 *
US-PATENT-APPL-SN-848421	c 43	N80-14423 *		US-PATENT-APPL-SN-861152	c 14	N70-33322 *	US-PATENT-APPL-SN-877966	c 33	N92-30542 *
US-PATENT-APPL-SN-848428	c 25	N82-21268 *		US-PATENT-APPL-SN-861390	c 28	N79-28342 *	US-PATENT-APPL-SN-877990	c 14	N72-28437 *
US-PATENT-APPL-SN-848481	c 17	N70-33283 *		US-PATENT-APPL-SN-861391	c 44	N79-12541 *	US-PATENT-APPL-SN-878253	c 25	N81-33246 *
US-PATENT-APPL-SN-848776	c 07	N72-22127 *		US-PATENT-APPL-SN-861392	c 71	N79-23753 *	US-PATENT-APPL-SN-878539	c 35	N80-20560 *
US-PATENT-APPL-SN-848793	c 43	N79-31706 *		US-PATENT-APPL-SN-861396	c 35	N79-14349 *	US-PATENT-APPL-SN-878540	c 24	N82-26384 *
US-PATENT-APPL-SN-848794	c 44	N79-24431 *		US-PATENT-APPL-SN-861649	c 14	N72-17327 *	US-PATENT-APPL-SN-878541	c 33	N81-14220 *
US-PATENT-APPL-SN-848805	c 06	N72-17095 *		US-PATENT-APPL-SN-862113	c 44	N92-24057 *	US-PATENT-APPL-SN-878542	c 33	N79-28416 *
US-PATENT-APPL-SN-848810	c 07	N72-11148 *		US-PATENT-APPL-SN-862861	c 37	N92-24042 *	US-PATENT-APPL-SN-878631	c 38	N92-29829 *
US-PATENT-APPL-SN-848811	c 10	N71-26142 *		US-PATENT-APPL-SN-862878	c 09	N82-29330 *	US-PATENT-APPL-SN-878730	c 08	N72-22164 *
US-PATENT-APPL-SN-849106	c 09	N72-22197 *		US-PATENT-APPL-SN-862880	c 24	N79-31347 *	US-PATENT-APPL-SN-878731	c 15	N71-26162 *
US-PATENT-APPL-SN-849274	c 28	N79-14228 *		US-PATENT-APPL-SN-862921	c 31	N71-29050 *	US-PATENT-APPL-SN-878916	c 60	N87-14863 *
US-PATENT-APPL-SN-849612	c 39	N93-29613 *		US-PATENT-APPL-SN-862925	c 24	N88-18628 *	US-PATENT-APPL-SN-879480	c 35	N93-31297 *
US-PATENT-APPL-SN-84961	c 02	N70-34178 *		US-PATENT-APPL-SN-862942	c 33	N90-20320 *	US-PATENT-APPL-SN-879757	c 33	N87-10231 *
US-PATENT-APPL-SN-849629	c 37	N92-23553 *	#	US-PATENT-APPL-SN-862959	c 33	N87-21232 *	US-PATENT-APPL-SN-879758	c 33	N88-23942 *
US-PATENT-APPL-SN-84962	c 21	N70-36943 *		US-PATENT-APPL-SN-863024	c 46	N80-14603 *	US-PATENT-APPL-SN-8800210	c 60	N92-23546 *
US-PATENT-APPL-SN-8497	c 14	N72-11363 *		US-PATENT-APPL-SN-863276	c 16	N72-12440 *	US-PATENT-APPL-SN-880211	c 62	N92-24045 *
US-PATENT-APPL-SN-8498	c 05	N71-24729 *		US-PATENT-APPL-SN-863280	c 24	N72-33681 *	US-PATENT-APPL-SN-880246	c 28	N72-22770 *
US-PATENT-APPL-SN-850504	c 52	N81-14613 *		US-PATENT-APPL-SN-863636	c 15	N72-25451 *	US-PATENT-APPL-SN-880247	c 09	N70-20737 *
US-PATENT-APPL-SN-850504	c 52	N81-29764 *		US-PATENT-APPL-SN-863770	c 44	N79-18444 *	US-PATENT-APPL-SN-880248	c 07	N72-11150 *
US-PATENT-APPL-SN-850507	c 25	N79-14169 *		US-PATENT-APPL-SN-863773	c 44	N79-26475 *	US-PATENT-APPL-SN-880249	c 15	N72-22482 *
US-PATENT-APPL-SN-850586	c 31	N71-25434 *		US-PATENT-APPL-SN-863883	c 74	N92-30027 *	US-PATENT-APPL-SN-880250	c 03	N72-20032 *
US-PATENT-APPL-SN-850587	c 08	N72-21199 *		US-PATENT-APPL-SN-863913	c 14	N71-28991 *	US-PATENT-APPL-SN-880271	c 15	N72-25448 *
US-PATENT-APPL-SN-851298	c 15	N72-12409 *		US-PATENT-APPL-SN-863914	c 09	N72-31235 *	US-PATENT-APPL-SN-880272	c 14	N71-27058 *
US-PATENT-APPL-SN-851394	c 09	N71-24892 *		US-PATENT-APPL-SN-863963	c 10	N71-26085 *	US-PATENT-APPL-SN-880398	c 15	N73-12487 *
US-PATENT-APPL-SN-852131	c 15	N71-24836 *		US-PATENT-APPL-SN-863967	c 11	N71-27036 *	US-PATENT-APPL-SN-880726	c 44	N80-21828 *
US-PATENT-APPL-SN-852461	c 27	N89-16042 *		US-PATENT-APPL-SN-864020	c 15	N72-17454 *	US-PATENT-APPL-SN-880727	c 35	N79-28527 *
US-PATENT-APPL-SN-852466	c 37	N87-24689 *		US-PATENT-APPL-SN-864039	c 15	N72-22483 *	US-PATENT-APPL-SN-880728	c 35	N80-10494 *
US-PATENT-APPL-SN-852467	c 27	N87-24564 *		US-PATENT-APPL-SN-864097	c 07	N71-33066 *	US-PATENT-APPL-SN-880729	c 37	N80-20563 *
US-PATENT-APPL-SN-852468	c 72	N87-21661 *		US-PATENT-APPL-SN-86417	c 07	N72-25171 *	US-PATENT-APPL-SN-880831	c 11	N72-20244 *
US-PATENT-APPL-SN-852620	c 76	N93-15151 *	#	US-PATENT-APPL-SN-8650	c 03	N72-25021 *	US-PATENT-APPL-SN-880838	c 37	N79-28549 *
US-PATENT-APPL-SN-852843	c 09	N72-22195 *		US-PATENT-APPL-SN-865106	c 09	N72-22202 *	US-PATENT-APPL-SN-880851	c 24	N93-29614 *
US-PATENT-APPL-SN-853349	c 35	N81-33448 *		US-PATENT-APPL-SN-865109	c 14	N71-28933 *	US-PATENT-APPL-SN-880885	c 07	N72-12080 *
US-PATENT-APPL-SN-853361	c 37	N87-22977 *		US-PATENT-APPL-SN-865274	c 09	N72-17155 *	US-PATENT-APPL-SN-881039	c 09	N71-24842 *
US-PATENT-APPL-SN-853641	c 33	N72-25913 *		US-PATENT-APPL-SN-865298	c 15	N72-11388 *	US-PATENT-APPL-SN-881041	c 09	N72-22204 *
US-PATENT-APPL-SN-853677	c 34	N79-31523 *		US-PATENT-APPL-SN-865329	c 15	N71-29132 *	US-PATENT-APPL-SN-881912	c 39	N92-30099 *
US-PATENT-APPL-SN-853679	c 35	N79-14346 *		US-PATENT-APPL-SN-86548	c 09	N72-21243 *	US-PATENT-APPL-SN-882122	c 14	N72-22438 *
US-PATENT-APPL-SN-853705	c 45	N79-12584 *		US-PATENT-APPL-SN-865811	c 09	N71-27053 *	US-PATENT-APPL-SN-882408	c 37	N93-13423 *
US-PATENT-APPL-SN-853716	c 09	N71-24904 *		US-PATENT-APPL-SN-865909	c 14	N72-11364 *	US-PATENT-APPL-SN-882577	c 07	N71-27056 *
US-PATENT-APPL-SN-853746	c 02	N72-11018 *		US-PATENT-APPL-SN-866442	c 25	N72-24753 *	US-PATENT-APPL-SN-883090	c 44	N80-29834 *
US-PATENT-APPL-SN-853763	c 07	N70-12616 *	#	US-PATENT-APPL-SN-866769	c 39	N92-30028 *	US-PATENT-APPL-SN-883094	c 54	N79-24651 *
US-PATENT-APPL-SN-853763	c 07	N72-33146 *		US-PATENT-APPL-SN-866779	c 37	N92-24043 *	US-PATENT-APPL-SN-883523	c 09	N72-33204 *
US-PATENT-APPL-SN-853855	c 17	N72-22530 *		US-PATENT-APPL-SN-867841	c 11	N72-22246 *	US-PATENT-APPL-SN-883524	c 09	N72-21246 *
US-PATENT-APPL-SN-853855	c 17	N72-28535 *		US-PATENT-APPL-SN-867842	c 23	N72-27728 *	US-PATENT-APPL-SN-883957	c 74	N92-30084 *
US-PATENT-APPL-SN-853856	c 16	N71-29131 *		US-PATENT-APPL-SN-867843	c 14	N71-26161 *	US-PATENT-APPL-SN-883961	c 25	N80-16116 *
US-PATENT-APPL-SN-853983	c 14	N70-33254 *		US-PATENT-APPL-SN-867851	c 15	N72-22484 *	US-PATENT-APPL-SN-884097	c 25	N92-34206 *
US-PATENT-APPL-SN-853984	c 21	N70-33181 *		US-PATENT-APPL-SN-867864	c 23	N93-23077 *	US-PATENT-APPL-SN-88435	c 35	N74-15090 *
US-PATENT-APPL-SN-854124	c 33	N92-24246 *	#	US-PATENT-APPL-SN-867986	c 74	N86-33138 *	US-PATENT-APPL-SN-884980	c 37	N93-12327 *
US-PATENT-APPL-SN-854815	c 09	N71-24807 *		US-PATENT-APPL-SN-867987	c 27	N88-23894 *	US-PATENT-APPL-SN-885049	c 33	N79-23345 *
US-PATENT-APPL-SN-854920	c 15	N79-26100 *		US-PATENT-APPL-SN-868249	c 33	N80-18286 *	US-PATENT-APPL-SN-885065	c 35	N79-18296 *
US-PATENT-APPL-SN-855004	c 24	N72-11595 *		US-PATENT-APPL-SN-868445	c 14	N72-17233 *	US-PATENT-APPL-SN-885066	c 33	N80-26599 *
US-PATENT-APPL-SN-855363	c 74	N92-30029 *	#	US-PATENT-APPL-SN-868529	c 08	N72-21667 *	US-PATENT-APPL-SN-885067	c 33	N79-28415 *
US-PATENT-APPL-SN-855364	c 52	N81-27783 *		US-PATENT-APPL-SN-868530	c 05	N72-11084 *</			

## REPORT NUMBER INDEX

## US-PATENT-APPL-SN-953313

US-PATENT-APPL-SN-886149	c 27	N87-28656 *	US-PATENT-APPL-SN-901627	c 25	N93-20570 *	US-PATENT-APPL-SN-929083	c 36	N80-16321 *
US-PATENT-APPL-SN-886149	c 27	N89-29538 *	US-PATENT-APPL-SN-902265	c 37	N92-34242 *	US-PATENT-APPL-SN-929084	c 37	N81-19455 *
US-PATENT-APPL-SN-886998	c 02	N93-19053 *	US-PATENT-APPL-SN-902266	c 37	N92-30101 *	US-PATENT-APPL-SN-929086	c 24	N81-13999 *
US-PATENT-APPL-SN-887001	c 18	N92-30315 *	US-PATENT-APPL-SN-903019	c 46	N80-10709 *	US-PATENT-APPL-SN-929087	c 35	N80-28687 *
US-PATENT-APPL-SN-887002	c 34	N92-30387 *	US-PATENT-APPL-SN-903708	c 35	N93-17041 *	US-PATENT-APPL-SN-929088	c 74	N80-24149 *
US-PATENT-APPL-SN-887674	c 27	N93-29088 *	US-PATENT-APPL-SN-903708	c 35	N93-20569 *	US-PATENT-APPL-SN-929552	c 37	N93-14843 *
US-PATENT-APPL-SN-887685	c 10	N72-20223 *	US-PATENT-APPL-SN-904128	c 25	N88-23845 *	US-PATENT-APPL-SN-929553	c 26	N92-34239 *
US-PATENT-APPL-SN-887698	c 09	N72-17153 *	US-PATENT-APPL-SN-904132	c 02	N89-14224 *	US-PATENT-APPL-SN-929556	c 54	N92-34210 *
US-PATENT-APPL-SN-887699	c 15	N72-17452 *	US-PATENT-APPL-SN-904134	c 18	N88-26398 *	US-PATENT-APPL-SN-929862	c 02	N89-12551 *
US-PATENT-APPL-SN-887700	c 07	N71-26980 *	US-PATENT-APPL-SN-904308	c 35	N93-26103 *	US-PATENT-APPL-SN-929865	c 18	N89-12621 *
US-PATENT-APPL-SN-887701	c 08	N71-29034 *	US-PATENT-APPL-SN-904513	c 33	N88-14270 *	US-PATENT-APPL-SN-929869	c 35	N87-23941 *
US-PATENT-APPL-SN-888362	c 33	N80-14330 *	US-PATENT-APPL-SN-904550	c 74	N92-30104 *	US-PATENT-APPL-SN-929869	c 52	N90-21519 *
US-PATENT-APPL-SN-888432	c 74	N81-17886 *	US-PATENT-APPL-SN-904812	c 37	N88-14359 *	US-PATENT-APPL-SN-929869	c 52	N91-11621 *
US-PATENT-APPL-SN-888434	c 51	N83-27569 *	US-PATENT-APPL-SN-90595	c 03	N72-20031 *	US-PATENT-APPL-SN-929875	c 18	N88-28958 *
US-PATENT-APPL-SN-889003	c 34	N93-11172 *	US-PATENT-APPL-SN-906297	c 44	N79-14529 *	US-PATENT-APPL-SN-929875	c 18	N88-28954 *
US-PATENT-APPL-SN-889374	c 08	N72-25207 *	US-PATENT-APPL-SN-906298	c 76	N80-18951 *	US-PATENT-APPL-SN-929876	c 32	N91-14523 *
US-PATENT-APPL-SN-889375	c 10	N72-20222 *	US-PATENT-APPL-SN-906299	c 27	N80-16158 *	US-PATENT-APPL-SN-930217	c 25	N88-24732 *
US-PATENT-APPL-SN-889376	c 18	N71-26285 *	US-PATENT-APPL-SN-907421	c 37	N81-14318 *	US-PATENT-APPL-SN-931090	c 37	N80-26658 *
US-PATENT-APPL-SN-889387	c 09	N71-29035 *	US-PATENT-APPL-SN-907431	c 37	N81-25370 *	US-PATENT-APPL-SN-931090	c 37	N82-19540 *
US-PATENT-APPL-SN-889420	c 14	N72-25413 *	US-PATENT-APPL-SN-907435	c 27	N80-10358 *	US-PATENT-APPL-SN-931217	c 37	N80-32716 *
US-PATENT-APPL-SN-889422	c 09	N72-25259 *	US-PATENT-APPL-SN-907436	c 37	N80-14398 *	US-PATENT-APPL-SN-931218	c 20	N80-18097 *
US-PATENT-APPL-SN-889423	c 10	N72-22236 *	US-PATENT-APPL-SN-907479	c 27	N80-24438 *	US-PATENT-APPL-SN-931468	c 37	N93-14842 *
US-PATENT-APPL-SN-889437	c 15	N72-11392 *	US-PATENT-APPL-SN-908677	c 63	N92-30085 *	US-PATENT-APPL-SN-931942	c 51	N93-17049 *
US-PATENT-APPL-SN-889438	c 15	N72-18477 *	US-PATENT-APPL-SN-909100	c 37	N79-28550 *	US-PATENT-APPL-SN-933186	c 27	N80-32515 *
US-PATENT-APPL-SN-889478	c 08	N71-29138 *	US-PATENT-APPL-SN-909235	c 07	N81-19115 *	US-PATENT-APPL-SN-933329	c 09	N73-26195 *
US-PATENT-APPL-SN-889479	c 14	N72-17325 *	US-PATENT-APPL-SN-909345	c 27	N93-20566 *	US-PATENT-APPL-SN-933941	c 33	N89-14385 *
US-PATENT-APPL-SN-889551	c 21	N72-21624 *	US-PATENT-APPL-SN-909501	c 32	N92-30391 *	US-PATENT-APPL-SN-933961	c 76	N87-29360 *
US-PATENT-APPL-SN-889554	c 15	N72-20444 *	US-PATENT-APPL-SN-909608	c 07	N81-19116 *	US-PATENT-APPL-SN-933962	c 25	N88-29002 *
US-PATENT-APPL-SN-889555	c 09	N72-17154 *	US-PATENT-APPL-SN-910707	c 32	N80-20448 *	US-PATENT-APPL-SN-933963	c 05	N88-28914 *
US-PATENT-APPL-SN-889556	c 14	N72-18411 *	US-PATENT-APPL-SN-910708	c 06	N80-18036 *	US-PATENT-APPL-SN-934078	c 74	N93-14404 *
US-PATENT-APPL-SN-889557	c 11	N72-17183 *	US-PATENT-APPL-SN-910793	c 44	N80-16452 *	US-PATENT-APPL-SN-934397	c 18	N88-23827 *
US-PATENT-APPL-SN-889558	c 15	N72-22491 *	US-PATENT-APPL-SN-910794	c 14	N81-26161 *	US-PATENT-APPL-SN-934576	c 35	N80-18358 *
US-PATENT-APPL-SN-889572	c 37	N93-12203 *	US-PATENT-APPL-SN-910992	c 52	N81-24711 *	US-PATENT-APPL-SN-935827	c 37	N80-18393 *
US-PATENT-APPL-SN-889577	c 33	N93-26104 *	US-PATENT-APPL-SN-911801	c 14	N70-40240 *	US-PATENT-APPL-SN-936376	c 76	N93-17043 *
US-PATENT-APPL-SN-889583	c 15	N72-21464 *	US-PATENT-APPL-SN-911851	c 29	N87-18679 *	US-PATENT-APPL-SN-936417	c 74	N92-34241 *
US-PATENT-APPL-SN-889584	c 08	N72-31226 *	US-PATENT-APPL-SN-912276	c 24	N81-29163 *	US-PATENT-APPL-SN-936474	c 37	N93-17080 *
US-PATENT-APPL-SN-889670	c 39	N79-22537 *	US-PATENT-APPL-SN-912401	c 27	N92-29831 *	US-PATENT-APPL-SN-937114	c 44	N82-28780 *
US-PATENT-APPL-SN-889671	c 24	N81-14000 *	US-PATENT-APPL-SN-912953	c 54	N93-30566 *	US-PATENT-APPL-SN-937325	c 54	N93-17087 *
US-PATENT-APPL-SN-889671	c 24	N81-33235 *	US-PATENT-APPL-SN-912955	c 37	N92-29765 *	US-PATENT-APPL-SN-937335	c 63	N93-11174 *
US-PATENT-APPL-SN-889682	c 15	N72-25447 *	US-PATENT-APPL-SN-912956	c 33	N92-30086 *	US-PATENT-APPL-SN-938293	c 32	N80-32605 *
US-PATENT-APPL-SN-890445	c 18	N87-27713 *	US-PATENT-APPL-SN-912960	c 27	N93-11912 *	US-PATENT-APPL-SN-938297	c 25	N81-14015 *
US-PATENT-APPL-SN-890575	c 09	N87-25334 *	US-PATENT-APPL-SN-912981	c 76	N92-30102 *	US-PATENT-APPL-SN-938298	c 33	N81-17348 *
US-PATENT-APPL-SN-890577	c 27	N88-29040 *	US-PATENT-APPL-SN-913432	c 18	N88-23828 *	US-PATENT-APPL-SN-938299	c 33	N81-19389 *
US-PATENT-APPL-SN-890586	c 32	N87-15390 *	US-PATENT-APPL-SN-913433	c 33	N87-15413 *	US-PATENT-APPL-SN-938300	c 37	N80-23654 *
US-PATENT-APPL-SN-890683	c 37	N88-23981 *	US-PATENT-APPL-SN-913433	c 74	N93-13711 *	US-PATENT-APPL-SN-938577	c 37	N93-18288 *
US-PATENT-APPL-SN-890982	c 35	N88-29150 *	US-PATENT-APPL-SN-913446	c 37	N87-15465 *	US-PATENT-APPL-SN-938579	c 76	N80-32244 *
US-PATENT-APPL-SN-891243	c 44	N79-25482 *	US-PATENT-APPL-SN-914260	c 44	N79-26474 *	US-PATENT-APPL-SN-938581	c 04	N80-32359 *
US-PATENT-APPL-SN-891244	c 05	N79-24976 *	US-PATENT-APPL-SN-914905	c 09	N92-34213 *	US-PATENT-APPL-SN-938582	c 37	N80-23653 *
US-PATENT-APPL-SN-891356	c 35	N80-18359 *	US-PATENT-APPL-SN-915050	c 44	N81-12542 *	US-PATENT-APPL-SN-940420	c 35	N93-17077 *
US-PATENT-APPL-SN-891358	c 44	N80-14474 *	US-PATENT-APPL-SN-916142	c 14	N72-31446 *	US-PATENT-APPL-SN-940499	c 14	N73-20476 *
US-PATENT-APPL-SN-891370	c 20	N79-20179 *	US-PATENT-APPL-SN-916654	c 07	N81-29129 *	US-PATENT-APPL-SN-940688	c 24	N79-24062 *
US-PATENT-APPL-SN-891372	c 37	N79-22474 *	US-PATENT-APPL-SN-916655	c 44	N80-14472 *	US-PATENT-APPL-SN-940689	c 35	N80-28686 *
US-PATENT-APPL-SN-891373	c 31	N80-18231 *	US-PATENT-APPL-SN-917125	c 35	N89-12048 *	US-PATENT-APPL-SN-940790	c 72	N80-27163 *
US-PATENT-APPL-SN-891604	c 60	N92-30541 *	US-PATENT-APPL-SN-917554	c 37	N92-34205 *	US-PATENT-APPL-SN-941335	c 63	N92-34240 *
US-PATENT-APPL-SN-891872	c 25	N82-24312 *	US-PATENT-APPL-SN-918533	c 32	N79-23310 *	US-PATENT-APPL-SN-941711	c 24	N80-26388 *
US-PATENT-APPL-SN-892053	c 37	N92-30026 *	US-PATENT-APPL-SN-918534	c 33	N80-32650 *	US-PATENT-APPL-SN-942158	c 34	N88-29133 *
US-PATENT-APPL-SN-892054	c 24	N93-11543 *	US-PATENT-APPL-SN-918535	c 35	N80-18357 *	US-PATENT-APPL-SN-942159	c 37	N87-18817 *
US-PATENT-APPL-SN-892055	c 24	N93-26100 *	US-PATENT-APPL-SN-918537	c 26	N80-14229 *	US-PATENT-APPL-SN-942491	c 33	N93-11456 *
US-PATENT-APPL-SN-892072	c 37	N92-30540 *	US-PATENT-APPL-SN-918705	c 52	N92-33996 *	US-PATENT-APPL-SN-942499	c 31	N93-12202 *
US-PATENT-APPL-SN-892072	c 37	N93-20120 *	US-PATENT-APPL-SN-918746	c 37	N93-29505 *	US-PATENT-APPL-SN-942500	c 61	N93-11664 *
US-PATENT-APPL-SN-89209	c 09	N72-25248 *	US-PATENT-APPL-SN-920878	c 24	N78-27184 *	US-PATENT-APPL-SN-94259	c 27	N70-35534 *
US-PATENT-APPL-SN-89210	c 07	N73-26119 *	US-PATENT-APPL-SN-920879	c 44	N79-31752 *	US-PATENT-APPL-SN-943086	c 37	N80-32717 *
US-PATENT-APPL-SN-89211	c 14	N73-12446 *	US-PATENT-APPL-SN-921192	c 37	N93-11177 *	US-PATENT-APPL-SN-943087	c 15	N78-32168 *
US-PATENT-APPL-SN-89212	c 08	N72-25208 *	US-PATENT-APPL-SN-921572	c 24	N90-25196 *	US-PATENT-APPL-SN-943088	c 18	N80-21183 *
US-PATENT-APPL-SN-893382	c 34	N79-24285 *	US-PATENT-APPL-SN-921572	c 24	N91-25199 *	US-PATENT-APPL-SN-943089	c 74	N80-21140 *
US-PATENT-APPL-SN-893383	c 31	N81-27323 *	US-PATENT-APPL-SN-921573	c 37	N87-14704 *	US-PATENT-APPL-SN-943168	c 35	N93-17076 *
US-PATENT-APPL-SN-893365	c 51	N80-27067 *	US-PATENT-APPL-SN-921574	c 31	N90-19425 *	US-PATENT-APPL-SN-943346	c 34	N88-29132 *
US-PATENT-APPL-SN-893857	c 24	N81-17170 *	US-PATENT-APPL-SN-921576	c 33	N91-31530 *	US-PATENT-APPL-SN-94347	c 05	N72-25122 *
US-PATENT-APPL-SN-893857	c 24	N81-26179 *	US-PATENT-APPL-SN-921577	c 37	N89-13785 *	US-PATENT-APPL-SN-943659	c 02	N92-34243 *
US-PATENT-APPL-SN-893865	c 37	N81-24443 *	US-PATENT-APPL-SN-921626	c 25	N80-23383 *	US-PATENT-APPL-SN-94369	c 07	N71-28965 *
US-PATENT-APPL-SN-893903	c 60	N81-15706 *	US-PATENT-APPL-SN-921627	c 33	N80-14332 *	US-PATENT-APPL-SN-94374	c 14	N72-25411 *
US-PATENT-APPL-SN-894213	c 37	N80-23655 *	US-PATENT-APPL-SN-923758	c 20	N78-27176 *	US-PATENT-APPL-SN-945040	c 37	N82-24492 *
US-PATENT-APPL-SN-894504	c 71	N93-24602 *	US-PATENT-APPL-SN-923758	c 20	N80-10278 *	US-PATENT-APPL-SN-945041	c 43	N80-18498 *
US-PATENT-APPL-SN-894505	c 24	N93-29023 *	US-PATENT-APPL-SN-924213	c 35	N93-14841 *	US-PATENT-APPL-SN-945043	c 33	N81-33403 *
US-PATENT-APPL-SN-894541	c 54	N89-29953 *	US-PATENT-APPL-SN-924297	c 71	N90-12289 *	US-PATENT-APPL-SN-945044	c 54	N81-26718 *
US-PATENT-APPL-SN-897828	c 52	N81-29763 *	US-PATENT-APPL-SN-924398	c 14	N87-25344 *	US-PATENT-APPL-SN-945436	c 46	N80-24906 *
US-PATENT-APPL-SN-897829	c 44	N79-25481 *	US-PATENT-APPL-SN-924399	c 76	N88-24545 *	US-PATENT-APPL-SN-946990	c 28	N80-23471 *
US-PATENT-APPL-SN-897830	c 35	N80-21719 *	US-PATENT-APPL-SN-924467	c 23	N88-24692 *	US-PATENT-APPL-SN-946991	c 31	N81-27324 *
US-PATENT-APPL-SN-897831	c 44	N80-20808 *	US-PATENT-APPL-SN-924470	c 23	N90-19300 *	US-PATENT-APPL-SN-946992	c 45	N80-14579 *
US-PATENT-APPL-SN-897832	c 43	N81-26509 *	US-PATENT-APPL-SN-924472	c 32	N87-18692 *	US-PATENT-APPL-SN-946994	c 44	N79-31753 *
US-PATENT-APPL-SN-897840	c 31	N81-14137 *	US-PATENT-APPL-SN-924474	c 23	N88-26404 *	US-PATENT-APPL-SN-947000	c 28	N81-15119 *
US-PATENT-APPL-SN-898449	c 31	N88-29052 *	US-PATENT-APPL-SN-924474	c 25	N90-23497 *	US-PATENT-APPL-SN-947597	c 35	N93-14840 *
US-PATENT-APPL-SN-899123	c 44	N79-14528 *	US-PATENT-APPL-SN-924474	c 23	N91-17141 *	US-PATENT-APPL-SN-948057	c 08	N93-20039 *
US-PATENT-APPL-SN-899145	c 37	N93-17625 *	US-PATENT-APPL-SN-924689	c 24	N92-34214 *	US-PATENT-APPL-SN-949552	c 14	N70-34158 *
US-PATENT-APPL-SN-899536	c 37	N93-23076 *	US-PATENT-APPL-SN-925189	c 76	N88-24544 *	US-PATENT-APPL-SN-949886	c 33	N80-18285 *
US-PATENT-APPL-SN-899683	c 18	N91-27199 *	US-PATENT-APPL-SN-9251	c 03	N70-34646 *	US-PATENT-APPL-SN-950580	c 27	N93-20041 *
US-PATENT-APPL-SN-899828	c 32	N80-18252 *	US-PATENT-APPL-SN-927972	c 74	N89-14078 *	US-PATENT-APPL-SN-950876	c 37	N80-31790 *
US-PATENT-APPL-SN-900659	c 27	N81-17261 *	US-PATENT-APPL-SN-927987	c 62	N90-19776 *	US-PATENT-APPL-SN-950877	c 52	N81-25660 *
US-PATENT-APPL-SN-900841	c 32	N82-31583 *	US-PATENT-APPL-SN-927992	c 37	N87-18818 *	US-PATENT-APPL-SN-951422	c 51	N81-14605 *
US-PATENT-APPL-SN-900842	c 32	N79-24203 *	US-PATENT-APPL-SN-928128	c 44	N80-18551 *	US-PATENT-APPL-SN-951423	c 48	N80-18667 *
US-PATENT-APPL-SN-900843	c 44	N80-20810 *	US-PATENT-APPL-SN-928129	c 35	N80-14371 *	US-PATENT-APPL-SN-951828	c 37	N80-29703 *
US-PATENT-APPL-SN-901055	c 76	N80-32245 *	US-PATENT-APPL-SN-928130	c 35	N80-20559 *	US-PATENT-APPL-SN-951829	c 33	N80-18287 *
US-PATENT-APPL-SN-901113	c 35	N87-28884 *	US-PATENT-APPL-SN-928131	c 09	N79-31228 *	US-PATENT-APPL-SN-951830	c 28	N80-28536 *
US-PATENT-APPL-S								

US-PATENT-APPL-SN-953314	c 37	N81-14319 *	US-PATENT-APPL-SN-99524	c 06	N72-27144 *	US-PATENT-CLASS-102-95	c 11	N73-32152 *
US-PATENT-APPL-SN-953389	c 74	N80-27185 *	US-PATENT-APPL-SN-996263	c 51	N93-19037 *	US-PATENT-CLASS-102-99	c 28	N77-10213 *
US-PATENT-APPL-SN-953390	c 74	N80-21138 *	US-PATENT-APPL-SN-996763	c 18	N93-20042 *	US-PATENT-CLASS-103.5R	c 04	N73-27052 *
US-PATENT-APPL-SN-953391	c 72	N80-33186 *	US-PATENT-APPL-SN-998062	c 37	N93-19331 *	US-PATENT-CLASS-103-1	c 26	N71-21824 *
US-PATENT-APPL-SN-953391	c 33	N93-17274 *	US-PATENT-APPL-SN-99901	c 37	N74-10474 *	US-PATENT-CLASS-103-37	c 28	N71-14058 *
US-PATENT-APPL-SN-953562	c 31	N93-19038 *	US-PATENT-APPL-SN-99903	c 11	N73-12265 *	US-PATENT-CLASS-103-48	c 15	N71-24042 *
US-PATENT-APPL-SN-954109	c 74	N93-17273 *	US-PATENT-APPL-SN-999695	c 33	N93-19051 *	US-PATENT-CLASS-104-DIG.4	c 44	N84-23019 *
US-PATENT-APPL-SN-955801	c 63	N93-17056 *	US-PATENT-APPL-SN-999696	c 35	N93-19492 *	US-PATENT-CLASS-104-138R	c 85	N74-34672 *
US-PATENT-APPL-SN-956160	c 32	N80-18253 *	US-PATENT-APPL-SN-999794	c 32	N93-28955 *	US-PATENT-CLASS-104-139	c 05	N71-28619 *
US-PATENT-APPL-SN-956161	c 27	N79-11215 *				US-PATENT-CLASS-104-172.1	c 18	N88-26398 *
US-PATENT-APPL-SN-956166	c 33	N81-19393 *	US-PATENT-APPL-156-241	c 31	N92-33020 *	US-PATENT-CLASS-104-1	c 05	N71-28619 *
US-PATENT-APPL-SN-956168	c 27	N81-25209 *	US-PATENT-APPL-156-285	c 31	N92-33020 *	US-PATENT-CLASS-104-23FS	c 85	N74-34672 *
US-PATENT-APPL-SN-956529	c 35	N80-26635 *	US-PATENT-APPL-156-293	c 31	N92-33020 *	US-PATENT-CLASS-104-281	c 37	N85-20337 *
US-PATENT-APPL-SN-956684	c 37	N93-17272 *	US-PATENT-APPL-264-272.15	c 31	N92-33020 *	US-PATENT-CLASS-104-282	c 37	N83-32067 *
US-PATENT-APPL-SN-956685	c 74	N93-17052 *	US-PATENT-APPL-29-856	c 31	N92-33020 *	US-PATENT-CLASS-104-284	c 37	N85-20337 *
US-PATENT-APPL-SN-957014	c 35	N93-19493 *				US-PATENT-CLASS-104-290	c 37	N83-32067 *
US-PATENT-APPL-SN-957127	c 35	N93-29503 *	US-PATENT-CASE-165-104.25	c 34	N87-28867 *	US-PATENT-CLASS-104-35	c 18	N88-26398 *
US-PATENT-APPL-SN-957128	c 37	N93-17084 *	US-PATENT-CASE-165-104.26	c 34	N87-28867 *	US-PATENT-CLASS-104-49	c 18	N88-26398 *
US-PATENT-APPL-SN-957128	c 37	N93-26001 *	US-PATENT-CASE-165-13	c 34	N87-28867 *	US-PATENT-CLASS-104-83	c 37	N82-21587 *
US-PATENT-APPL-SN-957452	c 32	N80-24510 *	US-PATENT-CASE-165-1	c 34	N87-28867 *	US-PATENT-CLASS-105-1A	c 37	N82-21587 *
US-PATENT-APPL-SN-958573	c 25	N80-20334 *	US-PATENT-CASE-165-32	c 34	N87-28867 *	US-PATENT-CLASS-105-124	c 37	N91-32514 *
US-PATENT-APPL-SN-958575	c 27	N80-24437 *	US-PATENT-CASE-165-41	c 34	N87-28867 *	US-PATENT-CLASS-105-141	c 37	N91-32514 *
US-PATENT-APPL-SN-958843	c 34	N93-17039 *	US-PATENT-CASE-179-146-R	c 05	N83-27975 *	US-PATENT-CLASS-105-142	c 37	N91-32514 *
US-PATENT-APPL-SN-958858	c 33	N93-17278 *	US-PATENT-CASE-179-179	c 05	N83-27975 *	US-PATENT-CLASS-105-161	c 43	N79-26439 *
US-PATENT-APPL-SN-961293	c 18	N93-17061 *	US-PATENT-CASE-244-121	c 05	N83-19737 *	US-PATENT-CLASS-105-171	c 37	N82-21587 *
US-PATENT-APPL-SN-961831	c 33	N81-25299 *	US-PATENT-CASE-244-129.4	c 05	N83-19737 *	US-PATENT-CLASS-105-180	c 37	N82-21587 *
US-PATENT-APPL-SN-961832	c 37	N81-24442 *	US-PATENT-CASE-292-254	c 05	N83-19737 *	US-PATENT-CLASS-105-2R	c 85	N82-33288 *
US-PATENT-APPL-SN-961833	c 37	N82-21587 *	US-PATENT-CASE-356-129	c 36	N83-29680 *	US-PATENT-CLASS-105-218R	c 37	N82-21587 *
US-PATENT-APPL-SN-961943	c 71	N93-17051 *	US-PATENT-CASE-367-906	c 05	N83-27975 *	US-PATENT-CLASS-105-87	c 37	N91-32514 *
US-PATENT-APPL-SN-963170	c 74	N93-19052 *	US-PATENT-CASE-368-10	c 35	N83-29651 *	US-PATENT-CLASS-105-1.2	c 44	N79-31752 *
US-PATENT-APPL-SN-963348	c 37	N93-17271 *	US-PATENT-CASE-368-118	c 35	N83-29651 *	US-PATENT-CLASS-106-13	c 23	N75-14834 *
US-PATENT-APPL-SN-963349	c 51	N93-19054 *	US-PATENT-CASE-368-119	c 35	N83-29651 *	US-PATENT-CLASS-106-15FP	c 27	N74-27037 *
US-PATENT-APPL-SN-9633974	c 33	N93-17277 *	US-PATENT-CASE-368-120	c 35	N83-29651 *	US-PATENT-CLASS-106-15FP	c 27	N78-24405 *
US-PATENT-APPL-SN-964009	c 02	N80-20224 *	US-PATENT-CASE-368-6	c 35	N83-29651 *	US-PATENT-CLASS-106-15FP	c 24	N78-15180 *
US-PATENT-APPL-SN-964754	c 33	N80-20487 *	US-PATENT-CASE-368-9	c 35	N83-29651 *	US-PATENT-CLASS-106-15R	c 23	N75-14834 *
US-PATENT-APPL-SN-964754	c 44	N81-29524 *				US-PATENT-CLASS-106-15	c 18	N71-14014 *
US-PATENT-APPL-SN-965367	c 33	N81-14221 *	US-PATENT-CLAS-165-27	c 34	N83-34221 *	US-PATENT-CLASS-106-15	c 18	N71-15469 *
US-PATENT-APPL-SN-965368	c 74	N81-17888 *	US-PATENT-CLAS-361-90	c 33	N83-34190 *	US-PATENT-CLASS-106-18.16	c 27	N82-16238 *
US-PATENT-APPL-SN-967083	c 63	N93-17275 *				US-PATENT-CLASS-106-18.24	c 27	N82-16238 *
US-PATENT-APPL-SN-969755	c 05	N81-19087 *	US-PATENT-CLASS-DIG.4	c 37	N91-21543 *	US-PATENT-CLASS-106-197	c 25	N82-29370 *
US-PATENT-APPL-SN-969756	c 37	N81-14317 *				US-PATENT-CLASS-106-1	c 44	N79-31752 *
US-PATENT-APPL-SN-969757	c 24	N84-16262 *	US-PATENT-CLASS-D12-76	c 05	N75-25914 *	US-PATENT-CLASS-106-209	c 05	N72-25120 *
US-PATENT-APPL-SN-969759	c 25	N82-11144 *	US-PATENT-CLASS-D71-1	c 05	N74-10907 *	US-PATENT-CLASS-106-286	c 18	N72-22566 *
US-PATENT-APPL-SN-969760	c 39	N81-25400 *				US-PATENT-CLASS-106-287SB	c 23	N75-14834 *
US-PATENT-APPL-SN-969761	c 32	N82-12297 *	US-PATENT-CLASS-073-801	c 26	N90-21170 *	US-PATENT-CLASS-106-288B	c 18	N72-22566 *
US-PATENT-APPL-SN-969762	c 33	N82-29539 *	US-PATENT-CLASS-100-299	c 15	N72-20446 *	US-PATENT-CLASS-106-292	c 18	N72-17532 *
US-PATENT-APPL-SN-969868	c 63	N93-17276 *	US-PATENT-CLASS-100-8	c 33	N74-19228 *	US-PATENT-CLASS-106-292	c 27	N77-30237 *
US-PATENT-APPL-SN-969869	c 38	N93-17048 *	US-PATENT-CLASS-101-395	c 35	N84-22930 *	US-PATENT-CLASS-106-296	c 18	N71-26772 *
US-PATENT-APPL-SN-970203	c 54	N93-17045 *	US-PATENT-CLASS-101-407BP	c 37	N84-12491 *	US-PATENT-CLASS-106-296	c 27	N77-30237 *
US-PATENT-APPL-SN-970204	c 54	N93-17042 *	US-PATENT-CLASS-102-101	c 28	N71-26779 *	US-PATENT-CLASS-106-296	c 24	N79-14156 *
US-PATENT-APPL-SN-970669	c 26	N93-31294 *	US-PATENT-CLASS-102-103	c 20	N78-32179 *	US-PATENT-CLASS-106-299	c 18	N72-17532 *
US-PATENT-APPL-SN-971116	c 54	N93-17088 *	US-PATENT-CLASS-102-105	c 33	N72-17947 *	US-PATENT-CLASS-106-299	c 27	N77-30237 *
US-PATENT-APPL-SN-971112	c 21	N70-34539 *	US-PATENT-CLASS-102-105	c 33	N72-25911 *	US-PATENT-CLASS-106-306	c 24	N76-24363 *
US-PATENT-APPL-SN-971473	c 23	N81-29160 *	US-PATENT-CLASS-102-105	c 33	N73-25952 *	US-PATENT-CLASS-106-39.5	c 27	N78-19302 *
US-PATENT-APPL-SN-971474	c 20	N82-18314 *	US-PATENT-CLASS-102-105	c 27	N74-27037 *	US-PATENT-CLASS-106-39R	c 18	N73-14584 *
US-PATENT-APPL-SN-971475	c 27	N81-24257 *	US-PATENT-CLASS-102-105	c 24	N79-25142 *	US-PATENT-CLASS-106-39	c 26	N72-28762 *
US-PATENT-APPL-SN-971596	c 27	N80-32516 *	US-PATENT-CLASS-102-105	c 25	N91-32196 *	US-PATENT-CLASS-106-40	c 18	N71-22998 *
US-PATENT-APPL-SN-972252	c 35	N81-33448 *	US-PATENT-CLASS-102-200	c 25	N91-32196 *	US-PATENT-CLASS-106-43	c 27	N78-17206 *
US-PATENT-APPL-SN-973343	c 10	N72-27246 *	US-PATENT-CLASS-102-202.14	c 28	N93-18274 *	US-PATENT-CLASS-106-43	c 37	N81-25371 *
US-PATENT-APPL-SN-973505	c 76	N93-17413 *	US-PATENT-CLASS-102-216	c 46	N79-22679 *	US-PATENT-CLASS-106-46	c 26	N72-28762 *
US-PATENT-APPL-SN-974292	c 26	N80-23419 *	US-PATENT-CLASS-102-262	c 03	N91-15142 *	US-PATENT-CLASS-106-48	c 27	N75-27160 *
US-PATENT-APPL-SN-974471	c 32	N81-14185 *	US-PATENT-CLASS-102-275.11	c 28	N93-18274 *	US-PATENT-CLASS-106-48	c 27	N78-32260 *
US-PATENT-APPL-SN-974472	c 37	N81-15363 *	US-PATENT-CLASS-102-28EB	c 28	N74-27425 *	US-PATENT-CLASS-106-50	c 27	N82-29452 *
US-PATENT-APPL-SN-974473	c 60	N81-27814 *	US-PATENT-CLASS-102-28R	c 28	N79-11231 *	US-PATENT-CLASS-106-50	c 27	N82-29452 *
US-PATENT-APPL-SN-974474	c 25	N81-19242 *	US-PATENT-CLASS-102-289	c 27	N82-24339 *	US-PATENT-CLASS-106-50	c 27	N82-29455 *
US-PATENT-APPL-SN-974475	c 33	N81-17349 *	US-PATENT-CLASS-102-34.4	c 07	N72-25171 *	US-PATENT-CLASS-106-52	c 37	N74-21063 *
US-PATENT-APPL-SN-974476	c 52	N81-14613 *	US-PATENT-CLASS-102-378	c 01	N83-35992 *	US-PATENT-CLASS-106-52	c 27	N82-29451 *
US-PATENT-APPL-SN-97472	c 14	N73-28487 *	US-PATENT-CLASS-102-378	c 37	N90-21390 *	US-PATENT-CLASS-106-52	c 27	N82-29452 *
US-PATENT-APPL-SN-977302	c 74	N93-28135 *	US-PATENT-CLASS-102-378	c 20	N91-32498 *	US-PATENT-CLASS-106-52	c 27	N82-29454 *
US-PATENT-APPL-SN-977468	c 37	N93-17057 *	US-PATENT-CLASS-102-39	c 20	N78-24275 *	US-PATENT-CLASS-106-52	c 27	N82-29455 *
US-PATENT-APPL-SN-977469	c 37	N93-19049 *	US-PATENT-CLASS-102-49.3	c 20	N77-17143 *	US-PATENT-CLASS-106-54	c 27	N75-27160 *
US-PATENT-APPL-SN-97829	c 06	N73-13129 *	US-PATENT-CLASS-102-49.5	c 31	N71-15687 *	US-PATENT-CLASS-106-54	c 27	N76-22377 *
US-PATENT-APPL-SN-982350	c 23	N93-17412 *	US-PATENT-CLASS-102-49.5	c 15	N71-22874 *	US-PATENT-CLASS-106-54	c 27	N76-23426 *
US-PATENT-APPL-SN-982535	c 27	N93-17062 *	US-PATENT-CLASS-102-49.5	c 31	N71-23008 *	US-PATENT-CLASS-106-54	c 27	N78-32260 *
US-PATENT-APPL-SN-98517	c 09	N72-25250 *	US-PATENT-CLASS-102-49.7	c 28	N73-14853 *	US-PATENT-CLASS-106-54	c 27	N82-29452 *
US-PATENT-APPL-SN-986399	c 24	N93-20040 *	US-PATENT-CLASS-102-49.8	c 20	N73-24784 *	US-PATENT-CLASS-106-54	c 27	N82-29454 *
US-PATENT-APPL-SN-98640	c 09	N72-25253 *	US-PATENT-CLASS-102-49.8	c 28	N73-24784 *	US-PATENT-CLASS-106-55	c 18	N73-14584 *
US-PATENT-APPL-SN-986631	c 52	N93-17058 *	US-PATENT-CLASS-102-49	c 33	N70-36846 *	US-PATENT-CLASS-106-58	c 18	N73-14584 *
US-PATENT-APPL-SN-98772	c 08	N73-12176 *	US-PATENT-CLASS-102-49	c 28	N70-38181 *	US-PATENT-CLASS-106-63	c 18	N73-14584 *
US-PATENT-APPL-SN-98773	c 15	N72-22486 *	US-PATENT-CLASS-102-49	c 03	N70-39930 *	US-PATENT-CLASS-106-65	c 27	N78-19302 *
US-PATENT-APPL-SN-98774	c 14	N73-19419 *	US-PATENT-CLASS-102-49	c 15	N70-41679 *	US-PATENT-CLASS-106-73.5	c 27	N78-19302 *
US-PATENT-APPL-SN-98798	c 09	N73-13209 *	US-PATENT-CLASS-102-49	c 28	N70-41967 *	US-PATENT-CLASS-106-74	c 18	N69-39979 *
US-PATENT-APPL-SN-988077	c 35	N93-19328 *	US-PATENT-CLASS-102-49	c 31	N71-10582 *	US-PATENT-CLASS-106-74	c 24	N79-31347 *
US-PATENT-APPL-SN-988082	c 36	N93-19373 *	US-PATENT-CLASS-102-49	c 15	N71-13789 *	US-PATENT-CLASS-106-84	c 18	N71-24183 *
US-PATENT-APPL-SN-988084	c 39	N93-19329 *	US-PATENT-CLASS-102-49	c 31	N71-15692 *	US-PATENT-CLASS-106-84	c 18	N71-24184 *
US-PATENT-APPL-SN-990570	c 27	N93-20567 *	US-PATENT-CLASS-102-49	c 31	N71-17730 *	US-PATENT-CLASS-106-84	c 18	N72-22566 *
US-PATENT-APPL-SN-991003	c 25	N93-19025 *	US-PATENT-CLASS-102-50.4	c 15	N82-24272 *	US-PATENT-CLASS-106-84	c 18	N72-23581 *
US-PATENT-APPL-SN-991403	c 35	N93-17060 *	US-PATENT-CLASS-102-50	c 31	N71-24750 *	US-PATENT-CLASS-106-84	c 24	N79-14156 *
US-PATENT-APPL-SN-99174	c 14	N72-33377 *	US-PATENT-CLASS-102-56R	c 02	N81-14968 *	US-PATENT-CLASS-106-84	c 24	N79-31347 *
US-PATENT-APPL-SN-99175	c 09	N72-25258 *	US-PATENT-CLASS-102-70.2A	c 28	N74-27425 *	US-PATENT-CLASS-106-88	c 18	N71-16124 *
US-PATENT-APPL-SN-99198	c 31	N73-32749 *	US-PATENT-CLASS-102-70.2R	c 19	N74-15089 *	US-PATENT-CLASS-108-136	c 09	N75-12968 *
US-PATENT-APPL-SN-99201	c 15	N73-25512 *	US-PATENT-CLASS-102-70.2	c 09	N71-18599 *	US-PATENT-CLASS-108-3	c 54	N88-24163 *
US-PATENT-APPL-SN-99201	c 37	N74-20063 *	US-PATENT-CLASS-102-70.2R	c 28	N74-27425 *	US-PATENT-CLASS-108-7	c 54	N88-24163 *
US-PATENT-APPL-SN-993477	c 37	N93-22007 *	US-PATENT-CLASS-102-70R	c 20	N78-24275 *	US-PATENT-CLASS-109-49.5	c 31	N81-19343 *
US-PATENT-APPL-SN-993743	c 27	N93-19332 *	US-PATENT-CLASS-102-90	c 15	N74-27360 *	US-PATENT-CLASS-109-58.5	c 31	N81-19343 *
US-PATENT-APPL-SN-994593	c 74	N93-19374 *	US-PATENT-CLASS-102-92.1	c 02	N81-14968 *	US-PATENT-CLASS-110-165R	c 31	N91-15423 *

## REPORT NUMBER INDEX

## US-PATENT-CLASS-126-429

US-PATENT-CLASS-110-171	c 31	N91-15423 *	US-PATENT-CLASS-117-35	c 32	N79-19186 *	US-PATENT-CLASS-123-102	c 11	N72-20244 *
US-PATENT-CLASS-110-186	c 25	N84-16276 *	US-PATENT-CLASS-117-37	c 15	N72-25452 *	US-PATENT-CLASS-123-119A	c 37	N77-31497 *
US-PATENT-CLASS-110-218	c 31	N81-15154 *	US-PATENT-CLASS-117-38	c 24	N75-33181 *	US-PATENT-CLASS-123-119E	c 37	N76-18457 *
US-PATENT-CLASS-110-229	c 31	N81-15154 *	US-PATENT-CLASS-117-43	c 31	N79-21227 *	US-PATENT-CLASS-123-120	c 37	N76-18457 *
US-PATENT-CLASS-110-232	c 31	N81-15154 *	US-PATENT-CLASS-117-45	c 74	N74-20008 *	US-PATENT-CLASS-123-121	c 37	N76-18457 *
US-PATENT-CLASS-110-234	c 25	N82-11144 *	US-PATENT-CLASS-117-46FS	c 24	N75-33181 *	US-PATENT-CLASS-123-122AB	c 28	N72-22772 *
US-PATENT-CLASS-110-245	c 25	N82-11144 *	US-PATENT-CLASS-117-46	c 15	N71-16077 *	US-PATENT-CLASS-123-122AB	c 37	N77-31497 *
US-PATENT-CLASS-110-255	c 25	N82-11144 *	US-PATENT-CLASS-117-47R	c 15	N72-25452 *	US-PATENT-CLASS-123-122E	c 07	N77-23106 *
US-PATENT-CLASS-110-259	c 31	N91-15423 *	US-PATENT-CLASS-117-50	c 15	N71-15610 *	US-PATENT-CLASS-123-122E	c 37	N78-10467 *
US-PATENT-CLASS-110-262	c 25	N84-16276 *	US-PATENT-CLASS-117-62	c 15	N72-25447 *	US-PATENT-CLASS-123-148CB	c 33	N77-28385 *
US-PATENT-CLASS-110-263	c 25	N84-16276 *	US-PATENT-CLASS-117-62	c 15	N72-25452 *	US-PATENT-CLASS-123-148DC	c 37	N79-11405 *
US-PATENT-CLASS-110-265	c 25	N84-16276 *	US-PATENT-CLASS-117-65.2	c 18	N71-10772 *	US-PATENT-CLASS-123-148E	c 33	N77-28385 *
US-PATENT-CLASS-110-266	c 25	N82-11144 *	US-PATENT-CLASS-117-66	c 15	N73-32360 *	US-PATENT-CLASS-123-148E	c 37	N79-11405 *
US-PATENT-CLASS-110-343	c 31	N81-15154 *	US-PATENT-CLASS-117-69	c 18	N70-36400 *	US-PATENT-CLASS-123-179R	c 28	N80-10374 *
US-PATENT-CLASS-110-347	c 31	N81-15154 *	US-PATENT-CLASS-117-69	c 15	N71-16075 *	US-PATENT-CLASS-123-193-P	c 37	N88-23981 *
US-PATENT-CLASS-112-402	c 18	N71-26285 *	US-PATENT-CLASS-117-6	c 14	N71-20461 *	US-PATENT-CLASS-123-193P	c 37	N90-22042 *
US-PATENT-CLASS-112-440	c 24	N91-31236 *	US-PATENT-CLASS-117-6	c 27	N81-15104 *	US-PATENT-CLASS-123-197R	c 37	N83-36483 *
US-PATENT-CLASS-113-116	c 15	N71-15597 *	US-PATENT-CLASS-117-72	c 35	N75-25122 *	US-PATENT-CLASS-123-37	c 37	N77-31497 *
US-PATENT-CLASS-114-112	c 18	N90-19278 *	US-PATENT-CLASS-117-8.5	c 24	N75-33181 *	US-PATENT-CLASS-123-3	c 44	N76-18460 *
US-PATENT-CLASS-114-122	c 02	N73-26006 *	US-PATENT-CLASS-117-93.1GD	c 25	N75-12087 *	US-PATENT-CLASS-123-3	c 44	N76-29700 *
US-PATENT-CLASS-114-122	c 34	N91-25380 *	US-PATENT-CLASS-117-93.16D	c 15	N72-25447 *	US-PATENT-CLASS-123-3	c 44	N77-10636 *
US-PATENT-CLASS-114-125	c 34	N91-25380 *	US-PATENT-CLASS-117-93.3	c 15	N72-25452 *	US-PATENT-CLASS-123-3	c 37	N77-31497 *
US-PATENT-CLASS-114-16.6	c 37	N76-22540 *	US-PATENT-CLASS-117-93.3	c 37	N75-15992 *	US-PATENT-CLASS-123-3	c 44	N78-33526 *
US-PATENT-CLASS-114-201R	c 18	N90-19278 *	US-PATENT-CLASS-117-95	c 24	N74-19769 *	US-PATENT-CLASS-123-3	c 28	N80-10374 *
US-PATENT-CLASS-114-66.5	c 12	N70-33305 *	US-PATENT-CLASS-117-95	c 36	N75-15029 *	US-PATENT-CLASS-123-41.33	c 07	N77-23106 *
US-PATENT-CLASS-114-67A	c 34	N91-14562 *	US-PATENT-CLASS-117-97	c 36	N75-15029 *	US-PATENT-CLASS-123-41.33	c 37	N78-10467 *
US-PATENT-CLASS-114-67R	c 02	N88-14071 *	US-PATENT-CLASS-118-DIG.5	c 24	N92-10070 *	US-PATENT-CLASS-123-59E	c 37	N77-31497 *
US-PATENT-CLASS-115-103.5	c 51	N75-13502 *	US-PATENT-CLASS-118-11	c 15	N71-17647 *	US-PATENT-CLASS-123-78E	c 37	N83-36483 *
US-PATENT-CLASS-116-DIG.43	c 02	N89-12551 *	US-PATENT-CLASS-118-124	c 24	N93-24597 *	US-PATENT-CLASS-123-89A	c 37	N76-18457 *
US-PATENT-CLASS-116-114.5	c 35	N75-25122 *	US-PATENT-CLASS-118-125	c 24	N93-24597 *	US-PATENT-CLASS-124-11R	c 75	N76-17951 *
US-PATENT-CLASS-116-114AH	c 14	N72-25411 *	US-PATENT-CLASS-118-300	c 71	N84-16940 *	US-PATENT-CLASS-124-1	c 75	N76-17951 *
US-PATENT-CLASS-116-114AH	c 35	N75-33367 *	US-PATENT-CLASS-118-308	c 17	N71-24911 *	US-PATENT-CLASS-124-3	c 14	N92-15081 *
US-PATENT-CLASS-116-117	c 14	N70-42074 *	US-PATENT-CLASS-118-308	c 31	N93-26101 *	US-PATENT-CLASS-124-56	c 18	N86-20469 *
US-PATENT-CLASS-116-201	c 02	N92-21588 *	US-PATENT-CLASS-118-313	c 51	N77-27677 *	US-PATENT-CLASS-124-6	c 09	N77-19076 *
US-PATENT-CLASS-116-207	c 02	N92-21588 *	US-PATENT-CLASS-118-320	c 37	N82-24492 *	US-PATENT-CLASS-125-13R	c 37	N85-21650 *
US-PATENT-CLASS-116-265	c 02	N89-12551 *	US-PATENT-CLASS-118-325	c 31	N93-26101 *	US-PATENT-CLASS-125-15	c 37	N85-21650 *
US-PATENT-CLASS-116-70	c 35	N93-29503 *	US-PATENT-CLASS-118-405	c 76	N91-15898 *	US-PATENT-CLASS-125-1	c 46	N74-23069 *
US-PATENT-CLASS-117-104	c 18	N71-26100 *	US-PATENT-CLASS-118-407	c 76	N91-15898 *	US-PATENT-CLASS-125-20	c 31	N83-27058 *
US-PATENT-CLASS-117-105.2	c 37	N74-11301 *	US-PATENT-CLASS-118-416	c 24	N92-16025 *	US-PATENT-CLASS-125-21	c 37	N80-29700 *
US-PATENT-CLASS-117-105.2	c 24	N75-33181 *	US-PATENT-CLASS-118-419	c 76	N91-15898 *	US-PATENT-CLASS-125-23R	c 76	N80-18951 *
US-PATENT-CLASS-117-105.5	c 15	N73-32360 *	US-PATENT-CLASS-118-423	c 37	N82-12441 *	US-PATENT-CLASS-125-23R	c 37	N82-32730 *
US-PATENT-CLASS-117-105	c 15	N73-32360 *	US-PATENT-CLASS-118-428	c 76	N91-15898 *	US-PATENT-CLASS-125-3	c 46	N74-23069 *
US-PATENT-CLASS-117-106A	c 70	N74-13436 *	US-PATENT-CLASS-118-43	c 25	N75-29192 *	US-PATENT-CLASS-126-DIG.1	c 44	N85-30474 *
US-PATENT-CLASS-117-106A	c 37	N75-15992 *	US-PATENT-CLASS-118-48	c 25	N75-26043 *	US-PATENT-CLASS-126-263	c 44	N77-32581 *
US-PATENT-CLASS-117-106A	c 25	N75-26043 *	US-PATENT-CLASS-118-49.1	c 15	N72-32487 *	US-PATENT-CLASS-126-263	c 44	N78-17460 *
US-PATENT-CLASS-117-106	c 33	N71-14032 *	US-PATENT-CLASS-118-49.1	c 31	N75-12161 *	US-PATENT-CLASS-126-263	c 44	N80-20808 *
US-PATENT-CLASS-117-107.2	c 25	N75-26043 *	US-PATENT-CLASS-118-49.1	c 25	N75-26043 *	US-PATENT-CLASS-126-263	c 35	N85-29214 *
US-PATENT-CLASS-117-107	c 15	N72-25447 *	US-PATENT-CLASS-118-49.5	c 09	N71-26701 *	US-PATENT-CLASS-126-270	c 09	N70-40234 *
US-PATENT-CLASS-117-107	c 76	N79-16678 *	US-PATENT-CLASS-118-49	c 25	N79-28253 *	US-PATENT-CLASS-126-270	c 03	N70-41580 *
US-PATENT-CLASS-117-119	c 18	N71-16105 *	US-PATENT-CLASS-118-50.1	c 71	N84-16940 *	US-PATENT-CLASS-126-270	c 34	N74-23039 *
US-PATENT-CLASS-117-119	c 76	N79-16678 *	US-PATENT-CLASS-118-50.1	c 36	N84-22944 *	US-PATENT-CLASS-126-270	c 44	N76-14595 *
US-PATENT-CLASS-117-124C	c 15	N72-25452 *	US-PATENT-CLASS-118-500	c 37	N78-17383 *	US-PATENT-CLASS-126-270	c 44	N76-23675 *
US-PATENT-CLASS-117-124F	c 23	N75-14834 *	US-PATENT-CLASS-118-500	c 37	N82-12441 *	US-PATENT-CLASS-126-270	c 44	N76-24696 *
US-PATENT-CLASS-117-126GM	c 37	N75-26371 *	US-PATENT-CLASS-118-500	c 37	N82-24492 *	US-PATENT-CLASS-126-270	c 35	N77-20401 *
US-PATENT-CLASS-117-126GR	c 27	N74-23125 *	US-PATENT-CLASS-118-503	c 71	N84-16940 *	US-PATENT-CLASS-126-270	c 44	N77-32582 *
US-PATENT-CLASS-117-126R	c 37	N75-26371 *	US-PATENT-CLASS-118-505	c 37	N82-24492 *	US-PATENT-CLASS-126-270	c 44	N78-15560 *
US-PATENT-CLASS-117-129	c 37	N74-21063 *	US-PATENT-CLASS-118-50	c 37	N78-17383 *	US-PATENT-CLASS-126-270	c 44	N78-19599 *
US-PATENT-CLASS-117-129	c 27	N75-27160 *	US-PATENT-CLASS-118-50	c 37	N81-33482 *	US-PATENT-CLASS-126-270	c 44	N78-31526 *
US-PATENT-CLASS-117-130R	c 15	N73-32360 *	US-PATENT-CLASS-118-50	c 37	N81-33482 *	US-PATENT-CLASS-126-270	c 44	N79-11471 *
US-PATENT-CLASS-117-132B	c 27	N74-23125 *	US-PATENT-CLASS-118-50	c 71	N84-16940 *	US-PATENT-CLASS-126-270	c 44	N79-14526 *
US-PATENT-CLASS-117-132	c 06	N72-25150 *	US-PATENT-CLASS-118-52	c 37	N81-33482 *	US-PATENT-CLASS-126-270	c 44	N79-23481 *
US-PATENT-CLASS-117-135.5	c 23	N75-14834 *	US-PATENT-CLASS-118-57	c 71	N84-16940 *	US-PATENT-CLASS-126-270	c 44	N79-24432 *
US-PATENT-CLASS-117-138.8R	c 15	N73-32360 *	US-PATENT-CLASS-118-624	c 36	N84-22944 *	US-PATENT-CLASS-126-271	c 44	N75-32581 *
US-PATENT-CLASS-117-151	c 15	N73-32360 *	US-PATENT-CLASS-118-641	c 36	N84-22944 *	US-PATENT-CLASS-126-271	c 44	N76-14602 *
US-PATENT-CLASS-117-152	c 15	N72-25452 *	US-PATENT-CLASS-118-6	c 51	N77-27677 *	US-PATENT-CLASS-126-271	c 44	N76-22657 *
US-PATENT-CLASS-117-16R	c 15	N72-25452 *	US-PATENT-CLASS-118-7	c 51	N77-27677 *	US-PATENT-CLASS-126-271	c 44	N76-24696 *
US-PATENT-CLASS-117-160R	c 15	N73-32360 *	US-PATENT-CLASS-118-9	c 51	N77-27677 *	US-PATENT-CLASS-126-271	c 35	N77-20401 *
US-PATENT-CLASS-117-161P	c 06	N73-27980 *	US-PATENT-CLASS-119-15	c 51	N77-27677 *	US-PATENT-CLASS-126-271	c 44	N77-32582 *
US-PATENT-CLASS-117-161UA	c 25	N75-12087 *	US-PATENT-CLASS-119-17	c 11	N71-22875 *	US-PATENT-CLASS-126-271	c 44	N78-10554 *
US-PATENT-CLASS-117-161UN	c 06	N73-27980 *	US-PATENT-CLASS-119-18	c 51	N81-32829 *	US-PATENT-CLASS-126-271	c 44	N78-17460 *
US-PATENT-CLASS-117-161UN	c 27	N74-23125 *	US-PATENT-CLASS-119-19	c 51	N81-32829 *	US-PATENT-CLASS-126-271	c 44	N78-31525 *
US-PATENT-CLASS-117-161UN	c 25	N75-12087 *	US-PATENT-CLASS-119-29	c 51	N78-27733 *	US-PATENT-CLASS-126-271	c 44	N78-31526 *
US-PATENT-CLASS-117-161UZ	c 25	N75-12087 *	US-PATENT-CLASS-119-51.11	c 35	N78-19466 *	US-PATENT-CLASS-126-271	c 44	N79-11471 *
US-PATENT-CLASS-117-161	c 06	N72-25150 *	US-PATENT-CLASS-119-51.13	c 51	N74-15778 *	US-PATENT-CLASS-126-271	c 44	N79-14526 *
US-PATENT-CLASS-117-2R	c 32	N74-27612 *	US-PATENT-CLASS-119-51.5	c 51	N74-15778 *	US-PATENT-CLASS-126-271	c 44	N79-14529 *
US-PATENT-CLASS-117-200	c 09	N72-25259 *	US-PATENT-CLASS-119-51R	c 51	N74-15778 *	US-PATENT-CLASS-126-271	c 44	N79-18443 *
US-PATENT-CLASS-117-201	c 15	N69-21460 *	US-PATENT-CLASS-119-52AF	c 51	N74-15778 *	US-PATENT-CLASS-126-271	c 44	N79-23481 *
US-PATENT-CLASS-117-201	c 18	N71-16046 *	US-PATENT-CLASS-119-54	c 51	N74-15778 *	US-PATENT-CLASS-126-271	c 44	N79-24433 *
US-PATENT-CLASS-117-201	c 03	N72-24037 *	US-PATENT-CLASS-119-72.5	c 35	N78-19466 *	US-PATENT-CLASS-126-400	c 44	N78-15560 *
US-PATENT-CLASS-117-201	c 25	N75-26043 *	US-PATENT-CLASS-119-96	c 05	N71-28619 *	US-PATENT-CLASS-126-400	c 44	N79-24433 *
US-PATENT-CLASS-117-211	c 15	N72-25447 *	US-PATENT-CLASS-121-38	c 15	N70-35409 *	US-PATENT-CLASS-126-400	c 44	N85-30474 *
US-PATENT-CLASS-117-212	c 09	N71-20705 *	US-PATENT-CLASS-121-38	c 02	N71-29128 *	US-PATENT-CLASS-126-415	c 44	N84-34792 *
US-PATENT-CLASS-117-212	c 15	N71-29032 *	US-PATENT-CLASS-122-32	c 33	N72-20915 *	US-PATENT-CLASS-126-415	c 44	N85-30474 *
US-PATENT-CLASS-117-212	c 26	N72-28762 *	US-PATENT-CLASS-122-366	c 34	N85-29180 *	US-PATENT-CLASS-126-417	c 44	N80-16452 *
US-PATENT-CLASS-117-217	c 15	N72-25447 *	US-PATENT-CLASS-122-366	c 34	N86-27593 *	US-PATENT-CLASS-126-417	c 34	N84-22903 *
US-PATENT-CLASS-117-217	c 26	N72-28762 *	US-PATENT-CLASS-122-366	c 34	N88-29133 *	US-PATENT-CLASS-126-418	c 44	N84-28204 *
US-PATENT-CLASS-117-21	c 18	N69-39895 *	US-PATENT-CLASS-122-366	c 34	N89-14392 *	US-PATENT-CLASS-126-418	c 44	N86-27706 *
US-PATENT-CLASS-117-224	c 15	N71-28582 *	US-PATENT-CLASS-122-366	c 27	N90-23541 *	US-PATENT-CLASS-126-419	c 44	N80-20810 *
US-PATENT-CLASS-117-228	c 06	N73-27980 *	US-PATENT-CLASS-122-366	c 31	N90-23587 *	US-PATENT-CLASS-126-419	c 44	N81-17518 *
US-PATENT-CLASS-117-234	c 76	N79-16678 *	US-PATENT-CLASS-122-40	c 25	N82-11144 *	US-PATENT-CLASS-126-419	c 44	N84-28203 *
US-PATENT-CLASS-117-235	c 76	N79-16678 *	US-PATENT-CLASS-123-DIG.12	c 37	N76-18457 *	US-PATENT-CLASS-126-419	c 44	N85-30474 *
US-PATENT-CLASS-117-237	c 76	N79-16678 *	US-PATENT-CLASS-123-DIG.12	c 44	N78-33526 *	US-PATENT-CLASS-126-419	c 44	N86-27706 *
US-PATENT-CLASS-117-239	c 76	N79-16678 *	US-PATENT-CLASS-123-DIG.12	c 28	N80-10374 *	US-PATENT-CLASS-126-422	c 44	N82-18686 *
US-PATENT-CLASS-117-240	c 76	N79-16678 *	US-PATENT-CLASS-123-DIG.8	c 37	N77-31497 *	US-PATENT-CLASS-126-423	c 34	N88-23958 *
US-PATENT-CLASS-117-33.3	c 70	N74-13436 *	US-PATENT-CLASS-123-1A	c 44	N76-29700 *	US-PATENT-CLASS-126-425	c 44	N88-14492 *
US-PATENT-CLASS-117-35R	c 06	N73-13128 *	US-PATENT-CLASS-123-1A	c 44	N78-33526 *	US-PATENT-CLASS-126-429	c 44	N82-18686 *

## US-PATENT-CLASS-126-430

## REPORT NUMBER INDEX

US-PATENT-CLASS-126-430	c 44	N82-18686 *	US-PATENT-CLASS-128-2.1A	c 52	N76-29894 *	US-PATENT-CLASS-128-422	c 52	N82-33996 *
US-PATENT-CLASS-126-433	c 44	N92-29143 *	US-PATENT-CLASS-128-2.1A	c 52	N79-18580 *	US-PATENT-CLASS-128-62A	c 52	N82-29862 *
US-PATENT-CLASS-126-434	c 44	N80-20810	US-PATENT-CLASS-128-2.1E	c 05	N72-27103	US-PATENT-CLASS-128-639	c 52	N79-27836
US-PATENT-CLASS-126-436	c 44	N92-29143 *	US-PATENT-CLASS-128-2.1E	c 35	N76-24525 *	US-PATENT-CLASS-128-642	c 52	N80-27072 *
US-PATENT-CLASS-126-437	c 44	N80-20810	US-PATENT-CLASS-128-2.1E	c 52	N77-28717	US-PATENT-CLASS-128-642	c 52	N81-14612
US-PATENT-CLASS-126-438	c 44	N80-14473 *	US-PATENT-CLASS-128-2.1R	c 05	N73-26072 *	US-PATENT-CLASS-128-642	c 52	N81-20703 *
US-PATENT-CLASS-126-438	c 44	N82-16475 *	US-PATENT-CLASS-128-2.1Z	c 35	N76-24525 *	US-PATENT-CLASS-128-660.06	c 71	N91-27914 *
US-PATENT-CLASS-126-438	c 44	N84-28203 *	US-PATENT-CLASS-128-2.1	c 05	N71-11193	US-PATENT-CLASS-128-660	c 52	N79-26771 *
US-PATENT-CLASS-126-438	c 44	N84-28204 *	US-PATENT-CLASS-128-2.1	c 05	N71-12346	US-PATENT-CLASS-128-660	c 52	N83-27578 *
US-PATENT-CLASS-126-438	c 44	N86-27706 *	US-PATENT-CLASS-128-2.1	c 05	N71-24729 *	US-PATENT-CLASS-128-660	c 52	N85-30618
US-PATENT-CLASS-126-440	c 44	N84-28204 *	US-PATENT-CLASS-128-2.1	c 09	N71-26002 *	US-PATENT-CLASS-128-661.03	c 52	N90-21519 *
US-PATENT-CLASS-126-442	c 44	N80-14473 *	US-PATENT-CLASS-128-2.1	c 05	N72-25120 *	US-PATENT-CLASS-128-661.03	c 52	N92-11621 *
US-PATENT-CLASS-126-443	c 35	N89-12048 *	US-PATENT-CLASS-128-2F	c 54	N76-14804 *	US-PATENT-CLASS-128-663	c 52	N83-27578 *
US-PATENT-CLASS-126-451	c 44	N84-28203 *	US-PATENT-CLASS-128-2H	c 52	N76-14757 *	US-PATENT-CLASS-128-665	c 52	N81-27783 *
US-PATENT-CLASS-126-900	c 44	N85-30474 *	US-PATENT-CLASS-128-2H	c 52	N76-29894 *	US-PATENT-CLASS-128-666	c 52	N80-23969 *
US-PATENT-CLASS-126-901	c 44	N80-16452 *	US-PATENT-CLASS-128-2H	c 52	N77-10780	US-PATENT-CLASS-128-671	c 52	N91-14709 *
US-PATENT-CLASS-126-901	c 44	N83-34449 *	US-PATENT-CLASS-128-2H	c 52	N77-14736 *	US-PATENT-CLASS-128-675	c 35	N90-23706
US-PATENT-CLASS-126-901	c 35	N89-12048 *	US-PATENT-CLASS-128-2N	c 05	N72-25122 *	US-PATENT-CLASS-128-686	c 52	N82-11770 *
US-PATENT-CLASS-126-91A	c 25	N79-11151 *	US-PATENT-CLASS-128-2N	c 05	N73-13114 *	US-PATENT-CLASS-128-689	c 52	N91-14709 *
US-PATENT-CLASS-127-1	c 25	N93-22036 *	US-PATENT-CLASS-128-2P	c 52	N76-29894 *	US-PATENT-CLASS-128-690	c 52	N80-23969 *
US-PATENT-CLASS-127-2	c 25	N93-22036 *	US-PATENT-CLASS-128-2R	c 09	N72-22202 *	US-PATENT-CLASS-128-691	c 52	N82-11770 *
US-PATENT-CLASS-127-37	c 25	N93-22036 *	US-PATENT-CLASS-128-2R	c 52	N79-12694 *	US-PATENT-CLASS-128-6	c 52	N80-16725 *
US-PATENT-CLASS-128.2.06E	c 05	N75-24716 *	US-PATENT-CLASS-128-2S	c 52	N74-10975 *	US-PATENT-CLASS-128-706	c 52	N91-14709 *
US-PATENT-CLASS-128.2.07	c 52	N79-21750 *	US-PATENT-CLASS-128-2S	c 52	N74-27864 *	US-PATENT-CLASS-128-715	c 35	N92-33016 *
US-PATENT-CLASS-128-DIG.12	c 37	N77-28487 *	US-PATENT-CLASS-128-2S	c 33	N75-31329 *	US-PATENT-CLASS-128-716	c 52	N91-14709 *
US-PATENT-CLASS-128-DIG.12	c 51	N81-14605 *	US-PATENT-CLASS-128-2S	c 33	N76-19338 *	US-PATENT-CLASS-128-736	c 52	N85-30618 *
US-PATENT-CLASS-128-DIG.13	c 52	N83-27577 *	US-PATENT-CLASS-128-2S	c 52	N76-29895 *	US-PATENT-CLASS-128-748	c 52	N80-18691 *
US-PATENT-CLASS-128-DIG.16	c 51	N81-14605 *	US-PATENT-CLASS-128-2S	c 52	N76-29896 *	US-PATENT-CLASS-128-748	c 35	N90-23706 *
US-PATENT-CLASS-128-DIG.20	c 52	N76-19785 *	US-PATENT-CLASS-128-2V	c 52	N74-20726 *	US-PATENT-CLASS-128-760	c 52	N80-18690 *
US-PATENT-CLASS-128-DIG.20	c 37	N81-17433 *	US-PATENT-CLASS-128-2V	c 35	N75-12271 *	US-PATENT-CLASS-128-760	c 52	N81-29763 *
US-PATENT-CLASS-128-DIG.25	c 52	N81-25660 *	US-PATENT-CLASS-128-2V	c 54	N75-27760 *	US-PATENT-CLASS-128-761	c 52	N81-24711 *
US-PATENT-CLASS-128-DIG.25	c 52	N84-11744 *	US-PATENT-CLASS-128-2V	c 52	N79-14751 *	US-PATENT-CLASS-128-774	c 52	N80-27072 *
US-PATENT-CLASS-128-DIG.26	c 51	N81-14605 *	US-PATENT-CLASS-128-2V	c 52	N79-18580 *	US-PATENT-CLASS-128-774	c 52	N81-20703 *
US-PATENT-CLASS-128-DIG.4	c 05	N72-27103 *	US-PATENT-CLASS-128-202.11	c 54	N86-28618 *	US-PATENT-CLASS-128-774	c 52	N83-25346 *
US-PATENT-CLASS-128-DIG.4	c 05	N75-24716 *	US-PATENT-CLASS-128-203	c 54	N76-24900 *	US-PATENT-CLASS-128-775	c 35	N92-33016 *
US-PATENT-CLASS-128-DIG.4	c 35	N76-24525 *	US-PATENT-CLASS-128-204.18	c 51	N81-14605 *	US-PATENT-CLASS-128-778	c 52	N82-22875 *
US-PATENT-CLASS-128-DIG.4	c 52	N77-28717 *	US-PATENT-CLASS-128-206F	c 14	N73-24473 *	US-PATENT-CLASS-128-778	c 35	N90-23706 *
US-PATENT-CLASS-128-DIG.6	c 51	N81-14605 *	US-PATENT-CLASS-128-207.14	c 51	N81-14605 *	US-PATENT-CLASS-128-782	c 52	N80-27072 *
US-PATENT-CLASS-128-DIG.9	c 52	N80-16725 *	US-PATENT-CLASS-128-207.28	c 51	N81-14605 *	US-PATENT-CLASS-128-782	c 39	N83-20280 *
US-PATENT-CLASS-128-DIG.9	c 51	N81-14605 *	US-PATENT-CLASS-128-212	c 54	N80-10799 *	US-PATENT-CLASS-128-782	c 52	N83-25346 *
US-PATENT-CLASS-128-1.2	c 52	N82-22875 *	US-PATENT-CLASS-128-214D	c 52	N79-14749 *	US-PATENT-CLASS-128-784	c 52	N82-33996 *
US-PATENT-CLASS-128-1A	c 05	N73-32012 *	US-PATENT-CLASS-128-214E	c 52	N74-22771 *	US-PATENT-CLASS-128-80-E	c 54	N86-22112 *
US-PATENT-CLASS-128-1A	c 54	N84-16803 *	US-PATENT-CLASS-128-214F	c 37	N77-28487 *	US-PATENT-CLASS-128-80F	c 52	N81-25661 *
US-PATENT-CLASS-128-1R	c 52	N77-25772 *	US-PATENT-CLASS-128-230	c 52	N75-33640 *	US-PATENT-CLASS-128-80A	c 52	N82-33996 *
US-PATENT-CLASS-128-1R	c 52	N77-28716 *	US-PATENT-CLASS-128-236	c 51	N81-14605 *	US-PATENT-CLASS-128-89R	c 52	N81-25662 *
US-PATENT-CLASS-128-1R	c 52	N81-25660 *	US-PATENT-CLASS-128-24A	c 52	N84-34913 *	US-PATENT-CLASS-128-903	c 52	N80-18691 *
US-PATENT-CLASS-128-1R	c 52	N84-11744 *	US-PATENT-CLASS-128-24A	c 05	N73-27062 *	US-PATENT-CLASS-128-92C	c 27	N78-17215 *
US-PATENT-CLASS-128-142.2	c 54	N76-24900 *	US-PATENT-CLASS-128-24A	c 54	N75-27760 *	US-PATENT-CLASS-128-92G	c 27	N78-17215 *
US-PATENT-CLASS-128-142.5	c 05	N71-11190 *	US-PATENT-CLASS-128-24	c 05	N71-24738 *	US-PATENT-CLASS-129-16.7	c 08	N71-15908 *
US-PATENT-CLASS-128-142.5	c 05	N71-11203 *	US-PATENT-CLASS-128-25R	c 37	N74-18127 *	US-PATENT-CLASS-13-20	c 11	N72-23215 *
US-PATENT-CLASS-128-142.5	c 05	N71-17599 *	US-PATENT-CLASS-128-25	c 05	N71-24738 *	US-PATENT-CLASS-13-20	c 12	N79-26075 *
US-PATENT-CLASS-128-142.5	c 05	N72-20096 *	US-PATENT-CLASS-128-26	c 52	N76-19785 *	US-PATENT-CLASS-13-22	c 12	N79-26075 *
US-PATENT-CLASS-128-142.5	c 05	N73-25125 *	US-PATENT-CLASS-128-272	c 15	N71-24835 *	US-PATENT-CLASS-13-24	c 12	N79-26075 *
US-PATENT-CLASS-128-142.7	c 54	N78-32721 *	US-PATENT-CLASS-128-272	c 52	N79-14749 *	US-PATENT-CLASS-13-26	c 33	N71-15625 *
US-PATENT-CLASS-128-142R	c 54	N80-10799 *	US-PATENT-CLASS-128-275	c 15	N71-24835 *	US-PATENT-CLASS-13-26	c 14	N71-23267 *
US-PATENT-CLASS-128-145.8	c 54	N75-27761 *	US-PATENT-CLASS-128-275	c 52	N81-29763 *	US-PATENT-CLASS-13-31	c 11	N72-23215 *
US-PATENT-CLASS-128-15R	c 54	N84-16803 *	US-PATENT-CLASS-128-276	c 52	N80-14684 *	US-PATENT-CLASS-13-31	c 31	N74-27900 *
US-PATENT-CLASS-128-191R	c 25	N74-12813 *	US-PATENT-CLASS-128-276	c 52	N80-18690 *	US-PATENT-CLASS-13-35	c 33	N71-24145 *
US-PATENT-CLASS-128-191R	c 54	N80-10799 *	US-PATENT-CLASS-128-280	c 24	N82-29362 *	US-PATENT-CLASS-134-137	c 37	N82-12441 *
US-PATENT-CLASS-128-1	c 05	N70-41819 *	US-PATENT-CLASS-128-283	c 05	N69-23192 *	US-PATENT-CLASS-134-166C	c 37	N87-17035 *
US-PATENT-CLASS-128-1	c 05	N71-20268 *	US-PATENT-CLASS-128-283	c 24	N82-29362 *	US-PATENT-CLASS-134-17	c 43	N81-26509 *
US-PATENT-CLASS-128-2.05A	c 52	N74-26626 *	US-PATENT-CLASS-128-284	c 24	N82-29362 *	US-PATENT-CLASS-134-21	c 37	N76-18456 *
US-PATENT-CLASS-128-2.05A	c 54	N75-13531 *	US-PATENT-CLASS-128-285	c 24	N82-29362 *	US-PATENT-CLASS-134-37	c 37	N76-18456 *
US-PATENT-CLASS-128-2.05E	c 52	N74-27566 *	US-PATENT-CLASS-128-288	c 24	N82-29362 *	US-PATENT-CLASS-134-37	c 37	N85-21652 *
US-PATENT-CLASS-128-2.05E	c 52	N76-29896 *	US-PATENT-CLASS-128-291	c 24	N82-29362 *	US-PATENT-CLASS-134-93	c 37	N87-17035 *
US-PATENT-CLASS-128-2.05F	c 14	N73-32326 *	US-PATENT-CLASS-128-295	c 05	N72-22093 *	US-PATENT-CLASS-135-1	c 32	N70-36536 *
US-PATENT-CLASS-128-2.05F	c 54	N75-13531 *	US-PATENT-CLASS-128-295	c 52	N81-24711 *	US-PATENT-CLASS-135-903	c 37	N87-17036 *
US-PATENT-CLASS-128-2.05R	c 05	N73-27941 *	US-PATENT-CLASS-128-295	c 52	N81-28740 *	US-PATENT-CLASS-136-100R	c 03	N72-20034 *
US-PATENT-CLASS-128-2.05R	c 52	N76-29895 *	US-PATENT-CLASS-128-296	c 24	N82-29362 *	US-PATENT-CLASS-136-114	c 44	N76-14601 *
US-PATENT-CLASS-128-2.05R	c 52	N79-10724 *	US-PATENT-CLASS-128-299	c 05	N70-39922 *	US-PATENT-CLASS-136-132	c 03	N71-11053 *
US-PATENT-CLASS-128-2.05S	c 52	N74-26626 *	US-PATENT-CLASS-128-2	c 05	N73-27062 *	US-PATENT-CLASS-136-132	c 03	N71-22974 *
US-PATENT-CLASS-128-2.05T	c 52	N74-12778 *	US-PATENT-CLASS-128-303B	c 52	N83-25346 *	US-PATENT-CLASS-136-133	c 15	N69-24320 *
US-PATENT-CLASS-128-2.05V	c 35	N76-24525 *	US-PATENT-CLASS-128-303R	c 52	N77-28716 *	US-PATENT-CLASS-136-133	c 03	N71-23006 *
US-PATENT-CLASS-128-2.05Z	c 54	N75-27760 *	US-PATENT-CLASS-128-305	c 05	N73-27062 *	US-PATENT-CLASS-136-133	c 03	N72-15986 *
US-PATENT-CLASS-128-2.05Z	c 52	N79-18580 *	US-PATENT-CLASS-128-305	c 52	N75-33640 *	US-PATENT-CLASS-136-135	c 03	N72-15986 *
US-PATENT-CLASS-128-2.05	c 05	N70-41329 *	US-PATENT-CLASS-128-305	c 52	N76-14773 *	US-PATENT-CLASS-136-143	c 44	N76-29699 *
US-PATENT-CLASS-128-2.05	c 04	N71-23185 *	US-PATENT-CLASS-128-325	c 52	N84-28388 *	US-PATENT-CLASS-136-146	c 03	N69-21337 *
US-PATENT-CLASS-128-2.05	c 05	N71-27234 *	US-PATENT-CLASS-128-327	c 52	N82-11770 *	US-PATENT-CLASS-136-146	c 24	N76-14204 *
US-PATENT-CLASS-128-2.06B	c 05	N75-24716 *	US-PATENT-CLASS-128-328	c 52	N84-34913 *	US-PATENT-CLASS-136-148	c 24	N76-14204 *
US-PATENT-CLASS-128-2.06E	c 52	N76-29896 *	US-PATENT-CLASS-128-329R	c 52	N79-27836 *	US-PATENT-CLASS-136-148	c 44	N82-24645 *
US-PATENT-CLASS-128-2.06F	c 52	N74-12778 *	US-PATENT-CLASS-128-346	c 52	N81-25660 *	US-PATENT-CLASS-136-162	c 44	N76-14601 *
US-PATENT-CLASS-128-2.06R	c 05	N73-27941 *	US-PATENT-CLASS-128-346	c 52	N84-11744 *	US-PATENT-CLASS-136-166	c 03	N71-23336 *
US-PATENT-CLASS-128-2.06R	c 52	N76-14757 *	US-PATENT-CLASS-128-346	c 52	N84-28388 *	US-PATENT-CLASS-136-166	c 03	N72-20032 *
US-PATENT-CLASS-128-2.06	c 05	N69-21925 *	US-PATENT-CLASS-128-348	c 52	N80-16725 *	US-PATENT-CLASS-136-170	c 03	N71-11051 *
US-PATENT-CLASS-128-2.06	c 05	N71-22896 *	US-PATENT-CLASS-128-379	c 52	N77-14736 *	US-PATENT-CLASS-136-175	c 03	N72-20034 *
US-PATENT-CLASS-128-2.06	c 09	N71-24618 *	US-PATENT-CLASS-128-38	c 54	N84-16803 *	US-PATENT-CLASS-136-179	c 03	N70-41864 *
US-PATENT-CLASS-128-2.06	c 05	N71-26293 *	US-PATENT-CLASS-128-400	c 52	N77-14736 *	US-PATENT-CLASS-136-182	c 03	N71-10728 *
US-PATENT-CLASS-128-2.07	c 05	N73-32015 *	US-PATENT-CLASS-128-402	c 05	N72-20096 *	US-PATENT-CLASS-136-182	c 03	N71-20407 *
US-PATENT-CLASS-128-2.07	c 52	N74-20728 *	US-PATENT-CLASS-128-402	c 52	N77-14736 *	US-PATENT-CLASS-136-182	c 03	N71-20491 *
US-PATENT-CLASS-128-2.08	c 05	N69-21473 *	US-PATENT-CLASS-128-410	c 52	N77-28717 *	US-PATENT-CLASS-136-182	c 44	N74-27519 *
US-PATENT-CLASS-128-2.08	c 05	N73-32015 *	US-PATENT-CLASS-128-417	c 05	N72-25120 *	US-PATENT-CLASS-136-182	c 44	N76-14601 *
US-PATENT-CLASS-128-2.08	c 52	N74-20728 *	US-PATENT-CLASS-128-417	c 05	N72-27103 *	US-PATENT-CLASS-136-200	c 35	N91-31608 *
US-PATENT-CLASS-128-2.1A	c 09	N72-17153 *	US-PATENT-CLASS-128-418	c 52	N76-29896 *	US-PATENT-CLASS-136-202	c 09	N72-12136 *
US-PATENT-CLASS-128-2.1A	c 09	N72-22202 *	US-PATENT-CLASS-128-418	c 52	N77-14738 *	US-PATENT-CLASS-136-202	c 03	N72-26031 *
US-PATENT-CLASS-128-2.1A	c 52	N74-26625 *	US-PATENT-CLASS-128-419P	c 52	N76-29896 *	US-PATENT-CLASS-136-202	c 44	N76-16612 *
US-PATENT-CLASS-128-2.1A	c 52	N76-14757 *	US-PATENT-CLASS-128-421	c 52	N82-29863 *	US-PATENT-CLASS-136-202	c 35	N77-32454 *



## REPORT NUMBER INDEX

## US-PATENT-CLASS-141-45

US-PATENT-CLASS-136-202	c 35	N79-14346 *	US-PATENT-CLASS-136-89CC	c 44	N79-31752 *	US-PATENT-CLASS-137-549	c 37	N81-17433 *
US-PATENT-CLASS-136-202	c 44	N92-16457 *	US-PATENT-CLASS-136-89H	c 44	N78-25528 *	US-PATENT-CLASS-137-550	c 37	N76-14463 *
US-PATENT-CLASS-136-204	c 31	N91-27385 *	US-PATENT-CLASS-136-89H	c 44	N78-25529 *	US-PATENT-CLASS-137-554	c 09	N71-23191 *
US-PATENT-CLASS-136-205	c 44	N92-16457 *	US-PATENT-CLASS-136-89PC	c 44	N79-25482 *	US-PATENT-CLASS-137-554	c 35	N93-29503 *
US-PATENT-CLASS-136-206	c 03	N72-11062 *	US-PATENT-CLASS-136-89PC	c 44	N79-31753 *	US-PATENT-CLASS-137-556	c 34	N91-14563 *
US-PATENT-CLASS-136-206	c 09	N72-12136 *	US-PATENT-CLASS-136-89P	c 44	N77-31601 *	US-PATENT-CLASS-137-557	c 35	N93-29503 *
US-PATENT-CLASS-136-206	c 44	N76-14595 *	US-PATENT-CLASS-136-89P	c 44	N78-25528 *	US-PATENT-CLASS-137-559	c 11	N73-12265 *
US-PATENT-CLASS-136-206	c 44	N76-31666 *	US-PATENT-CLASS-136-89P	c 44	N78-25529 *	US-PATENT-CLASS-137-574	c 20	N80-10278 *
US-PATENT-CLASS-136-20	c 44	N74-19693 *	US-PATENT-CLASS-136-89P	c 44	N78-27515 *	US-PATENT-CLASS-137-576	c 20	N80-10278 *
US-PATENT-CLASS-136-210	c 44	N76-16612 *	US-PATENT-CLASS-136-89P	c 44	N79-17314 *	US-PATENT-CLASS-137-582	c 32	N71-16103 *
US-PATENT-CLASS-136-211	c 35	N76-15434 *	US-PATENT-CLASS-136-89P	c 44	N80-14474 *	US-PATENT-CLASS-137-582	c 32	N71-16106 *
US-PATENT-CLASS-136-212	c 35	N76-15434 *	US-PATENT-CLASS-136-89SG	c 44	N78-24609 *	US-PATENT-CLASS-137-582	c 15	N71-19569 *
US-PATENT-CLASS-136-213	c 14	N69-27459 *	US-PATENT-CLASS-136-89SG	c 44	N80-24741 *	US-PATENT-CLASS-137-582	c 15	N73-26472 *
US-PATENT-CLASS-136-213	c 34	N74-27861 *	US-PATENT-CLASS-136-89SJ	c 44	N78-13526 *	US-PATENT-CLASS-137-590	c 20	N80-10278 *
US-PATENT-CLASS-136-224	c 14	N73-12447 *	US-PATENT-CLASS-136-89SJ	c 44	N79-11467 *	US-PATENT-CLASS-137-594	c 12	N71-18615 *
US-PATENT-CLASS-136-225	c 14	N73-24472 *	US-PATENT-CLASS-136-89SJ	c 44	N79-14528 *	US-PATENT-CLASS-137-604	c 15	N73-27406 *
US-PATENT-CLASS-136-225	c 35	N76-15434 *	US-PATENT-CLASS-136-89SJ	c 44	N79-25482 *	US-PATENT-CLASS-137-606	c 37	N87-21332 *
US-PATENT-CLASS-136-225	c 44	N85-21768 *	US-PATENT-CLASS-136-89	c 03	N69-24267 *	US-PATENT-CLASS-137-608	c 15	N73-13462 *
US-PATENT-CLASS-136-227	c 09	N72-12136 *	US-PATENT-CLASS-136-89	c 03	N71-11049 *	US-PATENT-CLASS-137-614.06	c 37	N79-11402 *
US-PATENT-CLASS-136-228	c 33	N71-15568 *	US-PATENT-CLASS-136-89	c 03	N71-11050 *	US-PATENT-CLASS-137-614.11	c 37	N87-25573 *
US-PATENT-CLASS-136-230	c 14	N71-23039 *	US-PATENT-CLASS-136-89	c 03	N71-11056 *	US-PATENT-CLASS-137-614.18	c 37	N87-25573 *
US-PATENT-CLASS-136-230	c 34	N74-27861 *	US-PATENT-CLASS-136-89	c 03	N71-18698 *	US-PATENT-CLASS-137-614	c 15	N70-36492 *
US-PATENT-CLASS-136-232	c 35	N77-14409 *	US-PATENT-CLASS-136-89	c 03	N71-19545 *	US-PATENT-CLASS-137-615	c 12	N71-16031 *
US-PATENT-CLASS-136-233	c 14	N72-7410 *	US-PATENT-CLASS-136-89	c 03	N71-20492 *	US-PATENT-CLASS-137-624.11	c 35	N78-19466 *
US-PATENT-CLASS-136-233	c 14	N73-13417 *	US-PATENT-CLASS-136-89	c 03	N71-20895 *	US-PATENT-CLASS-137-624.14	c 03	N69-21469 *
US-PATENT-CLASS-136-233	c 34	N74-27861 *	US-PATENT-CLASS-136-89	c 26	N71-23043 *	US-PATENT-CLASS-137-625.38	c 37	N78-25426 *
US-PATENT-CLASS-136-233	c 35	N77-14409 *	US-PATENT-CLASS-136-89	c 03	N71-23187 *	US-PATENT-CLASS-137-625.3	c 37	N78-25426 *
US-PATENT-CLASS-136-236R	c 35	N77-32454 *	US-PATENT-CLASS-136-89	c 03	N71-23449 *	US-PATENT-CLASS-137-625.4	c 37	N80-23654 *
US-PATENT-CLASS-136-236	c 35	N79-14346 *	US-PATENT-CLASS-136-89	c 03	N71-33409 *	US-PATENT-CLASS-137-625.5	c 15	N71-23051 *
US-PATENT-CLASS-136-240	c 35	N77-32454 *	US-PATENT-CLASS-136-89	c 03	N72-20031 *	US-PATENT-CLASS-137-625.69	c 15	N70-36908 *
US-PATENT-CLASS-136-244	c 44	N91-27614 *	US-PATENT-CLASS-136-89	c 03	N72-22042 *	US-PATENT-CLASS-137-628	c 37	N74-21065 *
US-PATENT-CLASS-136-245	c 54	N92-21589 *	US-PATENT-CLASS-136-89	c 31	N72-22874 *	US-PATENT-CLASS-137-637.05	c 37	N79-11402 *
US-PATENT-CLASS-136-246	c 44	N85-21768 *	US-PATENT-CLASS-136-89	c 03	N72-24037 *	US-PATENT-CLASS-137-81.5	c 12	N69-21466 *
US-PATENT-CLASS-136-246	c 54	N92-21589 *	US-PATENT-CLASS-136-89	c 09	N72-25259 *	US-PATENT-CLASS-137-81.5	c 15	N71-15609 *
US-PATENT-CLASS-136-249	c 44	N81-12542 *	US-PATENT-CLASS-136-89	c 03	N72-27053 *	US-PATENT-CLASS-137-81.5	c 12	N71-17578 *
US-PATENT-CLASS-136-249	c 44	N82-29709 *	US-PATENT-CLASS-136-89	c 09	N73-32109 *	US-PATENT-CLASS-137-81.5	c 12	N71-17579 *
US-PATENT-CLASS-136-249	c 44	N82-31764 *	US-PATENT-CLASS-136-89	c 44	N74-14784 *	US-PATENT-CLASS-137-81.5	c 10	N71-25899 *
US-PATENT-CLASS-136-249	c 44	N83-32177 *	US-PATENT-CLASS-136-89	c 44	N76-14600 *	US-PATENT-CLASS-137-81.5	c 12	N71-27332 *
US-PATENT-CLASS-136-249	c 44	N87-17399 *	US-PATENT-CLASS-136-89	c 44	N76-28635 *	US-PATENT-CLASS-137-81.5	c 12	N71-28741 *
US-PATENT-CLASS-136-249	c 33	N87-23879 *	US-PATENT-CLASS-136-89	c 44	N76-31666 *	US-PATENT-CLASS-137-81.5	c 28	N72-22772 *
US-PATENT-CLASS-136-249	c 44	N91-27614 *	US-PATENT-CLASS-136-89	c 44	N77-10635 *	US-PATENT-CLASS-137-81.5	c 15	N72-33477 *
US-PATENT-CLASS-136-24	c 09	N73-32108 *	US-PATENT-CLASS-136-89	c 44	N77-14580 *	US-PATENT-CLASS-137-81.5	c 15	N73-13462 *
US-PATENT-CLASS-136-253	c 44	N85-34441 *	US-PATENT-CLASS-136-89	c 44	N77-19571 *	US-PATENT-CLASS-137-81.5	c 28	N73-13773 *
US-PATENT-CLASS-136-253	c 44	N92-22037 *	US-PATENT-CLASS-136-89	c 44	N79-11468 *	US-PATENT-CLASS-137-819	c 33	N74-11050 *
US-PATENT-CLASS-136-255	c 44	N81-29525 *	US-PATENT-CLASS-136-90	c 44	N76-14601 *	US-PATENT-CLASS-137-81	c 05	N72-20097 *
US-PATENT-CLASS-136-255	c 44	N83-14692 *	US-PATENT-CLASS-137-DIG.9	c 54	N76-24900 *	US-PATENT-CLASS-137-81	c 14	N73-13418 *
US-PATENT-CLASS-136-255	c 33	N85-21492 *	US-PATENT-CLASS-137-101	c 07	N77-23106 *	US-PATENT-CLASS-137-833	c 33	N74-11050 *
US-PATENT-CLASS-136-255	c 44	N85-30475 *	US-PATENT-CLASS-137-104	c 37	N78-10467 *	US-PATENT-CLASS-137-838	c 71	N84-28568 *
US-PATENT-CLASS-136-255	c 76	N86-20150 *	US-PATENT-CLASS-137-110	c 54	N76-24900 *	US-PATENT-CLASS-137-840	c 33	N74-11050 *
US-PATENT-CLASS-136-255	c 33	N87-23879 *	US-PATENT-CLASS-137-116.3	c 37	N85-34403 *	US-PATENT-CLASS-137-886	c 37	N81-17433 *
US-PATENT-CLASS-136-255	c 44	N83-13579 *	US-PATENT-CLASS-137-13	c 15	N71-15967 *	US-PATENT-CLASS-137-887	c 37	N81-17433 *
US-PATENT-CLASS-136-256	c 44	N83-14692 *	US-PATENT-CLASS-137-13	c 15	N72-33477 *	US-PATENT-CLASS-137-89	c 37	N85-34403 *
US-PATENT-CLASS-136-256	c 44	N85-20530 *	US-PATENT-CLASS-137-14	c 37	N79-33468 *	US-PATENT-CLASS-138.6R	c 27	N81-15104 *
US-PATENT-CLASS-136-256	c 44	N85-30475 *	US-PATENT-CLASS-137-15.1	c 02	N74-20646 *	US-PATENT-CLASS-138-103	c 52	N80-16725 *
US-PATENT-CLASS-136-256	c 44	N91-27614 *	US-PATENT-CLASS-137-15.1	c 07	N74-31270 *	US-PATENT-CLASS-138-113	c 34	N75-12222 *
US-PATENT-CLASS-136-258	c 44	N81-19558 *	US-PATENT-CLASS-137-15.1	c 07	N75-24736 *	US-PATENT-CLASS-138-114	c 34	N75-12222 *
US-PATENT-CLASS-136-258	c 44	N81-29525 *	US-PATENT-CLASS-137-15.1	c 07	N77-18154 *	US-PATENT-CLASS-138-119	c 32	N70-41579 *
US-PATENT-CLASS-136-259	c 44	N83-13579 *	US-PATENT-CLASS-137-15.1	c 07	N79-14096 *	US-PATENT-CLASS-138-120	c 54	N86-28619 *
US-PATENT-CLASS-136-259	c 44	N83-14692 *	US-PATENT-CLASS-137-15.1	c 05	N79-24976 *	US-PATENT-CLASS-138-120	c 54	N86-28620 *
US-PATENT-CLASS-136-261	c 44	N82-26777 *	US-PATENT-CLASS-137-15.1	c 07	N81-14999 *	US-PATENT-CLASS-138-120	c 54	N86-29507 *
US-PATENT-CLASS-136-261	c 44	N85-30475 *	US-PATENT-CLASS-137-15.2	c 02	N74-20646 *	US-PATENT-CLASS-138-133	c 52	N80-16725 *
US-PATENT-CLASS-136-261	c 44	N86-32875 *	US-PATENT-CLASS-137-15.2	c 35	N76-14431 *	US-PATENT-CLASS-138-141	c 24	N90-25196 *
US-PATENT-CLASS-136-262	c 44	N81-29525 *	US-PATENT-CLASS-137-154	c 15	N73-27406 *	US-PATENT-CLASS-138-148	c 34	N75-12222 *
US-PATENT-CLASS-136-262	c 76	N86-20150 *	US-PATENT-CLASS-137-154	c 31	N90-20254 *	US-PATENT-CLASS-138-149	c 24	N90-25196 *
US-PATENT-CLASS-136-28	c 03	N71-10608 *	US-PATENT-CLASS-137-177	c 20	N80-10278 *	US-PATENT-CLASS-138-153	c 24	N90-25196 *
US-PATENT-CLASS-136-290	c 44	N82-26777 *	US-PATENT-CLASS-137-197	c 15	N70-14646 *	US-PATENT-CLASS-138-178	c 15	N72-20445 *
US-PATENT-CLASS-136-291	c 44	N81-12542 *	US-PATENT-CLASS-137-197	c 35	N78-12390 *	US-PATENT-CLASS-138-26	c 31	N91-25305 *
US-PATENT-CLASS-136-30	c 44	N74-19693 *	US-PATENT-CLASS-137-1	c 12	N70-38997 *	US-PATENT-CLASS-138-30	c 31	N91-25305 *
US-PATENT-CLASS-136-30	c 44	N76-18643 *	US-PATENT-CLASS-137-1	c 15	N73-27406 *	US-PATENT-CLASS-138-33	c 52	N80-16725 *
US-PATENT-CLASS-136-30	c 44	N76-29699 *	US-PATENT-CLASS-137-207	c 34	N77-30399 *	US-PATENT-CLASS-138-38	c 02	N88-14071 *
US-PATENT-CLASS-136-36	c 44	N74-19692 *	US-PATENT-CLASS-137-209	c 34	N77-30399 *	US-PATENT-CLASS-138-38	c 34	N88-29133 *
US-PATENT-CLASS-136-6LF	c 44	N76-18643 *	US-PATENT-CLASS-137-209	c 20	N80-10278 *	US-PATENT-CLASS-138-42	c 15	N71-15608 *
US-PATENT-CLASS-136-6	c 03	N71-26084 *	US-PATENT-CLASS-137-340	c 15	N70-34817 *	US-PATENT-CLASS-138-42	c 44	N84-14583 *
US-PATENT-CLASS-136-6	c 03	N72-15986 *	US-PATENT-CLASS-137-340	c 15	N70-35087 *	US-PATENT-CLASS-138-43	c 15	N71-19213 *
US-PATENT-CLASS-136-6	c 44	N82-24641 *	US-PATENT-CLASS-137-341	c 12	N71-17661 *	US-PATENT-CLASS-138-45	c 15	N71-18580 *
US-PATENT-CLASS-136-6	c 44	N82-24642 *	US-PATENT-CLASS-137-375	c 37	N80-23654 *	US-PATENT-CLASS-138-45	c 15	N73-13462 *
US-PATENT-CLASS-136-6	c 44	N82-24643 *	US-PATENT-CLASS-137-397	c 15	N73-26472 *	US-PATENT-CLASS-138-46	c 12	N71-18615 *
US-PATENT-CLASS-136-6	c 44	N82-24644 *	US-PATENT-CLASS-137-469	c 05	N72-20097 *	US-PATENT-CLASS-138-4	c 15	N71-18580 *
US-PATENT-CLASS-136-79	c 03	N72-20032 *	US-PATENT-CLASS-137-484.2	c 34	N78-25351 *	US-PATENT-CLASS-138-96R	c 37	N79-22474 *
US-PATENT-CLASS-136-81	c 03	N72-20032 *	US-PATENT-CLASS-137-487.5	c 14	N73-13418 *	US-PATENT-CLASS-138-97	c 37	N86-32736 *
US-PATENT-CLASS-136-83R	c 03	N72-20034 *	US-PATENT-CLASS-137-491	c 15	N69-21924 *	US-PATENT-CLASS-139-DIG.1	c 31	N93-18857 *
US-PATENT-CLASS-136-83R	c 44	N76-18641 *	US-PATENT-CLASS-137-493	c 52	N81-25660 *	US-PATENT-CLASS-139-DIG.1	c 31	N93-29611 *
US-PATENT-CLASS-136-83	c 03	N71-28579 *	US-PATENT-CLASS-137-495	c 15	N70-38603 *	US-PATENT-CLASS-139-11	c 31	N93-18857 *
US-PATENT-CLASS-136-88A	c 44	N76-27664 *	US-PATENT-CLASS-137-496	c 15	N71-22706 *	US-PATENT-CLASS-139-11	c 31	N93-29611 *
US-PATENT-CLASS-136-86S	c 44	N76-18641 *	US-PATENT-CLASS-137-501	c 34	N78-25351 *	US-PATENT-CLASS-139-425R	c 28	N72-11708 *
US-PATENT-CLASS-136-86	c 03	N71-11052 *	US-PATENT-CLASS-137-505.12	c 14	N71-18625 *	US-PATENT-CLASS-139-429	c 31	N93-18857 *
US-PATENT-CLASS-136-86	c 03	N71-20904 *	US-PATENT-CLASS-137-505.16	c 34	N78-25351 *	US-PATENT-CLASS-139-436	c 31	N93-18857 *
US-PATENT-CLASS-136-86	c 15	N71-23022 *	US-PATENT-CLASS-137-505.25	c 37	N78-25426 *	US-PATENT-CLASS-141-71.5	c 18	N91-14374 *
US-PATENT-CLASS-136-86	c 03	N71-29044 *	US-PATENT-CLASS-137-505.38	c 37	N75-15050 *	US-PATENT-CLASS-140-105	c 15	N72-12408 *
US-PATENT-CLASS-136-89AC	c 44	N77-31601 *	US-PATENT-CLASS-137-505.42	c 37	N75-15050 *	US-PATENT-CLASS-140-123	c 15	N71-15918 *
US-PATENT-CLASS-136-89CA	c 44	N79-25482 *	US-PATENT-CLASS-137-515.3	c 37	N76-14463 *	US-PATENT-CLASS-140-124	c 15	N71-10809 *
US-PATENT-CLASS-136-89CC	c 44	N78-25527 *	US-PATENT-CLASS-137-516.27	c 15	N73-30459 *	US-PATENT-CLASS-141-197	c 35	N78-10428 *
US-PATENT-CLASS-136-89CC	c 44	N78-25529 *	US-PATENT-CLASS-137-535	c 15	N73-30459 *	US-PATENT-CLASS-141-198	c 25	N86-27431 *
US-PATENT-CLASS-136-89CC	c 44	N79-11467 *	US-PATENT-CLASS-137-535	c 05	N73-32014 *	US-PATENT-CLASS-141-23	c 15	N72-21465 *
US-PATENT-CLASS-136-89CC	c 44	N79-17314 *	US-PATENT-CLASS-137-538	c 05	N73-25125 *	US-PATENT-CLASS-141-258	c 14	N71-27005 *
US-PATENT-CLASS-136-89CC	c 44	N79-25482 *	US-PATENT-CLASS-137-539	c 15	N70-41811 *	US-PATENT-CLASS-141-45	c 29	N90-20236 *



## US-PATENT-CLASS-141-4

## REPORT NUMBER INDEX

US-PATENT-CLASS-141-4	c 35	N78-10428 *	US-PATENT-CLASS-149-19.4	c 28	N79-28342 *	US-PATENT-CLASS-156-153	c 24	N90-25197 *
US-PATENT-CLASS-141-5	c 33	N71-20834 *	US-PATENT-CLASS-149-19.8	c 28	N78-31255 *	US-PATENT-CLASS-156-154	c 24	N78-17150 *
US-PATENT-CLASS-141-91	c 12	N71-21089 *	US-PATENT-CLASS-149-19.92	c 28	N79-14228 *	US-PATENT-CLASS-156-154	c 27	N81-14077 *
US-PATENT-CLASS-141-93	c 31	N90-20254 *	US-PATENT-CLASS-149-19.9	c 28	N79-14228 *	US-PATENT-CLASS-156-157	c 33	N82-26571 *
US-PATENT-CLASS-148-DIG.22	c 76	N92-22035 *	US-PATENT-CLASS-149-19.9	c 28	N79-28342 *	US-PATENT-CLASS-156-160	c 27	N81-14077 *
US-PATENT-CLASS-148-DIG.26	c 76	N85-30922 *	US-PATENT-CLASS-149-19.9	c 28	N80-28536 *	US-PATENT-CLASS-156-161	c 24	N81-29163 *
US-PATENT-CLASS-148-1.5	c 26	N71-10607 *	US-PATENT-CLASS-149-19.9	c 27	N71-14090 *	US-PATENT-CLASS-156-163	c 27	N81-14077 *
US-PATENT-CLASS-148-1.5	c 26	N71-23654 *	US-PATENT-CLASS-149-19	c 27	N72-25699 *	US-PATENT-CLASS-156-163	c 74	N87-28416 *
US-PATENT-CLASS-148-1.5	c 76	N74-20329 *	US-PATENT-CLASS-149-19	c 27	N73-16764 *	US-PATENT-CLASS-156-165	c 24	N81-29163 *
US-PATENT-CLASS-148-1.5	c 44	N80-29835 *	US-PATENT-CLASS-149-19	c 23	N71-16212 *	US-PATENT-CLASS-156-166	c 74	N85-29749 *
US-PATENT-CLASS-148-1.5	c 33	N81-26360 *	US-PATENT-CLASS-149-1	c 06	N73-30097 *	US-PATENT-CLASS-156-166	c 24	N92-10070 *
US-PATENT-CLASS-148-1.5	c 44	N82-26777 *	US-PATENT-CLASS-149-1	c 28	N80-24042 *	US-PATENT-CLASS-156-16	c 74	N75-12732 *
US-PATENT-CLASS-148-1.5	c 44	N82-29709 *	US-PATENT-CLASS-149-1	c 28	N81-14103 *	US-PATENT-CLASS-156-172	c 15	N71-17651 *
US-PATENT-CLASS-148-1.5	c 44	N86-32875 *	US-PATENT-CLASS-149-20	c 27	N72-25699 *	US-PATENT-CLASS-156-172	c 24	N91-25199 *
US-PATENT-CLASS-148-11.5R	c 15	N73-13465 *	US-PATENT-CLASS-149-20	c 28	N79-14228 *	US-PATENT-CLASS-156-17	c 76	N79-21910 *
US-PATENT-CLASS-148-12.4	c 26	N79-22271 *	US-PATENT-CLASS-149-20	c 28	N79-28342 *	US-PATENT-CLASS-156-181	c 24	N93-24597 *
US-PATENT-CLASS-148-12.7A	c 26	N78-24333 *	US-PATENT-CLASS-149-20	c 28	N80-28536 *	US-PATENT-CLASS-156-187	c 24	N91-25199 *
US-PATENT-CLASS-148-12.7N	c 26	N77-20201 *	US-PATENT-CLASS-149-2	c 12	N70-40124 *	US-PATENT-CLASS-156-18	c 26	N92-16752 *
US-PATENT-CLASS-148-12F	c 26	N79-22271 *	US-PATENT-CLASS-149-36	c 27	N72-25699 *	US-PATENT-CLASS-156-18	c 74	N75-12732 *
US-PATENT-CLASS-148-121	c 76	N79-16678 *	US-PATENT-CLASS-149-36	c 27	N73-16764 *	US-PATENT-CLASS-156-191	c 52	N84-28389 *
US-PATENT-CLASS-148-125	c 26	N78-24333 *	US-PATENT-CLASS-149-36	c 06	N73-30097 *	US-PATENT-CLASS-156-212	c 03	N71-26726 *
US-PATENT-CLASS-148-126	c 17	N71-24142 *	US-PATENT-CLASS-149-36	c 24	N76-14203 *	US-PATENT-CLASS-156-212	c 24	N80-26388 *
US-PATENT-CLASS-148-126	c 18	N71-26153 *	US-PATENT-CLASS-149-37	c 44	N80-28088 *	US-PATENT-CLASS-156-212	c 27	N81-14077 *
US-PATENT-CLASS-148-126	c 18	N71-28729 *	US-PATENT-CLASS-149-42	c 20	N78-32179 *	US-PATENT-CLASS-156-213	c 24	N80-26388 *
US-PATENT-CLASS-148-126	c 26	N74-10521 *	US-PATENT-CLASS-149-43	c 20	N78-32179 *	US-PATENT-CLASS-156-215	c 35	N84-12443 *
US-PATENT-CLASS-148-127	c 26	N75-29236 *	US-PATENT-CLASS-149-44	c 20	N78-32179 *	US-PATENT-CLASS-156-218	c 54	N74-32546 *
US-PATENT-CLASS-148-13.1	c 76	N90-19884 *	US-PATENT-CLASS-149-60	c 28	N74-33209 *	US-PATENT-CLASS-156-229	c 24	N77-28225 *
US-PATENT-CLASS-148-131	c 26	N80-28492 *	US-PATENT-CLASS-149-76	c 28	N74-33209 *	US-PATENT-CLASS-156-229	c 74	N87-28416 *
US-PATENT-CLASS-148-13	c 14	N71-25892 *	US-PATENT-CLASS-149-76	c 20	N78-32179 *	US-PATENT-CLASS-156-230	c 35	N84-12443 *
US-PATENT-CLASS-148-13	c 76	N90-19884 *	US-PATENT-CLASS-149-83	c 20	N78-32179 *	US-PATENT-CLASS-156-233	c 35	N88-30108 *
US-PATENT-CLASS-148-149	c 09	N90-23415 *	US-PATENT-CLASS-149-85	c 20	N78-32179 *	US-PATENT-CLASS-156-235	c 35	N84-12443 *
US-PATENT-CLASS-148-159	c 26	N89-28621 *	US-PATENT-CLASS-149-88	c 28	N78-31255 *	US-PATENT-CLASS-156-242	c 15	N69-24222 *
US-PATENT-CLASS-148-16.6	c 26	N88-14179 *	US-PATENT-CLASS-149-92	c 27	N72-25699 *	US-PATENT-CLASS-156-242	c 37	N76-24575 *
US-PATENT-CLASS-148-162	c 26	N77-20201 *	US-PATENT-CLASS-149-92	c 28	N78-31255 *	US-PATENT-CLASS-156-242	c 24	N81-33235 *
US-PATENT-CLASS-148-162	c 26	N87-28647 *	US-PATENT-CLASS-149-93	c 28	N78-31255 *	US-PATENT-CLASS-156-245	c 31	N74-18089 *
US-PATENT-CLASS-148-173	c 76	N83-20789 *	US-PATENT-CLASS-15-143	c 15	N72-11390 *	US-PATENT-CLASS-156-245	c 24	N78-17149 *
US-PATENT-CLASS-148-174	c 26	N71-29156 *	US-PATENT-CLASS-15-210	c 15	N72-11390 *	US-PATENT-CLASS-156-245	c 24	N81-33235 *
US-PATENT-CLASS-148-174	c 44	N76-28635 *	US-PATENT-CLASS-15-230.11	c 37	N92-28754 *	US-PATENT-CLASS-156-245	c 27	N93-25995 *
US-PATENT-CLASS-148-174	c 44	N78-24609 *	US-PATENT-CLASS-15-230.16	c 37	N79-10422 *	US-PATENT-CLASS-156-247	c 31	N74-18089 *
US-PATENT-CLASS-148-174	c 76	N85-30922 *	US-PATENT-CLASS-15-230.17	c 37	N79-10422 *	US-PATENT-CLASS-156-247	c 35	N88-30108 *
US-PATENT-CLASS-148-174	c 76	N87-15882 *	US-PATENT-CLASS-15-406	c 37	N85-21652 *	US-PATENT-CLASS-156-249	c 24	N90-25197 *
US-PATENT-CLASS-148-175	c 25	N75-26043 *	US-PATENT-CLASS-15-415	c 14	N73-30395 *	US-PATENT-CLASS-156-250	c 03	N72-25019 *
US-PATENT-CLASS-148-175	c 76	N76-25049 *	US-PATENT-CLASS-15-52	c 31	N93-22035 *	US-PATENT-CLASS-156-252	c 24	N81-33235 *
US-PATENT-CLASS-148-175	c 44	N76-28635 *	US-PATENT-CLASS-15-80	c 31	N93-22035 *	US-PATENT-CLASS-156-264	c 05	N72-25121 *
US-PATENT-CLASS-148-175	c 44	N82-28780 *	US-PATENT-CLASS-15-87	c 31	N93-22035 *	US-PATENT-CLASS-156-264	c 24	N78-17150 *
US-PATENT-CLASS-148-175	c 76	N83-20789 *	US-PATENT-CLASS-15-11	c 37	N81-14317 *	US-PATENT-CLASS-156-264	c 24	N81-33235 *
US-PATENT-CLASS-148-175	c 76	N85-30922 *	US-PATENT-CLASS-150-1	c 52	N79-14749 *	US-PATENT-CLASS-156-264	c 31	N83-34077 *
US-PATENT-CLASS-148-175	c 76	N87-15882 *	US-PATENT-CLASS-151-41.76	c 37	N80-23653 *	US-PATENT-CLASS-156-267	c 27	N81-14077 *
US-PATENT-CLASS-148-187	c 26	N72-17820 *	US-PATENT-CLASS-152-11	c 31	N71-18611 *	US-PATENT-CLASS-156-272.4	c 31	N85-29083 *
US-PATENT-CLASS-148-187	c 14	N72-28438 *	US-PATENT-CLASS-152-225	c 15	N71-27091 *	US-PATENT-CLASS-156-272.4	c 35	N88-30108 *
US-PATENT-CLASS-148-187	c 33	N81-26360 *	US-PATENT-CLASS-152-250	c 15	N71-27091 *	US-PATENT-CLASS-156-272	c 27	N80-32516 *
US-PATENT-CLASS-148-187	c 35	N87-14671 *	US-PATENT-CLASS-152-300RF	c 37	N81-24443 *	US-PATENT-CLASS-156-272	c 33	N82-26571 *
US-PATENT-CLASS-148-188	c 24	N71-10560 *	US-PATENT-CLASS-152-353G	c 37	N81-24443 *	US-PATENT-CLASS-156-273.7	c 27	N85-20125 *
US-PATENT-CLASS-148-188	c 09	N71-12513 *	US-PATENT-CLASS-152-353R	c 37	N81-24443 *	US-PATENT-CLASS-156-273.9	c 31	N85-29083 *
US-PATENT-CLASS-148-188	c 44	N79-11468 *	US-PATENT-CLASS-152-379.4	c 37	N81-24443 *	US-PATENT-CLASS-156-274.8	c 35	N88-30108 *
US-PATENT-CLASS-148-188	c 35	N87-14671 *	US-PATENT-CLASS-156.307.7	c 27	N82-11206 *	US-PATENT-CLASS-156-275.5	c 35	N88-30108 *
US-PATENT-CLASS-148-189	c 35	N87-14671 *	US-PATENT-CLASS-156-DIG.113	c 76	N90-24169 *	US-PATENT-CLASS-156-278	c 44	N80-18550 *
US-PATENT-CLASS-148-190	c 35	N87-14671 *	US-PATENT-CLASS-156-DIG.113	c 76	N92-25398 *	US-PATENT-CLASS-156-279	c 33	N93-18285 *
US-PATENT-CLASS-148-20.3	c 26	N77-20201 *	US-PATENT-CLASS-156-DIG.6-8	c 76	N79-32798 *	US-PATENT-CLASS-156-283	c 24	N92-10070 *
US-PATENT-CLASS-148-2	c 26	N77-20201 *	US-PATENT-CLASS-156-DIG.62	c 76	N77-32919 *	US-PATENT-CLASS-156-285	c 15	N71-23052 *
US-PATENT-CLASS-148-2	c 26	N79-22271 *	US-PATENT-CLASS-156-DIG.62	c 35	N83-24828 *	US-PATENT-CLASS-156-285	c 18	N73-30532 *
US-PATENT-CLASS-148-32	c 26	N78-18183 *	US-PATENT-CLASS-156-DIG.62	c 33	N85-29142 *	US-PATENT-CLASS-156-285	c 31	N74-18089 *
US-PATENT-CLASS-148-32.5	c 17	N72-22535 *	US-PATENT-CLASS-156-DIG.62	c 76	N90-23242 *	US-PATENT-CLASS-156-285	c 24	N74-27035 *
US-PATENT-CLASS-148-32.5	c 26	N77-20201 *	US-PATENT-CLASS-156-DIG.62	c 76	N90-24169 *	US-PATENT-CLASS-156-285	c 24	N78-17149 *
US-PATENT-CLASS-148-32.5	c 26	N77-32280 *	US-PATENT-CLASS-156-DIG.62	c 76	N92-25398 *	US-PATENT-CLASS-156-285	c 24	N78-17150 *
US-PATENT-CLASS-148-32.5	c 26	N78-18183 *	US-PATENT-CLASS-156-DIG.62	c 76	N93-14707 *	US-PATENT-CLASS-156-285	c 44	N80-18550 *
US-PATENT-CLASS-148-32	c 26	N77-32279 *	US-PATENT-CLASS-156-DIG.64	c 76	N79-11920 *	US-PATENT-CLASS-156-285	c 24	N80-26388 *
US-PATENT-CLASS-148-32	c 26	N80-23419 *	US-PATENT-CLASS-156-DIG.64	c 44	N80-24741 *	US-PATENT-CLASS-156-285	c 24	N81-29163 *
US-PATENT-CLASS-148-32.2	c 76	N85-30922 *	US-PATENT-CLASS-156-DIG.64	c 76	N80-32245 *	US-PATENT-CLASS-156-285	c 24	N81-33235 *
US-PATENT-CLASS-148-402	c 52	N92-33032 *	US-PATENT-CLASS-156-DIG.64	c 76	N84-35113 *	US-PATENT-CLASS-156-285	c 52	N84-28389 *
US-PATENT-CLASS-148-410	c 26	N87-28647 *	US-PATENT-CLASS-156-DIG.65	c 76	N92-21499 *	US-PATENT-CLASS-156-286	c 37	N76-21554 *
US-PATENT-CLASS-148-416	c 26	N89-28621 *	US-PATENT-CLASS-156-DIG.65	c 76	N79-11920 *	US-PATENT-CLASS-156-286	c 37	N76-24575 *
US-PATENT-CLASS-148-417	c 26	N89-28621 *	US-PATENT-CLASS-156-DIG.65	c 76	N85-30922 *	US-PATENT-CLASS-156-286	c 24	N78-17150 *
US-PATENT-CLASS-148-428	c 26	N82-31505 *	US-PATENT-CLASS-156-DIG.65	c 76	N83-35888 *	US-PATENT-CLASS-156-286	c 37	N87-23981 *
US-PATENT-CLASS-148-429	c 26	N87-14482 *	US-PATENT-CLASS-156-DIG.70	c 76	N88-24544 *	US-PATENT-CLASS-156-286	c 74	N87-28416 *
US-PATENT-CLASS-148-4	c 09	N90-23415 *	US-PATENT-CLASS-156-DIG.70	c 76	N88-24545 *	US-PATENT-CLASS-156-289	c 24	N78-17149 *
US-PATENT-CLASS-148-6.11	c 15	N71-24875 *	US-PATENT-CLASS-156-DIG.72	c 76	N88-24544 *	US-PATENT-CLASS-156-289	c 24	N78-17150 *
US-PATENT-CLASS-148-6.16	c 18	N71-23047 *	US-PATENT-CLASS-156-DIG.72	c 76	N88-24545 *	US-PATENT-CLASS-156-289	c 52	N84-28389 *
US-PATENT-CLASS-148-6.20	c 17	N71-23828 *	US-PATENT-CLASS-156-DIG.72	c 76	N90-23242 *	US-PATENT-CLASS-156-289	c 37	N87-23981 *
US-PATENT-CLASS-148-6.3	c 17	N71-33408 *	US-PATENT-CLASS-156-DIG.73	c 76	N83-35888 *	US-PATENT-CLASS-156-289	c 24	N90-25197 *
US-PATENT-CLASS-148-6.3	c 44	N79-18444 *	US-PATENT-CLASS-156-DIG.73	c 27	N83-36220 *	US-PATENT-CLASS-156-290	c 24	N81-33235 *
US-PATENT-CLASS-148-6.3	c 26	N87-25455 *	US-PATENT-CLASS-156-DIG.82	c 76	N88-24544 *	US-PATENT-CLASS-156-292	c 27	N80-32516 *
US-PATENT-CLASS-148-6	c 18	N71-29040 *	US-PATENT-CLASS-156-DIG.82	c 76	N88-24545 *	US-PATENT-CLASS-156-292	c 24	N81-17170 *
US-PATENT-CLASS-148-6	c 76	N79-16678 *	US-PATENT-CLASS-156-DIG.84	c 76	N88-24545 *	US-PATENT-CLASS-156-294	c 37	N81-14317 *
US-PATENT-CLASS-148-802	c 09	N90-23415 *	US-PATENT-CLASS-156-DIG.88	c 76	N79-11920 *	US-PATENT-CLASS-156-294	c 24	N81-29163 *
US-PATENT-CLASS-148-903	c 09	N90-23415 *	US-PATENT-CLASS-156-DIG.88	c 76	N80-32245 *	US-PATENT-CLASS-156-294	c 35	N84-12443 *
US-PATENT-CLASS-149-105	c 28	N78-31255 *	US-PATENT-CLASS-156-DIG.88	c 76	N84-35113 *	US-PATENT-CLASS-156-295	c 27	N81-14077 *
US-PATENT-CLASS-149-108.4	c 28	N80-23471 *	US-PATENT-CLASS-156-DIG.88	c 76	N85-30922 *	US-PATENT-CLASS-156-297	c 27	N89-12741 *
US-PATENT-CLASS-149-108.4	c 28	N81-15119 *	US-PATENT-CLASS-156-DIG.88	c 76	N86-28760 *	US-PATENT-CLASS-156-298	c 37	N87-23981 *
US-PATENT-CLASS-149-109	c 27	N70-41897 *	US-PATENT-CLASS-156-DIG.89	c 27	N83-36220 *	US-PATENT-CLASS-156-299	c 37	N89-12741 *
US-PATENT-CLASS-149-111	c 28	N78-31255 *	US-PATENT-CLASS-156-DIG.89	c 76	N88-24545 *	US-PATENT-CLASS-156-300	c 24	N78-17150 *
US-PATENT-CLASS-149-15	c 44	N80-28088 *	US-PATENT-CLASS-156-DIG.92	c 76	N88-24545 *	US-PATENT-CLASS-156-303	c 44	N80-18550 *
US-PATENT-CLASS-149-17	c 28	N74-33209 *	US-PATENT-CLASS-156-DIG.96	c 76	N80-32245 *	US-PATENT-CLASS-156-304.3	c 27	N84-22748 *
US-PATENT-CLASS-149-19.2	c 28	N80-28536 *	US-PATENT-CLASS-156-DIG.96	c 33	N81-19389 *	US-PATENT-CLASS-156-304.6	c 27	N84-22748 *
US-PATENT-CLASS-149-19.4	c 28	N78-31255 *	US-PATENT-CLASS-156-DIG.98	c 76	N84-35113 *	US-PATENT-CLASS-156-306	c 24	N78-17150 *
US-PATENT-CLASS-149-19.4	c 20	N78-32179 *	US-PATENT-CLASS-156-104	c 44	N80-18550 *	US-PATENT-CLASS-156-307.1	c 37	N87-23981 *

## REPORT NUMBER INDEX

## US-PATENT-CLASS-165-13

US-PATENT-CLASS-156-307.3	c 27	N82-11206 *	US-PATENT-CLASS-156-620.1	c 76	N91-15898 *	US-PATENT-CLASS-161-68	c 18	N71-21651 *
US-PATENT-CLASS-156-307.3	c 37	N87-23981 *	US-PATENT-CLASS-156-620.1	c 76	N92-21499 *	US-PATENT-CLASS-161-68	c 18	N72-25540 *
US-PATENT-CLASS-156-307.5	c 27	N82-11206 *	US-PATENT-CLASS-156-620.3	c 76	N92-21499 *	US-PATENT-CLASS-161-68	c 18	N72-25541 *
US-PATENT-CLASS-156-307.7	c 37	N87-23981 *	US-PATENT-CLASS-156-620.4	c 76	N92-21499 *	US-PATENT-CLASS-161-69	c 33	N71-24858 *
US-PATENT-CLASS-156-307.7	c 35	N88-30108 *	US-PATENT-CLASS-156-620.76	c 76	N88-24545 *	US-PATENT-CLASS-161-7	c 18	N72-25540 *
US-PATENT-CLASS-156-307	c 27	N86-20561 *	US-PATENT-CLASS-156-620	c 76	N77-32919 *	US-PATENT-CLASS-161-7	c 18	N72-25541 *
US-PATENT-CLASS-156-308	c 05	N72-25121 *	US-PATENT-CLASS-156-621	c 76	N88-14835 *	US-PATENT-CLASS-161-89	c 17	N71-28747 *
US-PATENT-CLASS-156-309	c 27	N86-20561 *	US-PATENT-CLASS-156-621	c 76	N88-24544 *	US-PATENT-CLASS-161-92	c 37	N75-26371 *
US-PATENT-CLASS-156-309.9	c 27	N74-18089 *	US-PATENT-CLASS-156-621	c 76	N92-34171 *	US-PATENT-CLASS-161-93	c 18	N73-12604 *
US-PATENT-CLASS-156-309	c 27	N78-17205 *	US-PATENT-CLASS-156-622	c 76	N88-14835 *	US-PATENT-CLASS-161-93	c 37	N74-18126 *
US-PATENT-CLASS-156-311	c 24	N78-17150 *	US-PATENT-CLASS-156-623Q	c 76	N85-29800 *	US-PATENT-CLASS-161-93	c 37	N75-26371 *
US-PATENT-CLASS-156-312	c 44	N80-18550 *	US-PATENT-CLASS-156-624	c 76	N83-20789 *	US-PATENT-CLASS-162-102	c 24	N76-14204 *
US-PATENT-CLASS-156-315	c 27	N82-24340 *	US-PATENT-CLASS-156-624	c 76	N86-28760 *	US-PATENT-CLASS-162-14	c 85	N79-17747 *
US-PATENT-CLASS-156-320	c 15	N72-11392 *	US-PATENT-CLASS-156-624	c 76	N88-14835 *	US-PATENT-CLASS-162-153	c 24	N76-14204 *
US-PATENT-CLASS-156-323	c 27	N81-14077 *	US-PATENT-CLASS-156-624	c 76	N88-24544 *	US-PATENT-CLASS-162-222	c 24	N76-14204 *
US-PATENT-CLASS-156-329	c 27	N82-29456 *	US-PATENT-CLASS-156-625	c 24	N91-25199 *	US-PATENT-CLASS-162-228	c 24	N76-14204 *
US-PATENT-CLASS-156-330	c 24	N81-14000 *	US-PATENT-CLASS-156-630	c 35	N84-22930 *	US-PATENT-CLASS-162-29	c 85	N79-17747 *
US-PATENT-CLASS-156-331.5	c 27	N82-11206 *	US-PATENT-CLASS-156-633	c 44	N78-25529 *	US-PATENT-CLASS-162-50	c 25	N93-22036 *
US-PATENT-CLASS-156-331.5	c 27	N86-20561 *	US-PATENT-CLASS-156-634	c 24	N91-25199 *	US-PATENT-CLASS-162-72	c 25	N93-22036 *
US-PATENT-CLASS-156-331	c 37	N74-18126 *	US-PATENT-CLASS-156-635	c 76	N83-20789 *	US-PATENT-CLASS-162-76	c 25	N93-22036 *
US-PATENT-CLASS-156-331	c 27	N78-17205 *	US-PATENT-CLASS-156-637	c 76	N92-10681 *	US-PATENT-CLASS-164-105	c 20	N79-21123 *
US-PATENT-CLASS-156-331	c 24	N79-16915 *	US-PATENT-CLASS-156-643	c 52	N84-23095 *	US-PATENT-CLASS-164-113	c 31	N90-21216 *
US-PATENT-CLASS-156-331	c 27	N81-14077 *	US-PATENT-CLASS-156-643	c 31	N87-21160 *	US-PATENT-CLASS-164-119	c 24	N84-16262 *
US-PATENT-CLASS-156-338	c 27	N82-24340 *	US-PATENT-CLASS-156-643	c 25	N91-31258 *	US-PATENT-CLASS-164-122.1	c 26	N91-14462 *
US-PATENT-CLASS-156-344	c 28	N81-14103 *	US-PATENT-CLASS-156-643	c 76	N92-22040 *	US-PATENT-CLASS-164-132	c 37	N76-23570 *
US-PATENT-CLASS-156-344	c 31	N83-34073 *	US-PATENT-CLASS-156-644	c 52	N84-23095 *	US-PATENT-CLASS-164-284	c 31	N90-21216 *
US-PATENT-CLASS-156-344	c 31	N90-19427 *	US-PATENT-CLASS-156-645	c 27	N77-32308 *	US-PATENT-CLASS-164-331.12	c 27	N83-34041 *
US-PATENT-CLASS-156-344	c 24	N90-25197 *	US-PATENT-CLASS-156-646	c 31	N87-21160 *	US-PATENT-CLASS-164-338.1	c 26	N91-14462 *
US-PATENT-CLASS-156-345	c 15	N70-42033 *	US-PATENT-CLASS-156-647	c 33	N81-26360 *	US-PATENT-CLASS-164-60	c 24	N77-27187 *
US-PATENT-CLASS-156-345	c 31	N87-21160 *	US-PATENT-CLASS-156-648	c 33	N81-26360 *	US-PATENT-CLASS-165-DIG.6	c 34	N84-22903 *
US-PATENT-CLASS-156-345	c 25	N91-31258 *	US-PATENT-CLASS-156-649	c 33	N81-26360 *	US-PATENT-CLASS-165-104.14	c 05	N81-26114 *
US-PATENT-CLASS-156-379.7	c 33	N82-26571 *	US-PATENT-CLASS-156-64	c 33	N93-18285 *	US-PATENT-CLASS-165-104.14	c 34	N85-29179 *
US-PATENT-CLASS-156-380.2	c 31	N85-29083 *	US-PATENT-CLASS-156-654	c 76	N83-20789 *	US-PATENT-CLASS-165-104.14	c 34	N86-27593 *
US-PATENT-CLASS-156-382	c 37	N76-21554 *	US-PATENT-CLASS-156-654	c 35	N84-22930 *	US-PATENT-CLASS-165-104.14	c 34	N87-22950 *
US-PATENT-CLASS-156-382	c 52	N84-28389 *	US-PATENT-CLASS-156-656	c 25	N92-25399 *	US-PATENT-CLASS-165-104.14	c 34	N88-23958 *
US-PATENT-CLASS-156-382	c 74	N87-28416 *	US-PATENT-CLASS-156-659.1	c 31	N87-21160 *	US-PATENT-CLASS-165-104.14	c 34	N89-14392 *
US-PATENT-CLASS-156-391	c 35	N84-12443 *	US-PATENT-CLASS-156-661.1	c 31	N87-21160 *	US-PATENT-CLASS-165-104.14	c 34	N91-21473 *
US-PATENT-CLASS-156-3	c 17	N71-16044 *	US-PATENT-CLASS-156-662	c 76	N83-20789 *	US-PATENT-CLASS-165-104.14	c 34	N92-29125 *
US-PATENT-CLASS-156-3	c 15	N71-21404 *	US-PATENT-CLASS-156-663	c 27	N77-32308 *	US-PATENT-CLASS-165-104.22	c 34	N92-29125 *
US-PATENT-CLASS-156-3	c 15	N71-24047 *	US-PATENT-CLASS-156-664	c 25	N92-25399 *	US-PATENT-CLASS-165-104.25	c 34	N87-22950 *
US-PATENT-CLASS-156-3	c 06	N72-21094 *	US-PATENT-CLASS-156-668	c 52	N84-23095 *	US-PATENT-CLASS-165-104.26	c 74	N83-19596 *
US-PATENT-CLASS-156-423	c 35	N84-12443 *	US-PATENT-CLASS-156-668	c 25	N91-31258 *	US-PATENT-CLASS-165-104.26	c 34	N83-35307 *
US-PATENT-CLASS-156-441	c 24	N93-24597 *	US-PATENT-CLASS-156-66	c 15	N72-11392 *	US-PATENT-CLASS-165-104.26	c 34	N85-21568 *
US-PATENT-CLASS-156-494	c 74	N87-28416 *	US-PATENT-CLASS-156-71	c 33	N82-26571 *	US-PATENT-CLASS-165-104.26	c 34	N85-29180 *
US-PATENT-CLASS-156-499	c 27	N84-22748 *	US-PATENT-CLASS-156-71	c 35	N84-12443 *	US-PATENT-CLASS-165-104.26	c 34	N86-27593 *
US-PATENT-CLASS-156-510	c 15	N71-17687 *	US-PATENT-CLASS-156-74	c 24	N81-29163 *	US-PATENT-CLASS-165-104.26	c 34	N87-22950 *
US-PATENT-CLASS-156-510	c 03	N72-25019 *	US-PATENT-CLASS-156-7	c 74	N75-12732 *	US-PATENT-CLASS-165-104.26	c 34	N88-29133 *
US-PATENT-CLASS-156-52	c 31	N79-21226 *	US-PATENT-CLASS-156-81	c 27	N84-22748 *	US-PATENT-CLASS-165-104.26	c 34	N89-14392 *
US-PATENT-CLASS-156-540	c 35	N84-12443 *	US-PATENT-CLASS-156-84	c 15	N72-16330 *	US-PATENT-CLASS-165-104.26	c 27	N90-23541 *
US-PATENT-CLASS-156-545	c 15	N71-24164 *	US-PATENT-CLASS-156-84	c 37	N82-24491 *	US-PATENT-CLASS-165-104.26	c 31	N90-23587 *
US-PATENT-CLASS-156-556	c 37	N76-21554 *	US-PATENT-CLASS-156-85	c 37	N82-24491 *	US-PATENT-CLASS-165-104.31	c 31	N91-15424 *
US-PATENT-CLASS-156-59	c 31	N83-34073 *	US-PATENT-CLASS-156-86	c 15	N72-16330 *	US-PATENT-CLASS-165-104.31	c 34	N92-28752 *
US-PATENT-CLASS-156-600	c 27	N83-36220 *	US-PATENT-CLASS-156-86	c 37	N82-24491 *	US-PATENT-CLASS-165-104.34	c 34	N92-28752 *
US-PATENT-CLASS-156-600	c 76	N90-23242 *	US-PATENT-CLASS-156-87	c 37	N87-23981 *	US-PATENT-CLASS-165-104	c 33	N71-25353 *
US-PATENT-CLASS-156-600	c 76	N90-24169 *	US-PATENT-CLASS-156-89	c 37	N75-15992 *	US-PATENT-CLASS-165-104	c 34	N90-20323 *
US-PATENT-CLASS-156-600	c 76	N92-34171 *	US-PATENT-CLASS-156-89	c 24	N79-25143 *	US-PATENT-CLASS-165-105	c 09	N71-24807 *
US-PATENT-CLASS-156-601	c 76	N77-32919 *	US-PATENT-CLASS-156-904	c 27	N84-22748 *	US-PATENT-CLASS-165-105	c 33	N71-25353 *
US-PATENT-CLASS-156-601	c 76	N80-32245 *	US-PATENT-CLASS-156-905	c 31	N87-21160 *	US-PATENT-CLASS-165-105	c 33	N72-17948 *
US-PATENT-CLASS-156-601	c 76	N90-24169 *	US-PATENT-CLASS-156-905	c 35	N84-22930 *	US-PATENT-CLASS-165-105	c 31	N73-30829 *
US-PATENT-CLASS-156-602	c 76	N82-30105 *	US-PATENT-CLASS-156-94	c 32	N74-27612 *	US-PATENT-CLASS-165-105	c 28	N73-32606 *
US-PATENT-CLASS-156-605	c 44	N80-24741 *	US-PATENT-CLASS-156-94	c 24	N74-30001 *	US-PATENT-CLASS-165-105	c 34	N74-18552 *
US-PATENT-CLASS-156-607	c 76	N87-23286 *	US-PATENT-CLASS-156-99	c 37	N75-15992 *	US-PATENT-CLASS-165-105	c 34	N75-12222 *
US-PATENT-CLASS-156-607	c 76	N88-24544 *	US-PATENT-CLASS-159-3	c 25	N88-23846 *	US-PATENT-CLASS-165-105	c 44	N75-32581 *
US-PATENT-CLASS-156-607	c 76	N90-24169 *	US-PATENT-CLASS-159-48.2	c 25	N88-23846 *	US-PATENT-CLASS-165-105	c 44	N76-16612 *
US-PATENT-CLASS-156-608	c 76	N79-1920 *	US-PATENT-CLASS-159-900	c 25	N88-23846 *	US-PATENT-CLASS-165-105	c 34	N76-17317 *
US-PATENT-CLASS-156-608	c 33	N81-19389 *	US-PATENT-CLASS-16-111R	c 37	N92-29092 *	US-PATENT-CLASS-165-105	c 34	N76-27515 *
US-PATENT-CLASS-156-608	c 76	N82-30105 *	US-PATENT-CLASS-16-114R	c 37	N92-29092 *	US-PATENT-CLASS-165-105	c 34	N77-32413 *
US-PATENT-CLASS-156-608	c 76	N83-20789 *	US-PATENT-CLASS-16-242	c 31	N86-19479 *	US-PATENT-CLASS-165-105	c 25	N78-10224 *
US-PATENT-CLASS-156-608	c 76	N83-35888 *	US-PATENT-CLASS-16-292	c 18	N88-23827 *	US-PATENT-CLASS-165-105	c 34	N78-17336 *
US-PATENT-CLASS-156-608	c 76	N84-35113 *	US-PATENT-CLASS-16-294	c 37	N86-19605 *	US-PATENT-CLASS-165-105	c 34	N78-17337 *
US-PATENT-CLASS-156-608	c 76	N90-23242 *	US-PATENT-CLASS-16-294	c 18	N87-14373 *	US-PATENT-CLASS-165-105	c 44	N79-18443 *
US-PATENT-CLASS-156-608	c 76	N91-15898 *	US-PATENT-CLASS-16-297	c 18	N88-23827 *	US-PATENT-CLASS-165-105	c 37	N79-28549 *
US-PATENT-CLASS-156-608	c 76	N92-21499 *	US-PATENT-CLASS-16-326	c 18	N88-23827 *	US-PATENT-CLASS-165-105	c 34	N79-31523 *
US-PATENT-CLASS-156-60	c 15	N71-22713 *	US-PATENT-CLASS-16-332	c 18	N88-23827 *	US-PATENT-CLASS-165-105	c 35	N81-14287 *
US-PATENT-CLASS-156-610	c 76	N76-25049 *	US-PATENT-CLASS-16-345	c 18	N88-23827 *	US-PATENT-CLASS-165-106	c 33	N73-32818 *
US-PATENT-CLASS-156-610	c 27	N83-36220 *	US-PATENT-CLASS-16-347	c 18	N88-23827 *	US-PATENT-CLASS-165-106	c 34	N76-17317 *
US-PATENT-CLASS-156-610	c 76	N86-28760 *	US-PATENT-CLASS-16-349	c 18	N88-23827 *	US-PATENT-CLASS-165-107	c 09	N71-24807 *
US-PATENT-CLASS-156-612	c 76	N76-25049 *	US-PATENT-CLASS-16-370	c 18	N87-14373 *	US-PATENT-CLASS-165-107	c 44	N77-32581 *
US-PATENT-CLASS-156-612	c 44	N76-28635 *	US-PATENT-CLASS-16-390	c 31	N86-19479 *	US-PATENT-CLASS-165-109.1	c 34	N92-28752 *
US-PATENT-CLASS-156-612	c 76	N85-30922 *	US-PATENT-CLASS-160-23R	c 37	N87-17036 *	US-PATENT-CLASS-165-109	c 35	N74-15093 *
US-PATENT-CLASS-156-613	c 76	N76-25049 *	US-PATENT-CLASS-160-265	c 37	N87-17036 *	US-PATENT-CLASS-165-110	c 44	N76-31667 *
US-PATENT-CLASS-156-613	c 44	N76-28635 *	US-PATENT-CLASS-161-115	c 18	N70-41583 *	US-PATENT-CLASS-165-110	c 77	N75-20139 *
US-PATENT-CLASS-156-614	c 44	N76-28635 *	US-PATENT-CLASS-161-116	c 37	N74-23064 *	US-PATENT-CLASS-165-110	c 34	N92-28752 *
US-PATENT-CLASS-156-616.41	c 76	N90-20896 *	US-PATENT-CLASS-161-127	c 18	N72-25540 *	US-PATENT-CLASS-165-111	c 77	N75-20139 *
US-PATENT-CLASS-156-616.4	c 76	N90-20896 *	US-PATENT-CLASS-161-127	c 18	N72-25541 *	US-PATENT-CLASS-165-112	c 33	N71-24276 *
US-PATENT-CLASS-156-617.1	c 76	N91-15898 *	US-PATENT-CLASS-161-161	c 33	N71-25351 *	US-PATENT-CLASS-165-12	c 34	N83-34221 *
US-PATENT-CLASS-156-617.1	c 76	N92-21499 *	US-PATENT-CLASS-161-182	c 15	N69-39735 *	US-PATENT-CLASS-165-133	c 33	N71-16277 *
US-PATENT-CLASS-156-617-H	c 76	N87-23286 *	US-PATENT-CLASS-161-182	c 37	N74-18126 *	US-PATENT-CLASS-165-133	c 33	N71-25353 *
US-PATENT-CLASS-156-617-SP	c 76	N84-35113 *	US-PATENT-CLASS-161-189	c 23	N71-15978 *	US-PATENT-CLASS-165-133	c 33	N72-20915 *
US-PATENT-CLASS-156-617-SP	c 76	N87-23286 *	US-PATENT-CLASS-161-192	c 37	N74-18126 *	US-PATENT-CLASS-165-133	c 44	N76-23675 *
US-PATENT-CLASS-156-617-V	c 76	N84-35113 *	US-PATENT-CLASS-161-196	c 37	N74-21063 *	US-PATENT-CLASS-165-133	c 34	N90-20323 *
US-PATENT-CLASS-156-617SP	c 76	N79-11920 *	US-PATENT-CLASS-161-214	c 06	N73-27980 *	US-PATENT-CLASS-165-134R	c 74	N83-19596 *
US-PATENT-CLASS-156-617SP	c 76	N79-23798 *	US-PATENT-CLASS-161-227	c 06	N73-27980 *	US-PATENT-CLASS-165-134	c 34	N78-17336 *
US-PATENT-CLASS-156-617SP	c 44	N80-24741 *	US-PATENT-CLASS-161-42	c 37	N74-18126 *	US-PATENT-CLASS-165-135	c 34	N84-22903 *
US-PATENT-CLASS-156-617SP	c 76	N80-32245 *	US-PATENT-CLASS-161-43	c 37	N74-18126 *	US-PATENT-CLASS-165-138	c 09	N71-24807 *
US-PATENT-CLASS-156-619	c 76	N77-32919 *	US-PATENT-CLASS-161-67	c 33	N72-17947 *	US-PATENT-CLASS-165-13	c 34	N88-23958 *

## US-PATENT-CLASS-165-141

US-PATENT-CLASS-165-141 ..... c 28 N73-32606 \*  
US-PATENT-CLASS-165-146 ..... c 34 N79-13289 \*  
US-PATENT-CLASS-165-155 ..... c 33 N72-20915 \*  
US-PATENT-CLASS-165-156 ..... c 25 N90-11824 \*  
US-PATENT-CLASS-165-158 ..... c 33 N72-20915 \*  
US-PATENT-CLASS-165-161 ..... c 33 N72-20915 \*  
US-PATENT-CLASS-165-164 ..... c 34 N77-10463 \*  
US-PATENT-CLASS-165-166 ..... c 34 N77-32722 \*  
US-PATENT-CLASS-165-169 ..... c 34 N79-13288 \*  
US-PATENT-CLASS-165-169 ..... c 34 N79-13289 \*  
US-PATENT-CLASS-165-16 ..... c 31 N80-32583 \*  
US-PATENT-CLASS-165-170 ..... c 34 N77-10463 \*  
US-PATENT-CLASS-165-170 ..... c 34 N88-29132 \*  
US-PATENT-CLASS-165-174 ..... c 33 N72-20915 \*  
US-PATENT-CLASS-165-180 ..... c 34 N90-20323 \*  
US-PATENT-CLASS-165-185 ..... c 28 N73-32606 \*  
US-PATENT-CLASS-165-185 ..... c 34 N83-28356 \*  
US-PATENT-CLASS-165-185 ..... c 31 N91-27385 \*  
US-PATENT-CLASS-165-185 ..... c 24 N93-29614 \*  
US-PATENT-CLASS-165-1 ..... c 09 N70-41717 \*  
US-PATENT-CLASS-165-1 ..... c 34 N75-12222 \*  
US-PATENT-CLASS-165-1 ..... c 34 N85-29180 \*  
US-PATENT-CLASS-165-1 ..... c 34 N87-22950 \*  
US-PATENT-CLASS-165-1 ..... c 34 N88-23958 \*  
US-PATENT-CLASS-165-1 ..... c 31 N91-27385 \*  
US-PATENT-CLASS-165-1 ..... c 54 N92-21589 \*  
US-PATENT-CLASS-165-20 ..... c 03 N72-28025 \*  
US-PATENT-CLASS-165-20 ..... c 35 N91-21496 \*  
US-PATENT-CLASS-165-2 ..... c 33 N71-24876 \*  
US-PATENT-CLASS-165-2 ..... c 35 N72-15093 \*  
US-PATENT-CLASS-165-2 ..... c 44 N77-32581 \*  
US-PATENT-CLASS-165-2 ..... c 44 N78-17460 \*  
US-PATENT-CLASS-165-2 ..... c 51 N79-10694 \*  
US-PATENT-CLASS-165-2 ..... c 27 N83-36220 \*  
US-PATENT-CLASS-165-30 ..... c 51 N79-10694 \*  
US-PATENT-CLASS-165-30 ..... c 31 N79-17029 \*  
US-PATENT-CLASS-165-30 ..... c 35 N86-20750 \*  
US-PATENT-CLASS-165-32 ..... c 31 N73-30829 \*  
US-PATENT-CLASS-165-32 ..... c 33 N73-32818 \*  
US-PATENT-CLASS-165-32 ..... c 34 N78-17337 \*  
US-PATENT-CLASS-165-32 ..... c 34 N79-31523 \*  
US-PATENT-CLASS-165-32 ..... c 44 N80-20810 \*  
US-PATENT-CLASS-165-32 ..... c 33 N82-24419 \*  
US-PATENT-CLASS-165-32 ..... c 34 N83-28356 \*  
US-PATENT-CLASS-165-32 ..... c 34 N83-35307 \*  
US-PATENT-CLASS-165-32 ..... c 34 N84-14461 \*  
US-PATENT-CLASS-165-32 ..... c 34 N85-29179 \*  
US-PATENT-CLASS-165-32 ..... c 34 N90-21999 \*  
US-PATENT-CLASS-165-34 ..... c 34 N87-22950 \*  
US-PATENT-CLASS-165-3 ..... c 03 N72-28025 \*  
US-PATENT-CLASS-165-41 ..... c 34 N84-14461 \*  
US-PATENT-CLASS-165-41 ..... c 34 N86-27593 \*  
US-PATENT-CLASS-165-41 ..... c 34 N88-23958 \*  
US-PATENT-CLASS-165-41 ..... c 35 N89-12048 \*  
US-PATENT-CLASS-165-41 ..... c 34 N90-20323 \*  
US-PATENT-CLASS-165-41 ..... c 27 N90-23541 \*  
US-PATENT-CLASS-165-41 ..... c 31 N90-23587 \*  
US-PATENT-CLASS-165-41 ..... c 31 N91-15424 \*  
US-PATENT-CLASS-165-41 ..... c 54 N92-21589 \*  
US-PATENT-CLASS-165-41 ..... c 34 N92-28752 \*  
US-PATENT-CLASS-165-41 ..... c 34 N92-29125 \*  
US-PATENT-CLASS-165-44 ..... c 15 N71-26611 \*  
US-PATENT-CLASS-165-46 ..... c 05 N71-19439 \*  
US-PATENT-CLASS-165-46 ..... c 05 N71-24147 \*  
US-PATENT-CLASS-165-46 ..... c 05 N73-20137 \*  
US-PATENT-CLASS-165-46 ..... c 05 N73-26071 \*  
US-PATENT-CLASS-165-46 ..... c 54 N82-29002 \*  
US-PATENT-CLASS-165-46 ..... c 34 N90-21999 \*  
US-PATENT-CLASS-165-47 ..... c 33 N71-29052 \*  
US-PATENT-CLASS-165-47 ..... c 31 N73-30829 \*  
US-PATENT-CLASS-165-47 ..... c 34 N75-12222 \*  
US-PATENT-CLASS-165-48.2 ..... c 54 N92-21589 \*  
US-PATENT-CLASS-165-48R ..... c 35 N85-29214 \*  
US-PATENT-CLASS-165-4 ..... c 34 N92-28752 \*  
US-PATENT-CLASS-165-58 ..... c 27 N83-36220 \*  
US-PATENT-CLASS-165-61 ..... c 34 N83-34221 \*  
US-PATENT-CLASS-165-61 ..... c 35 N85-29214 \*  
US-PATENT-CLASS-165-61 ..... c 35 N86-20750 \*  
US-PATENT-CLASS-165-61 ..... c 31 N89-12785 \*  
US-PATENT-CLASS-165-64 ..... c 35 N85-29214 \*  
US-PATENT-CLASS-165-65 ..... c 35 N86-20750 \*  
US-PATENT-CLASS-165-76 ..... c 34 N83-28356 \*  
US-PATENT-CLASS-165-76 ..... c 37 N86-32736 \*  
US-PATENT-CLASS-165-78 ..... c 34 N90-21999 \*  
US-PATENT-CLASS-165-80E ..... c 34 N83-34221 \*  
US-PATENT-CLASS-165-81 ..... c 34 N88-29132 \*  
US-PATENT-CLASS-165-81 ..... c 25 N90-11824 \*  
US-PATENT-CLASS-165-83 ..... c 25 N90-11824 \*  
US-PATENT-CLASS-165-86 ..... c 15 N71-26611 \*  
US-PATENT-CLASS-165-86 ..... c 33 N71-29046 \*  
US-PATENT-CLASS-165-86 ..... c 34 N91-21473 \*  
US-PATENT-CLASS-165-86 ..... c 54 N92-21589 \*  
US-PATENT-CLASS-165-904 ..... c 35 N89-12048 \*  
US-PATENT-CLASS-165-904 ..... c 31 N91-15424 \*  
US-PATENT-CLASS-165-904 ..... c 54 N92-21589 \*  
US-PATENT-CLASS-165-905 ..... c 34 N88-29133 \*

US-PATENT-CLASS-165-905 ..... c 34 N90-20323 \*  
US-PATENT-CLASS-165-905 ..... c 27 N90-23541 \*  
US-PATENT-CLASS-165-96 ..... c 33 N70-36847 \*  
US-PATENT-CLASS-165-96 ..... c 33 N71-22890 \*  
US-PATENT-CLASS-165-96 ..... c 31 N73-30829 \*  
US-PATENT-CLASS-165-96 ..... c 33 N73-32818 \*  
US-PATENT-CLASS-165-96 ..... c 34 N78-17337 \*  
US-PATENT-CLASS-165-96 ..... c 34 N84-14461 \*  
US-PATENT-CLASS-165-96 ..... c 31 N89-12785 \*  
US-PATENT-CLASS-165-96 ..... c 34 N90-21999 \*  
US-PATENT-CLASS-165-96 ..... c 34 N91-21473 \*  
US-PATENT-CLASS-166-222 ..... c 43 N81-26509 \*  
US-PATENT-CLASS-166-248 ..... c 43 N78-14452 \*  
US-PATENT-CLASS-166-259 ..... c 43 N78-14452 \*  
US-PATENT-CLASS-166-267 ..... c 25 N82-23282 \*  
US-PATENT-CLASS-166-303 ..... c 25 N82-23282 \*  
US-PATENT-CLASS-166-343 ..... c 18 N90-20126 \*  
US-PATENT-CLASS-166-63 ..... c 46 N79-22679 \*  
US-PATENT-CLASS-166-77 ..... c 43 N81-26509 \*  
US-PATENT-CLASS-169-28 ..... c 12 N72-21310 \*  
US-PATENT-CLASS-169-36 ..... c 12 N72-21310 \*  
US-PATENT-CLASS-169-47 ..... c 25 N83-36118 \*  
US-PATENT-CLASS-169-62 ..... c 31 N81-14137 \*  
US-PATENT-CLASS-169-70 ..... c 31 N81-14137 \*  
US-PATENT-CLASS-173-131 ..... c 15 N73-13463 \*  
US-PATENT-CLASS-173-132 ..... c 37 N76-18454 \*  
US-PATENT-CLASS-174-DIG.6 ..... c 26 N73-26752 \*  
US-PATENT-CLASS-174-DIG.6 ..... c 26 N73-32571 \*  
US-PATENT-CLASS-174-DIG.8 ..... c 33 N74-22865 \*  
US-PATENT-CLASS-174-106R ..... c 09 N72-22198 \*  
US-PATENT-CLASS-174-110.3 ..... c 14 N71-27186 \*  
US-PATENT-CLASS-174-111 ..... c 33 N74-27683 \*  
US-PATENT-CLASS-174-115 ..... c 09 N70-38201 \*  
US-PATENT-CLASS-174-117FF ..... c 09 N72-22198 \*  
US-PATENT-CLASS-174-126CP ..... c 26 N73-32571 \*  
US-PATENT-CLASS-174-142 ..... c 33 N80-18286 \*  
US-PATENT-CLASS-174-145 ..... c 33 N76-16332 \*  
US-PATENT-CLASS-174-148 ..... c 33 N76-16332 \*  
US-PATENT-CLASS-174-15CA ..... c 31 N79-17029 \*  
US-PATENT-CLASS-174-15C ..... c 33 N74-27683 \*  
US-PATENT-CLASS-174-16.3 ..... c 24 N93-29614 \*  
US-PATENT-CLASS-174-18 ..... c 09 N69-21542 \*  
US-PATENT-CLASS-174-28 ..... c 07 N71-27191 \*  
US-PATENT-CLASS-174-28 ..... c 33 N74-27683 \*  
US-PATENT-CLASS-174-35 ..... c 07 N71-19436 \*  
US-PATENT-CLASS-174-36 ..... c 09 N72-22198 \*  
US-PATENT-CLASS-174-52-PE ..... c 33 N88-23941 \*  
US-PATENT-CLASS-174-52-R ..... c 33 N88-23941 \*  
US-PATENT-CLASS-174-52-S ..... c 33 N88-23941 \*  
US-PATENT-CLASS-174-52S ..... c 15 N73-14469 \*  
US-PATENT-CLASS-174-68.5 ..... c 15 N70-41960 \*  
US-PATENT-CLASS-174-69 ..... c 33 N74-22865 \*  
US-PATENT-CLASS-174-70R ..... c 33 N74-22865 \*  
US-PATENT-CLASS-174-72 ..... c 03 N69-21539 \*  
US-PATENT-CLASS-174-73R ..... c 33 N80-18286 \*  
US-PATENT-CLASS-174-84 ..... c 15 N72-17455 \*  
US-PATENT-CLASS-175-1 ..... c 46 N79-22679 \*  
US-PATENT-CLASS-175-26 ..... c 15 N73-32362 \*  
US-PATENT-CLASS-175-310 ..... c 15 N70-42034 \*  
US-PATENT-CLASS-175-323 ..... c 14 N69-21923 \*  
US-PATENT-CLASS-175-45 ..... c 35 N84-33768 \*  
US-PATENT-CLASS-175-78 ..... c 46 N80-10709 \*  
US-PATENT-CLASS-176-11 ..... c 24 N72-33681 \*  
US-PATENT-CLASS-176-11 ..... c 25 N76-27383 \*  
US-PATENT-CLASS-176-11 ..... c 25 N76-29379 \*  
US-PATENT-CLASS-176-11 ..... c 25 N78-27226 \*  
US-PATENT-CLASS-176-14 ..... c 25 N76-29379 \*  
US-PATENT-CLASS-176-16 ..... c 22 N73-32528 \*  
US-PATENT-CLASS-176-16 ..... c 25 N76-27383 \*  
US-PATENT-CLASS-176-16 ..... c 25 N76-29379 \*  
US-PATENT-CLASS-176-22 ..... c 25 N78-27226 \*  
US-PATENT-CLASS-176-22 ..... c 73 N78-28913 \*  
US-PATENT-CLASS-176-33 ..... c 73 N78-28913 \*  
US-PATENT-CLASS-176-39 ..... c 73 N78-19920 \*  
US-PATENT-CLASS-176-39 ..... c 73 N78-28913 \*  
US-PATENT-CLASS-176-3 ..... c 75 N75-13625 \*  
US-PATENT-CLASS-176-45 ..... c 22 N71-28759 \*  
US-PATENT-CLASS-176-86G ..... c 22 N72-20597 \*  
US-PATENT-CLASS-177-147 ..... c 35 N85-20294 \*  
US-PATENT-CLASS-177-1 ..... c 35 N77-19385 \*  
US-PATENT-CLASS-177-200 ..... c 35 N74-26945 \*  
US-PATENT-CLASS-177-208 ..... c 35 N77-19385 \*  
US-PATENT-CLASS-177-210 ..... c 14 N71-10773 \*  
US-PATENT-CLASS-177-211 ..... c 35 N74-26945 \*  
US-PATENT-CLASS-177-246 ..... c 35 N74-26945 \*  
US-PATENT-CLASS-177-260 ..... c 35 N85-20294 \*  
US-PATENT-CLASS-178-DIG.12 ..... c 07 N72-12081 \*  
US-PATENT-CLASS-178-DIG.12 ..... c 32 N75-21485 \*  
US-PATENT-CLASS-178-DIG.1 ..... c 36 N74-20009 \*  
US-PATENT-CLASS-178-DIG.1 ..... c 33 N75-30431 \*  
US-PATENT-CLASS-178-DIG.1 ..... c 45 N76-17656 \*  
US-PATENT-CLASS-178-DIG.20 ..... c 18 N76-14186 \*  
US-PATENT-CLASS-178-DIG.20 ..... c 23 N72-27728 \*  
US-PATENT-CLASS-178-DIG.20 ..... c 35 N75-19613 \*  
US-PATENT-CLASS-178-DIG.21 ..... c 16 N72-13437 \*  
US-PATENT-CLASS-178-DIG.23 ..... c 07 N73-30115 \*

US-PATENT-CLASS-178-DIG.25 ..... c 74 N75-25706 \*  
US-PATENT-CLASS-178-DIG.28 ..... c 08 N72-22164 \*  
US-PATENT-CLASS-178-DIG.29 ..... c 35 N75-25123 \*  
US-PATENT-CLASS-178-DIG.32 ..... c 71 N74-21014 \*  
US-PATENT-CLASS-178-DIG.35 ..... c 09 N76-24280 \*  
US-PATENT-CLASS-178-DIG.36 ..... c 08 N72-22164 \*  
US-PATENT-CLASS-178-DIG.6 ..... c 10 N73-13235 \*  
US-PATENT-CLASS-178-DIG.8 ..... c 14 N72-25412 \*  
US-PATENT-CLASS-178-DIG.8 ..... c 45 N76-17656 \*  
US-PATENT-CLASS-178-15 ..... c 33 N75-19517 \*  
US-PATENT-CLASS-178-18 ..... c 10 N73-32143 \*  
US-PATENT-CLASS-178-22.16 ..... c 32 N82-31583 \*  
US-PATENT-CLASS-178-22.17 ..... c 32 N82-31583 \*  
US-PATENT-CLASS-178-5.2R ..... c 09 N71-28618 \*  
US-PATENT-CLASS-178-5.2R ..... c 07 N72-17109 \*  
US-PATENT-CLASS-178-5.4 ..... c 07 N72-17109 \*  
US-PATENT-CLASS-178-5.8R ..... c 71 N74-21014 \*  
US-PATENT-CLASS-178-50 ..... c 08 N72-18184 \*  
US-PATENT-CLASS-178-50 ..... c 08 N72-25208 \*  
US-PATENT-CLASS-178-52 ..... c 08 N72-22162 \*  
US-PATENT-CLASS-178-54CF ..... c 09 N71-28618 \*  
US-PATENT-CLASS-178-54PE ..... c 09 N71-28618 \*  
US-PATENT-CLASS-178-58A ..... c 32 N75-21486 \*  
US-PATENT-CLASS-178-58R ..... c 32 N80-18252 \*  
US-PATENT-CLASS-178-6.5 ..... c 23 N72-27728 \*  
US-PATENT-CLASS-178-6.6DD ..... c 07 N73-30115 \*  
US-PATENT-CLASS-178-6.6DD ..... c 35 N74-11283 \*  
US-PATENT-CLASS-178-6.6 ..... c 07 N71-11300 \*  
US-PATENT-CLASS-178-6.6 ..... c 07 N71-26102 \*  
US-PATENT-CLASS-178-6.7R ..... c 35 N74-15831 \*  
US-PATENT-CLASS-178-6.7 ..... c 07 N72-17109 \*  
US-PATENT-CLASS-178-6.8 ..... c 08 N72-22164 \*  
US-PATENT-CLASS-178-6.8 ..... c 14 N72-25412 \*  
US-PATENT-CLASS-178-6.8 ..... c 07 N73-30115 \*  
US-PATENT-CLASS-178-6.8 ..... c 33 N75-30431 \*  
US-PATENT-CLASS-178-6.8 ..... c 45 N76-17656 \*  
US-PATENT-CLASS-178-66R ..... c 32 N75-24981 \*  
US-PATENT-CLASS-178-66 ..... c 09 N71-25866 \*  
US-PATENT-CLASS-178-66 ..... c 08 N72-18184 \*  
US-PATENT-CLASS-178-67 ..... c 08 N70-41961 \*  
US-PATENT-CLASS-178-67 ..... c 32 N74-26654 \*  
US-PATENT-CLASS-178-69.1 ..... c 32 N78-15323 \*  
US-PATENT-CLASS-178-69.4R ..... c 32 N74-10132 \*  
US-PATENT-CLASS-178-69.5R ..... c 07 N72-20140 \*  
US-PATENT-CLASS-178-69.5R ..... c 32 N75-26195 \*  
US-PATENT-CLASS-178-69.5R ..... c 33 N76-14371 \*  
US-PATENT-CLASS-178-69.5R ..... c 60 N77-19760 \*  
US-PATENT-CLASS-178-69.5 ..... c 07 N71-11281 \*  
US-PATENT-CLASS-178-69.5 ..... c 10 N71-19468 \*  
US-PATENT-CLASS-178-69.5 ..... c 10 N71-25865 \*  
US-PATENT-CLASS-178-69.5 ..... c 10 N71-33407 \*  
US-PATENT-CLASS-178-69.5 ..... c 07 N72-25173 \*  
US-PATENT-CLASS-178-69.5 ..... c 07 N73-13149 \*  
US-PATENT-CLASS-178-69.5 ..... c 09 N73-28084 \*  
US-PATENT-CLASS-178-69.5 ..... c 17 N76-22245 \*  
US-PATENT-CLASS-178-69A ..... c 35 N75-21582 \*  
US-PATENT-CLASS-178-69C ..... c 32 N76-16249 \*  
US-PATENT-CLASS-178-6 ..... c 07 N71-19433 \*  
US-PATENT-CLASS-178-6 ..... c 09 N71-19449 \*  
US-PATENT-CLASS-178-6 ..... c 07 N71-23026 \*  
US-PATENT-CLASS-178-6 ..... c 07 N71-26579 \*  
US-PATENT-CLASS-178-6 ..... c 07 N72-12081 \*  
US-PATENT-CLASS-178-6 ..... c 16 N72-13437 \*  
US-PATENT-CLASS-178-6 ..... c 10 N73-13235 \*  
US-PATENT-CLASS-178-6 ..... c 36 N74-20009 \*  
US-PATENT-CLASS-178-7.1 ..... c 07 N71-24612 \*  
US-PATENT-CLASS-178-7.1 ..... c 07 N71-27341 \*  
US-PATENT-CLASS-178-7.1 ..... c 09 N72-17156 \*  
US-PATENT-CLASS-178-7.1 ..... c 32 N74-19790 \*  
US-PATENT-CLASS-178-7.1 ..... c 36 N75-19652 \*  
US-PATENT-CLASS-178-7.2R ..... c 08 N72-22164 \*  
US-PATENT-CLASS-178-7.2 ..... c 14 N70-41807 \*  
US-PATENT-CLASS-178-7.2 ..... c 71 N74-21014 \*  
US-PATENT-CLASS-178-7.2 ..... c 35 N75-25123 \*  
US-PATENT-CLASS-178-7.3 ..... c 07 N71-27341 \*  
US-PATENT-CLASS-178-7.3 ..... c 07 N72-12081 \*  
US-PATENT-CLASS-178-7.5E ..... c 10 N72-31273 \*  
US-PATENT-CLASS-178-7.6 ..... c 36 N74-20009 \*  
US-PATENT-CLASS-178-7.7 ..... c 09 N71-12539 \*  
US-PATENT-CLASS-178-7.7 ..... c 32 N74-20813 \*  
US-PATENT-CLASS-178-7.89 ..... c 09 N76-24280 \*  
US-PATENT-CLASS-178-7.92 ..... c 14 N72-25414 \*  
US-PATENT-CLASS-178-79 ..... c 32 N75-21486 \*  
US-PATENT-CLASS-178-88 ..... c 07 N71-12392 \*  
US-PATENT-CLASS-178-88 ..... c 33 N74-12887 \*  
US-PATENT-CLASS-178-88 ..... c 32 N74-20809 \*  
US-PATENT-CLASS-178-88 ..... c 33 N72-27705 \*  
US-PATENT-CLASS-178-88 ..... c 33 N76-14371 \*  
US-PATENT-CLASS-178-88 ..... c 32 N76-16249 \*  
US-PATENT-CLASS-178-88 ..... c 32 N77-10392 \*  
US-PATENT-CLASS-178-88 ..... c 32 N77-24331 \*  
US-PATENT-CLASS-179-10M ..... c 71 N79-23753 \*  
US-PATENT-CLASS-179-1MF ..... c 71 N79-23753 \*  
US-PATENT-CLASS-179-1MN ..... c 32 N79-23310 \*  
US-PATENT-CLASS-179-1P ..... c 10 N73-12244 \*  
US-PATENT-CLASS-179-1R ..... c 07 N71-33108 \*

## REPORT NUMBER INDEX

## REPORT NUMBER INDEX

## US-PATENT-CLASS-200-61

US-PATENT-CLASS-179-1SA	c 10	N73-25240 *	US-PATENT-CLASS-181-213	c 71	N79-14871 *	US-PATENT-CLASS-195-1.8	c 51	N77-25769 *
US-PATENT-CLASS-179-1SA	c 32	N76-31372 *	US-PATENT-CLASS-181-213	c 07	N83-33884 *	US-PATENT-CLASS-195-1.8	c 51	N79-10694 *
US-PATENT-CLASS-179-1SA	c 32	N77-30309 *	US-PATENT-CLASS-181-214	c 07	N81-14999 *	US-PATENT-CLASS-195-1.8	c 52	N79-14749 *
US-PATENT-CLASS-179-1SP	c 32	N77-30309 *	US-PATENT-CLASS-181-214	c 71	N82-16800 *	US-PATENT-CLASS-195-103.5K	c 51	N77-22794 *
US-PATENT-CLASS-179-1VC	c 07	N71-33108 *	US-PATENT-CLASS-181-222	c 71	N79-14871 *	US-PATENT-CLASS-195-103.5K	c 52	N79-14750 *
US-PATENT-CLASS-179-100.2A	c 21	N73-13644 *	US-PATENT-CLASS-181-286	c 24	N90-21822 *	US-PATENT-CLASS-195-103.5L	c 52	N79-14750 *
US-PATENT-CLASS-179-100.2A	c 32	N74-27612 *	US-PATENT-CLASS-181-286	c 71	N91-27913 *	US-PATENT-CLASS-195-103.5R	c 06	N72-25149 *
US-PATENT-CLASS-179-100.2B	c 32	N74-27612 *	US-PATENT-CLASS-181-290	c 24	N90-21822 *	US-PATENT-CLASS-195-103.5R	c 25	N75-12086 *
US-PATENT-CLASS-179-100.2CH	c 36	N74-13205 *	US-PATENT-CLASS-181-290	c 71	N91-27913 *	US-PATENT-CLASS-195-103.5R	c 35	N75-27330 *
US-PATENT-CLASS-179-100.2CH	c 35	N78-29421 *	US-PATENT-CLASS-181-293	c 71	N79-14871 *	US-PATENT-CLASS-195-103.5R	c 35	N75-33368 *
US-PATENT-CLASS-179-100.2CH	c 35	N79-16246 *	US-PATENT-CLASS-181-295	c 71	N91-27913 *	US-PATENT-CLASS-195-103.5R	c 51	N76-29891 *
US-PATENT-CLASS-179-100.2C	c 35	N77-21392 *	US-PATENT-CLASS-181-33C	c 07	N74-32418 *	US-PATENT-CLASS-195-103.5R	c 51	N77-22794 *
US-PATENT-CLASS-179-100.2K	c 07	N72-21119 *	US-PATENT-CLASS-181-33F	c 07	N74-32418 *	US-PATENT-CLASS-195-103.5R	c 25	N79-22235 *
US-PATENT-CLASS-179-100.2MD	c 35	N74-11283 *	US-PATENT-CLASS-181-33HB	c 07	N74-27490 *	US-PATENT-CLASS-195-120	c 51	N75-13502 *
US-PATENT-CLASS-179-100.2T	c 35	N74-11283 *	US-PATENT-CLASS-181-33HC	c 07	N74-33218 *	US-PATENT-CLASS-195-120	c 35	N75-27330 *
US-PATENT-CLASS-179-100.2	c 09	N69-24329 #	US-PATENT-CLASS-181-33HC	c 07	N76-18117 *	US-PATENT-CLASS-195-127	c 15	N72-21465 *
US-PATENT-CLASS-179-100.2	c 09	N71-25866 *	US-PATENT-CLASS-181-33H	c 07	N74-32418 *	US-PATENT-CLASS-195-127	c 11	N72-25284 *
US-PATENT-CLASS-179-100.2	c 08	N71-27210 *	US-PATENT-CLASS-181-33L	c 07	N74-32418 *	US-PATENT-CLASS-195-127	c 14	N72-25413 *
US-PATENT-CLASS-179-100.2	c 08	N71-27255 *	US-PATENT-CLASS-181-42	c 07	N74-32418 *	US-PATENT-CLASS-195-127	c 15	N73-20514 *
US-PATENT-CLASS-179-100.2	c 09	N72-11224 *	US-PATENT-CLASS-181-43	c 07	N74-15453 *	US-PATENT-CLASS-195-127	c 05	N73-32011 *
US-PATENT-CLASS-179-100.2CA	c 08	N72-11224 *	US-PATENT-CLASS-181-52	c 28	N80-41582 *	US-PATENT-CLASS-195-127	c 35	N75-12272 *
US-PATENT-CLASS-179-100.2MD	c 09	N72-11224 *	US-PATENT-CLASS-182-103	c 18	N89-12621 *	US-PATENT-CLASS-195-127	c 51	N75-13502 *
US-PATENT-CLASS-179-107R	c 33	N78-10375 *	US-PATENT-CLASS-182-10	c 15	N71-27067 *	US-PATENT-CLASS-195-127	c 35	N75-27330 *
US-PATENT-CLASS-179-15.55R	c 08	N72-11171 *	US-PATENT-CLASS-182-129	c 54	N92-16559 *	US-PATENT-CLASS-195-127	c 25	N79-22235 *
US-PATENT-CLASS-179-15.55R	c 08	N72-33172 *	US-PATENT-CLASS-182-134	c 54	N92-16559 *	US-PATENT-CLASS-195-127	c 25	N79-24073 *
US-PATENT-CLASS-179-15AN	c 07	N73-16121 *	US-PATENT-CLASS-182-141	c 54	N92-16559 *	US-PATENT-CLASS-195-141	c 35	N75-27330 *
US-PATENT-CLASS-179-15AT	c 32	N74-30524 *	US-PATENT-CLASS-182-152	c 31	N87-25492 *	US-PATENT-CLASS-195-28N	c 06	N72-25149 *
US-PATENT-CLASS-179-15A	c 08	N72-22162 *	US-PATENT-CLASS-182-178	c 39	N76-31562 *	US-PATENT-CLASS-195-66R	c 06	N73-27086 *
US-PATENT-CLASS-179-15A	c 07	N73-26118 *	US-PATENT-CLASS-182-191	c 05	N71-11199 *	US-PATENT-CLASS-195-68	c 04	N69-27487 #
US-PATENT-CLASS-179-15BA	c 60	N77-12721 *	US-PATENT-CLASS-182-223	c 54	N87-29118 *	US-PATENT-CLASS-195-99	c 06	N71-17705 *
US-PATENT-CLASS-179-15BA	c 32	N80-18252 *	US-PATENT-CLASS-182-2	c 54	N92-16559 *	US-PATENT-CLASS-197-188	c 37	N77-19457 *
US-PATENT-CLASS-179-15BC	c 08	N72-25208 *	US-PATENT-CLASS-182-5	c 15	N73-25512 *	US-PATENT-CLASS-197-190	c 37	N77-19457 *
US-PATENT-CLASS-179-15BC	c 07	N73-16121 *	US-PATENT-CLASS-182-62.5	c 31	N81-27324 *	US-PATENT-CLASS-198-847	c 37	N80-32717 *
US-PATENT-CLASS-179-15BC	c 32	N74-30523 *	US-PATENT-CLASS-182-63	c 54	N87-29118 *	US-PATENT-CLASS-198-848	c 37	N80-32717 *
US-PATENT-CLASS-179-15BC	c 33	N75-26243 *	US-PATENT-CLASS-182-82	c 54	N92-16559 *	US-PATENT-CLASS-1	c 14	N71-27005 *
US-PATENT-CLASS-179-15BL	c 08	N72-22162 *	US-PATENT-CLASS-184-1	c 15	N71-23048 *	US-PATENT-CLASS-2-115	c 05	N72-25119 *
US-PATENT-CLASS-179-15BM	c 07	N73-26118 *	US-PATENT-CLASS-185-38	c 37	N78-16369 *	US-PATENT-CLASS-2-14	c 05	N71-23096 *
US-PATENT-CLASS-179-15BS	c 10	N71-33407 *	US-PATENT-CLASS-187-1	c 15	N72-25453 *	US-PATENT-CLASS-2-161R	c 54	N84-23113 *
US-PATENT-CLASS-179-15BS	c 07	N72-20140 *	US-PATENT-CLASS-187-20	c 15	N72-25453 *	US-PATENT-CLASS-2-161R	c 54	N84-28484 *
US-PATENT-CLASS-179-15BS	c 07	N73-30115 *	US-PATENT-CLASS-187-7.1	c 07	N71-24742 *	US-PATENT-CLASS-2-161	c 54	N84-28484 *
US-PATENT-CLASS-179-15BS	c 32	N75-26195 *	US-PATENT-CLASS-187-95	c 15	N72-25453 *	US-PATENT-CLASS-2-167	c 54	N84-23113 *
US-PATENT-CLASS-179-15BS	c 60	N77-19760 *	US-PATENT-CLASS-188-1B	c 15	N72-20443 *	US-PATENT-CLASS-2-167	c 54	N84-28484 *
US-PATENT-CLASS-179-15BV	c 07	N72-25172 *	US-PATENT-CLASS-188-1B	c 19	N76-22284 *	US-PATENT-CLASS-2-2.1A	c 05	N72-22092 *
US-PATENT-CLASS-179-15BY	c 32	N74-30524 *	US-PATENT-CLASS-188-1C	c 15	N72-17450 *	US-PATENT-CLASS-2-2.1A	c 05	N73-25125 *
US-PATENT-CLASS-179-15FD	c 08	N72-25208 *	US-PATENT-CLASS-188-1C	c 15	N72-20443 *	US-PATENT-CLASS-2-2.1A	c 05	N73-32012 *
US-PATENT-CLASS-179-15FS	c 07	N73-28012 *	US-PATENT-CLASS-188-1C	c 15	N73-30460 *	US-PATENT-CLASS-2-2.1A	c 54	N74-32546 *
US-PATENT-CLASS-179-15	c 07	N69-39978 #	US-PATENT-CLASS-188-1C	c 11	N73-32152 *	US-PATENT-CLASS-2-2.1A	c 54	N77-32721 *
US-PATENT-CLASS-179-15	c 07	N71-20814 *	US-PATENT-CLASS-188-1C	c 37	N79-10420 *	US-PATENT-CLASS-2-2.1A	c 54	N78-17675 *
US-PATENT-CLASS-179-15	c 07	N71-24621 *	US-PATENT-CLASS-188-103	c 15	N71-27146 *	US-PATENT-CLASS-2-2.1A	c 54	N78-31735 *
US-PATENT-CLASS-179-15	c 07	N71-24622 *	US-PATENT-CLASS-188-129	c 15	N72-17450 *	US-PATENT-CLASS-2-2.1A	c 54	N78-31736 *
US-PATENT-CLASS-179-15	c 08	N72-18184 *	US-PATENT-CLASS-188-129	c 37	N93-23075 *	US-PATENT-CLASS-2-2.1A	c 54	N79-24651 *
US-PATENT-CLASS-179-175.1A	c 14	N73-27379 *	US-PATENT-CLASS-188-134	c 37	N81-15364 *	US-PATENT-CLASS-2-2.1A	c 54	N86-28618 *
US-PATENT-CLASS-179-175.1A	c 33	N78-10375 *	US-PATENT-CLASS-188-151A	c 44	N79-14527 *	US-PATENT-CLASS-2-2.1A	c 54	N86-28619 *
US-PATENT-CLASS-179-18BC	c 32	N86-27513 *	US-PATENT-CLASS-188-163	c 37	N74-26976 *	US-PATENT-CLASS-2-2.1A	c 54	N86-28620 *
US-PATENT-CLASS-179-18GF	c 33	N82-29538 *	US-PATENT-CLASS-188-171	c 37	N74-26976 *	US-PATENT-CLASS-2-2.1A	c 54	N86-29507 #
US-PATENT-CLASS-179-1	c 07	N71-26181 *	US-PATENT-CLASS-188-171	c 37	N92-21728 *	US-PATENT-CLASS-2-2.1A	c 18	N90-16860 *
US-PATENT-CLASS-179-1	c 31	N71-33160 *	US-PATENT-CLASS-188-180	c 37	N81-15364 *	US-PATENT-CLASS-2-2.1A	c 27	N92-10091 *
US-PATENT-CLASS-179-1	c 32	N79-23310 *	US-PATENT-CLASS-188-184	c 37	N81-15364 *	US-PATENT-CLASS-2-2.1R	c 54	N86-28618 *
US-PATENT-CLASS-179-27CA	c 33	N81-27397 *	US-PATENT-CLASS-188-1	c 15	N70-38601 *	US-PATENT-CLASS-2-2.1R	c 54	N86-28619 *
US-PATENT-CLASS-179-84VF	c 32	N79-23310 *	US-PATENT-CLASS-188-1	c 15	N70-40354 *	US-PATENT-CLASS-2-2.1	c 05	N71-11194 *
US-PATENT-CLASS-179-91R	c 74	N78-14889 *	US-PATENT-CLASS-188-1	c 14	N71-17626 *	US-PATENT-CLASS-2-2.1	c 05	N71-11195 *
US-PATENT-CLASS-18-26	c 06	N71-22975 *	US-PATENT-CLASS-188-1	c 15	N71-22877 *	US-PATENT-CLASS-2-2.1	c 05	N71-12335 *
US-PATENT-CLASS-18-39	c 27	N70-34783 *	US-PATENT-CLASS-188-1	c 14	N71-23092 *	US-PATENT-CLASS-2-2.1	c 05	N71-12344 *
US-PATENT-CLASS-18-6	c 15	N71-26721 *	US-PATENT-CLASS-188-1	c 15	N71-26243 *	US-PATENT-CLASS-2-2.1	c 05	N71-23161 *
US-PATENT-CLASS-180-105E	c 11	N72-20244 *	US-PATENT-CLASS-188-1	c 15	N71-27146 *	US-PATENT-CLASS-2-2.1	c 05	N71-24623 *
US-PATENT-CLASS-180-118	c 31	N71-15689 *	US-PATENT-CLASS-188-1	c 15	N71-27169 *	US-PATENT-CLASS-2-2.1	c 05	N71-24730 *
US-PATENT-CLASS-180-121	c 31	N71-15689 *	US-PATENT-CLASS-188-218-XL	c 37	N88-29181 *	US-PATENT-CLASS-2-2.1	c 05	N72-20096 *
US-PATENT-CLASS-180-125	c 15	N72-17451 *	US-PATENT-CLASS-188-24.11	c 37	N91-32514 *	US-PATENT-CLASS-2-2.1	c 05	N72-20098 *
US-PATENT-CLASS-180-127	c 15	N72-17451 *	US-PATENT-CLASS-188-251-A	c 37	N88-29181 *	US-PATENT-CLASS-2-2.1	c 05	N72-25119 *
US-PATENT-CLASS-180-168	c 35	N84-33769 *	US-PATENT-CLASS-188-266	c 15	N73-25513 *	US-PATENT-CLASS-2-2.1	c 05	N72-26071 *
US-PATENT-CLASS-180-19.2	c 85	N87-21755 *	US-PATENT-CLASS-188-268	c 15	N72-20443 *	US-PATENT-CLASS-2-2.1	c 34	N78-17337 *
US-PATENT-CLASS-180-305	c 85	N87-21755 *	US-PATENT-CLASS-188-269	c 44	N79-14527 *	US-PATENT-CLASS-2-2.1	c 54	N78-17678 *
US-PATENT-CLASS-180-41	c 11	N73-26238 *	US-PATENT-CLASS-188-291	c 54	N77-21844 *	US-PATENT-CLASS-2-2.1	c 54	N78-18761 *
US-PATENT-CLASS-180-6.5	c 11	N73-26238 *	US-PATENT-CLASS-188-322.5	c 39	N93-24596 *	US-PATENT-CLASS-2-201	c 54	N89-29953 *
US-PATENT-CLASS-180-7R	c 11	N73-26238 *	US-PATENT-CLASS-188-371	c 37	N82-18601 *	US-PATENT-CLASS-2-275	c 18	N71-26285 *
US-PATENT-CLASS-180-79.3	c 37	N74-18125 *	US-PATENT-CLASS-188-373	c 37	N88-23982 *	US-PATENT-CLASS-2-411	c 27	N92-10091 *
US-PATENT-CLASS-180-8.6	c 18	N88-23828 *	US-PATENT-CLASS-188-378	c 37	N92-34173 *	US-PATENT-CLASS-2-424	c 05	N92-10091 *
US-PATENT-CLASS-180-8A	c 11	N73-26238 *	US-PATENT-CLASS-188-65.1	c 15	N73-25512 *	US-PATENT-CLASS-2-6	c 05	N71-26333 *
US-PATENT-CLASS-180-9.2R	c 11	N73-26238 *	US-PATENT-CLASS-188-65.5	c 15	N71-27067 *	US-PATENT-CLASS-2-6	c 54	N78-17680 *
US-PATENT-CLASS-180-9.5	c 11	N73-26238 *	US-PATENT-CLASS-188-67	c 37	N93-23075 *	US-PATENT-CLASS-2-81	c 18	N71-26285 *
US-PATENT-CLASS-181.5R	c 71	N74-31148 *	US-PATENT-CLASS-188-82.84	c 37	N92-21728 *	US-PATENT-CLASS-2-81	c 05	N73-32012 *
US-PATENT-CLASS-181-5	c 11	N71-28779 *	US-PATENT-CLASS-188-82.84	c 37	N92-21728 *	US-PATENT-CLASS-200-114	c 54	N74-32546 *
US-PATENT-CLASS-181-0.5	c 71	N85-30765 *	US-PATENT-CLASS-188-87	c 12	N71-16894 *	US-PATENT-CLASS-200-129	c 33	N79-33393 *
US-PATENT-CLASS-181-0.5	c 71	N88-24241 *	US-PATENT-CLASS-188-88	c 15	N71-26611 *	US-PATENT-CLASS-200-152	c 33	N75-27249 *
US-PATENT-CLASS-181-0.5	c 31	N90-21215 *	US-PATENT-CLASS-188-96	c 15	N70-36947 *	US-PATENT-CLASS-200-153S	c 09	N71-19610 *
US-PATENT-CLASS-181-0.5	c 71	N91-14808 *	US-PATENT-CLASS-19-205	c 37	N76-18456 *	US-PATENT-CLASS-200-157	c 33	N80-18285 *
US-PATENT-CLASS-181-102	c 39	N80-10507 *	US-PATENT-CLASS-191-12.2-R	c 33	N86-20669 *	US-PATENT-CLASS-200-19	c 08	N86-27288 *
US-PATENT-CLASS-181-102	c 31	N80-32584 *	US-PATENT-CLASS-192-43.1	c 15	N71-17805 *	US-PATENT-CLASS-200-304	c 09	N70-39915 *
US-PATENT-CLASS-181-105	c 39	N80-10507 *	US-PATENT-CLASS-192-46	c 37	N87-17037 *	US-PATENT-CLASS-200-309	c 33	N80-18285 *
US-PATENT-CLASS-181-106	c 46	N79-22679 *	US-PATENT-CLASS-192-67R	c 37	N87-17037 *	US-PATENT-CLASS-200-46	c 03	N78-38713 *
US-PATENT-CLASS-181-115	c 46	N79-23555 *	US-PATENT-CLASS-194-82.26	c 37	N90-21390 *	US-PATENT-CLASS-200-61.05	c 74	N79-12890 *
US-PATENT-CLASS-181-117	c 46	N79-22679 *	US-PATENT-CLASS-194-82.29	c 37	N90-21390 *	US-PATENT-CLASS-200-61.42	c 25	N86-27431 *
US-PATENT-CLASS-181-120	c 46	N79-23555 *	US-PATENT-CLASS-194-902	c 37	N89-13785 *	US-PATENT-CLASS-200-61.45	c 09	N71-12518 *
US-PATENT-CLASS-181-121	c 35	N84-22933 *				US-PATENT-CLASS-200-61	c 14	N70-41812 *
US-PATENT-CLASS-181-148	c 71	N79-23753 *						N79-12890 *
US-PATENT-CLASS-181-190	c 71	N79-14871 *						
US-PATENT-CLASS-181-206	c 71	N91-27913 *						

## US-PATENT-CLASS-200-64

## REPORT NUMBER INDEX

US-PATENT-CLASS-200-64	c 15	N72-17455 *	US-PATENT-CLASS-204-192EC	c 27	N82-28440 *	US-PATENT-CLASS-204-37R	c 44	N79-11469 *
US-PATENT-CLASS-200-6	c 10	N71-15909 *	US-PATENT-CLASS-204-192EC	c 27	N82-33521 *	US-PATENT-CLASS-204-37R	c 27	N83-29388 *
US-PATENT-CLASS-200-6	c 09	N71-16089 *	US-PATENT-CLASS-204-192EC	c 33	N84-22884 *	US-PATENT-CLASS-204-37	c 33	N71-29151 *
US-PATENT-CLASS-200-81.9M	c 09	N72-20199 *	US-PATENT-CLASS-204-192E	c 37	N81-19455 *	US-PATENT-CLASS-204-38A	c 44	N76-14595 *
US-PATENT-CLASS-200-81R	c 09	N72-22204 *	US-PATENT-CLASS-204-192E	c 27	N82-28440 *	US-PATENT-CLASS-204-38B	c 44	N79-11469 *
US-PATENT-CLASS-200-82C	c 09	N72-22204 *	US-PATENT-CLASS-204-192E	c 27	N82-33521 *	US-PATENT-CLASS-204-38B	c 27	N82-33521 *
US-PATENT-CLASS-200-82	c 10	N71-23663 *	US-PATENT-CLASS-204-192E	c 24	N83-10117 *	US-PATENT-CLASS-204-38	c 17	N71-24830 *
US-PATENT-CLASS-200-83N	c 35	N75-15931 *	US-PATENT-CLASS-204-192E	c 52	N84-23095 *	US-PATENT-CLASS-204-40	c 44	N76-14595 *
US-PATENT-CLASS-200-83	c 33	N79-33392 *	US-PATENT-CLASS-204-192N	c 24	N85-21267 *	US-PATENT-CLASS-204-40	c 24	N77-19171 *
US-PATENT-CLASS-201-10	c 27	N81-17261 *	US-PATENT-CLASS-204-192N	c 26	N85-29005 *	US-PATENT-CLASS-204-42	c 44	N76-14595 *
US-PATENT-CLASS-201-17	c 44	N78-31527 *	US-PATENT-CLASS-204-192P	c 76	N85-33826 *	US-PATENT-CLASS-204-430	c 35	N85-29212 *
US-PATENT-CLASS-201-17	c 25	N81-33246 *	US-PATENT-CLASS-204-192R	c 24	N84-22695 *	US-PATENT-CLASS-204-49	c 15	N72-25452 *
US-PATENT-CLASS-201-17	c 25	N82-29371 *	US-PATENT-CLASS-204-192R	c 31	N85-20153 *	US-PATENT-CLASS-204-49	c 44	N76-14595 *
US-PATENT-CLASS-201-17	c 25	N83-31743 *	US-PATENT-CLASS-204-192R	c 24	N85-21267 *	US-PATENT-CLASS-204-56R	c 44	N83-10494 *
US-PATENT-CLASS-201-17	c 25	N85-35253 *	US-PATENT-CLASS-204-192SP	c 24	N84-22695 *	US-PATENT-CLASS-204-56R	c 27	N83-29388 *
US-PATENT-CLASS-201-25	c 27	N81-17261 *	US-PATENT-CLASS-204-192SP	c 31	N85-20153 *	US-PATENT-CLASS-204-56R	c 76	N84-35112 *
US-PATENT-CLASS-201-8	c 27	N81-17261 *	US-PATENT-CLASS-204-192	c 15	N73-12487 *	US-PATENT-CLASS-204-59	c 15	N72-21466 *
US-PATENT-CLASS-202-118	c 31	N81-15154 *	US-PATENT-CLASS-204-192	c 17	N73-24569 *	US-PATENT-CLASS-204-59	c 20	N74-32919 *
US-PATENT-CLASS-202-182	c 05	N71-11207 *	US-PATENT-CLASS-204-192	c 27	N74-13270 *	US-PATENT-CLASS-204-9	c 24	N77-19171 *
US-PATENT-CLASS-202-234	c 15	N71-23086 *	US-PATENT-CLASS-204-192	c 20	N74-31269 *	US-PATENT-CLASS-204/298	c 27	N86-19458 *
US-PATENT-CLASS-203-12	c 25	N82-28368 *	US-PATENT-CLASS-204-192	c 37	N75-19684 *	US-PATENT-CLASS-2041-195B	c 25	N79-22235 *
US-PATENT-CLASS-203-90	c 25	N88-23846 *	US-PATENT-CLASS-204-192	c 44	N77-14580 *	US-PATENT-CLASS-205-343	c 35	N75-30502 *
US-PATENT-CLASS-203-91	c 25	N88-23846 *	US-PATENT-CLASS-204-195B	c 25	N79-24073 *	US-PATENT-CLASS-206-07	c 31	N89-29578 *
US-PATENT-CLASS-203-98	c 25	N88-23846 *	US-PATENT-CLASS-204-195B	c 51	N80-27067 *	US-PATENT-CLASS-206-364	c 31	N92-33612 *
US-PATENT-CLASS-204-DIG.11	c 25	N77-32255 *	US-PATENT-CLASS-204-195B	c 51	N81-28698 *	US-PATENT-CLASS-206-366	c 31	N92-33612 *
US-PATENT-CLASS-204-DIG.3	c 25	N84-12262 *	US-PATENT-CLASS-204-195B	c 35	N82-28604 *	US-PATENT-CLASS-206-370	c 31	N92-33612 *
US-PATENT-CLASS-204-DIG.3	c 44	N84-23019 *	US-PATENT-CLASS-204-195R	c 33	N76-19339 *	US-PATENT-CLASS-206-439	c 52	N79-14749 *
US-PATENT-CLASS-204-1T	c 25	N79-22235 *	US-PATENT-CLASS-204-195S	c 25	N82-12166 *	US-PATENT-CLASS-206-447	c 27	N84-14323 *
US-PATENT-CLASS-204-1T	c 51	N81-28698 *	US-PATENT-CLASS-204-195W	c 35	N78-25391 *	US-PATENT-CLASS-206-582	c 27	N84-14323 *
US-PATENT-CLASS-204-1T	c 25	N82-12166 *	US-PATENT-CLASS-204-195	c 14	N71-17575 *	US-PATENT-CLASS-206-818	c 31	N92-33612 *
US-PATENT-CLASS-204-1T	c 76	N84-35112 *	US-PATENT-CLASS-204-2.1	c 44	N81-29524 *	US-PATENT-CLASS-208-10	c 25	N79-11152 *
US-PATENT-CLASS-204-1T	c 35	N85-29212 *	US-PATENT-CLASS-204-20	c 18	N71-16210 *	US-PATENT-CLASS-208-10	c 23	N84-16255 *
US-PATENT-CLASS-204-1T	c 76	N85-30923 *	US-PATENT-CLASS-204-222	c 31	N74-23065 *	US-PATENT-CLASS-208-10	c 25	N84-22709 *
US-PATENT-CLASS-204-104	c 25	N93-29617 *	US-PATENT-CLASS-204-224	c 37	N80-14395 *	US-PATENT-CLASS-208-11	c 25	N86-25428 *
US-PATENT-CLASS-204-105R	c 25	N93-29617 *	US-PATENT-CLASS-204-242	c 33	N75-27252 *	US-PATENT-CLASS-208-241	c 25	N82-23282 *
US-PATENT-CLASS-204-112	c 25	N93-29617 *	US-PATENT-CLASS-204-242	c 25	N84-12262 *	US-PATENT-CLASS-208-8LE	c 23	N84-16255 *
US-PATENT-CLASS-204-129.55	c 31	N83-19947 *	US-PATENT-CLASS-204-252	c 28	N81-24280 *	US-PATENT-CLASS-208-8LE	c 25	N84-22709 *
US-PATENT-CLASS-204-129.75	c 31	N83-19947 *	US-PATENT-CLASS-204-263	c 14	N71-28933 *	US-PATENT-CLASS-208-8	c 25	N79-11152 *
US-PATENT-CLASS-204-129	c 28	N81-24280 *	US-PATENT-CLASS-204-263	c 25	N82-12166 *	US-PATENT-CLASS-209-10	c 15	N71-20440 *
US-PATENT-CLASS-204-129	c 25	N84-12262 *	US-PATENT-CLASS-204-264	c 25	N82-12166 *	US-PATENT-CLASS-209-127R	c 35	N76-22559 *
US-PATENT-CLASS-204-129	c 44	N84-23019 *	US-PATENT-CLASS-204-266	c 28	N81-24280 *	US-PATENT-CLASS-209-250	c 37	N76-18456 *
US-PATENT-CLASS-204-129	c 25	N92-28756 *	US-PATENT-CLASS-204-266	c 25	N82-12166 *	US-PATENT-CLASS-209-300	c 37	N76-18456 *
US-PATENT-CLASS-204-129	c 25	N93-29617 *	US-PATENT-CLASS-204-267	c 33	N75-27252 *	US-PATENT-CLASS-209-305	c 37	N76-18456 *
US-PATENT-CLASS-204-130	c 15	N72-21466 *	US-PATENT-CLASS-204-275	c 25	N82-12166 *	US-PATENT-CLASS-209-349	c 15	N72-22483 *
US-PATENT-CLASS-204-157.1H	c 25	N74-30502 *	US-PATENT-CLASS-204-276	c 25	N82-12166 *	US-PATENT-CLASS-209-422	c 71	N85-30765 *
US-PATENT-CLASS-204-157.1H	c 37	N76-18458 *	US-PATENT-CLASS-204-278	c 25	N82-12166 *	US-PATENT-CLASS-209-638	c 71	N85-30765 *
US-PATENT-CLASS-204-157.1R	c 25	N77-32255 *	US-PATENT-CLASS-204-278	c 25	N84-12262 *	US-PATENT-CLASS-21-207	c 17	N71-16393 *
US-PATENT-CLASS-204-157.1R	c 44	N77-32580 *	US-PATENT-CLASS-204-278	c 44	N84-23019 *	US-PATENT-CLASS-210-DIG.23	c 52	N79-14749 *
US-PATENT-CLASS-204-157.1R	c 44	N79-11470 *	US-PATENT-CLASS-204-279	c 33	N75-27252 *	US-PATENT-CLASS-210-DIG.27	c 27	N77-31308 *
US-PATENT-CLASS-204-157.18AG	c 15	N72-25452 *	US-PATENT-CLASS-204-280R	c 25	N83-13187 *	US-PATENT-CLASS-210-103	c 05	N72-27102 *
US-PATENT-CLASS-204-157.22	c 25	N88-24732 *	US-PATENT-CLASS-204-280	c 44	N84-23019 *	US-PATENT-CLASS-210-104	c 05	N72-27102 *
US-PATENT-CLASS-204-157.51	c 25	N90-20154 *	US-PATENT-CLASS-204-286	c 33	N75-27252 *	US-PATENT-CLASS-210-108	c 34	N79-24285 *
US-PATENT-CLASS-204-158R	c 25	N77-32255 *	US-PATENT-CLASS-204-290F	c 28	N81-24280 *	US-PATENT-CLASS-210-110	c 05	N72-27102 *
US-PATENT-CLASS-204-159.11	c 27	N80-32516 *	US-PATENT-CLASS-204-290F	c 44	N82-29710 *	US-PATENT-CLASS-210-137	c 05	N72-27102 *
US-PATENT-CLASS-204-159.14	c 27	N80-32516 *	US-PATENT-CLASS-204-290R	c 33	N75-27252 *	US-PATENT-CLASS-210-140	c 51	N93-18351 *
US-PATENT-CLASS-204-159.15	c 27	N80-26446 *	US-PATENT-CLASS-204-290R	c 28	N81-24280 *	US-PATENT-CLASS-210-142	c 34	N79-24285 *
US-PATENT-CLASS-204-159.19	c 27	N80-26446 *	US-PATENT-CLASS-204-290R	c 44	N82-29710 *	US-PATENT-CLASS-210-151	c 45	N84-12654 *
US-PATENT-CLASS-204-162R	c 25	N77-32255 *	US-PATENT-CLASS-204-290R	c 25	N84-12262 *	US-PATENT-CLASS-210-186	c 37	N80-10494 *
US-PATENT-CLASS-204-164	c 26	N78-32229 *	US-PATENT-CLASS-204-290	c 44	N84-28205 *	US-PATENT-CLASS-210-188	c 12	N72-25292 *
US-PATENT-CLASS-204-168	c 24	N71-25555 *	US-PATENT-CLASS-204-291	c 28	N81-24280 *	US-PATENT-CLASS-210-190	c 51	N93-18351 *
US-PATENT-CLASS-204-16	c 24	N77-19171 *	US-PATENT-CLASS-204-292	c 25	N78-10225 *	US-PATENT-CLASS-210-192	c 54	N78-14784 *
US-PATENT-CLASS-204-171	c 27	N80-23452 *	US-PATENT-CLASS-204-298	c 15	N70-34967 *	US-PATENT-CLASS-210-198.2	c 25	N92-33009 *
US-PATENT-CLASS-204-175	c 26	N78-32229 *	US-PATENT-CLASS-204-298	c 09	N71-26701 *	US-PATENT-CLASS-210-205	c 29	N90-21209 *
US-PATENT-CLASS-204-177	c 25	N75-12087 *	US-PATENT-CLASS-204-298	c 15	N72-32487 *	US-PATENT-CLASS-210-209	c 25	N92-33029 *
US-PATENT-CLASS-204-180.1	c 25	N88-23845 *	US-PATENT-CLASS-204-298	c 37	N75-19684 *	US-PATENT-CLASS-210-212	c 03	N72-20033 *
US-PATENT-CLASS-204-180.1	c 25	N92-28728 *	US-PATENT-CLASS-204-298	c 27	N86-32569 *	US-PATENT-CLASS-210-222	c 35	N78-12390 *
US-PATENT-CLASS-204-180G	c 25	N78-14104 *	US-PATENT-CLASS-204-298	c 31	N86-32569 *	US-PATENT-CLASS-210-222	c 25	N92-33611 *
US-PATENT-CLASS-204-180G	c 25	N79-14169 *	US-PATENT-CLASS-204-298	c 31	N87-21160 *	US-PATENT-CLASS-210-223	c 25	N92-33611 *
US-PATENT-CLASS-204-180G	c 37	N80-14397 *	US-PATENT-CLASS-204-299-R	c 25	N88-23845 *	US-PATENT-CLASS-210-22	c 52	N80-14687 *
US-PATENT-CLASS-204-180P	c 54	N78-14784 *	US-PATENT-CLASS-204-299R	c 25	N78-14104 *	US-PATENT-CLASS-210-23F	c 51	N79-10693 *
US-PATENT-CLASS-204-180R	c 25	N74-26948 *	US-PATENT-CLASS-204-299R	c 25	N79-14169 *	US-PATENT-CLASS-210-23H	c 27	N80-23452 *
US-PATENT-CLASS-204-180R	c 34	N74-27744 *	US-PATENT-CLASS-204-299R	c 37	N80-14397 *	US-PATENT-CLASS-210-234	c 34	N75-33342 *
US-PATENT-CLASS-204-180R	c 51	N80-16715 *	US-PATENT-CLASS-204-299R	c 51	N80-16715 *	US-PATENT-CLASS-210-24R	c 27	N81-14076 *
US-PATENT-CLASS-204-180S	c 25	N79-10163 *	US-PATENT-CLASS-204-299R	c 25	N83-10126 *	US-PATENT-CLASS-210-247	c 29	N90-21209 *
US-PATENT-CLASS-204-180S	c 25	N79-14169 *	US-PATENT-CLASS-204-299R	c 25	N83-13187 *	US-PATENT-CLASS-210-24	c 27	N77-30236 *
US-PATENT-CLASS-204-183.3	c 25	N92-28728 *	US-PATENT-CLASS-204-299R	c 27	N92-25397 *	US-PATENT-CLASS-210-24	c 25	N81-19244 *
US-PATENT-CLASS-204-192.15	c 26	N87-25455 *	US-PATENT-CLASS-204-299R	c 25	N92-28728 *	US-PATENT-CLASS-210-257.1	c 29	N90-21209 *
US-PATENT-CLASS-204-192.15	c 76	N88-24543 *	US-PATENT-CLASS-204-299	c 34	N74-27744 *	US-PATENT-CLASS-210-259	c 34	N75-33342 *
US-PATENT-CLASS-204-192.23	c 26	N87-25455 *	US-PATENT-CLASS-204-299	c 25	N79-10163 *	US-PATENT-CLASS-210-266	c 25	N92-33029 *
US-PATENT-CLASS-204-192.24	c 76	N88-24543 *	US-PATENT-CLASS-204-300EC	c 27	N92-25397 *	US-PATENT-CLASS-210-269	c 25	N92-33029 *
US-PATENT-CLASS-204-192.31	c 26	N88-14179 *	US-PATENT-CLASS-204-301	c 54	N78-14784 *	US-PATENT-CLASS-210-282	c 37	N87-17035 *
US-PATENT-CLASS-204-192.32	c 25	N91-31258 *	US-PATENT-CLASS-204-305	c 03	N71-24718 *	US-PATENT-CLASS-210-287	c 25	N92-33029 *
US-PATENT-CLASS-204-192-C	c 27	N86-19458 *	US-PATENT-CLASS-204-30	c 09	N71-28691 *	US-PATENT-CLASS-210-28	c 85	N79-17747 *
US-PATENT-CLASS-204-192-D	c 27	N86-19458 *	US-PATENT-CLASS-204-32A	c 33	N77-26385 *	US-PATENT-CLASS-210-304	c 34	N75-33342 *
US-PATENT-CLASS-204-192-R	c 27	N86-19458 *	US-PATENT-CLASS-204-32R	c 44	N76-14595 *	US-PATENT-CLASS-210-314	c 28	N70-41447 *
US-PATENT-CLASS-204-192C	c 76	N79-14906 *	US-PATENT-CLASS-204-324	c 33	N73-16918 *	US-PATENT-CLASS-210-321.1	c 25	N82-21269 *
US-PATENT-CLASS-204-192C	c 26	N82-29415 *	US-PATENT-CLASS-204-325	c 33	N73-16918 *	US-PATENT-CLASS-210-321.6	c 29	N90-21209 *
US-PATENT-CLASS-204-192C	c 26	N82-30371 *	US-PATENT-CLASS-204-328	c 33	N73-16918 *	US-PATENT-CLASS-210-321B	c 52	N80-14687 *
US-PATENT-CLASS-204-192C	c 24	N84-22695 *	US-PATENT-CLASS-204-32	c 44	N79-11469 *	US-PATENT-CLASS-210-333	c 34	N75-33342 *
US-PATENT-CLASS-204-192C	c 31	N85-20153 *	US-PATENT-CLASS-204-33	c 17	N71-25903 *	US-PATENT-CLASS-210-340	c 34	N75-33342 *
US-PATENT-CLASS-204-192C	c 24	N85-21267 *	US-PATENT-CLASS-204-33	c 44	N76-14595 *	US-PATENT-CLASS-210-340	c 37	N80-10494 *
US-PATENT-CLASS-204-192C	c 76	N85-33826 *	US-PATENT-CLASS-204-33	c 44	N79-11469 *	US-PATENT-CLASS-210-340	c 29	N90-21209 *
US-PATENT-CLASS-204-192C	c 27	N86-32569 *	US-PATENT-CLASS-204-33	c 44	N83-34449 *	US-PATENT-CLASS-210-355	c 51	N91-14703 *
US-PATENT-CLASS-204-192C	c 31	N86-32587 *	US-PATENT-CLASS-204-35N	c 27	N83-29388 *	US-PATENT-CLASS-210-396	c 51	N91-21701 *
US-PATENT-CLASS-204-192D	c 27	N86-32569 *	US-PATENT-CLASS-204-35N	c 44	N83-34449 *	US-PATENT-CLASS-210-40	c 27	N77-31308 *
US-PATENT-CLASS-204-192D	c 31	N86-32587 *	US-PATENT-CLASS-204-37.6	c 76	N84-35112 *	US-PATENT-CLASS-210-40	c 85	N79-17747 *



US-PATENT-CLASS-210-40	c 45	N82-11634 *	US-PATENT-CLASS-219-117	c 15	N73-32358 *	US-PATENT-CLASS-219-510	c 35	N81-26431 *
US-PATENT-CLASS-210-411	c 34	N75-33342 *	US-PATENT-CLASS-219-118	c 37	N76-27568 *	US-PATENT-CLASS-219-522	c 11	N73-12265 *
US-PATENT-CLASS-210-414	c 51	N91-14703 *	US-PATENT-CLASS-219-119	c 37	N77-11397 *	US-PATENT-CLASS-219-522	c 52	N80-16725 *
US-PATENT-CLASS-210-425	c 34	N75-33342 *	US-PATENT-CLASS-219-121.28	c 35	N73-14468 *	US-PATENT-CLASS-219-522	c 27	N84-33589 *
US-PATENT-CLASS-210-429	c 37	N76-14463 *	US-PATENT-CLASS-219-121.47	c 75	N90-20351 *	US-PATENT-CLASS-219-530	c 33	N71-25353 *
US-PATENT-CLASS-210-433M	c 51	N79-10693 *	US-PATENT-CLASS-219-121.48	c 75	N91-25875 *	US-PATENT-CLASS-219-539	c 33	N74-14935 *
US-PATENT-CLASS-210-445	c 15	N72-11389 *	US-PATENT-CLASS-219-121.52	c 75	N91-25875 *	US-PATENT-CLASS-219-541	c 27	N84-33589 *
US-PATENT-CLASS-210-445	c 85	N79-17747 *	US-PATENT-CLASS-219-121.54	c 37	N88-30131 *	US-PATENT-CLASS-219-543	c 27	N84-33589 *
US-PATENT-CLASS-210-500.25	c 31	N88-29052 *	US-PATENT-CLASS-219-121.56	c 37	N88-30131 *	US-PATENT-CLASS-219-545	c 33	N82-26571 *
US-PATENT-CLASS-210-500.35	c 31	N88-29052 *	US-PATENT-CLASS-219-121.57	c 37	N88-30131 *	US-PATENT-CLASS-219-547	c 15	N73-28515 *
US-PATENT-CLASS-210-500M	c 27	N80-23452 *	US-PATENT-CLASS-219-121.68	c 31	N91-14508 *	US-PATENT-CLASS-219-59.11	c 27	N91-25296 *
US-PATENT-CLASS-210-500M	c 25	N81-17187 *	US-PATENT-CLASS-219-121.72	c 37	N91-32508 *	US-PATENT-CLASS-219-59.12	c 37	N91-32508 *
US-PATENT-CLASS-210-500	c 25	N75-12087 *	US-PATENT-CLASS-219-121.72	c 37	N91-32508 *	US-PATENT-CLASS-219-59.17	c 35	N92-22038 *
US-PATENT-CLASS-210-502.1	c 25	N92-33009 *	US-PATENT-CLASS-219-121LE	c 26	N86-32551 *	US-PATENT-CLASS-219-72	c 15	N71-14932 *
US-PATENT-CLASS-210-50	c 45	N79-12584 *	US-PATENT-CLASS-219-121LN	c 44	N82-26777 *	US-PATENT-CLASS-219-72	c 37	N90-19602 *
US-PATENT-CLASS-210-512.1	c 35	N90-20204 *	US-PATENT-CLASS-219-121LY	c 26	N86-32551 *	US-PATENT-CLASS-219-72	c 33	N92-33030 *
US-PATENT-CLASS-210-512	c 34	N75-33342 *	US-PATENT-CLASS-219-121P	c 15	N72-32487 *	US-PATENT-CLASS-219-74	c 74	N87-25843 *
US-PATENT-CLASS-210-54	c 85	N79-17747 *	US-PATENT-CLASS-219-121	c 15	N69-21471 *	US-PATENT-CLASS-219-74	c 37	N90-19602 *
US-PATENT-CLASS-210-57	c 45	N80-14579 *	US-PATENT-CLASS-219-121	c 33	N70-34540 *	US-PATENT-CLASS-219-75	c 37	N88-23980 *
US-PATENT-CLASS-210-602	c 45	N84-12654 *	US-PATENT-CLASS-219-121	c 15	N71-19486 *	US-PATENT-CLASS-219-75	c 31	N90-23586 *
US-PATENT-CLASS-210-605	c 45	N84-12654 *	US-PATENT-CLASS-219-121	c 16	N71-20400 *	US-PATENT-CLASS-219-75	c 31	N90-26168 *
US-PATENT-CLASS-210-60	c 45	N79-12584 *	US-PATENT-CLASS-219-121	c 15	N71-27135 *	US-PATENT-CLASS-219-75	c 75	N91-25875 *
US-PATENT-CLASS-210-615	c 45	N91-14662 *	US-PATENT-CLASS-219-124.02	c 37	N88-30131 *	US-PATENT-CLASS-219-75	c 33	N92-33030 *
US-PATENT-CLASS-210-617	c 45	N84-12654 *	US-PATENT-CLASS-219-124.2	c 37	N79-10421 *	US-PATENT-CLASS-219-76.14	c 24	N85-30027 *
US-PATENT-CLASS-210-63R	c 45	N78-10225 *	US-PATENT-CLASS-219-124.32	c 37	N79-10421 *	US-PATENT-CLASS-219-76.16	c 75	N91-25875 *
US-PATENT-CLASS-210-63R	c 25	N79-12584 *	US-PATENT-CLASS-219-124.34	c 37	N86-21850 *	US-PATENT-CLASS-219-78	c 37	N74-11300 *
US-PATENT-CLASS-210-63Z	c 45	N80-14579 *	US-PATENT-CLASS-219-124.34	c 74	N87-17493 *	US-PATENT-CLASS-219-85.15	c 26	N92-29094 *
US-PATENT-CLASS-210-635	c 25	N92-33009 *	US-PATENT-CLASS-219-124.34	c 74	N87-25843 *	US-PATENT-CLASS-219-85.19	c 26	N92-29094 *
US-PATENT-CLASS-210-639	c 31	N88-29052 *	US-PATENT-CLASS-219-124.34	c 37	N88-14362 *	US-PATENT-CLASS-219-85CA	c 35	N80-20560 *
US-PATENT-CLASS-210-653	c 31	N88-29052 *	US-PATENT-CLASS-219-125.1	c 37	N79-10421 *	US-PATENT-CLASS-219-85CM	c 35	N80-20560 *
US-PATENT-CLASS-210-66	c 85	N79-17747 *	US-PATENT-CLASS-219-125	c 15	N71-23815 *	US-PATENT-CLASS-219-85R	c 35	N80-20560 *
US-PATENT-CLASS-210-670	c 25	N92-33029 *	US-PATENT-CLASS-219-125	c 37	N75-27376 *	US-PATENT-CLASS-219-85	c 15	N72-22491 *
US-PATENT-CLASS-210-670	c 51	N93-18351 *	US-PATENT-CLASS-219-130.01	c 74	N87-17493 *	US-PATENT-CLASS-219-85	c 15	N72-23497 *
US-PATENT-CLASS-210-67	c 85	N79-17747 *	US-PATENT-CLASS-219-130.01	c 74	N87-25843 *	US-PATENT-CLASS-219-91	c 15	N71-18613 *
US-PATENT-CLASS-210-695	c 25	N92-33611 *	US-PATENT-CLASS-219-130.01	c 37	N88-14362 *	US-PATENT-CLASS-219-91	c 15	N73-32358 *
US-PATENT-CLASS-210-70	c 85	N79-17747 *	US-PATENT-CLASS-219-130.4	c 37	N88-30131 *	US-PATENT-CLASS-219-92	c 37	N76-27568 *
US-PATENT-CLASS-210-71	c 25	N78-10225 *	US-PATENT-CLASS-219-130	c 15	N71-23798 *	US-PATENT-CLASS-219-92	c 37	N77-11397 *
US-PATENT-CLASS-210-73R	c 85	N79-17747 *	US-PATENT-CLASS-219-131	c 15	N71-15871 *	US-PATENT-CLASS-219-92	c 15	N71-15966 *
US-PATENT-CLASS-210-739	c 51	N93-18351 *	US-PATENT-CLASS-219-136	c 37	N88-14362 *	US-PATENT-CLASS-219-92	c 17	N70-38198 *
US-PATENT-CLASS-210-748	c 71	N83-35781 *	US-PATENT-CLASS-219-136	c 31	N90-23586 *	US-PATENT-CLASS-219-92	c 15	N69-39935 *
US-PATENT-CLASS-210-748	c 35	N84-17555 *	US-PATENT-CLASS-219-136	c 31	N90-26168 *	US-PATENT-CLASS-219-92	c 31	N71-15664 *
US-PATENT-CLASS-210-748	c 54	N91-31803 *	US-PATENT-CLASS-219-137	c 37	N88-23980 *	US-PATENT-CLASS-219-92	c 34	N75-12222 *
US-PATENT-CLASS-210-748	c 25	N92-33029 *	US-PATENT-CLASS-219-137	c 15	N70-34814 *	US-PATENT-CLASS-219-92	c 31	N71-17680 *
US-PATENT-CLASS-210-748	c 25	N92-33611 *	US-PATENT-CLASS-219-137	c 37	N75-19683 *	US-PATENT-CLASS-219-92	c 24	N79-25143 *
US-PATENT-CLASS-210-748	c 25	N93-20570 *	US-PATENT-CLASS-219-158	c 15	N72-22491 *	US-PATENT-CLASS-219-92	c 37	N79-22474 *
US-PATENT-CLASS-210-753	c 51	N93-18351 *	US-PATENT-CLASS-219-160	c 37	N80-23655 *	US-PATENT-CLASS-219-92	c 27	N84-27886 *
US-PATENT-CLASS-210-758	c 25	N92-33029 *	US-PATENT-CLASS-219-161	c 37	N80-23655 *	US-PATENT-CLASS-219-92	c 45	N83-25217 *
US-PATENT-CLASS-210-764	c 51	N93-18351 *	US-PATENT-CLASS-219-19	c 33	N70-34812 *	US-PATENT-CLASS-219-92	c 37	N82-24490 *
US-PATENT-CLASS-210-767	c 25	N92-33611 *	US-PATENT-CLASS-219-201	c 52	N80-16725 *	US-PATENT-CLASS-219-92	c 37	N80-18393 *
US-PATENT-CLASS-210-767	c 25	N93-20570 *	US-PATENT-CLASS-219-201	c 37	N85-29286 *	US-PATENT-CLASS-219-92	c 44	N80-20808 *
US-PATENT-CLASS-210-806	c 25	N93-20570 *	US-PATENT-CLASS-219-203	c 11	N73-12265 *	US-PATENT-CLASS-219-92	c 37	N80-18393 *
US-PATENT-CLASS-210-82	c 34	N75-33342 *	US-PATENT-CLASS-219-203	c 27	N84-33589 *	US-PATENT-CLASS-219-92	c 15	N71-27068 *
US-PATENT-CLASS-210-84	c 29	N90-21209 *	US-PATENT-CLASS-219-209	c 35	N81-26431 *	US-PATENT-CLASS-219-92	c 31	N89-29578 *
US-PATENT-CLASS-210-95	c 29	N90-21209 *	US-PATENT-CLASS-219-210	c 35	N81-26431 *	US-PATENT-CLASS-219-92	c 15	N72-22486 *
US-PATENT-CLASS-210-96.1	c 51	N93-18351 *	US-PATENT-CLASS-219-216	c 35	N74-15831 *	US-PATENT-CLASS-219-92	c 15	N69-27502 *
US-PATENT-CLASS-210-96M	c 54	N78-14784 *	US-PATENT-CLASS-219-219	c 27	N84-33589 *	US-PATENT-CLASS-219-92	c 11	N70-38182 *
US-PATENT-CLASS-210-96M	c 51	N79-10693 *	US-PATENT-CLASS-219-221	c 15	N72-11392 *	US-PATENT-CLASS-219-92	c 15	N71-10577 *
US-PATENT-CLASS-210-97	c 35	N90-22024 *	US-PATENT-CLASS-219-221	c 37	N85-29286 *	US-PATENT-CLASS-219-92	c 31	N81-19343 *
US-PATENT-CLASS-211-126	c 35	N86-20751 *	US-PATENT-CLASS-219-229	c 15	N71-27214 *	US-PATENT-CLASS-219-92	c 31	N81-19343 *
US-PATENT-CLASS-211-74	c 35	N86-20751 *	US-PATENT-CLASS-219-234	c 15	N72-22491 *	US-PATENT-CLASS-219-92	c 11	N71-15960 *
US-PATENT-CLASS-212-11	c 32	N71-17609 *	US-PATENT-CLASS-219-234	c 15	N72-23497 *	US-PATENT-CLASS-219-92	c 11	N71-17600 *
US-PATENT-CLASS-212-134	c 15	N72-11388 *	US-PATENT-CLASS-219-243	c 15	N72-11392 *	US-PATENT-CLASS-219-92	c 37	N80-18393 *
US-PATENT-CLASS-212-225	c 18	N89-12621 *	US-PATENT-CLASS-219-273	c 15	N72-32487 *	US-PATENT-CLASS-219-92	c 31	N89-29578 *
US-PATENT-CLASS-212-230	c 37	N86-20789 *	US-PATENT-CLASS-219-275	c 15	N71-20395 *	US-PATENT-CLASS-219-92	c 31	N92-33612 *
US-PATENT-CLASS-212-257	c 18	N89-12621 *	US-PATENT-CLASS-219-275	c 20	N87-16875 *	US-PATENT-CLASS-219-92	c 23	N71-22881 *
US-PATENT-CLASS-212-267	c 31	N81-27324 *	US-PATENT-CLASS-219-285	c 37	N85-29286 *	US-PATENT-CLASS-219-92	c 18	N71-23658 *
US-PATENT-CLASS-213-81	c 37	N77-23483 *	US-PATENT-CLASS-219-299	c 51	N79-10694 *	US-PATENT-CLASS-219-92	c 15	N71-23816 *
US-PATENT-CLASS-214-1CM	c 37	N76-15460 *	US-PATENT-CLASS-219-300	c 37	N77-13418 *	US-PATENT-CLASS-219-92	c 33	N71-25351 *
US-PATENT-CLASS-214-1BC	c 54	N77-32721 *	US-PATENT-CLASS-219-302	c 51	N79-10694 *	US-PATENT-CLASS-219-92	c 51	N74-15778 *
US-PATENT-CLASS-214-1B	c 54	N75-27758 *	US-PATENT-CLASS-219-304	c 37	N77-13418 *	US-PATENT-CLASS-219-92	c 31	N79-21225 *
US-PATENT-CLASS-214-1CM	c 15	N72-28495 *	US-PATENT-CLASS-219-343	c 27	N83-36220 *	US-PATENT-CLASS-219-92	c 15	N72-21465 *
US-PATENT-CLASS-214-1CM	c 54	N75-12616 *	US-PATENT-CLASS-219-347	c 15	N69-27871 *	US-PATENT-CLASS-219-92	c 14	N71-27005 *
US-PATENT-CLASS-214-1CM	c 18	N75-27041 *	US-PATENT-CLASS-219-347	c 33	N70-34545 *	US-PATENT-CLASS-219-92	c 37	N76-19436 *
US-PATENT-CLASS-214-1CM	c 54	N75-27758 *	US-PATENT-CLASS-219-348	c 15	N73-27405 *	US-PATENT-CLASS-219-92	c 31	N90-23587 *
US-PATENT-CLASS-214-1CM	c 37	N77-23483 *	US-PATENT-CLASS-219-348	c 09	N70-33312 *	US-PATENT-CLASS-219-92	c 37	N74-13178 *
US-PATENT-CLASS-214-1CM	c 54	N77-32721 *	US-PATENT-CLASS-219-354	c 27	N83-36220 *	US-PATENT-CLASS-219-92	c 15	N72-21465 *
US-PATENT-CLASS-214-1CM	c 54	N78-17676 *	US-PATENT-CLASS-219-364	c 33	N71-16278 *	US-PATENT-CLASS-219-92	c 54	N74-12779 *
US-PATENT-CLASS-214-1R	c 54	N76-15457 *	US-PATENT-CLASS-219-378	c 33	N71-25353 *	US-PATENT-CLASS-219-92	c 35	N85-21595 *
US-PATENT-CLASS-214-16.1CB	c 37	N77-22480 *	US-PATENT-CLASS-219-383	c 09	N88-28939 *	US-PATENT-CLASS-219-92	c 54	N74-17853 *
US-PATENT-CLASS-214-1	c 32	N70-41367 *	US-PATENT-CLASS-219-388	c 35	N74-15831 *	US-PATENT-CLASS-219-92	c 54	N74-12779 *
US-PATENT-CLASS-214-90R	c 03	N72-25021 *	US-PATENT-CLASS-219-390	c 27	N83-36220 *	US-PATENT-CLASS-219-92	c 35	N85-21595 *
US-PATENT-CLASS-215-247	c 33	N76-19339 *	US-PATENT-CLASS-219-390	c 35	N86-20750 *	US-PATENT-CLASS-219-92	c 54	N74-12779 *
US-PATENT-CLASS-219-10.41	c 33	N82-26571 *	US-PATENT-CLASS-219-390	c 14	N91-27175 *	US-PATENT-CLASS-219-92	c 15	N70-38996 *
US-PATENT-CLASS-219-10.43	c 31	N85-29083 *	US-PATENT-CLASS-219-395	c 35	N86-20750 *	US-PATENT-CLASS-219-92	c 14	N73-27378 *
US-PATENT-CLASS-219-10.49R	c 33	N81-19389 *	US-PATENT-CLASS-219-396	c 35	N86-20750 *	US-PATENT-CLASS-219-92	c 35	N85-21595 *
US-PATENT-CLASS-219-10.49	c 11	N71-15925 *	US-PATENT-CLASS-219-410	c 12	N79-26075 *	US-PATENT-CLASS-219-92	c 14	N70-40233 *
US-PATENT-CLASS-219-10.49	c 31	N85-29083 *	US-PATENT-CLASS-219-411	c 17	N69-25147 *	US-PATENT-CLASS-219-92	c 35	N85-21595 *
US-PATENT-CLASS-219-10.53	c 33	N82-26571 *	US-PATENT-CLASS-219-411	c 27	N83-36220 *	US-PATENT-CLASS-219-92	c 14	N71-27005 *
US-PATENT-CLASS-219-10.53	c 31	N85-29083 *	US-PATENT-CLASS-219-413	c 14	N71-28958 *	US-PATENT-CLASS-219-92	c 54	N74-12779 *
US-PATENT-CLASS-219-10.67	c 33	N81-19389 *	US-PATENT-CLASS-219-477	c 33	N74-14935 *	US-PATENT-CLASS-219-92	c 27	N71-29155 *
US-PATENT-CLASS-219-10.77	c 31	N85-29083 *	US-PATENT-CLASS-219-497	c 77	N75-20140 *	US-PATENT-CLASS-219-92	c 37	N77-28487 *
US-PATENT-CLASS-219-101	c 15	N73-14468 *	US-PATENT-CLASS-219-499	c 14	N73-26430 *	US-PATENT-CLASS-219-92	c 15	N72-21465 *
US-PATENT-CLASS-219-101	c 37	N74-11300 *	US-PATENT-CLASS-219-501	c 77	N75-20140 *	US-PATENT-CLASS-219-92	c 37	N77-28487 *
US-PATENT-CLASS-219-107	c 15	N73-28515 *	US-PATENT-CLASS-219-505	c 14	N71-27058 *	US-PATENT-CLASS-219-92	c 05	N72-23085 *
US-PATENT-CLASS-219-107	c 37	N74-11300 *	US-PATENT-CLASS-219-505	c 77	N75-20140 *	US-PATENT-CLASS-219-92	c 05	N71-12531 *
US-PATENT-CLASS-219-109	c 15	N72-23497 *	US-PATENT-CLASS-219-50	c 14	N73-26430 *	US-PATENT-CLASS-219-92	c 54	N74-17853 *



## US-PATENT-CLASS-225-103

## REPORT NUMBER INDEX

US-PATENT-CLASS-225-103	c 37	N82-32730 *	US-PATENT-CLASS-23-232R	c 45	N76-31714 *	US-PATENT-CLASS-235-152IE	c 08	N73-32081 *
US-PATENT-CLASS-225-1	c 15	N71-17628 *	US-PATENT-CLASS-23-232R	c 23	N77-17161 *	US-PATENT-CLASS-235-152	c 07	N71-24741 *
US-PATENT-CLASS-225-2	c 26	N71-14354 *	US-PATENT-CLASS-23-232R	c 25	N78-15210 *	US-PATENT-CLASS-235-152	c 08	N72-20176 *
US-PATENT-CLASS-226-190	c 08	N71-19420 *	US-PATENT-CLASS-23-252R	c 25	N74-12813 *	US-PATENT-CLASS-235-152	c 08	N72-22167 *
US-PATENT-CLASS-226-58	c 14	N71-28935 *	US-PATENT-CLASS-23-252R	c 25	N79-10162 *	US-PATENT-CLASS-235-152	c 08	N72-25210 *
US-PATENT-CLASS-227-27	c 37	N86-25790 *	US-PATENT-CLASS-23-252R	c 25	N79-28253 *	US-PATENT-CLASS-235-152	c 08	N73-12175 *
US-PATENT-CLASS-227-28	c 37	N86-25790 *	US-PATENT-CLASS-23-253A	c 51	N77-27677 *	US-PATENT-CLASS-235-152	c 09	N73-13209 *
US-PATENT-CLASS-228-103	c 35	N83-35338 *	US-PATENT-CLASS-23-253A	c 54	N78-14784 *	US-PATENT-CLASS-235-152	c 08	N73-26175 *
US-PATENT-CLASS-228-107	c 37	N79-13364 *	US-PATENT-CLASS-23-253PC	c 06	N72-17094 *	US-PATENT-CLASS-235-152	c 60	N77-14751 *
US-PATENT-CLASS-228-107	c 37	N88-14359 *	US-PATENT-CLASS-23-253PC	c 37	N74-18123 *	US-PATENT-CLASS-235-153AE	c 60	N76-21914 *
US-PATENT-CLASS-228-107	c 31	N91-31476 *	US-PATENT-CLASS-23-253R	c 15	N72-21465 *	US-PATENT-CLASS-235-153AK	c 62	N74-14920 *
US-PATENT-CLASS-228-107	c 31	N92-16162 *	US-PATENT-CLASS-23-253R	c 25	N75-14844 *	US-PATENT-CLASS-235-153	c 08	N71-24633 *
US-PATENT-CLASS-228-109	c 37	N88-14359 *	US-PATENT-CLASS-23-253R	c 25	N76-18245 *	US-PATENT-CLASS-235-153	c 08	N72-22166 *
US-PATENT-CLASS-228-116	c 37	N81-19455 *	US-PATENT-CLASS-23-253	c 23	N71-16355 *	US-PATENT-CLASS-235-154	c 08	N70-34778 *
US-PATENT-CLASS-228-118	c 24	N81-17170 *	US-PATENT-CLASS-23-253	c 06	N71-26754 *	US-PATENT-CLASS-235-154	c 10	N71-23662 *
US-PATENT-CLASS-228-118	c 24	N81-26179 *	US-PATENT-CLASS-23-253	c 06	N72-17095 *	US-PATENT-CLASS-235-154	c 08	N72-18184 *
US-PATENT-CLASS-228-119	c 37	N86-32736 #	US-PATENT-CLASS-23-254EF	c 35	N76-18403 *	US-PATENT-CLASS-235-154	c 08	N72-25206 *
US-PATENT-CLASS-228-124	c 26	N77-29260 *	US-PATENT-CLASS-23-254E	c 06	N73-16106 *	US-PATENT-CLASS-235-155	c 08	N71-24890 *
US-PATENT-CLASS-228-124	c 37	N87-21334 *	US-PATENT-CLASS-23-254E	c 33	N75-26245 *	US-PATENT-CLASS-235-155	c 08	N72-21197 *
US-PATENT-CLASS-228-13	c 18	N79-11108 *	US-PATENT-CLASS-23-254E	c 35	N75-29380 *	US-PATENT-CLASS-235-155	c 08	N72-12176 *
US-PATENT-CLASS-228-15.1	c 18	N79-11108 *	US-PATENT-CLASS-23-254E	c 45	N76-21742 *	US-PATENT-CLASS-235-156	c 08	N71-18693 *
US-PATENT-CLASS-228-157	c 24	N82-24296 *	US-PATENT-CLASS-23-254R	c 08	N73-16106 *	US-PATENT-CLASS-235-156	c 60	N75-13539 *
US-PATENT-CLASS-228-157	c 24	N84-11214 *	US-PATENT-CLASS-23-254R	c 25	N76-18245 *	US-PATENT-CLASS-235-156	c 32	N76-21366 *
US-PATENT-CLASS-228-165	c 35	N84-22930 *	US-PATENT-CLASS-23-254R	c 23	N77-17161 *	US-PATENT-CLASS-235-156	c 32	N77-10392 *
US-PATENT-CLASS-228-170	c 24	N81-17170 *	US-PATENT-CLASS-23-254	c 14	N71-20442 *	US-PATENT-CLASS-235-156	c 38	N78-17395 *
US-PATENT-CLASS-228-173	c 18	N79-11108 *	US-PATENT-CLASS-23-255E	c 35	N75-29380 *	US-PATENT-CLASS-235-156	c 38	N78-17396 *
US-PATENT-CLASS-228-174	c 24	N81-17170 *	US-PATENT-CLASS-23-255R	c 25	N76-18245 *	US-PATENT-CLASS-235-158	c 08	N71-19437 *
US-PATENT-CLASS-228-181	c 24	N84-11214 *	US-PATENT-CLASS-23-259	c 15	N71-27372 *	US-PATENT-CLASS-235-164	c 08	N71-33110 *
US-PATENT-CLASS-228-190	c 24	N75-28135 *	US-PATENT-CLASS-23-259	c 15	N72-21465 *	US-PATENT-CLASS-235-164	c 08	N73-26175 *
US-PATENT-CLASS-228-190	c 26	N77-28265 *	US-PATENT-CLASS-23-259	c 37	N74-18123 *	US-PATENT-CLASS-235-164	c 60	N74-20836 *
US-PATENT-CLASS-228-190	c 24	N81-17170 *	US-PATENT-CLASS-23-259	c 51	N77-27677 *	US-PATENT-CLASS-235-175	c 08	N71-18602 *
US-PATENT-CLASS-228-190	c 24	N81-26179 *	US-PATENT-CLASS-23-277C	c 25	N74-33378 *	US-PATENT-CLASS-235-175	c 08	N71-33110 *
US-PATENT-CLASS-228-193	c 24	N75-28135 *	US-PATENT-CLASS-23-277R	c 44	N77-22607 *	US-PATENT-CLASS-235-176	c 08	N70-34787 *
US-PATENT-CLASS-228-193	c 37	N76-18455 *	US-PATENT-CLASS-23-277	c 26	N70-40015 *	US-PATENT-CLASS-235-181	c 07	N71-21476 *
US-PATENT-CLASS-228-193	c 35	N83-35338 *	US-PATENT-CLASS-23-281	c 28	N72-18766 *	US-PATENT-CLASS-235-181	c 07	N73-13149 *
US-PATENT-CLASS-228-194	c 26	N77-28265 *	US-PATENT-CLASS-23-281	c 25	N74-12813 *	US-PATENT-CLASS-235-181	c 35	N75-21582 *
US-PATENT-CLASS-228-1	c 37	N75-25185 *	US-PATENT-CLASS-23-281	c 44	N76-18642 *	US-PATENT-CLASS-235-181	c 33	N75-26243 *
US-PATENT-CLASS-228-2.5	c 37	N79-13364 *	US-PATENT-CLASS-23-281	c 44	N76-29700 *	US-PATENT-CLASS-235-181	c 43	N77-10584 *
US-PATENT-CLASS-228-2.5	c 37	N88-14359 *	US-PATENT-CLASS-23-281	c 44	N77-10636 *	US-PATENT-CLASS-235-181	c 38	N78-17395 *
US-PATENT-CLASS-228-2.5	c 31	N91-31476 *	US-PATENT-CLASS-23-281	c 44	N77-22607 *	US-PATENT-CLASS-235-183	c 08	N72-22165 *
US-PATENT-CLASS-228-2.5	c 31	N92-16162 *	US-PATENT-CLASS-23-284	c 35	N74-15127 *	US-PATENT-CLASS-235-184	c 74	N76-18913 *
US-PATENT-CLASS-228-205	c 37	N81-19455 *	US-PATENT-CLASS-23-288F	c 25	N74-12813 *	US-PATENT-CLASS-235-186	c 10	N73-26230 *
US-PATENT-CLASS-228-206	c 37	N76-18455 *	US-PATENT-CLASS-23-288J	c 25	N74-12813 *	US-PATENT-CLASS-235-194	c 09	N71-19480 *
US-PATENT-CLASS-228-208	c 37	N87-21334 *	US-PATENT-CLASS-23-288R	c 28	N80-10374 *	US-PATENT-CLASS-235-194	c 08	N72-22165 *
US-PATENT-CLASS-228-209	c 37	N87-21334 *	US-PATENT-CLASS-23-288	c 28	N72-18766 *	US-PATENT-CLASS-235-194	c 10	N73-26230 *
US-PATENT-CLASS-228-212	c 37	N80-23655 *	US-PATENT-CLASS-23-292	c 51	N77-27677 *	US-PATENT-CLASS-235-197	c 08	N72-22165 *
US-PATENT-CLASS-228-212	c 24	N84-11214 *	US-PATENT-CLASS-23-293R	c 28	N81-15119 *	US-PATENT-CLASS-235-197	c 09	N72-23173 *
US-PATENT-CLASS-228-214	c 37	N76-18455 *	US-PATENT-CLASS-23-295R	c 76	N85-29800 *	US-PATENT-CLASS-235-197	c 10	N73-20253 *
US-PATENT-CLASS-228-222	c 37	N80-23655 *	US-PATENT-CLASS-23-295R	c 76	N93-14707 *	US-PATENT-CLASS-235-197	c 10	N73-26230 *
US-PATENT-CLASS-228-232	c 26	N77-28265 *	US-PATENT-CLASS-23-300	c 28	N80-23471 *	US-PATENT-CLASS-235-197	c 60	N75-13539 *
US-PATENT-CLASS-228-238	c 37	N76-18455 *	US-PATENT-CLASS-23-300	c 76	N93-14707 *	US-PATENT-CLASS-235-201	c 10	N71-25899 *
US-PATENT-CLASS-228-263.18	c 35	N83-35338 *	US-PATENT-CLASS-23-302A	c 28	N80-23471 *	US-PATENT-CLASS-235-61.6	c 01	N71-13111 *
US-PATENT-CLASS-228-263	c 26	N77-29260 *	US-PATENT-CLASS-23-302R	c 28	N80-23471 *	US-PATENT-CLASS-235-61.6	c 15	N71-21479 *
US-PATENT-CLASS-228-44.1R	c 37	N80-23655 *	US-PATENT-CLASS-23-302T	c 28	N80-23471 *	US-PATENT-CLASS-235-61NV	c 08	N72-11172 *
US-PATENT-CLASS-228-51	c 44	N79-24431 *	US-PATENT-CLASS-23-313R	c 71	N85-22104 *	US-PATENT-CLASS-235-61NV	c 35	N76-29552 *
US-PATENT-CLASS-228-50	c 15	N70-39924 *	US-PATENT-CLASS-23-55	c 06	N72-17093 *	US-PATENT-CLASS-235-70	c 04	N78-17031 *
US-PATENT-CLASS-228-50	c 15	N70-40204 *	US-PATENT-CLASS-23-88	c 06	N72-17093 *	US-PATENT-CLASS-235-78M	c 35	N76-29552 *
US-PATENT-CLASS-228-53	c 15	N71-27214 *	US-PATENT-CLASS-23-927	c 51	N80-16714 *	US-PATENT-CLASS-235-88M	c 35	N76-29552 *
US-PATENT-CLASS-228-57	c 15	N72-22491 *	US-PATENT-CLASS-23-97	c 06	N72-17093 *	US-PATENT-CLASS-235-92CA	c 33	N74-10223 *
US-PATENT-CLASS-228-6	c 44	N79-24431 *	US-PATENT-CLASS-230-162	c 33	N71-17610 *	US-PATENT-CLASS-235-92CA	c 38	N77-17495 *
US-PATENT-CLASS-228-7	c 15	N71-15607 *	US-PATENT-CLASS-230-221	c 11	N72-22245 *	US-PATENT-CLASS-235-92CC	c 08	N72-20176 *
US-PATENT-CLASS-228-8	c 15	N71-23050 *	US-PATENT-CLASS-230-54	c 11	N72-22245 *	US-PATENT-CLASS-235-92CT	c 38	N77-17495 *
US-PATENT-CLASS-228-8	c 37	N79-10421 *	US-PATENT-CLASS-233-DIG.1	c 34	N75-26282 *	US-PATENT-CLASS-235-92CV	c 08	N73-25206 *
US-PATENT-CLASS-228-9	c 15	N71-20393 *	US-PATENT-CLASS-233-11	c 15	N71-16079 *	US-PATENT-CLASS-235-92DE	c 08	N72-20176 *
US-PATENT-CLASS-229-DIG.11	c 32	N73-13921 *	US-PATENT-CLASS-233-20RP	c 34	N75-26282 *	US-PATENT-CLASS-235-92DM	c 08	N72-20176 *
US-PATENT-CLASS-23-109	c 04	N72-33072 *	US-PATENT-CLASS-233-25	c 34	N75-26282 *	US-PATENT-CLASS-235-92DM	c 33	N74-10223 *
US-PATENT-CLASS-23-201	c 06	N72-17095 *	US-PATENT-CLASS-233-46	c 34	N75-26282 *	US-PATENT-CLASS-235-92DM	c 33	N75-19519 *
US-PATENT-CLASS-23-208	c 15	N69-21922 #	US-PATENT-CLASS-233-6	c 34	N75-26282 *	US-PATENT-CLASS-235-92DN	c 08	N73-25206 *
US-PATENT-CLASS-23-208	c 26	N70-36805 *	US-PATENT-CLASS-235.150.27	c 04	N74-13420 *	US-PATENT-CLASS-235-92DN	c 38	N77-17495 *
US-PATENT-CLASS-23-209.1	c 15	N72-20446 *	US-PATENT-CLASS-235-10.2	c 08	N73-25206 *	US-PATENT-CLASS-235-92EA	c 08	N73-25206 *
US-PATENT-CLASS-23-230B	c 25	N75-14844 *	US-PATENT-CLASS-235-150.1	c 08	N71-29033 *	US-PATENT-CLASS-235-92EV	c 08	N73-25206 *
US-PATENT-CLASS-23-230B	c 23	N77-17161 *	US-PATENT-CLASS-235-150.1	c 08	N72-31226 *	US-PATENT-CLASS-235-92FQ	c 08	N73-20217 *
US-PATENT-CLASS-23-230B	c 25	N79-14169 *	US-PATENT-CLASS-235-150.1	c 32	N77-10392 *	US-PATENT-CLASS-235-92LG	c 08	N72-20176 *
US-PATENT-CLASS-23-230B	c 51	N80-27067 *	US-PATENT-CLASS-235-150.22	c 02	N71-13421 *	US-PATENT-CLASS-235-92LG	c 33	N75-19519 *
US-PATENT-CLASS-23-230L	c 35	N74-32879 *	US-PATENT-CLASS-235-150.22	c 04	N74-13420 *	US-PATENT-CLASS-235-92MT	c 08	N72-31226 *
US-PATENT-CLASS-23-230M	c 25	N76-18245 *	US-PATENT-CLASS-235-150.25	c 21	N71-21688 *	US-PATENT-CLASS-235-92MT	c 32	N72-21688 *
US-PATENT-CLASS-23-230M	c 23	N77-17161 *	US-PATENT-CLASS-235-150.25	c 35	N77-20399 *	US-PATENT-CLASS-235-92PC	c 35	N82-11431 *
US-PATENT-CLASS-23-230PC	c 25	N78-15210 *	US-PATENT-CLASS-235-150.26	c 04	N74-13420 *	US-PATENT-CLASS-235-92PE	c 37	N74-21056 *
US-PATENT-CLASS-23-230PC	c 25	N82-12166 *	US-PATENT-CLASS-235-150.27	c 08	N71-29033 *	US-PATENT-CLASS-235-92R	c 08	N72-20176 *
US-PATENT-CLASS-23-230R	c 06	N72-17094 *	US-PATENT-CLASS-235-150.2	c 08	N71-29033 *	US-PATENT-CLASS-235-92R	c 08	N73-20217 *
US-PATENT-CLASS-23-230R	c 17	N73-12547 *	US-PATENT-CLASS-235-150.2	c 35	N77-20399 *	US-PATENT-CLASS-235-92R	c 08	N73-25206 *
US-PATENT-CLASS-23-230R	c 17	N73-27446 *	US-PATENT-CLASS-235-150.3	c 33	N74-10223 *	US-PATENT-CLASS-235-92R	c 33	N75-19519 *
US-PATENT-CLASS-23-230R	c 25	N76-18245 *	US-PATENT-CLASS-235-150.52	c 08	N72-22165 *	US-PATENT-CLASS-235-92R	c 38	N77-17495 *
US-PATENT-CLASS-23-230R	c 45	N76-31714 *	US-PATENT-CLASS-235-150.53	c 08	N72-22165 *	US-PATENT-CLASS-235-92SB	c 37	N74-21056 *
US-PATENT-CLASS-23-230R	c 23	N77-17161 *	US-PATENT-CLASS-235-150.53	c 07	N73-13149 *	US-PATENT-CLASS-235-92SH	c 33	N76-14373 *
US-PATENT-CLASS-23-230	c 06	N71-23527 *	US-PATENT-CLASS-235-150.53	c 33	N75-26243 *	US-PATENT-CLASS-235-92T	c 03	N72-25020 *
US-PATENT-CLASS-23-230	c 06	N72-17095 *	US-PATENT-CLASS-235-151.13	c 25	N76-18245 *	US-PATENT-CLASS-235-92T	c 08	N73-20217 *
US-PATENT-CLASS-23-231	c 23	N77-17161 *	US-PATENT-CLASS-235-151.1	c 08	N71-29033 *	US-PATENT-CLASS-235-92T	c 33	N75-19519 *
US-PATENT-CLASS-23-232C	c 06	N72-17094 *	US-PATENT-CLASS-235-151.1	c 08	N72-31226 *	US-PATENT-CLASS-235-92VA	c 33	N75-19519 *
US-PATENT-CLASS-23-232C	c 25	N76-18245 *	US-PATENT-CLASS-235-151.27	c 08	N73-25206 *	US-PATENT-CLASS-235-92	c 08	N71-22897 *
US-PATENT-CLASS-23-232C	c 23	N77-17161 *	US-PATENT-CLASS-235-151.31	c 10	N73-25240 *	US-PATENT-CLASS-235-92	c 08	N71-24891 *
US-PATENT-CLASS-23-232E	c 06	N73-16106 *	US-PATENT-CLASS-235-151.34	c 35	N76-14431 *	US-PATENT-CLASS-235-92	c 10	N71-27137 *
US-PATENT-CLASS-23-232E	c 45	N76-31714 *	US-PATENT-CLASS-235-151.3	c 52	N74-22771 *	US-PATENT-CLASS-235-92	c 14	N71-27215 *
US-PATENT-CLASS-23-232E	c 25	N78-15210 *	US-PATENT-CLASS-235-151.3	c 38	N78-17395 *	US-PATENT-CLASS-236-1F	c 35	N81-26431 *
US-PATENT-CLASS-23-232E	c 25	N82-12166 *	US-PATENT-CLASS-235-151.3	c 38	N78-17396 *	US-PATENT-CLASS-236-13	c 31	N80-32583 *
US-PATENT-CLASS-23-232R	c 06	N73-16106 *	US-PATENT-CLASS-235-151	c 37	N74-21056 *	US-PATENT-CLASS-236-15-E	c 25	N88-29002 *

## REPORT NUMBER INDEX

## US-PATENT-CLASS-244-158A

US-PATENT-CLASS-236-1	c 33	N71-16357 *	US-PATENT-CLASS-24-214	c 31	N83-31895 *	US-PATENT-CLASS-244-119	c 24	N82-24296 *
US-PATENT-CLASS-236-44A	c 35	N91-21496 *	US-PATENT-CLASS-24-263	c 15	N71-21076 *	US-PATENT-CLASS-244-119	c 24	N82-26384 *
US-PATENT-CLASS-236-44C	c 31	N80-32583 *	US-PATENT-CLASS-24-263	c 15	N71-26162 *	US-PATENT-CLASS-244-119	c 24	N84-11214 *
US-PATENT-CLASS-236-49	c 31	N74-27902 *	US-PATENT-CLASS-24-304	c 27	N85-20125 *	US-PATENT-CLASS-244-119	c 05	N88-23765 *
US-PATENT-CLASS-236-49	c 31	N80-32583 *	US-PATENT-CLASS-24-447	c 27	N85-20125 *	US-PATENT-CLASS-244-12.3	c 05	N88-28914 *
US-PATENT-CLASS-236-68	c 15	N72-12409 *	US-PATENT-CLASS-24-450	c 27	N85-20125 *	US-PATENT-CLASS-244-12.4	c 05	N88-28914 *
US-PATENT-CLASS-236-94	c 35	N91-21496 *	US-PATENT-CLASS-24-560	c 52	N84-28388 *	US-PATENT-CLASS-244-12.5	c 08	N81-19130 *
US-PATENT-CLASS-237-1A	c 44	N76-14602 *	US-PATENT-CLASS-24-635	c 37	N90-17154 *	US-PATENT-CLASS-244-120	c 05	N88-23765 *
US-PATENT-CLASS-237-1A	c 44	N78-10554 *	US-PATENT-CLASS-24-688	c 54	N89-29953 *	US-PATENT-CLASS-244-120	c 05	N91-31140 *
US-PATENT-CLASS-237-1A	c 44	N78-15560 *	US-PATENT-CLASS-24-693	c 27	N85-20125 *	US-PATENT-CLASS-244-121	c 27	N79-12221 *
US-PATENT-CLASS-237-1A	c 44	N78-17460 *	US-PATENT-CLASS-240-1.2	c 11	N70-33329 *	US-PATENT-CLASS-244-121	c 24	N79-25142 *
US-PATENT-CLASS-237-1A	c 44	N78-31525 *	US-PATENT-CLASS-240-11.2	c 09	N71-26787 *	US-PATENT-CLASS-244-121	c 15	N79-26100 *
US-PATENT-CLASS-237-1A	c 44	N79-24433 *	US-PATENT-CLASS-240-11.4	c 09	N71-26787 *	US-PATENT-CLASS-244-121	c 27	N82-24339 *
US-PATENT-CLASS-237-60	c 34	N76-17317 *	US-PATENT-CLASS-240-41.35R	c 74	N77-21941 *	US-PATENT-CLASS-244-121	c 27	N82-29456 *
US-PATENT-CLASS-238-134	c 85	N74-34672 *	US-PATENT-CLASS-240-41B	c 36	N75-27364 *	US-PATENT-CLASS-244-121	c 37	N87-17036 *
US-PATENT-CLASS-238-1	c 05	N71-28619 *	US-PATENT-CLASS-240-41R	c 74	N77-21941 *	US-PATENT-CLASS-244-121	c 16	N92-16007 *
US-PATENT-CLASS-239-DIG.23	c 37	N85-29283 *	US-PATENT-CLASS-240-46.13	c 74	N77-21941 *	US-PATENT-CLASS-244-121	c 27	N93-29088 *
US-PATENT-CLASS-239-102	c 37	N80-10494 *	US-PATENT-CLASS-240-47	c 34	N74-23066 *	US-PATENT-CLASS-244-122AD	c 03	N91-15142 *
US-PATENT-CLASS-239-127.1	c 28	N71-23968 *	US-PATENT-CLASS-240-51.11	c 09	N71-26787 *	US-PATENT-CLASS-244-122	c 05	N71-20718 *
US-PATENT-CLASS-239-127.1	c 28	N73-32606 *	US-PATENT-CLASS-241-95	c 37	N84-16561 *	US-PATENT-CLASS-244-123	c 24	N77-28225 *
US-PATENT-CLASS-239-127.1	c 34	N79-13288 *	US-PATENT-CLASS-242-107	c 33	N86-20669 *	US-PATENT-CLASS-244-123	c 24	N82-24296 *
US-PATENT-CLASS-239-127.1	c 34	N79-13289 *	US-PATENT-CLASS-242-128	c 15	N82-24272 *	US-PATENT-CLASS-244-123	c 24	N82-26384 *
US-PATENT-CLASS-239-127.1	c 34	N80-24573 *	US-PATENT-CLASS-242-187	c 37	N77-14479 *	US-PATENT-CLASS-244-123	c 24	N84-11214 *
US-PATENT-CLASS-239-127.1	c 44	N81-24519 *	US-PATENT-CLASS-242-192	c 14	N71-23698 *	US-PATENT-CLASS-244-127	c 34	N74-23039 *
US-PATENT-CLASS-239-127.1	c 37	N92-16318 *	US-PATENT-CLASS-242-193	c 37	N77-14479 *	US-PATENT-CLASS-244-129.4	c 16	N92-16007 *
US-PATENT-CLASS-239-127.3	c 20	N76-14191 *	US-PATENT-CLASS-242-204	c 37	N77-14479 *	US-PATENT-CLASS-244-129.5	c 18	N90-19278 *
US-PATENT-CLASS-239-127.3	c 07	N80-32392 *	US-PATENT-CLASS-242-210	c 37	N77-14479 *	US-PATENT-CLASS-244-12	c 02	N70-33332 *
US-PATENT-CLASS-239-127.3	c 37	N92-16318 *	US-PATENT-CLASS-242-54-R	c 33	N86-20669 *	US-PATENT-CLASS-244-130	c 02	N77-10001 *
US-PATENT-CLASS-239-132.5	c 20	N87-14420 *	US-PATENT-CLASS-242-54	c 15	N72-18477 *	US-PATENT-CLASS-244-130	c 02	N81-14968 *
US-PATENT-CLASS-239-14.1	c 09	N89-25242 *	US-PATENT-CLASS-242-55.19	c 14	N70-16467 *	US-PATENT-CLASS-244-130	c 37	N81-24443 *
US-PATENT-CLASS-239-145	c 31	N90-23587 *	US-PATENT-CLASS-242-55.19	c 07	N71-10609 *	US-PATENT-CLASS-244-130	c 02	N87-16793 *
US-PATENT-CLASS-239-171	c 37	N77-13418 *	US-PATENT-CLASS-242-57	c 37	N77-14479 *	US-PATENT-CLASS-244-130	c 07	N87-16828 *
US-PATENT-CLASS-239-2.1	c 09	N89-25242 *	US-PATENT-CLASS-244-12.2	c 05	N82-26277 *	US-PATENT-CLASS-244-130	c 02	N88-14071 *
US-PATENT-CLASS-239-265.11	c 18	N71-21068 *	US-PATENT-CLASS-244-1SS	c 03	N72-20031 *	US-PATENT-CLASS-244-130	c 05	N88-23765 *
US-PATENT-CLASS-239-265.11	c 07	N74-33218 *	US-PATENT-CLASS-244-1.55	c 03	N73-20040 *	US-PATENT-CLASS-244-130	c 05	N90-20078 *
US-PATENT-CLASS-239-265.11	c 07	N76-18117 *	US-PATENT-CLASS-244-1R	c 06	N87-22678 *	US-PATENT-CLASS-244-130	c 05	N90-20079 *
US-PATENT-CLASS-239-265.11	c 37	N90-23751 *	US-PATENT-CLASS-244-1A	c 33	N77-10429 *	US-PATENT-CLASS-244-130	c 34	N91-14562 *
US-PATENT-CLASS-239-265.11	c 37	N91-27560 *	US-PATENT-CLASS-244-1R	c 34	N79-31525 *	US-PATENT-CLASS-244-130	c 05	N91-27156 *
US-PATENT-CLASS-239-265.11	c 37	N92-22043 *	US-PATENT-CLASS-244-1R	c 35	N90-22204 *	US-PATENT-CLASS-244-132	c 24	N82-26384 *
US-PATENT-CLASS-239-265.15	c 37	N79-22474 *	US-PATENT-CLASS-244-1SA	c 21	N72-21624 *	US-PATENT-CLASS-244-132	c 24	N82-32417 *
US-PATENT-CLASS-239-265.17	c 07	N74-27490 *	US-PATENT-CLASS-244-1SA	c 21	N72-25595 *	US-PATENT-CLASS-244-133	c 31	N90-19427 *
US-PATENT-CLASS-239-265.17	c 07	N83-33884 *	US-PATENT-CLASS-244-1SA	c 03	N73-20039 *	US-PATENT-CLASS-244-133	c 33	N86-20671 *
US-PATENT-CLASS-239-265.17	c 71	N84-14873 *	US-PATENT-CLASS-244-1SA	c 15	N73-25513 *	US-PATENT-CLASS-244-134-D	c 33	N87-28833 *
US-PATENT-CLASS-239-265.17	c 20	N89-25279 *	US-PATENT-CLASS-244-1SA	c 21	N73-30640 *	US-PATENT-CLASS-244-134-F	c 35	N88-29149 *
US-PATENT-CLASS-239-265.19	c 28	N71-21493 *	US-PATENT-CLASS-244-1SA	c 19	N74-15089 *	US-PATENT-CLASS-244-135R	c 34	N76-17317 *
US-PATENT-CLASS-239-265.19	c 28	N72-11708 *	US-PATENT-CLASS-244-1SA	c 35	N74-28097 *	US-PATENT-CLASS-244-135R	c 20	N80-10278 *
US-PATENT-CLASS-239-265.25	c 07	N78-27121 *	US-PATENT-CLASS-244-1SB	c 15	N73-12486 *	US-PATENT-CLASS-244-135	c 31	N70-42015 *
US-PATENT-CLASS-239-265.25	c 09	N78-31129 *	US-PATENT-CLASS-244-1SC	c 31	N73-32750 *	US-PATENT-CLASS-244-135	c 15	N73-12486 *
US-PATENT-CLASS-239-265.33	c 07	N78-27121 *	US-PATENT-CLASS-244-1SC	c 34	N75-12222 *	US-PATENT-CLASS-244-135	c 14	N73-27378 *
US-PATENT-CLASS-239-265.33	c 07	N80-32392 *	US-PATENT-CLASS-244-1SD	c 31	N73-26876 *	US-PATENT-CLASS-244-137.2	c 18	N91-14374 *
US-PATENT-CLASS-239-265.39	c 07	N79-14097 *	US-PATENT-CLASS-244-1SD	c 37	N74-27903 *	US-PATENT-CLASS-244-137.2	c 03	N91-15142 *
US-PATENT-CLASS-239-265.43	c 28	N71-16224 *	US-PATENT-CLASS-244-1SD	c 15	N77-10112 *	US-PATENT-CLASS-244-137.2	c 03	N91-31113 *
US-PATENT-CLASS-239-265.43	c 28	N72-11708 *	US-PATENT-CLASS-244-1SS	c 11	N73-13257 *	US-PATENT-CLASS-244-137.4	c 05	N90-20079 *
US-PATENT-CLASS-239-288	c 37	N79-22474 *	US-PATENT-CLASS-244-1SS	c 03	N73-20039 *	US-PATENT-CLASS-244-137.4	c 05	N91-27156 *
US-PATENT-CLASS-239-288	c 37	N85-29283 *	US-PATENT-CLASS-244-1SS	c 14	N73-27378 *	US-PATENT-CLASS-244-137-A	c 05	N87-14314 *
US-PATENT-CLASS-239-302	c 37	N80-10494 *	US-PATENT-CLASS-244-1SS	c 31	N73-30829 *	US-PATENT-CLASS-244-137P	c 31	N73-26876 *
US-PATENT-CLASS-239-322	c 37	N85-29283 *	US-PATENT-CLASS-244-1SS	c 31	N73-32750 *	US-PATENT-CLASS-244-137P	c 37	N76-22540 *
US-PATENT-CLASS-239-327	c 37	N85-29283 *	US-PATENT-CLASS-244-1SS	c 33	N73-32818 *	US-PATENT-CLASS-244-137P	c 01	N83-35992 *
US-PATENT-CLASS-239-375	c 37	N85-29283 *	US-PATENT-CLASS-244-1SS	c 18	N74-22136 *	US-PATENT-CLASS-244-137R	c 08	N82-32373 *
US-PATENT-CLASS-239-402.5	c 07	N85-35195 *	US-PATENT-CLASS-244-1SS	c 18	N74-27397 *	US-PATENT-CLASS-244-138A	c 35	N90-22769 *
US-PATENT-CLASS-239-403	c 20	N87-14420 *	US-PATENT-CLASS-244-1SS	c 73	N75-30876 *	US-PATENT-CLASS-244-138	c 01	N69-39981 *
US-PATENT-CLASS-239-416	c 15	N69-23185 *	US-PATENT-CLASS-244-100	c 15	N70-34850 *	US-PATENT-CLASS-244-138	c 02	N70-41630 *
US-PATENT-CLASS-239-416	c 15	N71-17654 *	US-PATENT-CLASS-244-100	c 31	N70-36654 *	US-PATENT-CLASS-244-138	c 31	N71-16085 *
US-PATENT-CLASS-239-418	c 28	N72-23809 *	US-PATENT-CLASS-244-100	c 31	N70-36845 *	US-PATENT-CLASS-244-138	c 31	N71-25434 *
US-PATENT-CLASS-239-424	c 15	N72-25455 *	US-PATENT-CLASS-244-100	c 02	N70-41589 *	US-PATENT-CLASS-244-138	c 31	N71-26851 *
US-PATENT-CLASS-239-425	c 20	N87-14420 *	US-PATENT-CLASS-244-103R	c 37	N81-24443 *	US-PATENT-CLASS-244-139	c 31	N73-13898 *
US-PATENT-CLASS-239-426	c 34	N84-12406 *	US-PATENT-CLASS-244-103	c 02	N70-36825 *	US-PATENT-CLASS-244-139	c 02	N76-16014 *
US-PATENT-CLASS-239-426	c 34	N87-21255 *	US-PATENT-CLASS-244-110B	c 07	N82-26293 *	US-PATENT-CLASS-244-139	c 05	N85-21147 *
US-PATENT-CLASS-239-433	c 28	N72-23809 *	US-PATENT-CLASS-244-110C	c 37	N82-18601 *	US-PATENT-CLASS-244-139	c 08	N85-35200 *
US-PATENT-CLASS-239-433	c 37	N87-24689 *	US-PATENT-CLASS-244-113	c 02	N70-37939 *	US-PATENT-CLASS-244-139	c 02	N91-27139 *
US-PATENT-CLASS-239-434	c 34	N87-21255 *	US-PATENT-CLASS-244-113	c 31	N71-25434 *	US-PATENT-CLASS-244-13	c 01	N71-23497 *
US-PATENT-CLASS-239-499	c 34	N82-13376 *	US-PATENT-CLASS-244-113	c 02	N77-10001 *	US-PATENT-CLASS-244-13	c 02	N73-26005 *
US-PATENT-CLASS-239-533.13	c 34	N92-21724 *	US-PATENT-CLASS-244-113	c 37	N82-16408 *	US-PATENT-CLASS-244-13	c 05	N75-25914 *
US-PATENT-CLASS-239-543	c 28	N72-23809 *	US-PATENT-CLASS-244-113	c 08	N85-35200 *	US-PATENT-CLASS-244-13	c 05	N84-12154 *
US-PATENT-CLASS-239-543	c 31	N90-20254 *	US-PATENT-CLASS-244-114R	c 02	N91-27139 *	US-PATENT-CLASS-244-140	c 02	N70-38009 *
US-PATENT-CLASS-239-543	c 34	N92-21724 *	US-PATENT-CLASS-244-114	c 04	N82-16059 *	US-PATENT-CLASS-244-145	c 02	N74-10034 *
US-PATENT-CLASS-239-545	c 34	N87-21255 *	US-PATENT-CLASS-244-115	c 21	N72-22619 *	US-PATENT-CLASS-244-147	c 05	N85-21147 *
US-PATENT-CLASS-239-546	c 34	N92-21724 *	US-PATENT-CLASS-244-115	c 18	N83-29303 *	US-PATENT-CLASS-244-14	c 14	N70-33322 *
US-PATENT-CLASS-239-552	c 34	N92-21724 *	US-PATENT-CLASS-244-117-A	c 24	N88-18628 *	US-PATENT-CLASS-244-14	c 18	N91-21222 *
US-PATENT-CLASS-239-562	c 43	N81-26509 *	US-PATENT-CLASS-244-117A	c 33	N73-25952 *	US-PATENT-CLASS-244-15.5	c 31	N72-18859 *
US-PATENT-CLASS-239-568	c 37	N84-16561 *	US-PATENT-CLASS-244-117A	c 34	N76-17317 *	US-PATENT-CLASS-244-150	c 15	N71-24600 *
US-PATENT-CLASS-239-589	c 34	N82-13376 *	US-PATENT-CLASS-244-117A	c 37	N76-19437 *	US-PATENT-CLASS-244-151R	c 33	N74-22865 *
US-PATENT-CLASS-239-590	c 37	N85-29283 *	US-PATENT-CLASS-244-117A	c 34	N77-18382 *	US-PATENT-CLASS-244-152	c 02	N70-36804 *
US-PATENT-CLASS-239-591	c 43	N81-26509 *	US-PATENT-CLASS-244-117A	c 05	N81-26114 *	US-PATENT-CLASS-244-155	c 30	N73-12884 *
US-PATENT-CLASS-239-596	c 37	N87-24689 *	US-PATENT-CLASS-244-117A	c 27	N84-27886 *	US-PATENT-CLASS-244-155	c 31	N73-14854 *
US-PATENT-CLASS-239-597	c 31	N91-15424 *	US-PATENT-CLASS-244-117	c 31	N70-33242 *	US-PATENT-CLASS-244-158R	c 20	N86-26368 *
US-PATENT-CLASS-239-600	c 37	N87-24689 *	US-PATENT-CLASS-244-117	c 33	N72-17947 *	US-PATENT-CLASS-244-158-A	c 37	N85-30335 *
US-PATENT-CLASS-239-601	c 34	N82-13376 *	US-PATENT-CLASS-244-118.1	c 08	N82-32373 *	US-PATENT-CLASS-244-158-A	c 05	N86-19310 *
US-PATENT-CLASS-239-601	c 31	N91-15424 *	US-PATENT-CLASS-244-118.1	c 18	N85-29991 *	US-PATENT-CLASS-244-158-A	c 24	N88-18828 *
US-PATENT-CLASS-239-602	c 34	N92-21724 *	US-PATENT-CLASS-244-118.1	c 37	N85-34401 *	US-PATENT-CLASS-244-158-R	c 05	N86-19310 *
US-PATENT-CLASS-239-690	c 28	N82-18401 *	US-PATENT-CLASS-244-118.1	c 05	N87-14314 *	US-PATENT-CLASS-244-158-R	c 18	N86-20469 *
US-PATENT-CLASS-24-126	c 15	N71-22994 *	US-PATENT-CLASS-244-118.1	c 05	N91-27156 *	US-PATENT-CLASS-244-158A	c 27	N82-24339 *
US-PATENT-CLASS-24-134R	c 15	N73-25512 *	US-PATENT-CLASS-244-118.1	c 16	N93-20115 *	US-PATENT-CLASS-244-158A	c 27	N82-29456 *
US-PATENT-CLASS-24-205.17	c 15	N71-25975 *	US-PATENT-CLASS-244-118.2	c 16	N93-20115 *	US-PATENT-CLASS-244-158A	c 24	N82-32417 *
US-PATENT-CLASS-24-211N	c 15	N72-11385 *	US-PATENT-CLASS-244-118.5	c 54	N93-14713 *	US-PATENT-CLASS-244-158A	c 24	N83-13172 *
US-PATENT-CLASS-24-211	c 15	N71-17653 *	US-PATENT-CLASS-244-119	c 02	N81-14968 *	US-PATENT-CLASS-244-158A	c 16	N84-22601 *

## US-PATENT-CLASS-244-158A

## REPORT NUMBER INDEX

US-PATENT-CLASS-244-158A	c 27	N84-27886 *	US-PATENT-CLASS-244-171	c 15	N77-10113 *	US-PATENT-CLASS-244-204	c 74	N93-22037 *
US-PATENT-CLASS-244-158A	c 24	N90-23480 *	US-PATENT-CLASS-244-171	c 35	N77-20399 *	US-PATENT-CLASS-244-207	c 05	N88-28914 *
US-PATENT-CLASS-244-158R	c 31	N81-25258 *	US-PATENT-CLASS-244-172	c 18	N76-17185 *	US-PATENT-CLASS-244-212	c 05	N84-22551 *
US-PATENT-CLASS-244-158R	c 16	N84-27784 *	US-PATENT-CLASS-244-172	c 16	N84-27784 *	US-PATENT-CLASS-244-212	c 05	N92-21587 *
US-PATENT-CLASS-244-158R	c 18	N85-29991 *	US-PATENT-CLASS-244-172	c 18	N84-27787 *	US-PATENT-CLASS-244-213	c 08	N82-24205 *
US-PATENT-CLASS-244-158R	c 37	N85-34401 *	US-PATENT-CLASS-244-172	c 05	N86-19310 *	US-PATENT-CLASS-244-214	c 08	N85-19985 *
US-PATENT-CLASS-244-158R	c 37	N87-17036 *	US-PATENT-CLASS-244-172	c 16	N90-22584 *	US-PATENT-CLASS-244-215	c 05	N84-22551 *
US-PATENT-CLASS-244-158R	c 18	N90-19278 *	US-PATENT-CLASS-244-172	c 18	N92-33013 *	US-PATENT-CLASS-244-215	c 05	N92-21587 *
US-PATENT-CLASS-244-158R	c 16	N90-22584 *	US-PATENT-CLASS-244-172	c 16	N93-20115 *	US-PATENT-CLASS-244-216	c 05	N84-22551 *
US-PATENT-CLASS-244-158R	c 18	N91-21222 *	US-PATENT-CLASS-244-173	c 44	N75-32581 *	US-PATENT-CLASS-244-217	c 37	N82-16408 *
US-PATENT-CLASS-244-158R	c 18	N92-15114 *	US-PATENT-CLASS-244-173	c 37	N81-15364 *	US-PATENT-CLASS-244-218	c 05	N78-32086 *
US-PATENT-CLASS-244-158R	c 16	N92-16007 *	US-PATENT-CLASS-244-173	c 07	N83-20944 *	US-PATENT-CLASS-244-218	c 08	N79-14108 *
US-PATENT-CLASS-244-158R	c 35	N92-33010 *	US-PATENT-CLASS-244-173	c 37	N86-25789 *	US-PATENT-CLASS-244-219	c 05	N84-22551 *
US-PATENT-CLASS-244-158R	c 18	N92-33013 *	US-PATENT-CLASS-244-175	c 04	N82-23231 *	US-PATENT-CLASS-244-226	c 08	N82-24205 *
US-PATENT-CLASS-244-158R	c 54	N93-14713 *	US-PATENT-CLASS-244-181	c 08	N81-24106 *	US-PATENT-CLASS-244-23A	c 21	N72-25595 *
US-PATENT-CLASS-244-158R	c 27	N93-29088 *	US-PATENT-CLASS-244-181	c 08	N81-26152 *	US-PATENT-CLASS-244-23C	c 05	N82-26277 *
US-PATENT-CLASS-244-158	c 37	N76-22540 *	US-PATENT-CLASS-244-181	c 06	N86-27280 *	US-PATENT-CLASS-244-23D	c 34	N76-18364 *
US-PATENT-CLASS-244-158	c 27	N79-12221 *	US-PATENT-CLASS-244-182	c 08	N81-26152 *	US-PATENT-CLASS-244-23A	c 08	N86-27288 *
US-PATENT-CLASS-244-159	c 18	N79-11108 *	US-PATENT-CLASS-244-190	c 04	N82-23231 *	US-PATENT-CLASS-244-23	c 02	N71-11039 *
US-PATENT-CLASS-244-159	c 07	N83-20944 *	US-PATENT-CLASS-244-194	c 60	N82-29013 *	US-PATENT-CLASS-244-2	c 14	N81-26161 *
US-PATENT-CLASS-244-159	c 31	N83-31895 *	US-PATENT-CLASS-244-195	c 08	N79-23097 *	US-PATENT-CLASS-244-2	c 18	N84-27787 *
US-PATENT-CLASS-244-159	c 18	N86-24729 *	US-PATENT-CLASS-244-195	c 08	N81-24106 *	US-PATENT-CLASS-244-3.14	c 31	N71-17691 *
US-PATENT-CLASS-244-159	c 37	N86-25789 *	US-PATENT-CLASS-244-198	c 05	N92-21587 *	US-PATENT-CLASS-244-3.16	c 19	N74-15089 *
US-PATENT-CLASS-244-159	c 18	N88-26398 *	US-PATENT-CLASS-244-199	c 07	N85-35194 *	US-PATENT-CLASS-244-3.21	c 30	N72-17873 *
US-PATENT-CLASS-244-159	c 18	N89-25266 *	US-PATENT-CLASS-244-199	c 02	N88-14071 *	US-PATENT-CLASS-244-3.21	c 15	N76-14158 *
US-PATENT-CLASS-244-159	c 18	N89-28553 *	US-PATENT-CLASS-244-199	c 05	N91-14345 *	US-PATENT-CLASS-244-3.21	c 15	N77-10113 *
US-PATENT-CLASS-244-159	c 18	N90-16860 *	US-PATENT-CLASS-244-199	c 05	N91-31140 *	US-PATENT-CLASS-244-3.21	c 35	N77-20399 *
US-PATENT-CLASS-244-159	c 18	N90-20126 *	US-PATENT-CLASS-244-1	c 31	N69-27499 * #	US-PATENT-CLASS-244-3.22	c 31	N71-17629 *
US-PATENT-CLASS-244-159	c 18	N91-27201 *	US-PATENT-CLASS-244-1	c 03	N70-33343 *	US-PATENT-CLASS-244-3.22	c 28	N72-22769 *
US-PATENT-CLASS-244-159	c 54	N91-31803 *	US-PATENT-CLASS-244-1	c 33	N70-33344 *	US-PATENT-CLASS-244-3.22	c 20	N76-21275 *
US-PATENT-CLASS-244-15	c 05	N75-25914 *	US-PATENT-CLASS-244-1	c 03	N70-34157 *	US-PATENT-CLASS-244-31	c 02	N71-11037 *
US-PATENT-CLASS-244-15	c 05	N88-23765 *	US-PATENT-CLASS-244-1	c 31	N70-34176 *	US-PATENT-CLASS-244-31	c 31	N71-16081 *
US-PATENT-CLASS-244-160	c 27	N79-12221 *	US-PATENT-CLASS-244-1	c 21	N70-34295 *	US-PATENT-CLASS-244-31	c 34	N74-23039 *
US-PATENT-CLASS-244-160	c 43	N81-17499 *	US-PATENT-CLASS-244-1	c 31	N70-34296 *	US-PATENT-CLASS-244-327	c 08	N74-30421 *
US-PATENT-CLASS-244-160	c 14	N81-26161 *	US-PATENT-CLASS-244-1	c 21	N70-35395 *	US-PATENT-CLASS-244-32	c 02	N73-13008 *
US-PATENT-CLASS-244-160	c 27	N82-24339 *	US-PATENT-CLASS-244-1	c 31	N70-36410 *	US-PATENT-CLASS-244-34A	c 05	N82-26277 *
US-PATENT-CLASS-244-160	c 27	N82-29456 *	US-PATENT-CLASS-244-1	c 33	N70-36617 *	US-PATENT-CLASS-244-35-R	c 02	N89-14224 *
US-PATENT-CLASS-244-160	c 16	N90-22584 *	US-PATENT-CLASS-244-1	c 21	N70-36943 *	US-PATENT-CLASS-244-35A	c 02	N84-11136 *
US-PATENT-CLASS-244-160	c 18	N92-21999 *	US-PATENT-CLASS-244-1	c 31	N70-37924 *	US-PATENT-CLASS-244-35R	c 02	N76-22154 *
US-PATENT-CLASS-244-160	c 18	N92-33013 *	US-PATENT-CLASS-244-1	c 31	N70-37938 *	US-PATENT-CLASS-244-35R	c 02	N84-11136 *
US-PATENT-CLASS-244-161	c 18	N76-14186 *	US-PATENT-CLASS-244-1	c 31	N70-37986 *	US-PATENT-CLASS-244-35R	c 02	N84-28732 *
US-PATENT-CLASS-244-161	c 37	N76-22540 *	US-PATENT-CLASS-244-1	c 31	N70-38676 *	US-PATENT-CLASS-244-35R	c 02	N87-16793 *
US-PATENT-CLASS-244-161	c 37	N77-23483 *	US-PATENT-CLASS-244-1	c 30	N70-40016 *	US-PATENT-CLASS-244-35R	c 02	N92-28729 *
US-PATENT-CLASS-244-161	c 15	N78-25119 *	US-PATENT-CLASS-244-1	c 31	N70-41373 *	US-PATENT-CLASS-244-35	c 01	N71-13410 *
US-PATENT-CLASS-244-161	c 37	N80-14398 *	US-PATENT-CLASS-244-1	c 31	N70-41588 *	US-PATENT-CLASS-244-36	c 02	N92-28729 *
US-PATENT-CLASS-244-161	c 37	N81-14320 *	US-PATENT-CLASS-244-1	c 31	N70-41631 *	US-PATENT-CLASS-244-40R	c 02	N76-22154 *
US-PATENT-CLASS-244-161	c 37	N81-27519 *	US-PATENT-CLASS-244-1	c 31	N70-41855 *	US-PATENT-CLASS-244-42CG	c 33	N77-10429 *
US-PATENT-CLASS-244-161	c 18	N83-29303 *	US-PATENT-CLASS-244-1	c 21	N70-41856 *	US-PATENT-CLASS-244-42DA	c 05	N75-25914 *
US-PATENT-CLASS-244-161	c 18	N84-22605 *	US-PATENT-CLASS-244-1	c 31	N70-42075 *	US-PATENT-CLASS-244-42	c 02	N70-42016 *
US-PATENT-CLASS-244-161	c 16	N86-26352 *	US-PATENT-CLASS-244-1	c 03	N71-11058 *	US-PATENT-CLASS-244-42	c 02	N71-26110 *
US-PATENT-CLASS-244-161	c 37	N87-25582 *	US-PATENT-CLASS-244-1	c 33	N71-14035 *	US-PATENT-CLASS-244-43	c 02	N70-33255 *
US-PATENT-CLASS-244-161	c 18	N89-25266 *	US-PATENT-CLASS-244-1	c 21	N71-14132 *	US-PATENT-CLASS-244-43	c 02	N71-11043 *
US-PATENT-CLASS-244-161	c 18	N89-28553 *	US-PATENT-CLASS-244-1	c 21	N71-14159 *	US-PATENT-CLASS-244-44	c 02	N71-11038 *
US-PATENT-CLASS-244-161	c 18	N90-20126 *	US-PATENT-CLASS-244-1	c 21	N71-15583 *	US-PATENT-CLASS-244-45-A	c 05	N88-28914 *
US-PATENT-CLASS-244-161	c 16	N90-22584 *	US-PATENT-CLASS-244-1	c 31	N71-15663 *	US-PATENT-CLASS-244-45A	c 05	N78-32086 *
US-PATENT-CLASS-244-161	c 18	N91-14374 *	US-PATENT-CLASS-244-1	c 31	N71-15674 *	US-PATENT-CLASS-244-45A	c 05	N90-23390 *
US-PATENT-CLASS-244-161	c 37	N92-28727 *	US-PATENT-CLASS-244-1	c 31	N71-15676 *	US-PATENT-CLASS-244-45R	c 05	N84-12154 *
US-PATENT-CLASS-244-161	c 18	N92-28750 *	US-PATENT-CLASS-244-1	c 02	N71-16087 *	US-PATENT-CLASS-244-45	c 02	N71-12243 *
US-PATENT-CLASS-244-161	c 37	N92-33018 *	US-PATENT-CLASS-244-1	c 31	N71-16222 *	US-PATENT-CLASS-244-46	c 02	N70-33266 *
US-PATENT-CLASS-244-162	c 18	N75-19329 *	US-PATENT-CLASS-244-1	c 31	N71-16345 *	US-PATENT-CLASS-244-46	c 02	N70-33286 *
US-PATENT-CLASS-244-162	c 18	N76-17185 *	US-PATENT-CLASS-244-1	c 31	N71-16346 *	US-PATENT-CLASS-244-46	c 02	N70-34178 *
US-PATENT-CLASS-244-162	c 03	N91-15142 *	US-PATENT-CLASS-244-1	c 31	N71-17679 *	US-PATENT-CLASS-244-46	c 02	N70-34858 *
US-PATENT-CLASS-244-162	c 18	N92-21999 *	US-PATENT-CLASS-244-1	c 15	N71-17693 *	US-PATENT-CLASS-244-46	c 31	N70-38010 *
US-PATENT-CLASS-244-163	c 37	N76-19437 *	US-PATENT-CLASS-244-1	c 31	N71-17729 *	US-PATENT-CLASS-244-46	c 02	N70-38011 *
US-PATENT-CLASS-244-163	c 24	N79-25142 *	US-PATENT-CLASS-244-1	c 15	N71-19214 *	US-PATENT-CLASS-244-46	c 02	N71-11041 * #
US-PATENT-CLASS-244-163	c 34	N79-31523 *	US-PATENT-CLASS-244-1	c 03	N71-20273 *	US-PATENT-CLASS-244-46	c 02	N73-26005 *
US-PATENT-CLASS-244-163	c 05	N81-26114 *	US-PATENT-CLASS-244-1	c 31	N71-20396 *	US-PATENT-CLASS-244-46	c 05	N76-29217 *
US-PATENT-CLASS-244-163	c 37	N82-16408 *	US-PATENT-CLASS-244-1	c 31	N71-21064 *	US-PATENT-CLASS-244-46	c 05	N78-32086 *
US-PATENT-CLASS-244-163	c 27	N82-29456 *	US-PATENT-CLASS-244-1	c 14	N71-21082 *	US-PATENT-CLASS-244-46	c 08	N79-14108 *
US-PATENT-CLASS-244-163	c 35	N85-29214 *	US-PATENT-CLASS-244-1	c 21	N71-21078 *	US-PATENT-CLASS-244-46	c 05	N90-23390 *
US-PATENT-CLASS-244-163	c 31	N91-15424 *	US-PATENT-CLASS-244-1	c 31	N71-21881 *	US-PATENT-CLASS-244-48	c 05	N79-12061 *
US-PATENT-CLASS-244-163	c 54	N91-31803 *	US-PATENT-CLASS-244-1	c 33	N71-22792 *	US-PATENT-CLASS-244-48	c 05	N82-28279 *
US-PATENT-CLASS-244-163	c 18	N92-21999 *	US-PATENT-CLASS-244-1	c 31	N71-22968 *	US-PATENT-CLASS-244-49	c 43	N81-17499 *
US-PATENT-CLASS-244-164	c 35	N89-15379 *	US-PATENT-CLASS-244-1	c 31	N71-22969 *	US-PATENT-CLASS-244-4	c 05	N69-21380 * #
US-PATENT-CLASS-244-164	c 34	N91-25380 *	US-PATENT-CLASS-244-1	c 31	N71-23009 *	US-PATENT-CLASS-244-4	c 05	N71-12336 *
US-PATENT-CLASS-244-165	c 15	N76-14158 *	US-PATENT-CLASS-244-1	c 14	N71-23040 *	US-PATENT-CLASS-244-4	c 28	N71-27585 *
US-PATENT-CLASS-244-165	c 35	N77-20399 *	US-PATENT-CLASS-244-1	c 31	N71-23912 *	US-PATENT-CLASS-244-50	c 02	N70-34160 *
US-PATENT-CLASS-244-165	c 35	N80-21719 *	US-PATENT-CLASS-244-1	c 31	N71-24315 *	US-PATENT-CLASS-244-51	c 02	N70-34856 *
US-PATENT-CLASS-244-165	c 08	N88-23808 *	US-PATENT-CLASS-244-1	c 15	N71-24600 *	US-PATENT-CLASS-244-52	c 08	N81-19130 *
US-PATENT-CLASS-244-165	c 35	N89-15379 *	US-PATENT-CLASS-244-1	c 05	N71-24728 *	US-PATENT-CLASS-244-53A	c 07	N78-18066 *
US-PATENT-CLASS-244-165	c 34	N91-25380 *	US-PATENT-CLASS-244-1	c 33	N71-25353 *	US-PATENT-CLASS-244-53B	c 02	N74-20646 *
US-PATENT-CLASS-244-167	c 15	N78-25119 *	US-PATENT-CLASS-244-1	c 31	N71-25434 *	US-PATENT-CLASS-244-53B	c 07	N75-24736 *
US-PATENT-CLASS-244-168	c 04	N82-23231 *	US-PATENT-CLASS-244-1	c 31	N71-26537 *	US-PATENT-CLASS-244-53B	c 07	N77-18154 *
US-PATENT-CLASS-244-169	c 15	N77-10113 *	US-PATENT-CLASS-244-1	c 15	N71-26611 *	US-PATENT-CLASS-244-53B	c 05	N79-24976 *
US-PATENT-CLASS-244-169	c 18	N83-28064 *	US-PATENT-CLASS-244-1	c 28	N71-27095 *	US-PATENT-CLASS-244-53B	c 85	N82-33286 *
US-PATENT-CLASS-244-169	c 20	N86-26368 *	US-PATENT-CLASS-244-1	c 21	N71-27324 *	US-PATENT-CLASS-244-53R	c 05	N84-12154 *
US-PATENT-CLASS-244-16	c 02	N70-41863 *	US-PATENT-CLASS-244-1	c 33	N71-28903 *	US-PATENT-CLASS-244-53	c 28	N71-15563 *
US-PATENT-CLASS-244-17.11	c 08	N93-25998 * #	US-PATENT-CLASS-244-1	c 15	N71-28936 *	US-PATENT-CLASS-244-54	c 07	N78-18066 *
US-PATENT-CLASS-244-17.13	c 02	N73-19004 *	US-PATENT-CLASS-244-1	c 31	N71-29050 *	US-PATENT-CLASS-244-54	c 07	N79-14096 *
US-PATENT-CLASS-244-17.13	c 08	N79-23097 *	US-PATENT-CLASS-244-1	c 31	N71-33160 *	US-PATENT-CLASS-244-54	c 05	N90-20078 *
US-PATENT-CLASS-244-17.19	c 08	N88-23809 *	US-PATENT-CLASS-244-200	c 02	N87-16793 *	US-PATENT-CLASS-244-54	c 16	N93-20115 *
US-PATENT-CLASS-244-17.19	c 08	N93-25998 * #	US-PATENT-CLASS-244-200	c 02	N88-14071 *	US-PATENT-CLASS-244-55	c 02	N73-26005 *
US-PATENT-CLASS-244-17.25	c 05	N81-19087 *	US-PATENT-CLASS-244-200	c 05	N92-21587 *	US-PATENT-CLASS-244-55	c 05	N75-25914 *
US-PATENT-CLASS-244-17.27	c 05	N87-14314 *	US-PATENT-CLASS-244-203	c 34	N91-14562 *	US-PATENT-CLASS-244-55	c 05	N84-12154 *
US-PATENT-CLASS-244-170	c 35	N80-21719 *	US-PATENT-CLASS-244-204	c 02	N87-16793 *	US-PATENT-CLASS-244-55	c 07	N85-35194 *
US-PATENT-CLASS-244-170	c 18	N83-28064 *	US-PATENT-CLASS-244-204	c 34	N91-14562 *	US-PATENT-CLASS-244-55	c 07	N87-16828 *

## REPORT NUMBER INDEX

## US-PATENT-CLASS-250-281

US-PATENT-CLASS-244-55	c 05	N88-28914 *	US-PATENT-CLASS-248-487	c 15	N72-11386 *	US-PATENT-CLASS-250-211K	c 74	N77-22951 *
US-PATENT-CLASS-244-55	c 05	N90-20078 *	US-PATENT-CLASS-248-503	c 18	N85-29991 *	US-PATENT-CLASS-250-211K	c 44	N80-18552 *
US-PATENT-CLASS-244-57	c 15	N71-26611 *	US-PATENT-CLASS-248-548	c 37	N88-23982 *	US-PATENT-CLASS-250-211K	c 08	N86-27288 *
US-PATENT-CLASS-244-58	c 05	N91-14345 *	US-PATENT-CLASS-248-550	c 37	N85-34401 *	US-PATENT-CLASS-250-211R	c 36	N75-19652 *
US-PATENT-CLASS-244-63	c 09	N77-19076 *	US-PATENT-CLASS-248-550	c 37	N87-21333 *	US-PATENT-CLASS-250-211R	c 35	N75-23910 *
US-PATENT-CLASS-244-63	c 14	N81-26161 *	US-PATENT-CLASS-248-550	c 37	N92-34173 *	US-PATENT-CLASS-250-212	c 03	N71-23354 *
US-PATENT-CLASS-244-63	c 16	N84-27784 *	US-PATENT-CLASS-248-550	c 39	N93-13420 *	US-PATENT-CLASS-250-212	c 03	N73-20040 *
US-PATENT-CLASS-244-63	c 18	N84-27787 *	US-PATENT-CLASS-248-555	c 18	N85-29991 *	US-PATENT-CLASS-250-212	c 09	N73-32109 *
US-PATENT-CLASS-244-63	c 14	N92-15081 *	US-PATENT-CLASS-248-593	c 37	N91-21541 *	US-PATENT-CLASS-250-213VT	c 74	N78-18905 *
US-PATENT-CLASS-244-75-R	c 08	N85-35200 *	US-PATENT-CLASS-248-604	c 37	N91-21541 *	US-PATENT-CLASS-250-214AL	c 74	N79-12890 *
US-PATENT-CLASS-244-75-R	c 05	N89-11738 *	US-PATENT-CLASS-248-608	c 37	N88-23982 *	US-PATENT-CLASS-250-214A	c 33	N77-14335 *
US-PATENT-CLASS-244-75A	c 02	N73-26004 *	US-PATENT-CLASS-248-636	c 35	N83-32026 *	US-PATENT-CLASS-250-214LS	c 63	N93-24599 *
US-PATENT-CLASS-244-75R	c 05	N75-12930 *	US-PATENT-CLASS-248-638	c 35	N83-32026 *	US-PATENT-CLASS-250-214R	c 14	N73-28490 *
US-PATENT-CLASS-244-75R	c 05	N85-21147 *	US-PATENT-CLASS-248-638	c 05	N87-14314 *	US-PATENT-CLASS-250-214R	c 74	N79-12890 *
US-PATENT-CLASS-244-75R	c 05	N90-23390 *	US-PATENT-CLASS-248-650	c 37	N91-21543 *	US-PATENT-CLASS-250-214	c 14	N73-25462 *
US-PATENT-CLASS-244-75R	c 02	N91-27139 *	US-PATENT-CLASS-248-655	c 33	N92-29153 *	US-PATENT-CLASS-250-214	c 14	N73-25462 *
US-PATENT-CLASS-244-75R	c 05	N91-31140 *	US-PATENT-CLASS-248-677	c 37	N91-21543 *	US-PATENT-CLASS-250-214	c 35	N74-15090 *
US-PATENT-CLASS-244-75R	c 08	N93-25998 *	US-PATENT-CLASS-248-68.1	c 33	N92-29153 *	US-PATENT-CLASS-250-214	c 33	N82-28545 *
US-PATENT-CLASS-244-76-R	c 08	N87-20999 *	US-PATENT-CLASS-248	c 25	N79-28253 *	US-PATENT-CLASS-250-215	c 14	N73-16483 *
US-PATENT-CLASS-244-76C	c 02	N73-26004 *	US-PATENT-CLASS-249-127	c 31	N90-21216 *	US-PATENT-CLASS-250-216	c 74	N79-34011 *
US-PATENT-CLASS-244-76	c 21	N70-34539 *	US-PATENT-CLASS-249-144	c 31	N75-13111 *	US-PATENT-CLASS-250-216	c 74	N82-24072 *
US-PATENT-CLASS-244-76	c 02	N71-13422 *	US-PATENT-CLASS-249-145	c 31	N74-32920 *	US-PATENT-CLASS-250-216	c 74	N89-14077 *
US-PATENT-CLASS-244-76	c 02	N71-20570 *	US-PATENT-CLASS-249-145	c 31	N75-13111 *	US-PATENT-CLASS-250-216	c 74	N92-33028 *
US-PATENT-CLASS-244-77A	c 04	N74-13420 *	US-PATENT-CLASS-249-184	c 31	N74-32920 *	US-PATENT-CLASS-250-217F	c 14	N73-16484 *
US-PATENT-CLASS-244-77B	c 04	N74-13420 *	US-PATENT-CLASS-249-59	c 31	N75-13111 *	US-PATENT-CLASS-250-217R	c 14	N73-19419 *
US-PATENT-CLASS-244-77D	c 02	N73-19004 *	US-PATENT-CLASS-249-83	c 31	N74-32920 *	US-PATENT-CLASS-250-217SS	c 09	N73-14214 *
US-PATENT-CLASS-244-77F	c 02	N73-26004 *	US-PATENT-CLASS-249-95	c 31	N74-32920 *	US-PATENT-CLASS-250-217SS	c 36	N74-15145 *
US-PATENT-CLASS-244-77G	c 02	N73-26004 *	US-PATENT-CLASS-25-156	c 15	N71-16076 *	US-PATENT-CLASS-250-217	c 14	N69-39896 *
US-PATENT-CLASS-244-77	c 32	N71-23971 *	US-PATENT-CLASS-250-105	c 14	N70-40240 *	US-PATENT-CLASS-250-217	c 14	N73-16483 *
US-PATENT-CLASS-244-78	c 08	N82-24205 *	US-PATENT-CLASS-250-105	c 14	N73-30389 *	US-PATENT-CLASS-250-217	c 36	N74-13205 *
US-PATENT-CLASS-244-78	c 05	N89-11738 *	US-PATENT-CLASS-250-199	c 16	N69-27491 *	US-PATENT-CLASS-250-218	c 14	N71-22996 *
US-PATENT-CLASS-244-79	c 04	N76-26175 *	US-PATENT-CLASS-250-199	c 07	N71-12389 *	US-PATENT-CLASS-250-218	c 14	N71-28994 *
US-PATENT-CLASS-244-82	c 05	N79-12061 *	US-PATENT-CLASS-250-199	c 16	N71-22895 *	US-PATENT-CLASS-250-218	c 74	N78-33913 *
US-PATENT-CLASS-244-83G	c 08	N79-23097 *	US-PATENT-CLASS-250-199	c 16	N71-25914 *	US-PATENT-CLASS-250-219DF	c 91	N74-13130 *
US-PATENT-CLASS-244-83R	c 05	N75-12930 *	US-PATENT-CLASS-250-199	c 16	N71-27183 *	US-PATENT-CLASS-250-219TH	c 26	N73-26751 *
US-PATENT-CLASS-244-83	c 21	N70-33279 *	US-PATENT-CLASS-250-199	c 16	N73-16536 *	US-PATENT-CLASS-250-219	c 14	N71-28993 *
US-PATENT-CLASS-244-83	c 15	N71-23255 *	US-PATENT-CLASS-250-199	c 07	N73-26119 *	US-PATENT-CLASS-250-221	c 33	N82-28545 *
US-PATENT-CLASS-244-83	c 31	N71-33160 *	US-PATENT-CLASS-250-199	c 74	N76-18913 *	US-PATENT-CLASS-250-221	c 74	N85-22139 *
US-PATENT-CLASS-244-83	c 08	N74-10942 *	US-PATENT-CLASS-250-199	c 74	N76-30053 *	US-PATENT-CLASS-250-225	c 14	N71-24864 *
US-PATENT-CLASS-244-87	c 08	N81-19130 *	US-PATENT-CLASS-250-199	c 74	N77-26942 *	US-PATENT-CLASS-250-225	c 14	N72-27409 *
US-PATENT-CLASS-244-87	c 05	N91-31140 *	US-PATENT-CLASS-250-199	c 32	N77-28346 *	US-PATENT-CLASS-250-225	c 32	N86-20647 *
US-PATENT-CLASS-244-88	c 05	N91-31140 *	US-PATENT-CLASS-250-199	c 60	N77-32731 *	US-PATENT-CLASS-250-226	c 14	N72-25409 *
US-PATENT-CLASS-244-90R	c 08	N74-30421 *	US-PATENT-CLASS-250-199	c 74	N78-14889 *	US-PATENT-CLASS-250-226	c 43	N79-17288 *
US-PATENT-CLASS-244-90R	c 05	N79-12061 *	US-PATENT-CLASS-250-201.9	c 74	N92-29122 *	US-PATENT-CLASS-250-226	c 74	N82-30071 *
US-PATENT-CLASS-244-90R	c 08	N79-14108 *	US-PATENT-CLASS-250-201	c 14	N70-40238 *	US-PATENT-CLASS-250-227.21	c 74	N92-33017 *
US-PATENT-CLASS-244-90R	c 08	N85-19985 *	US-PATENT-CLASS-250-201	c 35	N75-15014 *	US-PATENT-CLASS-250-227.21	c 71	N93-24602 *
US-PATENT-CLASS-244-90R	c 05	N90-23390 *	US-PATENT-CLASS-250-201	c 74	N78-17866 *	US-PATENT-CLASS-250-227	c 14	N71-22991 *
US-PATENT-CLASS-244-90	c 02	N71-27088 *	US-PATENT-CLASS-250-203R	c 14	N72-27409 *	US-PATENT-CLASS-250-227	c 14	N71-23240 *
US-PATENT-CLASS-244-91	c 08	N74-30421 *	US-PATENT-CLASS-250-203R	c 14	N73-25462 *	US-PATENT-CLASS-250-227	c 60	N77-14751 *
US-PATENT-CLASS-244-91	c 05	N84-12154 *	US-PATENT-CLASS-250-203R	c 14	N73-28490 *	US-PATENT-CLASS-250-227	c 74	N78-33913 *
US-PATENT-CLASS-244-91	c 08	N88-23809 *	US-PATENT-CLASS-250-203R	c 21	N73-30640 *	US-PATENT-CLASS-250-227	c 74	N83-19597 *
US-PATENT-CLASS-244-93	c 05	N82-26277 *	US-PATENT-CLASS-250-203R	c 19	N74-15089 *	US-PATENT-CLASS-250-227	c 74	N84-11921 *
US-PATENT-CLASS-244/161	c 37	N87-22985 *	US-PATENT-CLASS-250-203R	c 89	N74-30886 *	US-PATENT-CLASS-250-227	c 74	N91-21871 *
US-PATENT-CLASS-247-171	c 35	N75-23910 *	US-PATENT-CLASS-250-203R	c 35	N77-20401 *	US-PATENT-CLASS-250-228	c 74	N86-26190 *
US-PATENT-CLASS-248-DIG-1	c 18	N89-28554 *	US-PATENT-CLASS-250-203R	c 74	N77-22951 *	US-PATENT-CLASS-250-229	c 08	N73-30135 *
US-PATENT-CLASS-248-119	c 11	N70-35383 *	US-PATENT-CLASS-250-203R	c 44	N81-24520 *	US-PATENT-CLASS-250-229	c 74	N90-22383 *
US-PATENT-CLASS-248-14	c 15	N72-17454 *	US-PATENT-CLASS-250-203R	c 32	N83-18975 *	US-PATENT-CLASS-250-231.14	c 74	N92-29133 *
US-PATENT-CLASS-248-16	c 18	N74-27397 *	US-PATENT-CLASS-250-203R	c 47	N83-32232 *	US-PATENT-CLASS-250-231.19	c 74	N92-33017 *
US-PATENT-CLASS-248-178	c 15	N70-41310 *	US-PATENT-CLASS-250-203R	c 44	N88-14492 *	US-PATENT-CLASS-250-231.19	c 71	N93-24602 *
US-PATENT-CLASS-248-178	c 37	N78-27425 *	US-PATENT-CLASS-250-203X	c 16	N72-13437 *	US-PATENT-CLASS-250-231-GY	c 74	N87-23259 *
US-PATENT-CLASS-248-181	c 37	N91-21543 *	US-PATENT-CLASS-250-203	c 14	N69-27432 *	US-PATENT-CLASS-250-231R	c 74	N82-30071 *
US-PATENT-CLASS-248-183	c 14	N71-26627 *	US-PATENT-CLASS-250-203	c 14	N69-27485 *	US-PATENT-CLASS-250-231SE	c 74	N74-21304 *
US-PATENT-CLASS-248-183	c 15	N72-11386 *	US-PATENT-CLASS-250-203	c 07	N69-39736 *	US-PATENT-CLASS-250-231SE	c 44	N80-18552 *
US-PATENT-CLASS-248-186	c 37	N78-27425 *	US-PATENT-CLASS-250-203	c 14	N70-34158 *	US-PATENT-CLASS-250-231	c 14	N73-20475 *
US-PATENT-CLASS-248-188.4	c 15	N72-27484 *	US-PATENT-CLASS-250-203	c 21	N70-35089 *	US-PATENT-CLASS-250-232	c 23	N71-21821 *
US-PATENT-CLASS-248-188.9	c 31	N70-34159 *	US-PATENT-CLASS-250-203	c 14	N70-40239 *	US-PATENT-CLASS-250-233	c 23	N71-16100 *
US-PATENT-CLASS-248-18	c 14	N69-27486 *	US-PATENT-CLASS-250-203	c 21	N71-10678 *	US-PATENT-CLASS-250-234	c 03	N73-20040 *
US-PATENT-CLASS-248-18	c 15	N72-11391 *	US-PATENT-CLASS-250-203	c 21	N71-10771 *	US-PATENT-CLASS-250-235	c 14	N72-11364 *
US-PATENT-CLASS-248-20	c 15	N72-11391 *	US-PATENT-CLASS-250-203	c 21	N71-15642 *	US-PATENT-CLASS-250-235	c 43	N82-13465 *
US-PATENT-CLASS-248-222.1	c 37	N92-29092 *	US-PATENT-CLASS-250-203	c 14	N71-19568 *	US-PATENT-CLASS-250-235	c 74	N82-24072 *
US-PATENT-CLASS-248-228	c 37	N84-16560 *	US-PATENT-CLASS-250-203	c 14	N71-23269 *	US-PATENT-CLASS-250-236	c 21	N73-30640 *
US-PATENT-CLASS-248-229	c 37	N91-14617 *	US-PATENT-CLASS-250-203	c 14	N71-23797 *	US-PATENT-CLASS-250-236	c 43	N82-13465 *
US-PATENT-CLASS-248-22	c 19	N76-22284 *	US-PATENT-CLASS-250-203	c 14	N72-22444 *	US-PATENT-CLASS-250-237G	c 74	N79-20856 *
US-PATENT-CLASS-248-230	c 37	N91-14617 *	US-PATENT-CLASS-250-203	c 14	N73-30393 *	US-PATENT-CLASS-250-237R	c 08	N73-30135 *
US-PATENT-CLASS-248-23	c 18	N74-27397 *	US-PATENT-CLASS-250-203	c 35	N75-23910 *	US-PATENT-CLASS-250-237R	c 19	N74-15089 *
US-PATENT-CLASS-248-251	c 37	N92-29092 *	US-PATENT-CLASS-250-204	c 36	N74-21091 *	US-PATENT-CLASS-250-237	c 14	N69-24331 *
US-PATENT-CLASS-248-278	c 15	N72-11386 *	US-PATENT-CLASS-250-205	c 14	N72-27411 *	US-PATENT-CLASS-250-238	c 33	N75-31332 *
US-PATENT-CLASS-248-27	c 15	N71-20813 *	US-PATENT-CLASS-250-205	c 09	N73-14214 *	US-PATENT-CLASS-250-238	c 32	N77-28346 *
US-PATENT-CLASS-248-316.4	c 37	N87-21333 *	US-PATENT-CLASS-250-205	c 36	N74-13205 *	US-PATENT-CLASS-250-238	c 37	N87-23982 *
US-PATENT-CLASS-248-317	c 11	N69-27466 *	US-PATENT-CLASS-250-206	c 10	N71-20782 *	US-PATENT-CLASS-250-239	c 08	N73-30135 *
US-PATENT-CLASS-248-328	c 14	N93-24598 *	US-PATENT-CLASS-250-207	c 14	N72-17328 *	US-PATENT-CLASS-250-239	c 74	N78-33913 *
US-PATENT-CLASS-248-346	c 14	N70-39898 *	US-PATENT-CLASS-250-207	c 14	N73-32317 *	US-PATENT-CLASS-250-251	c 35	N76-15431 *
US-PATENT-CLASS-248-358R	c 37	N75-18573 *	US-PATENT-CLASS-250-207	c 33	N74-27682 *	US-PATENT-CLASS-250-251	c 35	N84-33767 *
US-PATENT-CLASS-248-358R	c 19	N76-22284 *	US-PATENT-CLASS-250-208	c 14	N72-20379 *	US-PATENT-CLASS-250-251	c 72	N87-21661 *
US-PATENT-CLASS-248-358	c 15	N70-40156 *	US-PATENT-CLASS-250-209	c 07	N69-39980 *	US-PATENT-CLASS-250-251	c 72	N88-24253 *
US-PATENT-CLASS-248-358	c 23	N71-15673 *	US-PATENT-CLASS-250-209	c 20	N71-16340 *	US-PATENT-CLASS-250-251	c 29	N93-24600 *
US-PATENT-CLASS-248-358	c 15	N71-24694 *	US-PATENT-CLASS-250-209	c 10	N72-17173 *	US-PATENT-CLASS-250-252.1	c 35	N84-33767 *
US-PATENT-CLASS-248-36-3	c 37	N78-17383 *	US-PATENT-CLASS-250-209	c 14	N72-25409 *	US-PATENT-CLASS-250-252	c 72	N89-29169 *
US-PATENT-CLASS-248-360	c 15	N71-17649 *	US-PATENT-CLASS-250-209	c 14	N73-16483 *	US-PATENT-CLASS-250-253	c 43	N79-31706 *
US-PATENT-CLASS-248-361	c 05	N71-28619 *	US-PATENT-CLASS-250-209	c 14	N73-26432 *	US-PATENT-CLASS-250-272	c 74	N78-15880 *
US-PATENT-CLASS-248-362	c 37	N76-21554 *	US-PATENT-CLASS-250-209	c 14	N73-28490 *	US-PATENT-CLASS-250-272	c 43	N79-31706 *
US-PATENT-CLASS-248-363	c 37	N76-21554 *	US-PATENT-CLASS-250-209	c 21	N73-30640 *	US-PATENT-CLASS-250-277CH	c 76	N78-24950 *
US-PATENT-CLASS-248-425	c 37	N82-21587 *	US-PATENT-CLASS-250-209	c 44	N81-24520 *	US-PATENT-CLASS-250-277CH	c 74	N80-21140 *
US-PATENT-CLASS-248-453	c 37	N92-33616 *	US-PATENT-CLASS-250-211J	c 09	N72-17152 *	US-PATENT-CLASS-250-280	c 76	N78-24950 *
US-PATENT-CLASS-248-455	c 37	N92-33616 *	US-PATENT-CLASS-250-211J	c 09	N73-14214 *	US-PATENT-CLASS-250-280	c 74	N80-21140 *
US-PATENT-CLASS-248-463	c 37	N92-33616 *	US-PATENT-CLASS-250-211J	c 35	N74-15090 *	US-PATENT-CLASS-250-281	c 35	N74-34857 *

## US-PATENT-CLASS-250-281

US-PATENT-CLASS-250-281 ..... c 35 N76-16393 \*  
US-PATENT-CLASS-250-281 ..... c 36 N77-26477 \*  
US-PATENT-CLASS-250-281 ..... c 72 N80-14877 \*  
US-PATENT-CLASS-250-281 ..... c 35 N91-14587 \*  
US-PATENT-CLASS-250-282 ..... c 36 N77-26477 \*  
US-PATENT-CLASS-250-282 ..... c 72 N80-14877 \*  
US-PATENT-CLASS-250-282 ..... c 35 N83-27184 \*  
US-PATENT-CLASS-250-282 ..... c 35 N91-14587 \*  
US-PATENT-CLASS-250-283 ..... c 36 N77-26477 \*  
US-PATENT-CLASS-250-286 ..... c 35 N91-14587 \*  
US-PATENT-CLASS-250-287 ..... c 35 N76-15431 \*  
US-PATENT-CLASS-250-287 ..... c 35 N76-16393 \*  
US-PATENT-CLASS-250-287 ..... c 35 N91-14587 \*  
US-PATENT-CLASS-250-288 ..... c 35 N76-16393 \*  
US-PATENT-CLASS-250-288 ..... c 35 N77-32456 \*  
US-PATENT-CLASS-250-288 ..... c 35 N83-27184 \*  
US-PATENT-CLASS-250-288 ..... c 72 N87-21660 \*  
US-PATENT-CLASS-250-288 ..... c 35 N91-14587 \*  
US-PATENT-CLASS-250-289 ..... c 35 N77-14406 \*  
US-PATENT-CLASS-250-290 ..... c 35 N77-10492 \*  
US-PATENT-CLASS-250-291 ..... c 35 N77-10492 \*  
US-PATENT-CLASS-250-295 ..... c 35 N74-34857 \*  
US-PATENT-CLASS-250-296 ..... c 35 N84-28016 \*  
US-PATENT-CLASS-250-298 ..... c 35 N77-14406 \*  
US-PATENT-CLASS-250-304 ..... c 25 N74-26947 \*  
US-PATENT-CLASS-250-305 ..... c 72 N84-28575 \*  
US-PATENT-CLASS-250-305 ..... c 35 N91-14587 \*  
US-PATENT-CLASS-250-306 ..... c 72 N91-27936 \*  
US-PATENT-CLASS-250-307 ..... c 25 N80-20334 \*  
US-PATENT-CLASS-250-307 ..... c 72 N91-27936 \*  
US-PATENT-CLASS-250-308 ..... c 25 N80-20334 \*  
US-PATENT-CLASS-250-310 ..... c 35 N78-10429 \*  
US-PATENT-CLASS-250-310 ..... c 33 N80-14332 \*  
US-PATENT-CLASS-250-310 ..... c 35 N90-20351 \*  
US-PATENT-CLASS-250-311 ..... c 33 N83-18996 \*  
US-PATENT-CLASS-250-320 ..... c 74 N78-15880 \*  
US-PATENT-CLASS-250-322 ..... c 35 N78-15461 \*  
US-PATENT-CLASS-250-322.2 ..... c 74 N91-14835 \*  
US-PATENT-CLASS-250-330 ..... c 44 N82-32841 \*  
US-PATENT-CLASS-250-330 ..... c 74 N93-22037 \*  
US-PATENT-CLASS-250-332 ..... c 35 N75-19613 \*  
US-PATENT-CLASS-250-332 ..... c 31 N78-25256 \*  
US-PATENT-CLASS-250-332 ..... c 35 N82-31659 \*  
US-PATENT-CLASS-250-332 ..... c 74 N83-19597 \*  
US-PATENT-CLASS-250-332 ..... c 74 N84-28590 \*  
US-PATENT-CLASS-250-335 ..... c 34 N76-18374 \*  
US-PATENT-CLASS-250-336.1 ..... c 72 N86-33127 \*  
US-PATENT-CLASS-250-336 ..... c 14 N73-28488 \*  
US-PATENT-CLASS-250-336 ..... c 35 N76-15433 \*  
US-PATENT-CLASS-250-336 ..... c 33 N76-27473 \*  
US-PATENT-CLASS-250-336 ..... c 35 N78-13400 \*  
US-PATENT-CLASS-250-338.1 ..... c 35 N91-14588 \*  
US-PATENT-CLASS-250-338.2 ..... c 35 N91-14588 \*  
US-PATENT-CLASS-250-338.5 ..... c 74 N93-22037 \*  
US-PATENT-CLASS-250-338 ..... c 35 N74-18088 \*  
US-PATENT-CLASS-250-338 ..... c 35 N77-10493 \*  
US-PATENT-CLASS-250-338 ..... c 47 N77-10753 \*  
US-PATENT-CLASS-250-338 ..... c 35 N80-26635 \*  
US-PATENT-CLASS-250-338 ..... c 35 N83-21311 \*  
US-PATENT-CLASS-250-338 ..... c 74 N84-28590 \*  
US-PATENT-CLASS-250-338 ..... c 72 N86-33127 \*  
US-PATENT-CLASS-250-338 ..... c 76 N87-13313 \*  
US-PATENT-CLASS-250-339 ..... c 35 N77-10493 \*  
US-PATENT-CLASS-250-339 ..... c 47 N77-10753 \*  
US-PATENT-CLASS-250-339 ..... c 35 N84-33766 \*  
US-PATENT-CLASS-250-339 ..... c 36 N85-21631 \*  
US-PATENT-CLASS-250-339 ..... c 36 N85-29264 \*  
US-PATENT-CLASS-250-339 ..... c 36 N87-28006 \*  
US-PATENT-CLASS-250-339 ..... c 74 N93-13419 \*  
US-PATENT-CLASS-250-339 ..... c 74 N93-29086 \*  
US-PATENT-CLASS-250-340 ..... c 35 N76-29551 \*  
US-PATENT-CLASS-250-340 ..... c 74 N83-19597 \*  
US-PATENT-CLASS-250-340 ..... c 72 N86-33127 \*  
US-PATENT-CLASS-250-340 ..... c 74 N93-22037 \*  
US-PATENT-CLASS-250-341 ..... c 32 N87-21206 \*  
US-PATENT-CLASS-250-343 ..... c 35 N74-11284 \*  
US-PATENT-CLASS-250-343 ..... c 25 N74-26947 \*  
US-PATENT-CLASS-250-343 ..... c 45 N75-27585 \*  
US-PATENT-CLASS-250-343 ..... c 74 N76-20958 \*  
US-PATENT-CLASS-250-343 ..... c 25 N76-22323 \*  
US-PATENT-CLASS-250-343 ..... c 35 N77-14411 \*  
US-PATENT-CLASS-250-343 ..... c 35 N78-13400 \*  
US-PATENT-CLASS-250-343 ..... c 25 N81-14015 \*  
US-PATENT-CLASS-250-343 ..... c 35 N84-34705 \*  
US-PATENT-CLASS-250-343 ..... c 36 N85-21631 \*  
US-PATENT-CLASS-250-343 ..... c 36 N87-28006 \*  
US-PATENT-CLASS-250-344 ..... c 25 N76-22323 \*  
US-PATENT-CLASS-250-344 ..... c 74 N78-17867 \*  
US-PATENT-CLASS-250-345 ..... c 45 N77-27585 \*  
US-PATENT-CLASS-250-347 ..... c 35 N77-10493 \*  
US-PATENT-CLASS-250-347 ..... c 47 N77-10753 \*  
US-PATENT-CLASS-250-347 ..... c 74 N80-33210 \*  
US-PATENT-CLASS-250-350 ..... c 25 N81-25159 \*  
US-PATENT-CLASS-250-350 ..... c 74 N83-19597 \*  
US-PATENT-CLASS-250-351 ..... c 35 N75-30502 \*  
US-PATENT-CLASS-250-351 ..... c 35 N78-13400 \*

US-PATENT-CLASS-250-351 ..... c 74 N83-19597 \*  
US-PATENT-CLASS-250-351 ..... c 35 N84-34705 \*  
US-PATENT-CLASS-250-352 ..... c 31 N79-17029 \*  
US-PATENT-CLASS-250-352 ..... c 34 N79-20336 \*  
US-PATENT-CLASS-250-352 ..... c 35 N80-26635 \*  
US-PATENT-CLASS-250-352 ..... c 74 N80-33210 \*  
US-PATENT-CLASS-250-352 ..... c 37 N87-23982 \*  
US-PATENT-CLASS-250-353 ..... c 35 N76-29551 \*  
US-PATENT-CLASS-250-353 ..... c 35 N80-26635 \*  
US-PATENT-CLASS-250-353 ..... c 74 N80-33210 \*  
US-PATENT-CLASS-250-356.1 ..... c 47 N84-28292 \*  
US-PATENT-CLASS-250-356.1 ..... c 35 N91-31608 \*  
US-PATENT-CLASS-250-358.1 ..... c 72 N91-27936 \*  
US-PATENT-CLASS-250-359 ..... c 37 N75-26372 \*  
US-PATENT-CLASS-250-360 ..... c 35 N74-15091 \*  
US-PATENT-CLASS-250-361 ..... c 35 N74-15091 \*  
US-PATENT-CLASS-250-363R ..... c 52 N77-14737 \*  
US-PATENT-CLASS-250-363R ..... c 74 N79-20857 \*  
US-PATENT-CLASS-250-363R ..... c 74 N84-11920 \*  
US-PATENT-CLASS-250-363S ..... c 74 N84-11920 \*  
US-PATENT-CLASS-250-363S ..... c 35 N85-30281 \*  
US-PATENT-CLASS-250-367 ..... c 35 N84-33765 \*  
US-PATENT-CLASS-250-368 ..... c 74 N81-24900 \*  
US-PATENT-CLASS-250-368 ..... c 74 N84-11920 \*  
US-PATENT-CLASS-250-369 ..... c 35 N74-15091 \*  
US-PATENT-CLASS-250-369 ..... c 35 N82-32659 \*  
US-PATENT-CLASS-250-369 ..... c 35 N85-30281 \*  
US-PATENT-CLASS-250-370.12 ..... c 35 N91-14588 \*  
US-PATENT-CLASS-250-370.13 ..... c 35 N91-14588 \*  
US-PATENT-CLASS-250-370 ..... c 35 N74-18088 \*  
US-PATENT-CLASS-250-370 ..... c 33 N75-31332 \*  
US-PATENT-CLASS-250-370 ..... c 35 N74-15091 \*  
US-PATENT-CLASS-250-370 ..... c 44 N82-32841 \*  
US-PATENT-CLASS-250-370 ..... c 76 N87-13313 \*  
US-PATENT-CLASS-250-371 ..... c 35 N74-18088 \*  
US-PATENT-CLASS-250-372 ..... c 19 N74-29410 \*  
US-PATENT-CLASS-250-372 ..... c 24 N76-24363 \*  
US-PATENT-CLASS-250-372 ..... c 33 N76-27473 \*  
US-PATENT-CLASS-250-372 ..... c 35 N82-31311 \*  
US-PATENT-CLASS-250-372 ..... c 35 N84-33767 \*  
US-PATENT-CLASS-250-373 ..... c 25 N74-26947 \*  
US-PATENT-CLASS-250-373 ..... c 35 N75-30502 \*  
US-PATENT-CLASS-250-373 ..... c 45 N76-17656 \*  
US-PATENT-CLASS-250-373 ..... c 36 N87-28006 \*  
US-PATENT-CLASS-250-374 ..... c 35 N74-26949 \*  
US-PATENT-CLASS-250-374 ..... c 35 N85-34374 \*  
US-PATENT-CLASS-250-379 ..... c 35 N85-34374 \*  
US-PATENT-CLASS-250-385 ..... c 35 N74-26949 \*  
US-PATENT-CLASS-250-385 ..... c 35 N75-27331 \*  
US-PATENT-CLASS-250-385 ..... c 35 N76-15433 \*  
US-PATENT-CLASS-250-385 ..... c 35 N76-16393 \*  
US-PATENT-CLASS-250-385 ..... c 35 N82-24471 \*  
US-PATENT-CLASS-250-385 ..... c 35 N84-33765 \*  
US-PATENT-CLASS-250-386 ..... c 35 N82-24471 \*  
US-PATENT-CLASS-250-388 ..... c 33 N83-24763 \*  
US-PATENT-CLASS-250-389 ..... c 35 N82-24471 \*  
US-PATENT-CLASS-250-394 ..... c 14 N73-30392 \*  
US-PATENT-CLASS-250-394 ..... c 19 N74-29410 \*  
US-PATENT-CLASS-250-396-ML ..... c 35 N90-20351 \*  
US-PATENT-CLASS-250-396-R ..... c 72 N87-21661 \*  
US-PATENT-CLASS-250-396-R ..... c 35 N90-20351 \*  
US-PATENT-CLASS-250-396 ..... c 35 N71-14408 \*  
US-PATENT-CLASS-250-397 ..... c 72 N89-29169 \*  
US-PATENT-CLASS-250-398 ..... c 35 N78-10429 \*  
US-PATENT-CLASS-250-400 ..... c 25 N76-29379 \*  
US-PATENT-CLASS-250-400 ..... c 25 N78-27226 \*  
US-PATENT-CLASS-250-41.9D ..... c 14 N72-29464 \*  
US-PATENT-CLASS-250-41.9G ..... c 14 N73-12444 \*  
US-PATENT-CLASS-250-41.9S ..... c 14 N73-12444 \*  
US-PATENT-CLASS-250-41.9S ..... c 14 N71-28992 \*  
US-PATENT-CLASS-250-41.9 ..... c 06 N71-13461 \*  
US-PATENT-CLASS-250-41.9 ..... c 24 N71-16095 \*  
US-PATENT-CLASS-250-41.9 ..... c 14 N71-23041 \*  
US-PATENT-CLASS-250-41.9 ..... c 14 N71-28863 \*  
US-PATENT-CLASS-250-41.9 ..... c 14 N72-17328 \*  
US-PATENT-CLASS-250-41.9 ..... c 14 N73-32325 \*  
US-PATENT-CLASS-250-416TV ..... c 35 N78-15461 \*  
US-PATENT-CLASS-250-423-P ..... c 72 N87-21661 \*  
US-PATENT-CLASS-250-423-P ..... c 25 N88-24732 \*  
US-PATENT-CLASS-250-423-R ..... c 33 N87-21234 \*  
US-PATENT-CLASS-250-423-R ..... c 72 N87-21660 \*  
US-PATENT-CLASS-250-423-R ..... c 72 N88-24253 \*  
US-PATENT-CLASS-250-423P ..... c 36 N77-26477 \*  
US-PATENT-CLASS-250-423P ..... c 25 N78-25148 \*  
US-PATENT-CLASS-250-423P ..... c 72 N80-14877 \*  
US-PATENT-CLASS-250-423 ..... c 35 N76-15431 \*  
US-PATENT-CLASS-250-423 ..... c 35 N76-16393 \*  
US-PATENT-CLASS-250-423 ..... c 35 N83-27184 \*  
US-PATENT-CLASS-250-423 ..... c 35 N91-14587 \*  
US-PATENT-CLASS-250-424 ..... c 72 N87-21660 \*  
US-PATENT-CLASS-250-426 ..... c 33 N85-21491 \*  
US-PATENT-CLASS-250-427 ..... c 72 N80-27163 \*  
US-PATENT-CLASS-250-427 ..... c 72 N87-21660 \*  
US-PATENT-CLASS-250-427 ..... c 72 N88-24253 \*  
US-PATENT-CLASS-250-427 ..... c 25 N88-24732 \*  
US-PATENT-CLASS-250-429 ..... c 25 N76-29379 \*

US-PATENT-CLASS-250-429 ..... c 25 N78-27226 \*  
US-PATENT-CLASS-250-43.5FC ..... c 14 N72-11365 \*  
US-PATENT-CLASS-250-43.5R ..... c 14 N71-27090 \*  
US-PATENT-CLASS-250-43.5R ..... c 14 N72-21408 \*  
US-PATENT-CLASS-250-43.5R ..... c 06 N72-25146 \*  
US-PATENT-CLASS-250-43.5R ..... c 06 N72-31141 \*  
US-PATENT-CLASS-250-43.5 ..... c 27 N71-16348 \*  
US-PATENT-CLASS-250-43.5 ..... c 15 N71-24896 \*  
US-PATENT-CLASS-250-43.5 ..... c 14 N71-25901 \*  
US-PATENT-CLASS-250-432R ..... c 25 N76-22323 \*  
US-PATENT-CLASS-250-432 ..... c 45 N75-27585 \*  
US-PATENT-CLASS-250-444 ..... c 52 N77-14737 \*  
US-PATENT-CLASS-250-457 ..... c 35 N80-28686 \*  
US-PATENT-CLASS-250-459.1 ..... c 35 N90-22770 \*  
US-PATENT-CLASS-250-460 ..... c 37 N75-26372 \*  
US-PATENT-CLASS-250-461.1 ..... c 35 N90-22770 \*  
US-PATENT-CLASS-250-474.1 ..... c 35 N83-21311 \*  
US-PATENT-CLASS-250-475 ..... c 35 N79-10389 \*  
US-PATENT-CLASS-250-483.1 ..... c 35 N84-33765 \*  
US-PATENT-CLASS-250-483 ..... c 74 N79-20857 \*  
US-PATENT-CLASS-250-483 ..... c 74 N81-24900 \*  
US-PATENT-CLASS-250-484.1 ..... c 74 N81-14835 \*  
US-PATENT-CLASS-250-489 ..... c 35 N76-15433 \*  
US-PATENT-CLASS-250-49.5B ..... c 24 N72-11595 \*  
US-PATENT-CLASS-250-49.5TE ..... c 24 N72-11595 \*  
US-PATENT-CLASS-250-49.5 ..... c 14 N69-39982 \* #  
US-PATENT-CLASS-250-49.5 ..... c 14 N71-28863 \*  
US-PATENT-CLASS-250-49.5 ..... c 14 N72-17328 \*  
US-PATENT-CLASS-250-491 ..... c 35 N80-28686 \*  
US-PATENT-CLASS-250-492A ..... c 33 N80-14332 \*  
US-PATENT-CLASS-250-492B ..... c 25 N78-27226 \*  
US-PATENT-CLASS-250-492R ..... c 25 N76-29379 \*  
US-PATENT-CLASS-250-492R ..... c 28 N78-24365 \*  
US-PATENT-CLASS-250-492 ..... c 35 N74-15091 \*  
US-PATENT-CLASS-250-492 ..... c 37 N75-26372 \*  
US-PATENT-CLASS-250-493.1 ..... c 35 N91-14588 \*  
US-PATENT-CLASS-250-493 ..... c 73 N75-30876 \*  
US-PATENT-CLASS-250-495 ..... c 74 N75-12732 \*  
US-PATENT-CLASS-250-496 ..... c 73 N75-30876 \*  
US-PATENT-CLASS-250-498 ..... c 52 N77-14737 \*  
US-PATENT-CLASS-250-499 ..... c 73 N74-26767 \*  
US-PATENT-CLASS-250-499 ..... c 72 N76-15880 \*  
US-PATENT-CLASS-250-499 ..... c 37 N78-13436 \*  
US-PATENT-CLASS-250-500 ..... c 72 N75-30876 \*  
US-PATENT-CLASS-250-505 ..... c 74 N74-27866 \*  
US-PATENT-CLASS-250-505 ..... c 35 N75-19616 \*  
US-PATENT-CLASS-250-508 ..... c 35 N75-19616 \*  
US-PATENT-CLASS-250-51.5 ..... c 23 N73-13662 \*  
US-PATENT-CLASS-250-51.5 ..... c 14 N73-28491 \*  
US-PATENT-CLASS-250-510 ..... c 35 N75-19616 \*  
US-PATENT-CLASS-250-511 ..... c 74 N74-27866 \*  
US-PATENT-CLASS-250-513 ..... c 35 N80-28686 \*  
US-PATENT-CLASS-250-518 ..... c 14 N73-30392 \*  
US-PATENT-CLASS-250-51 ..... c 24 N72-11595 \*  
US-PATENT-CLASS-250-527 ..... c 37 N76-18458 \*  
US-PATENT-CLASS-250-527 ..... c 25 N77-32255 \*  
US-PATENT-CLASS-250-527 ..... c 44 N77-32580 \*  
US-PATENT-CLASS-250-527 ..... c 44 N79-11470 \*  
US-PATENT-CLASS-250-527 ..... c 44 N82-16475 \*  
US-PATENT-CLASS-250-528 ..... c 25 N78-25148 \*  
US-PATENT-CLASS-250-52 ..... c 15 N71-15606 \*  
US-PATENT-CLASS-250-52 ..... c 11 N71-23042 \*  
US-PATENT-CLASS-250-52 ..... c 24 N72-11595 \*  
US-PATENT-CLASS-250-52 ..... c 23 N73-13662 \*  
US-PATENT-CLASS-250-531 ..... c 25 N78-25148 \*  
US-PATENT-CLASS-250-531 ..... c 33 N79-15245 \*  
US-PATENT-CLASS-250-540 ..... c 33 N79-15245 \*  
US-PATENT-CLASS-250-541 ..... c 33 N79-15245 \*  
US-PATENT-CLASS-250-551 ..... c 74 N79-34011 \*  
US-PATENT-CLASS-250-551 ..... c 63 N93-24599 \*  
US-PATENT-CLASS-250-563 ..... c 38 N78-17396 \*  
US-PATENT-CLASS-250-566 ..... c 74 N75-27067 \*  
US-PATENT-CLASS-250-571 ..... c 36 N78-14380 \*  
US-PATENT-CLASS-250-572 ..... c 38 N78-17395 \*  
US-PATENT-CLASS-250-572 ..... c 38 N78-17396 \*  
US-PATENT-CLASS-250-572 ..... c 74 N76-20958 \*  
US-PATENT-CLASS-250-573 ..... c 34 N83-31993 \*  
US-PATENT-CLASS-250-574 ..... c 45 N76-21742 \*  
US-PATENT-CLASS-250-574 ..... c 36 N77-25501 \*  
US-PATENT-CLASS-250-576 ..... c 35 N74-27860 \*  
US-PATENT-CLASS-250-578 ..... c 36 N75-19652 \*  
US-PATENT-CLASS-250-65F ..... c 15 N72-25452 \*  
US-PATENT-CLASS-250-65R ..... c 14 N73-30389 \*  
US-PATENT-CLASS-250-71.5R ..... c 14 N72-29464 \*  
US-PATENT-CLASS-250-71.5 ..... c 14 N72-17328 \*  
US-PATENT-CLASS-250-71R ..... c 06 N73-16106 \*  
US-PATENT-CLASS-250-71 ..... c 14 N70-41676 \*  
US-PATENT-CLASS-250-83.3H ..... c 14 N72-21408 \*  
US-PATENT-CLASS-250-83.3H ..... c 14 N72-24477 \*  
US-PATENT-CLASS-250-83.3H ..... c 14 N73-12445 \*  
US-PATENT-CLASS-250-83.3H ..... c 14 N73-20475 \*  
US-PATENT-CLASS-250-83.3H ..... c 14 N73-25462 \*  
US-PATENT-CLASS-250-83.3R ..... c 14 N73-12445 \*  
US-PATENT-CLASS-250-83.3R ..... c 14 N73-20477 \*  
US-PATENT-CLASS-250-83.3R ..... c 14 N73-32317 \*  
US-PATENT-CLASS-250-83.3UV ..... c 10 N72-17173 \*

## REPORT NUMBER INDEX



## REPORT NUMBER INDEX

## US-PATENT-CLASS-260-45.7R

US-PATENT-CLASS-250-83.3UV	c 14	N72-25409 *	US-PATENT-CLASS-252-305	c 06	N73-30097 *	US-PATENT-CLASS-260-2.5AK	c 27	N76-15310 *
US-PATENT-CLASS-250-83.3UV	c 06	N73-16106 *	US-PATENT-CLASS-252-359A	c 37	N77-13418 *	US-PATENT-CLASS-260-2.5AK	c 24	N78-24290 *
US-PATENT-CLASS-250-83.3	c 21	N70-33181 *	US-PATENT-CLASS-252-361	c 71	N83-35781 *	US-PATENT-CLASS-260-2.5AM	c 27	N74-12812 *
US-PATENT-CLASS-250-83.3	c 21	N70-34297 *	US-PATENT-CLASS-252-364	c 28	N81-15119 *	US-PATENT-CLASS-260-2.5AM	c 27	N77-31308 *
US-PATENT-CLASS-250-83.3	c 14	N71-15599 *	US-PATENT-CLASS-252-373	c 44	N76-29704 *	US-PATENT-CLASS-260-2.5AP	c 24	N78-24290 *
US-PATENT-CLASS-250-83.3	c 14	N71-18699 *	US-PATENT-CLASS-252-373	c 44	N77-10636 *	US-PATENT-CLASS-260-2.5AY	c 27	N77-31308 *
US-PATENT-CLASS-250-83.3	c 14	N71-21088 *	US-PATENT-CLASS-252-408	c 14	N73-14428 *	US-PATENT-CLASS-260-2.5A	c 27	N77-31308 *
US-PATENT-CLASS-250-83.3	c 09	N71-22985 *	US-PATENT-CLASS-252-422	c 45	N82-11634 *	US-PATENT-CLASS-260-2.5BE	c 24	N78-24290 *
US-PATENT-CLASS-250-83.3	c 14	N71-25901 *	US-PATENT-CLASS-252-431N	c 06	N73-32029 *	US-PATENT-CLASS-260-2.5B	c 24	N78-24290 *
US-PATENT-CLASS-250-83.3	c 14	N71-26475 *	US-PATENT-CLASS-252-431R	c 06	N73-32029 *	US-PATENT-CLASS-260-2.5EP	c 24	N78-24290 *
US-PATENT-CLASS-250-83.3	c 14	N71-27323 *	US-PATENT-CLASS-252-472	c 25	N78-10225 *	US-PATENT-CLASS-260-2.5FP	c 06	N72-25147 *
US-PATENT-CLASS-250-83.3	c 14	N72-17328 *	US-PATENT-CLASS-252-500	c 27	N92-16121 *	US-PATENT-CLASS-260-2.5FP	c 27	N74-27037 *
US-PATENT-CLASS-250-83.3	c 35	N75-27329 *	US-PATENT-CLASS-252-502	c 27	N92-10090 *	US-PATENT-CLASS-260-2.5FP	c 24	N78-24290 *
US-PATENT-CLASS-250-83.6R	c 14	N71-27090 *	US-PATENT-CLASS-252-502	c 24	N92-16025 *	US-PATENT-CLASS-260-2.5F	c 18	N73-13562 *
US-PATENT-CLASS-250-83.6R	c 14	N72-20381 *	US-PATENT-CLASS-252-510	c 24	N91-15320 *	US-PATENT-CLASS-260-2.5L	c 27	N74-12814 *
US-PATENT-CLASS-250-83.6R	c 25	N72-33696 *	US-PATENT-CLASS-252-514	c 05	N72-25120 *	US-PATENT-CLASS-260-2.5N	c 24	N78-15180 *
US-PATENT-CLASS-250-83.6R	c 74	N81-19898 *	US-PATENT-CLASS-252-514	c 44	N79-31752 *	US-PATENT-CLASS-260-2.5N	c 27	N78-31232 *
US-PATENT-CLASS-250-83.6R	c 10	N70-41991 *	US-PATENT-CLASS-252-518	c 25	N82-26396 *	US-PATENT-CLASS-260-2.5R	c 27	N74-27037 *
US-PATENT-CLASS-250-83CD	c 91	N74-13130 *	US-PATENT-CLASS-252-518	c 24	N79-14156 *	US-PATENT-CLASS-260-2.5R	c 24	N78-15180 *
US-PATENT-CLASS-250-83R	c 14	N73-12445 *	US-PATENT-CLASS-252-518	c 27	N92-16121 *	US-PATENT-CLASS-260-2.5	c 06	N71-11242 *
US-PATENT-CLASS-250-83R	c 14	N73-20477 *	US-PATENT-CLASS-252-545	c 54	N92-29137 *	US-PATENT-CLASS-260-2.5	c 06	N71-24739 *
US-PATENT-CLASS-250-83	c 14	N69-27484 *	US-PATENT-CLASS-252-547	c 54	N92-29137 *	US-PATENT-CLASS-260-2.5	c 06	N71-25929 *
US-PATENT-CLASS-250-83	c 14	N69-39937 *	US-PATENT-CLASS-252-549	c 23	N75-14834 *	US-PATENT-CLASS-260-2.5	c 18	N71-26155 *
US-PATENT-CLASS-250-83	c 09	N71-18830 *	US-PATENT-CLASS-252-58	c 18	N70-39897 *	US-PATENT-CLASS-260-2.5	c 06	N72-25150 *
US-PATENT-CLASS-250-83	c 05	N71-19440 *	US-PATENT-CLASS-252-5	c 25	N83-33977 *	US-PATENT-CLASS-260-2P	c 27	N78-32256 *
US-PATENT-CLASS-250-83	c 14	N71-20430 *	US-PATENT-CLASS-252-5	c 25	N83-36118 *	US-PATENT-CLASS-260-2R	c 37	N74-18126 *
US-PATENT-CLASS-250-83	c 14	N71-23401 *	US-PATENT-CLASS-252-62.2	c 33	N91-14536 *	US-PATENT-CLASS-260-2R	c 27	N74-27037 *
US-PATENT-CLASS-250-83	c 09	N71-27232 *	US-PATENT-CLASS-252-62.2	c 33	N92-28753 *	US-PATENT-CLASS-260-2R	c 27	N78-15276 *
US-PATENT-CLASS-250-84	c 14	N71-24809 *	US-PATENT-CLASS-252-62.3E	c 44	N80-24741 *	US-PATENT-CLASS-260-211.5	c 06	N72-25149 *
US-PATENT-CLASS-251-118	c 15	N71-18580 *	US-PATENT-CLASS-252-62.3E	c 44	N81-19558 *	US-PATENT-CLASS-260-240G	c 27	N76-32315 *
US-PATENT-CLASS-251-11	c 15	N70-35407 *	US-PATENT-CLASS-252-62.3GA	c 25	N75-26043 *	US-PATENT-CLASS-260-245.75	c 27	N86-19455 *
US-PATENT-CLASS-251-120	c 37	N74-21065 *	US-PATENT-CLASS-252-62.3	c 26	N71-23292 *	US-PATENT-CLASS-260-245.9	c 27	N86-19455 *
US-PATENT-CLASS-251-121	c 15	N71-18580 *	US-PATENT-CLASS-252-62.3	c 76	N76-25049 *	US-PATENT-CLASS-260-28.5	c 27	N78-33228 *
US-PATENT-CLASS-251-122	c 15	N73-13462 *	US-PATENT-CLASS-252-62	c 27	N74-27037 *	US-PATENT-CLASS-260-29.1R	c 24	N78-24290 *
US-PATENT-CLASS-251-122	c 37	N74-21065 *	US-PATENT-CLASS-252-70	c 23	N75-14834 *	US-PATENT-CLASS-260-29.6RB	c 25	N81-19242 *
US-PATENT-CLASS-251-127	c 12	N71-18615 *	US-PATENT-CLASS-252-79.2	c 25	N92-25399 *	US-PATENT-CLASS-260-29.6S	c 27	N74-17283 *
US-PATENT-CLASS-251-127	c 44	N84-14583 *	US-PATENT-CLASS-252-79.4	c 25	N92-25399 *	US-PATENT-CLASS-260-29.6	c 26	N75-27125 *
US-PATENT-CLASS-251-129.15	c 37	N87-25573 *	US-PATENT-CLASS-252-8.1	c 18	N73-26572 *	US-PATENT-CLASS-260-2	c 06	N71-11243 *
US-PATENT-CLASS-251-129.15	c 34	N91-27504 *	US-PATENT-CLASS-252-8.1	c 27	N74-27037 *	US-PATENT-CLASS-260-2	c 06	N71-20717 *
US-PATENT-CLASS-251-129	c 15	N72-20442 *	US-PATENT-CLASS-252-8.1	c 24	N78-14096 *	US-PATENT-CLASS-260-2	c 06	N71-20905 *
US-PATENT-CLASS-251-138	c 37	N80-23654 *	US-PATENT-CLASS-253-317	c 44	N77-22606 *	US-PATENT-CLASS-260-2	c 06	N71-27363 *
US-PATENT-CLASS-251-148	c 15	N71-23024 *	US-PATENT-CLASS-253-39.15	c 15	N70-33226 *	US-PATENT-CLASS-260-2	c 06	N73-30102 *
US-PATENT-CLASS-251-148	c 34	N91-27504 *	US-PATENT-CLASS-253-39.15	c 15	N70-33264 *	US-PATENT-CLASS-260-2	c 27	N79-21190 *
US-PATENT-CLASS-251-149.6	c 37	N76-14463 *	US-PATENT-CLASS-253-39.15	c 28	N70-33372 *	US-PATENT-CLASS-260-30.2	c 06	N73-27980 *
US-PATENT-CLASS-251-149.9	c 37	N79-11402 *	US-PATENT-CLASS-253-39.1	c 33	N71-29152 *	US-PATENT-CLASS-260-30.4N	c 27	N78-17205 *
US-PATENT-CLASS-251-160	c 37	N91-14609 *	US-PATENT-CLASS-253-66	c 15	N70-36412 *	US-PATENT-CLASS-260-30.8DS	c 06	N73-27980 *
US-PATENT-CLASS-251-163	c 37	N91-14609 *	US-PATENT-CLASS-253-66	c 28	N70-39895 *	US-PATENT-CLASS-260-307G	c 27	N79-22300 *
US-PATENT-CLASS-251-165	c 37	N87-21332 *	US-PATENT-CLASS-253-77	c 28	N71-28928 *	US-PATENT-CLASS-260-32.2R	c 27	N78-17205 *
US-PATENT-CLASS-251-172	c 15	N71-21234 *	US-PATENT-CLASS-253-77	c 28	N71-29154 *	US-PATENT-CLASS-260-32.6NT	c 27	N78-17205 *
US-PATENT-CLASS-251-172	c 37	N79-33469 *	US-PATENT-CLASS-253	c 25	N79-28253 *	US-PATENT-CLASS-260-32.6N	c 06	N73-27980 *
US-PATENT-CLASS-251-173	c 15	N70-33376 *	US-PATENT-CLASS-254-101	c 37	N91-21543 *	US-PATENT-CLASS-260-32.6N	c 23	N76-15268 *
US-PATENT-CLASS-251-175	c 37	N87-25573 *	US-PATENT-CLASS-254-124	c 20	N76-22296 *	US-PATENT-CLASS-260-32.8N	c 23	N76-15268 *
US-PATENT-CLASS-251-205	c 34	N91-27504 *	US-PATENT-CLASS-254-131	c 60	N82-24839 *	US-PATENT-CLASS-260-32.6N	c 27	N81-17260 *
US-PATENT-CLASS-251-210	c 37	N74-21065 *	US-PATENT-CLASS-254-150	c 15	N71-24599 *	US-PATENT-CLASS-260-32.6S	c 27	N81-17260 *
US-PATENT-CLASS-251-212	c 34	N91-14563 *	US-PATENT-CLASS-254-158	c 54	N77-21844 *	US-PATENT-CLASS-260-33.4R	c 06	N73-27980 *
US-PATENT-CLASS-251-216	c 37	N81-17433 *	US-PATENT-CLASS-254-173	c 15	N71-24599 *	US-PATENT-CLASS-260-33.4R	c 27	N81-19296 *
US-PATENT-CLASS-251-265	c 37	N85-20338 *	US-PATENT-CLASS-254-186	c 15	N71-24599 *	US-PATENT-CLASS-260-33.6EP	c 24	N78-27180 *
US-PATENT-CLASS-251-267	c 37	N85-20338 *	US-PATENT-CLASS-254-190	c 15	N72-25453 *	US-PATENT-CLASS-260-33.6PQ	c 24	N78-27180 *
US-PATENT-CLASS-251-284	c 37	N85-20338 *	US-PATENT-CLASS-254-29A	c 15	N73-30457 *	US-PATENT-CLASS-260-33.6R	c 06	N73-27980 *
US-PATENT-CLASS-251-297	c 37	N85-20338 *	US-PATENT-CLASS-254-93-H	c 35	N88-24927 *	US-PATENT-CLASS-260-33.6UB	c 27	N81-15104 *
US-PATENT-CLASS-251-31	c 15	N71-19485 *	US-PATENT-CLASS-254-93-R	c 35	N88-24927 *	US-PATENT-CLASS-260-33.6EP	c 24	N78-27180 *
US-PATENT-CLASS-251-325	c 37	N85-29284 *	US-PATENT-CLASS-254-93R	c 35	N74-13129 *	US-PATENT-CLASS-260-33.8F	c 27	N76-24405 *
US-PATENT-CLASS-251-326	c 34	N91-27504 *	US-PATENT-CLASS-254-93R	c 20	N76-22296 *	US-PATENT-CLASS-260-33.8F	c 25	N81-14016 *
US-PATENT-CLASS-251-331	c 15	N72-31483 *	US-PATENT-CLASS-256-13.1	c 37	N79-10420 *	US-PATENT-CLASS-260-33.8UA	c 24	N78-27180 *
US-PATENT-CLASS-251-333	c 15	N70-34859 *	US-PATENT-CLASS-256-1	c 37	N79-10420 *	US-PATENT-CLASS-260-340.9R	c 23	N82-16174 *
US-PATENT-CLASS-251-333	c 12	N71-18615 *	US-PATENT-CLASS-256-308.2	c 27	N86-20561 *	US-PATENT-CLASS-260-346.3	c 23	N75-30256 *
US-PATENT-CLASS-251-333	c 15	N72-20442 *	US-PATENT-CLASS-256-59	c 37	N92-29092 *	US-PATENT-CLASS-260-346.3	c 23	N76-15268 *
US-PATENT-CLASS-251-333	c 37	N75-25185 *	US-PATENT-CLASS-257-17	c 35	N93-19387 *	US-PATENT-CLASS-260-346.3	c 27	N80-32515 *
US-PATENT-CLASS-251-339	c 37	N81-17433 *	US-PATENT-CLASS-257-21	c 35	N93-19387 *	US-PATENT-CLASS-260-348SC	c 06	N72-25148 *
US-PATENT-CLASS-251-342	c 12	N71-18615 *	US-PATENT-CLASS-257-712	c 35	N93-19387 *	US-PATENT-CLASS-260-37EP	c 24	N78-24290 *
US-PATENT-CLASS-251-349	c 37	N85-29284 *	US-PATENT-CLASS-259-DIG.18	c 32	N93-29087 *	US-PATENT-CLASS-260-37EP	c 24	N78-27180 *
US-PATENT-CLASS-251-353	c 37	N85-29284 *	US-PATENT-CLASS-259-4AC	c 35	N74-15093 *	US-PATENT-CLASS-260-37EP	c 15	N79-26100 *
US-PATENT-CLASS-251-358	c 15	N71-17648 *	US-PATENT-CLASS-259-4AC	c 37	N76-19436 *	US-PATENT-CLASS-260-37EP	c 27	N81-17260 *
US-PATENT-CLASS-251-360	c 15	N72-25451 *	US-PATENT-CLASS-259-4	c 15	N73-19453 *	US-PATENT-CLASS-260-37N	c 27	N79-28307 *
US-PATENT-CLASS-251-363	c 34	N91-27504 *	US-PATENT-CLASS-259-60	c 35	N74-15093 *	US-PATENT-CLASS-260-37	c 18	N71-25881 *
US-PATENT-CLASS-251-61.1	c 12	N71-18615 *	US-PATENT-CLASS-259-71	c 15	N71-21177 *	US-PATENT-CLASS-260-37	c 27	N81-24258 *
US-PATENT-CLASS-251-61	c 15	N71-10778 *	US-PATENT-CLASS-259-72	c 37	N74-18123 *	US-PATENT-CLASS-260-386	c 25	N82-24312 *
US-PATENT-CLASS-251-7	c 37	N79-28550 *	US-PATENT-CLASS-259-98	c 35	N74-15126 *	US-PATENT-CLASS-260-386	c 23	N88-26404 *
US-PATENT-CLASS-251-86	c 15	N72-31483 *	US-PATENT-CLASS-259-4R	c 34	N77-24423 *	US-PATENT-CLASS-260-386	c 25	N90-23497 *
US-PATENT-CLASS-251-86	c 37	N80-23654 *	US-PATENT-CLASS-260-46.5E	c 27	N71-21156 *	US-PATENT-CLASS-260-389	c 25	N82-24312 *
US-PATENT-CLASS-252-DIG.13	c 54	N92-29137 *	US-PATENT-CLASS-260-DIG.15	c 27	N78-14164 *	US-PATENT-CLASS-260-389	c 23	N88-26404 *
US-PATENT-CLASS-252-DIG.14	c 54	N92-29137 *	US-PATENT-CLASS-260-DIG.24	c 27	N74-27037 *	US-PATENT-CLASS-260-395	c 23	N88-26404 *
US-PATENT-CLASS-252-DIG.5	c 54	N92-29137 *	US-PATENT-CLASS-260-DIG.29	c 27	N80-24438 *	US-PATENT-CLASS-260-395	c 25	N90-23497 *
US-PATENT-CLASS-252-12.2	c 24	N79-17916 *	US-PATENT-CLASS-260-17.2	c 24	N80-26388 *	US-PATENT-CLASS-260-396N	c 27	N74-27037 *
US-PATENT-CLASS-252-12	c 15	N71-23810 *	US-PATENT-CLASS-260-17.2	c 24	N81-13999 *	US-PATENT-CLASS-260-404.5	c 18	N71-15688 *
US-PATENT-CLASS-252-12	c 24	N76-22309 *	US-PATENT-CLASS-260-17.4UC	c 23	N81-29160 *	US-PATENT-CLASS-260-42.17	c 27	N78-17215 *
US-PATENT-CLASS-252-182.1	c 33	N84-14422 *	US-PATENT-CLASS-260-17A	c 27	N81-14076 *	US-PATENT-CLASS-260-42.43	c 24	N78-27180 *
US-PATENT-CLASS-252-26	c 15	N71-21403 *	US-PATENT-CLASS-260-18S	c 27	N81-14076 *	US-PATENT-CLASS-260-429	c 06	N71-28808 *
US-PATENT-CLASS-252-26	c 15	N71-24046 *	US-PATENT-CLASS-260-2.1E	c 06	N72-25151 *	US-PATENT-CLASS-260-42	c 27	N79-28307 *
US-PATENT-CLASS-252-2	c 25	N83-36118 *	US-PATENT-CLASS-260-2.1E	c 18	N72-22567 *	US-PATENT-CLASS-260-448.2D	c 06	N72-25151 *
US-PATENT-CLASS-252-300	c 14	N72-22443 *	US-PATENT-CLASS-260-2.1E	c 27	N81-14076 *	US-PATENT-CLASS-260-448.2D	c 06	N73-32030 *
US-PATENT-CLASS-252-300	c 25	N76-24363 *	US-PATENT-CLASS-260-2.1E	c 25	N81-19244 *	US-PATENT-CLASS-260-448.2N	c 37	N74-21058 *
US-PATENT-CLASS-252-301.1R	c 34	N79-10389 *	US-PATENT-CLASS-260-2.1	c 25	N81-17187 *	US-PATENT-CLASS-260-448.2	c 06	N71-23230 *
US-PATENT-CLASS-252-301.16	c 35	N79-10389 *	US-PATENT-CLASS-260-2.2R	c 25	N81-17187 *	US-PATENT-CLASS-260-45.7R	c 24	N78-27180 *
US-PATENT-CLASS-252-301.2	c 18	N71-27170 *	US-PATENT-CLASS-260-2.2R	c 25	N81-19244 *	US-PATENT-CLASS-260-45.7R	c 27	N82-16238 *
US-PATENT-CLASS-252-301.4	c 06	N73-30097 *						



## US-PATENT-CLASS-260-45.75W

## REPORT NUMBER INDEX

US-PATENT-CLASS-260-45.75W	c 24	N78-27180 *	US-PATENT-CLASS-261-118	c 31	N80-18231 *	US-PATENT-CLASS-264-258	c 27	N83-34041 *
US-PATENT-CLASS-260-45.7	c 27	N76-24405 *	US-PATENT-CLASS-261-123	c 34	N77-24423 *	US-PATENT-CLASS-264-258	c 27	N85-20124 *
US-PATENT-CLASS-260-45.85N	c 24	N78-27180 *	US-PATENT-CLASS-261-145	c 28	N72-22772 *	US-PATENT-CLASS-264-259	c 24	N81-29163 *
US-PATENT-CLASS-260-45.9R	c 24	N78-27180 *	US-PATENT-CLASS-261-28	c 07	N81-29129 *	US-PATENT-CLASS-264-259	c 27	N93-25995 *
US-PATENT-CLASS-260-46.5E	c 06	N72-25151 *	US-PATENT-CLASS-261-78A	c 35	N86-29174 *	US-PATENT-CLASS-264-261	c 24	N91-25199 *
US-PATENT-CLASS-260-46.5G	c 06	N72-25151 *	US-PATENT-CLASS-261-79A	c 54	N81-24724 *	US-PATENT-CLASS-264-265	c 27	N93-25995 *
US-PATENT-CLASS-260-46.5P	c 06	N72-25151 *	US-PATENT-CLASS-261-83	c 51	N91-30667 *	US-PATENT-CLASS-264-267	c 37	N76-24575 *
US-PATENT-CLASS-260-46.5R	c 06	N73-26100 *	US-PATENT-CLASS-263-48	c 15	N69-27483 *	US-PATENT-CLASS-264-27	c 26	N71-17818 *
US-PATENT-CLASS-260-46.5	c 06	N71-11237 *	US-PATENT-CLASS-264-DIG.36	c 18	N73-14584 *	US-PATENT-CLASS-264-28	c 15	N73-12489 *
US-PATENT-CLASS-260-46.5	c 06	N71-11240 *	US-PATENT-CLASS-264-DIG.44	c 15	N72-16329 *	US-PATENT-CLASS-264-28	c 27	N90-23566 *
US-PATENT-CLASS-260-46.55R	c 27	N81-24256 *	US-PATENT-CLASS-264-DIG.64	c 27	N88-23894 *	US-PATENT-CLASS-264-291	c 74	N87-28416 *
US-PATENT-CLASS-260-46.55R	c 27	N84-22744 *	US-PATENT-CLASS-264-DIG.65	c 27	N85-20124 *	US-PATENT-CLASS-264-294	c 31	N74-13177 *
US-PATENT-CLASS-260-46.56	c 27	N84-22744 *	US-PATENT-CLASS-264-DIG.65	c 27	N93-25995 *	US-PATENT-CLASS-264-3R	c 28	N77-10213 *
US-PATENT-CLASS-260-47CP	c 06	N73-27980 *	US-PATENT-CLASS-264-DIG.59	c 27	N89-29539 *	US-PATENT-CLASS-264-3R	c 20	N77-17143 *
US-PATENT-CLASS-260-47CP	c 23	N76-15268 *	US-PATENT-CLASS-264-022	c 27	N90-21198 *	US-PATENT-CLASS-264-304	c 37	N76-31524 *
US-PATENT-CLASS-260-47CP	c 27	N78-31232 *	US-PATENT-CLASS-264-102	c 15	N71-10672 *	US-PATENT-CLASS-264-305	c 37	N76-31524 *
US-PATENT-CLASS-260-47CP	c 27	N78-32261 *	US-PATENT-CLASS-264-102	c 15	N73-12489 *	US-PATENT-CLASS-264-308	c 37	N76-31524 *
US-PATENT-CLASS-260-47UP	c 06	N73-32029 *	US-PATENT-CLASS-264-102	c 31	N74-14133 *	US-PATENT-CLASS-264-310	c 37	N76-31524 *
US-PATENT-CLASS-260-47	c 06	N71-28620 *	US-PATENT-CLASS-264-102	c 31	N74-18124 *	US-PATENT-CLASS-264-311	c 24	N81-29163 *
US-PATENT-CLASS-260-47	c 06	N71-28807 *	US-PATENT-CLASS-264-102	c 37	N76-24575 *	US-PATENT-CLASS-264-311	c 31	N90-19425 *
US-PATENT-CLASS-260-485F	c 06	N73-30098 *	US-PATENT-CLASS-264-102	c 15	N79-26100 *	US-PATENT-CLASS-264-318	c 37	N76-31524 *
US-PATENT-CLASS-260-49	c 27	N78-32261 *	US-PATENT-CLASS-264-104	c 05	N72-25120 *	US-PATENT-CLASS-264-331.12	c 27	N85-20124 *
US-PATENT-CLASS-260-520	c 23	N75-30256 *	US-PATENT-CLASS-264-104	c 05	N81-24257 *	US-PATENT-CLASS-264-331.12	c 24	N91-25200 *
US-PATENT-CLASS-260-535H	c 06	N72-27144 *	US-PATENT-CLASS-264-104	c 23	N81-29160 *	US-PATENT-CLASS-264-331.19	c 27	N85-20124 *
US-PATENT-CLASS-260-53	c 27	N79-28307 *	US-PATENT-CLASS-264-104	c 25	N83-13188 *	US-PATENT-CLASS-264-331.46	c 27	N83-34041 *
US-PATENT-CLASS-260-544-D	c 27	N86-21675 *	US-PATENT-CLASS-264-105	c 27	N81-24257 *	US-PATENT-CLASS-264-331	c 27	N76-16230 *
US-PATENT-CLASS-260-544-P	c 27	N87-14515 *	US-PATENT-CLASS-264-111	c 17	N71-29137 *	US-PATENT-CLASS-264-332	c 37	N81-25371 *
US-PATENT-CLASS-260-544F	c 06	N72-20121 *	US-PATENT-CLASS-264-112	c 27	N85-20124 *	US-PATENT-CLASS-264-332	c 27	N87-28656 *
US-PATENT-CLASS-260-544P	c 27	N86-27450 *	US-PATENT-CLASS-264-114	c 31	N90-19425 *	US-PATENT-CLASS-264-334	c 37	N76-31524 *
US-PATENT-CLASS-260-551P	c 27	N78-32256 *	US-PATENT-CLASS-264-118	c 24	N80-26388 *	US-PATENT-CLASS-264-33	c 44	N79-24432 *
US-PATENT-CLASS-260-566B	c 27	N76-32315 *	US-PATENT-CLASS-264-118	c 24	N84-16262 *	US-PATENT-CLASS-264-342R	c 37	N82-24491 *
US-PATENT-CLASS-260-567.6M	c 06	N73-32029 *	US-PATENT-CLASS-264-119	c 24	N80-26388 *	US-PATENT-CLASS-264-345	c 71	N78-10837 *
US-PATENT-CLASS-260-571	c 23	N76-15268 *	US-PATENT-CLASS-264-11	c 27	N90-23566 *	US-PATENT-CLASS-264-345	c 37	N91-27562 *
US-PATENT-CLASS-260-606-5P	c 27	N78-32256 *	US-PATENT-CLASS-264-120	c 27	N85-20124 *	US-PATENT-CLASS-264-347	c 27	N86-29039 *
US-PATENT-CLASS-260-615	c 06	N71-27254 *	US-PATENT-CLASS-264-124	c 24	N80-26388 *	US-PATENT-CLASS-264-347	c 27	N89-29539 *
US-PATENT-CLASS-260-615	c 06	N73-30101 *	US-PATENT-CLASS-264-129	c 37	N76-31524 *	US-PATENT-CLASS-264-34	c 44	N79-24432 *
US-PATENT-CLASS-260-63N	c 27	N78-31232 *	US-PATENT-CLASS-264-12	c 31	N83-35176 *	US-PATENT-CLASS-264-35	c 44	N79-24432 *
US-PATENT-CLASS-260-63N	c 27	N78-32261 *	US-PATENT-CLASS-264-12	c 31	N91-32240 *	US-PATENT-CLASS-264-36	c 15	N73-12489 *
US-PATENT-CLASS-260-63R	c 27	N78-32261 *	US-PATENT-CLASS-264-130	c 27	N78-32262 *	US-PATENT-CLASS-264-36	c 32	N74-27612 *
US-PATENT-CLASS-260-65	c 06	N73-27980 *	US-PATENT-CLASS-264-135	c 37	N74-18126 *	US-PATENT-CLASS-264-3	c 28	N71-26779 *
US-PATENT-CLASS-260-65	c 27	N78-32261 *	US-PATENT-CLASS-264-135	c 37	N93-25995 *	US-PATENT-CLASS-264-40.1	c 27	N89-29539 *
US-PATENT-CLASS-260-65	c 23	N82-29358 *	US-PATENT-CLASS-264-136	c 37	N74-18126 *	US-PATENT-CLASS-264-40.1	c 27	N90-23544 *
US-PATENT-CLASS-260-67	c 27	N78-17214 *	US-PATENT-CLASS-264-136	c 24	N91-25200 *	US-PATENT-CLASS-264-40.4	c 35	N80-18357 *
US-PATENT-CLASS-260-67	c 27	N79-21191 *	US-PATENT-CLASS-264-137	c 27	N79-33316 *	US-PATENT-CLASS-264-40.5	c 27	N89-29539 *
US-PATENT-CLASS-260-72.5	c 06	N71-11236 *	US-PATENT-CLASS-264-137	c 27	N81-14078 *	US-PATENT-CLASS-264-40.6	c 27	N89-29539 *
US-PATENT-CLASS-260-72.5	c 06	N71-11239 *	US-PATENT-CLASS-264-137	c 27	N81-29229 *	US-PATENT-CLASS-264-40	c 15	N73-12489 *
US-PATENT-CLASS-260-72.5	c 06	N71-24740 *	US-PATENT-CLASS-264-137	c 27	N83-34041 *	US-PATENT-CLASS-264-41	c 25	N81-19244 *
US-PATENT-CLASS-260-75NH	c 27	N78-17213 *	US-PATENT-CLASS-264-137	c 27	N85-20124 *	US-PATENT-CLASS-264-41	c 51	N84-28361 *
US-PATENT-CLASS-260-75NK	c 27	N78-17213 *	US-PATENT-CLASS-264-145	c 15	N79-26100 *	US-PATENT-CLASS-264-43	c 27	N90-23566 *
US-PATENT-CLASS-260-75NT	c 27	N78-17213 *	US-PATENT-CLASS-264-151	c 15	N79-26100 *	US-PATENT-CLASS-264-453	c 25	N82-21268 *
US-PATENT-CLASS-260-77.5AM	c 27	N78-17213 *	US-PATENT-CLASS-264-152	c 27	N85-20124 *	US-PATENT-CLASS-264-4	c 34	N90-23700 *
US-PATENT-CLASS-260-77.5AN	c 27	N78-17213 *	US-PATENT-CLASS-264-157	c 24	N78-17150 *	US-PATENT-CLASS-264-50	c 27	N88-23894 *
US-PATENT-CLASS-260-77.5AP	c 06	N72-27144 *	US-PATENT-CLASS-264-161	c 37	N76-31524 *	US-PATENT-CLASS-264-510	c 44	N79-24432 *
US-PATENT-CLASS-260-77.5AP	c 06	N73-33076 *	US-PATENT-CLASS-264-175	c 15	N79-26100 *	US-PATENT-CLASS-264-516	c 44	N79-24432 *
US-PATENT-CLASS-260-77.5AP	c 27	N77-31308 *	US-PATENT-CLASS-264-184	c 27	N78-32262 *	US-PATENT-CLASS-264-53	c 25	N82-21268 *
US-PATENT-CLASS-260-77.5AP	c 27	N78-17213 *	US-PATENT-CLASS-264-184	c 37	N91-27562 *	US-PATENT-CLASS-264-58	c 24	N93-26100 *
US-PATENT-CLASS-260-77.5AT	c 27	N78-17213 *	US-PATENT-CLASS-264-1	c 44	N79-24432 *	US-PATENT-CLASS-264-59	c 24	N84-16262 *
US-PATENT-CLASS-260-77.55P	c 27	N78-17213 *	US-PATENT-CLASS-264-204	c 27	N86-29039 *	US-PATENT-CLASS-264-5	c 31	N81-33319 *
US-PATENT-CLASS-260-77.5	c 06	N73-30099 *	US-PATENT-CLASS-264-211.15	c 37	N91-27562 *	US-PATENT-CLASS-264-5	c 27	N82-28442 *
US-PATENT-CLASS-260-77.5	c 06	N73-30100 *	US-PATENT-CLASS-264-211.16	c 37	N91-27562 *	US-PATENT-CLASS-264-5	c 31	N83-31896 *
US-PATENT-CLASS-260-77.5	c 06	N73-30103 *	US-PATENT-CLASS-264-211.17	c 37	N91-27562 *	US-PATENT-CLASS-264-5	c 31	N83-35176 *
US-PATENT-CLASS-260-78.41	c 27	N76-31232 *	US-PATENT-CLASS-264-211	c 27	N78-32262 *	US-PATENT-CLASS-264-5	c 26	N86-32551 *
US-PATENT-CLASS-260-78TF	c 06	N73-27980 *	US-PATENT-CLASS-264-212	c 27	N80-32516 *	US-PATENT-CLASS-264-5	c 31	N91-32240 *
US-PATENT-CLASS-260-78TF	c 27	N74-23125 *	US-PATENT-CLASS-264-212	c 27	N86-31727 *	US-PATENT-CLASS-264-60	c 27	N76-22376 *
US-PATENT-CLASS-260-78TF	c 23	N75-30256 *	US-PATENT-CLASS-264-216	c 25	N82-21268 *	US-PATENT-CLASS-264-60	c 27	N79-14213 *
US-PATENT-CLASS-260-78TF	c 23	N76-15268 *	US-PATENT-CLASS-264-216	c 27	N86-29039 *	US-PATENT-CLASS-264-60	c 24	N84-16262 *
US-PATENT-CLASS-260-78TF	c 27	N78-32261 *	US-PATENT-CLASS-264-217	c 25	N75-12087 *	US-PATENT-CLASS-264-60	c 27	N87-28656 *
US-PATENT-CLASS-260-78UA	c 06	N73-27980 *	US-PATENT-CLASS-264-219	c 37	N76-31524 *	US-PATENT-CLASS-264-63	c 27	N76-22376 *
US-PATENT-CLASS-260-78	c 06	N71-11235 *	US-PATENT-CLASS-264-220	c 27	N82-28440 *	US-PATENT-CLASS-264-63	c 27	N87-28656 *
US-PATENT-CLASS-260-78	c 06	N71-11238 *	US-PATENT-CLASS-264-221	c 15	N72-16329 *	US-PATENT-CLASS-264-63	c 27	N92-16122 *
US-PATENT-CLASS-260-830S	c 15	N79-26100 *	US-PATENT-CLASS-264-225	c 15	N72-16329 *	US-PATENT-CLASS-264-65	c 18	N73-14584 *
US-PATENT-CLASS-260-85.5	c 06	N71-23500 *	US-PATENT-CLASS-264-227	c 15	N72-16329 *	US-PATENT-CLASS-264-66	c 27	N76-22376 *
US-PATENT-CLASS-260-858	c 27	N81-14076 *	US-PATENT-CLASS-264-229	c 24	N81-29163 *	US-PATENT-CLASS-264-6	c 27	N90-23566 *
US-PATENT-CLASS-260-877	c 06	N72-22107 *	US-PATENT-CLASS-264-22	c 15	N72-20446 *	US-PATENT-CLASS-264-70	c 44	N79-24432 *
US-PATENT-CLASS-260-879	c 27	N76-16228 *	US-PATENT-CLASS-264-22	c 14	N72-22439 *	US-PATENT-CLASS-264-71	c 44	N79-24432 *
US-PATENT-CLASS-260-886	c 27	N81-14076 *	US-PATENT-CLASS-264-22	c 25	N75-12087 *	US-PATENT-CLASS-264-90	c 24	N78-17150 *
US-PATENT-CLASS-260-8900	c 27	N81-14076 *	US-PATENT-CLASS-264-22	c 27	N80-32516 *	US-PATENT-CLASS-264-92	c 15	N71-17803 *
US-PATENT-CLASS-260-895	c 27	N81-14076 *	US-PATENT-CLASS-264-22	c 27	N82-28440 *	US-PATENT-CLASS-264-92	c 15	N72-24522 *
US-PATENT-CLASS-260-898	c 27	N81-14076 *	US-PATENT-CLASS-264-230	c 27	N82-24491 *	US-PATENT-CLASS-264-9	c 31	N81-33319 *
US-PATENT-CLASS-260-900	c 27	N76-16228 *	US-PATENT-CLASS-264-231	c 24	N81-29163 *	US-PATENT-CLASS-264-9	c 31	N83-31896 *
US-PATENT-CLASS-260-901	c 27	N81-14076 *	US-PATENT-CLASS-264-234	c 37	N91-27562 *	US-PATENT-CLASS-266-119	c 26	N80-28492 *
US-PATENT-CLASS-260-92.1	c 06	N72-25150 *	US-PATENT-CLASS-264-236	c 27	N78-32262 *	US-PATENT-CLASS-266-19	c 15	N70-33382 *
US-PATENT-CLASS-260-92.1	c 06	N72-25152 *	US-PATENT-CLASS-264-236	c 15	N79-26100 *	US-PATENT-CLASS-266-249	c 26	N80-28492 *
US-PATENT-CLASS-260-92.1	c 27	N76-16228 *	US-PATENT-CLASS-264-236	c 27	N86-29039 *	US-PATENT-CLASS-266-24	c 17	N72-28535 *
US-PATENT-CLASS-260-92.1	c 27	N76-24405 *	US-PATENT-CLASS-264-236	c 27	N86-31727 *	US-PATENT-CLASS-266-274	c 26	N80-28492 *
US-PATENT-CLASS-260-926	c 27	N80-10358 *	US-PATENT-CLASS-264-236	c 27	N89-29539 *	US-PATENT-CLASS-267-141.2	c 39	N93-24596 *
US-PATENT-CLASS-260-927-N	c 23	N86-19376 *	US-PATENT-CLASS-264-236	c 37	N91-27562 *	US-PATENT-CLASS-267-150	c 37	N85-34401 *
US-PATENT-CLASS-260-93.5A	c 06	N73-32029 *	US-PATENT-CLASS-264-23	c 71	N78-10837 *	US-PATENT-CLASS-267-154	c 39	N93-24596 *
US-PATENT-CLASS-260-93.5S	c 06	N73-32029 *	US-PATENT-CLASS-264-23	c 31	N81-15154 *	US-PATENT-CLASS-267-166	c 34	N74-18552 *
US-PATENT-CLASS-260-94.2M	c 06	N73-32029 *	US-PATENT-CLASS-264-24	c 31	N81-33319 *	US-PATENT-CLASS-267-1	c 15	N69-27504 *
US-PATENT-CLASS-260-94.2R	c 06	N73-32029 *	US-PATENT-CLASS-264-24	c 31	N83-35176 *	US-PATENT-CLASS-267-1	c 15	N70-38225 *
US-PATENT-CLASS-260-94.7R	c 06	N73-32029 *	US-PATENT-CLASS-264-257	c 37	N74-18126 *	US-PATENT-CLASS-267-64	c 15	N71-21530 *
US-PATENT-CLASS-260-94.8	c 27	N73-22710 *	US-PATENT-CLASS-264-257	c 27	N89-29539 *	US-PATENT-CLASS-267-8R	c 37	N85-34401 *
US-PATENT-CLASS-260-959	c 27	N78-32256 *	US-PATENT-CLASS-264-257	c 24	N91-25199 *	US-PATENT-CLASS-269-147	c 35	N88-24927 *
US-PATENT-CLASS-260-96D	c 28	N81-15119 *	US-PATENT-CLASS-264-257	c 24	N91-25200 *	US-PATENT-CLASS-269-152	c 18	N83-29303 *
US-PATENT-CLASS-261-DIG.75	c 34	N77-24423 *	US-PATENT-CLASS-264-258	c 24	N81-29163 *	US-PATENT-CLASS-269-153	c 44	N79-19447 *

## REPORT NUMBER INDEX

## US-PATENT-CLASS-29-447

US-PATENT-CLASS-269-156	c 37	N80-14398 *	US-PATENT-CLASS-277-72R	c 37	N82-24490 *	US-PATENT-CLASS-285-97	c 37	N92-21727 *
US-PATENT-CLASS-269-21	c 37	N76-21554 *	US-PATENT-CLASS-277-74	c 15	N72-29488 *	US-PATENT-CLASS-287-119	c 15	N70-41829 *
US-PATENT-CLASS-269-21	c 37	N78-17383 *	US-PATENT-CLASS-277-76	c 37	N76-22541 *	US-PATENT-CLASS-287-189.365	c 15	N71-26312 *
US-PATENT-CLASS-269-21	c 37	N78-27423 *	US-PATENT-CLASS-277-81R	c 37	N92-22043 *	US-PATENT-CLASS-287-189.36	c 15	N71-10799 *
US-PATENT-CLASS-269-21	c 37	N80-18951 *	US-PATENT-CLASS-277-91	c 37	N85-29284 *	US-PATENT-CLASS-287-54A	c 11	N72-25287 *
US-PATENT-CLASS-269-21	c 37	N81-33482 *	US-PATENT-CLASS-277-93R	c 37	N82-16408 *	US-PATENT-CLASS-287-85R	c 15	N73-12488 *
US-PATENT-CLASS-269-21	c 37	N91-21545 *	US-PATENT-CLASS-277-96.1	c 37	N74-15125 *	US-PATENT-CLASS-287-92	c 31	N73-32749 *
US-PATENT-CLASS-269-224	c 37	N84-28083 *	US-PATENT-CLASS-277-96	c 37	N76-22541 *	US-PATENT-CLASS-29-DIG.1	c 44	N81-14389 *
US-PATENT-CLASS-269-242	c 18	N83-29303 *	US-PATENT-CLASS-277-96.1	c 37	N82-12442 *	US-PATENT-CLASS-29-DIG.24	c 24	N75-33181 *
US-PATENT-CLASS-269-242	c 37	N84-28083 *	US-PATENT-CLASS-277-96	c 37	N79-22475 *	US-PATENT-CLASS-29-DIG.35	c 37	N77-23482 *
US-PATENT-CLASS-269-244	c 18	N83-29303 *	US-PATENT-CLASS-277-96	c 37	N74-10474 *	US-PATENT-CLASS-29-DIG.39	c 24	N75-33181 *
US-PATENT-CLASS-269-244	c 37	N84-28083 *	US-PATENT-CLASS-279-18	c 37	N81-24442 *	US-PATENT-CLASS-29-110.5	c 37	N92-28754 *
US-PATENT-CLASS-269-246	c 35	N88-24927 *	US-PATENT-CLASS-279-18	c 37	N75-33395 *	US-PATENT-CLASS-29-123	c 37	N92-28754 *
US-PATENT-CLASS-269-252	c 37	N84-28083 *	US-PATENT-CLASS-279-20.1	c 37	N75-33395 *	US-PATENT-CLASS-29-125	c 37	N79-10422 *
US-PATENT-CLASS-269-266	c 37	N78-27423 *	US-PATENT-CLASS-279-23.1	c 37	N93-18286 *	US-PATENT-CLASS-29-132	c 37	N92-28754 *
US-PATENT-CLASS-269-267	c 37	N89-13785 *	US-PATENT-CLASS-279-23.1	c 37	N78-17383 *	US-PATENT-CLASS-29-148.4A	c 37	N74-15128 *
US-PATENT-CLASS-269-270	c 37	N93-17625 *	US-PATENT-CLASS-279-23.1	c 37	N93-14710 *	US-PATENT-CLASS-29-148.4B	c 37	N74-15128 *
US-PATENT-CLASS-269-285	c 37	N84-28083 *	US-PATENT-CLASS-279-23.1	c 37	N93-18286 *	US-PATENT-CLASS-29-148.4	c 15	N71-16052 *
US-PATENT-CLASS-269-287	c 37	N80-23655 *	US-PATENT-CLASS-279-23.1	c 37	N75-33395 *	US-PATENT-CLASS-29-148.4	c 15	N71-17688 *
US-PATENT-CLASS-269-3	c 37	N84-12491 *	US-PATENT-CLASS-280-1.5	c 52	N93-14710 *	US-PATENT-CLASS-29-155.55	c 15	N71-15986 *
US-PATENT-CLASS-269-43	c 37	N88-14360 *	US-PATENT-CLASS-280-150SB	c 05	N93-14708 *	US-PATENT-CLASS-29-156.5R	c 24	N87-27742 *
US-PATENT-CLASS-269-48.1	c 39	N74-13131 *	US-PATENT-CLASS-280-290	c 52	N93-14708 *	US-PATENT-CLASS-29-156.8R	c 37	N78-24544 *
US-PATENT-CLASS-269-71	c 37	N88-14360 *	US-PATENT-CLASS-280-432	c 37	N77-14477 *	US-PATENT-CLASS-29-157.3H	c 74	N83-19596 *
US-PATENT-CLASS-269-73	c 37	N88-14360 *	US-PATENT-CLASS-280-47.11	c 85	N87-21755 *	US-PATENT-CLASS-29-157.3R	c 34	N74-18552 *
US-PATENT-CLASS-27-498	c 15	N73-28515 *	US-PATENT-CLASS-280-67.7	c 37	N90-17153 *	US-PATENT-CLASS-29-157.3	c 28	N70-41818 *
US-PATENT-CLASS-272-DIG.1	c 05	N73-32014 *	US-PATENT-CLASS-280-682	c 37	N90-17153 *	US-PATENT-CLASS-29-182.1	c 18	N71-23710 *
US-PATENT-CLASS-272-DIG.4	c 05	N73-32014 *	US-PATENT-CLASS-280-805	c 37	N82-18601 *	US-PATENT-CLASS-29-182.2	c 17	N71-23046 *
US-PATENT-CLASS-272-DIG.5	c 05	N73-32014 *	US-PATENT-CLASS-280-87.051	c 52	N93-14708 *	US-PATENT-CLASS-29-182.2	c 37	N75-26371 *
US-PATENT-CLASS-272-1R	c 09	N75-15662 *	US-PATENT-CLASS-285-DIG.21	c 15	N72-25450 *	US-PATENT-CLASS-29-182.5	c 17	N72-28536 *
US-PATENT-CLASS-272-145	c 54	N93-14713 *	US-PATENT-CLASS-285-DIG.21	c 33	N73-26958 *	US-PATENT-CLASS-29-182.5	c 37	N75-26371 *
US-PATENT-CLASS-272-57A	c 09	N75-15662 *	US-PATENT-CLASS-285-107	c 37	N89-13786 *	US-PATENT-CLASS-29-182.5	c 27	N76-15311 *
US-PATENT-CLASS-272-70	c 05	N71-28619 *	US-PATENT-CLASS-285-108	c 37	N89-13786 *	US-PATENT-CLASS-29-182.5	c 27	N77-13217 *
US-PATENT-CLASS-272-73	c 14	N73-27377 *	US-PATENT-CLASS-285-109	c 37	N89-13786 *	US-PATENT-CLASS-29-182	c 37	N74-13179 *
US-PATENT-CLASS-272-73	c 05	N73-27941 *	US-PATENT-CLASS-285-114	c 37	N75-19686 *	US-PATENT-CLASS-29-183.5	c 17	N70-38490 *
US-PATENT-CLASS-272-73	c 37	N74-18127 *	US-PATENT-CLASS-285-133.1	c 37	N89-13786 *	US-PATENT-CLASS-29-193	c 34	N76-27515 *
US-PATENT-CLASS-272-79C	c 05	N73-32014 *	US-PATENT-CLASS-285-137.1	c 35	N87-28884 *	US-PATENT-CLASS-29-194	c 26	N75-19408 *
US-PATENT-CLASS-272-80	c 37	N74-18127 *	US-PATENT-CLASS-285-159	c 37	N82-24494 *	US-PATENT-CLASS-29-194	c 44	N76-14595 *
US-PATENT-CLASS-273-1E	c 05	N73-13114 *	US-PATENT-CLASS-285-168	c 54	N86-28619 *	US-PATENT-CLASS-29-195A	c 27	N76-16229 *
US-PATENT-CLASS-273-148B	c 33	N92-29153 *	US-PATENT-CLASS-285-168	c 54	N86-28620 *	US-PATENT-CLASS-29-195Y	c 14	N73-32320 *
US-PATENT-CLASS-273-240	c 31	N83-34073 *	US-PATENT-CLASS-285-184	c 54	N86-29507 *	US-PATENT-CLASS-29-195	c 44	N76-14595 *
US-PATENT-CLASS-274-4R	c 09	N72-11224 *	US-PATENT-CLASS-285-184	c 15	N72-20445 *	US-PATENT-CLASS-29-196.2	c 17	N73-32414 *
US-PATENT-CLASS-277-105	c 37	N82-24490 *	US-PATENT-CLASS-285-184	c 15	N72-20445 *	US-PATENT-CLASS-29-196.2	c 26	N75-19408 *
US-PATENT-CLASS-277-116.6	c 37	N84-11497 *	US-PATENT-CLASS-285-192	c 20	N78-24275 *	US-PATENT-CLASS-29-196.6	c 17	N73-32414 *
US-PATENT-CLASS-277-124	c 37	N84-11497 *	US-PATENT-CLASS-285-223	c 37	N92-21727 *	US-PATENT-CLASS-29-196.6	c 37	N75-13261 *
US-PATENT-CLASS-277-134	c 37	N75-21631 *	US-PATENT-CLASS-285-226	c 37	N75-19686 *	US-PATENT-CLASS-29-196.6	c 26	N75-19408 *
US-PATENT-CLASS-277-134	c 07	N78-25090 *	US-PATENT-CLASS-285-226	c 18	N89-28553 *	US-PATENT-CLASS-29-197	c 17	N73-32414 *
US-PATENT-CLASS-277-135	c 37	N85-29284 *	US-PATENT-CLASS-285-227	c 54	N86-29507 *	US-PATENT-CLASS-29-197	c 37	N75-13261 *
US-PATENT-CLASS-277-13	c 15	N71-26294 *	US-PATENT-CLASS-285-235	c 54	N78-31735 *	US-PATENT-CLASS-29-197	c 26	N75-19408 *
US-PATENT-CLASS-277-153	c 37	N80-28711 *	US-PATENT-CLASS-285-235	c 54	N78-31735 *	US-PATENT-CLASS-29-197	c 44	N76-14595 *
US-PATENT-CLASS-277-153	c 37	N81-26447 *	US-PATENT-CLASS-285-23	c 37	N92-10197 *	US-PATENT-CLASS-29-198	c 17	N70-32388 *
US-PATENT-CLASS-277-157	c 37	N91-27560 *	US-PATENT-CLASS-285-24	c 15	N71-10782 *	US-PATENT-CLASS-29-198	c 09	N72-25259 *
US-PATENT-CLASS-277-158	c 37	N90-23751 *	US-PATENT-CLASS-285-265	c 37	N76-14460 *	US-PATENT-CLASS-29-203H	c 37	N74-32918 *
US-PATENT-CLASS-277-164	c 37	N84-11497 *	US-PATENT-CLASS-285-27	c 15	N70-41808 *	US-PATENT-CLASS-29-203MW	c 33	N74-26977 *
US-PATENT-CLASS-277-177	c 37	N84-11497 *	US-PATENT-CLASS-285-27	c 18	N87-27713 *	US-PATENT-CLASS-29-203V	c 15	N73-14468 *
US-PATENT-CLASS-277-181	c 37	N81-15363 *	US-PATENT-CLASS-285-302	c 18	N89-25266 *	US-PATENT-CLASS-29-23.5	c 37	N78-24544 *
US-PATENT-CLASS-277-189	c 37	N82-16408 *	US-PATENT-CLASS-285-305	c 37	N87-22977 *	US-PATENT-CLASS-29-234	c 15	N70-36901 *
US-PATENT-CLASS-277-190	c 37	N84-11497 *	US-PATENT-CLASS-285-314	c 15	N71-24903 *	US-PATENT-CLASS-29-244	c 37	N78-24544 *
US-PATENT-CLASS-277-192	c 37	N79-22474 *	US-PATENT-CLASS-285-316	c 15	N72-25450 *	US-PATENT-CLASS-29-25.14	c 05	N72-25121 *
US-PATENT-CLASS-277-193	c 37	N80-28711 *	US-PATENT-CLASS-285-316	c 33	N73-26958 *	US-PATENT-CLASS-29-25.14	c 35	N82-24471 *
US-PATENT-CLASS-277-193	c 37	N81-26447 *	US-PATENT-CLASS-285-317	c 15	N71-24903 *	US-PATENT-CLASS-29-25.18	c 09	N71-26678 *
US-PATENT-CLASS-277-1	c 37	N82-24490 *	US-PATENT-CLASS-285-31	c 18	N87-27713 *	US-PATENT-CLASS-29-25.18	c 05	N72-25121 *
US-PATENT-CLASS-277-204	c 37	N82-24490 *	US-PATENT-CLASS-285-326	c 37	N79-11402 *	US-PATENT-CLASS-29-25.18	c 20	N75-18310 *
US-PATENT-CLASS-277-224	c 37	N80-28711 *	US-PATENT-CLASS-285-327	c 37	N91-14610 *	US-PATENT-CLASS-29-25.18	c 20	N76-21276 *
US-PATENT-CLASS-277-226	c 37	N91-27560 *	US-PATENT-CLASS-285-331	c 15	N70-41629 *	US-PATENT-CLASS-29-25.35	c 35	N80-20559 *
US-PATENT-CLASS-277-229	c 37	N91-27560 *	US-PATENT-CLASS-285-331	c 15	N72-25450 *	US-PATENT-CLASS-29-25.42	c 26	N72-28762 *
US-PATENT-CLASS-277-229	c 37	N92-22043 *	US-PATENT-CLASS-285-345	c 15	N72-20445 *	US-PATENT-CLASS-29-252	c 37	N78-24544 *
US-PATENT-CLASS-277-234	c 37	N92-22043 *	US-PATENT-CLASS-285-346	c 37	N92-21727 *	US-PATENT-CLASS-29-26A	c 37	N75-33395 *
US-PATENT-CLASS-277-25	c 15	N69-21362 *	US-PATENT-CLASS-285-351	c 37	N89-13786 *	US-PATENT-CLASS-29-263	c 37	N93-14871 *
US-PATENT-CLASS-277-25	c 15	N71-19570 *	US-PATENT-CLASS-285-353	c 37	N92-10197 *	US-PATENT-CLASS-29-267	c 60	N82-24839 *
US-PATENT-CLASS-277-25	c 15	N72-29488 *	US-PATENT-CLASS-285-359	c 37	N79-11402 *	US-PATENT-CLASS-29-268	c 37	N74-32918 *
US-PATENT-CLASS-277-25	c 37	N74-10474 *	US-PATENT-CLASS-285-361	c 37	N91-14613 *	US-PATENT-CLASS-29-271	c 15	N70-41371 *
US-PATENT-CLASS-277-25	c 07	N78-25090 *	US-PATENT-CLASS-285-373	c 18	N87-27713 *	US-PATENT-CLASS-29-278R	c 15	N71-29133 *
US-PATENT-CLASS-277-27	c 15	N72-29488 *	US-PATENT-CLASS-285-37	c 37	N82-24490 *	US-PATENT-CLASS-29-400	c 05	N71-12345 *
US-PATENT-CLASS-277-27	c 37	N74-10474 *	US-PATENT-CLASS-285-381	c 37	N92-29120 *	US-PATENT-CLASS-29-402.16	c 37	N86-32736 *
US-PATENT-CLASS-277-27	c 37	N74-15125 *	US-PATENT-CLASS-285-38	c 15	N71-24903 *	US-PATENT-CLASS-29-412	c 15	N72-20444 *
US-PATENT-CLASS-277-27	c 37	N75-21631 *	US-PATENT-CLASS-285-39	c 37	N89-13786 *	US-PATENT-CLASS-29-419	c 24	N75-28135 *
US-PATENT-CLASS-277-27	c 37	N82-12442 *	US-PATENT-CLASS-285-39	c 37	N92-10197 *	US-PATENT-CLASS-29-420.5	c 26	N74-10521 *
US-PATENT-CLASS-277-27	c 37	N92-16318 *	US-PATENT-CLASS-285-3	c 15	N69-27490 *	US-PATENT-CLASS-29-420.5	c 37	N74-13179 *
US-PATENT-CLASS-277-2	c 37	N82-24490 *	US-PATENT-CLASS-285-401	c 37	N82-24494 *	US-PATENT-CLASS-29-420.5	c 24	N75-26371 *
US-PATENT-CLASS-277-34.3	c 37	N92-21727 *	US-PATENT-CLASS-285-406	c 15	N71-24903 *	US-PATENT-CLASS-29-420	c 37	N75-13032 *
US-PATENT-CLASS-277-34	c 37	N90-23751 *	US-PATENT-CLASS-285-410	c 05	N72-11085 *	US-PATENT-CLASS-29-421E	c 37	N79-13364 *
US-PATENT-CLASS-277-34	c 37	N91-27560 *	US-PATENT-CLASS-285-421	c 18	N87-27713 *	US-PATENT-CLASS-29-421	c 15	N71-29018 *
US-PATENT-CLASS-277-34	c 37	N92-21727 *	US-PATENT-CLASS-285-45	c 15	N71-28937 *	US-PATENT-CLASS-29-421	c 14	N72-22439 *
US-PATENT-CLASS-277-34	c 37	N92-22043 *	US-PATENT-CLASS-285-81	c 37	N87-22977 *	US-PATENT-CLASS-29-421	c 37	N76-14461 *
US-PATENT-CLASS-277-3	c 37	N92-22043 *	US-PATENT-CLASS-285-82	c 37	N91-14613 *	US-PATENT-CLASS-29-423	c 15	N70-36409 *
US-PATENT-CLASS-277-3	c 37	N75-21631 *	US-PATENT-CLASS-285-85	c 37	N87-22977 *	US-PATENT-CLASS-29-423	c 31	N74-21059 *
US-PATENT-CLASS-277-40	c 37	N82-12442 *	US-PATENT-CLASS-285-86	c 18	N87-27713 *	US-PATENT-CLASS-29-423	c 52	N84-28389 *
US-PATENT-CLASS-277-41	c 37	N76-22541 *	US-PATENT-CLASS-285-89	c 37	N82-24494 *	US-PATENT-CLASS-29-426.5	c 37	N93-14871 *
US-PATENT-CLASS-277-4	c 37	N76-22541 *	US-PATENT-CLASS-285-901	c 35	N87-28884 *	US-PATENT-CLASS-29-426	c 15	N72-20444 *
US-PATENT-CLASS-277-4	c 37	N82-24490 *	US-PATENT-CLASS-285-910	c 37	N92-21727 *	US-PATENT-CLASS-29-428	c 15	N71-17686 *
US-PATENT-CLASS-277-53	c 37	N86-20788 *	US-PATENT-CLASS-285-912	c 37	N92-10197 *	US-PATENT-CLASS-29-432	c 37	N76-19437 *
US-PATENT-CLASS-277-53	c 37	N92-16318 *	US-PATENT-CLASS-285-91	c 37	N87-22977 *	US-PATENT-CLASS-29-446	c 37	N83-36482 *
US-PATENT-CLASS-277-59	c 37	N82-24490 *	US-PATENT-CLASS-285-97	c 37	N89-13786 *	US-PATENT-CLASS-29-447	c 37	N77-23482 *
US-PATENT-CLASS-277-62	c 37	N79-22475 *						

## US-PATENT-CLASS-29-451

## REPORT NUMBER INDEX

US-PATENT-CLASS-29-451	c 52	N84-28389 *	US-PATENT-CLASS-29-577	c 44	N79-26475 *	US-PATENT-CLASS-29-106	c 37	N90-20408 *
US-PATENT-CLASS-29-452	c 15	N73-30457 *	US-PATENT-CLASS-29-578	c 26	N72-17820 *	US-PATENT-CLASS-29-106	c 37	N91-14616 *
US-PATENT-CLASS-29-456	c 26	N83-10170 *	US-PATENT-CLASS-29-578	c 33	N78-27326 *	US-PATENT-CLASS-29-111	c 37	N91-14616 *
US-PATENT-CLASS-29-460	c 37	N74-11301 *	US-PATENT-CLASS-29-578	c 44	N79-18444 *	US-PATENT-CLASS-29-113	c 37	N80-14398 *
US-PATENT-CLASS-29-460	c 37	N75-13261 *	US-PATENT-CLASS-29-578	c 44	N79-26475 *	US-PATENT-CLASS-29-113	c 37	N88-23979 *
US-PATENT-CLASS-29-463	c 07	N78-33101 *	US-PATENT-CLASS-29-578	c 33	N81-26360 *	US-PATENT-CLASS-29-116	c 37	N75-33395 *
US-PATENT-CLASS-29-467	c 39	N76-31562 *	US-PATENT-CLASS-29-578	c 76	N85-30922 *	US-PATENT-CLASS-29-116	c 37	N82-32731 *
US-PATENT-CLASS-29-470.1	c 37	N74-21057 *	US-PATENT-CLASS-29-578	c 76	N87-15882 *	US-PATENT-CLASS-29-119.1	c 37	N91-14615 *
US-PATENT-CLASS-29-470.1	c 37	N75-12326 *	US-PATENT-CLASS-29-580	c 09	N73-27150 * #	US-PATENT-CLASS-29-119.1	c 37	N92-29138 *
US-PATENT-CLASS-29-472.7	c 37	N75-15992 *	US-PATENT-CLASS-29-580	c 44	N79-26475 *	US-PATENT-CLASS-29-119.1	c 37	N93-18288 *
US-PATENT-CLASS-29-472.9	c 15	N69-39786 * #	US-PATENT-CLASS-29-580	c 33	N81-26360 *	US-PATENT-CLASS-29-119.2	c 37	N88-23979 *
US-PATENT-CLASS-29-472.9	c 26	N71-16037 *	US-PATENT-CLASS-29-580	c 35	N87-14671 *	US-PATENT-CLASS-29-15	c 15	N71-29133 *
US-PATENT-CLASS-29-472.9	c 15	N72-22492 *	US-PATENT-CLASS-29-588	c 14	N71-27334 *	US-PATENT-CLASS-29-16	c 37	N88-23979 *
US-PATENT-CLASS-29-473.1	c 15	N72-22487 *	US-PATENT-CLASS-29-588	c 14	N72-31446 *	US-PATENT-CLASS-29-19R	c 35	N76-16392 *
US-PATENT-CLASS-29-473.1	c 15	N72-22492 *	US-PATENT-CLASS-29-588	c 44	N74-14784 *	US-PATENT-CLASS-29-65.5	c 37	N92-28727 *
US-PATENT-CLASS-29-473.1	c 37	N75-15992 *	US-PATENT-CLASS-29-588	c 44	N80-14474 *	US-PATENT-CLASS-29-65.5	c 37	N92-33018 *
US-PATENT-CLASS-29-475	c 37	N75-12326 *	US-PATENT-CLASS-29-589	c 26	N72-17820 *	US-PATENT-CLASS-29-66.2	c 37	N92-33018 *
US-PATENT-CLASS-29-482	c 05	N72-25121 *	US-PATENT-CLASS-29-589	c 09	N72-25261 *	US-PATENT-CLASS-29-82.26	c 37	N91-32498 *
US-PATENT-CLASS-29-482	c 37	N74-18128 *	US-PATENT-CLASS-29-589	c 15	N73-14469 *	US-PATENT-CLASS-29-83	c 15	N71-24897 *
US-PATENT-CLASS-29-487	c 15	N73-33383 *	US-PATENT-CLASS-29-589	c 44	N79-31752 *	US-PATENT-CLASS-29-86.33	c 37	N75-33395 *
US-PATENT-CLASS-29-487	c 37	N74-21055 *	US-PATENT-CLASS-29-590	c 09	N72-22199 *	US-PATENT-CLASS-29-86.4	c 37	N90-20408 *
US-PATENT-CLASS-29-488	c 15	N70-33311 *	US-PATENT-CLASS-29-591	c 15	N73-14469 *	US-PATENT-CLASS-29-86.4	c 37	N91-31656 *
US-PATENT-CLASS-29-488	c 37	N74-18128 *	US-PATENT-CLASS-29-591	c 44	N79-18444 *	US-PATENT-CLASS-29-86.4	c 37	N92-28727 *
US-PATENT-CLASS-29-492	c 15	N71-20443 *	US-PATENT-CLASS-29-591	c 35	N87-14671 *	US-PATENT-CLASS-29-86.4	c 37	N92-33018 *
US-PATENT-CLASS-29-492	c 09	N72-25261 *	US-PATENT-CLASS-29-592	c 35	N75-13213 *	US-PATENT-CLASS-29-86.4	c 37	N93-17625 *
US-PATENT-CLASS-29-494	c 15	N73-33383 *	US-PATENT-CLASS-29-597	c 33	N77-26385 *	US-PATENT-CLASS-29-86R	c 37	N80-14398 *
US-PATENT-CLASS-29-494	c 37	N74-21055 *	US-PATENT-CLASS-29-599	c 15	N72-25447 *	US-PATENT-CLASS-29-86R	c 37	N81-27519 *
US-PATENT-CLASS-29-494	c 37	N75-13261 *	US-PATENT-CLASS-29-599	c 26	N73-26752 *	US-PATENT-CLASS-29-86R	c 18	N83-29303 *
US-PATENT-CLASS-29-495	c 15	N71-21078 *	US-PATENT-CLASS-29-599	c 26	N73-32571 *	US-PATENT-CLASS-29-88	c 37	N89-13785 *
US-PATENT-CLASS-29-497.5	c 15	N73-28515 *	US-PATENT-CLASS-29-603	c 08	N71-27210 *	US-PATENT-CLASS-29-89	c 37	N93-13417 *
US-PATENT-CLASS-29-497.5	c 15	N73-33383 *	US-PATENT-CLASS-29-604	c 24	N75-13032 *	US-PATENT-CLASS-29-902	c 37	N92-29138 *
US-PATENT-CLASS-29-497.5	c 37	N74-11300 *	US-PATENT-CLASS-29-610SG	c 35	N85-21598 *	US-PATENT-CLASS-29-902	c 37	N93-17625 *
US-PATENT-CLASS-29-497.5	c 37	N75-13261 *	US-PATENT-CLASS-29-610	c 24	N75-30260 *	US-PATENT-CLASS-29-907	c 37	N92-33018 *
US-PATENT-CLASS-29-497	c 09	N72-25261 *	US-PATENT-CLASS-29-613	c 24	N75-30260 *	US-PATENT-CLASS-29-907	c 37	N93-18288 *
US-PATENT-CLASS-29-497	c 15	N73-32358 *	US-PATENT-CLASS-29-613	c 35	N82-24470 *	US-PATENT-CLASS-29-93	c 54	N81-26718 *
US-PATENT-CLASS-29-497	c 37	N74-18128 *	US-PATENT-CLASS-29-620	c 35	N82-31659 *	US-PATENT-CLASS-29-94	c 37	N93-13417 *
US-PATENT-CLASS-29-498	c 09	N72-25261 *	US-PATENT-CLASS-29-622	c 33	N77-26385 *	US-PATENT-CLASS-29-96.1S	c 85	N82-33288 *
US-PATENT-CLASS-29-498	c 15	N73-33383 *	US-PATENT-CLASS-29-623.5	c 44	N83-32176 *	US-PATENT-CLASS-29-96.1S	c 02	N88-14071 *
US-PATENT-CLASS-29-498	c 37	N74-11301 *	US-PATENT-CLASS-29-623.5	c 26	N84-22734 *	US-PATENT-CLASS-29-100	c 37	N87-17036 *
US-PATENT-CLASS-29-498	c 37	N74-18128 *	US-PATENT-CLASS-29-623.5	c 44	N84-28205 *	US-PATENT-CLASS-29-20	c 85	N87-21755 *
US-PATENT-CLASS-29-498	c 37	N74-21055 *	US-PATENT-CLASS-29-623.5	c 33	N91-27478 *	US-PATENT-CLASS-29-24C	c 85	N82-33288 *
US-PATENT-CLASS-29-502	c 09	N72-25261 *	US-PATENT-CLASS-29-624	c 15	N72-20444 *	US-PATENT-CLASS-29-91	c 85	N82-33288 *
US-PATENT-CLASS-29-503	c 37	N74-11301 *	US-PATENT-CLASS-29-624	c 14	N73-13417 *	US-PATENT-CLASS-29-DIG.5	c 03	N84-33394 *
US-PATENT-CLASS-29-504	c 37	N74-21055 *	US-PATENT-CLASS-29-627	c 44	N80-14474 *	US-PATENT-CLASS-29-216	c 05	N70-35152 *
US-PATENT-CLASS-29-504	c 37	N75-13261 *	US-PATENT-CLASS-29-628	c 15	N72-22491 *	US-PATENT-CLASS-29-216	c 37	N88-23982 *
US-PATENT-CLASS-29-517	c 15	N71-17650 *	US-PATENT-CLASS-29-628	c 09	N72-25261 *	US-PATENT-CLASS-29-232	c 05	N72-11085 *
US-PATENT-CLASS-29-521	c 26	N83-10170 *	US-PATENT-CLASS-29-628	c 09	N73-28083 *	US-PATENT-CLASS-29-232	c 05	N71-12341 *
US-PATENT-CLASS-29-526	c 37	N76-19437 *	US-PATENT-CLASS-29-628	c 33	N77-26385 *	US-PATENT-CLASS-29-385	c 05	N75-25915 *
US-PATENT-CLASS-29-526	c 39	N76-31562 *	US-PATENT-CLASS-29-628	c 44	N78-25528 *	US-PATENT-CLASS-29-386	c 15	N73-30460 *
US-PATENT-CLASS-29-527.2	c 15	N72-20444 *	US-PATENT-CLASS-29-629	c 09	N73-28083 *	US-PATENT-CLASS-29-388	c 05	N75-25915 *
US-PATENT-CLASS-29-527.2	c 15	N73-32360 *	US-PATENT-CLASS-29-630A	c 05	N72-25121 *	US-PATENT-CLASS-29-389	c 05	N75-25915 *
US-PATENT-CLASS-29-527.2	c 37	N74-11301 *	US-PATENT-CLASS-29-630A	c 09	N73-28083 *	US-PATENT-CLASS-29-423	c 54	N93-14713 *
US-PATENT-CLASS-29-527.2	c 24	N75-33181 *	US-PATENT-CLASS-29-630E	c 33	N77-26385 *	US-PATENT-CLASS-29-468	c 05	N71-12343 *
US-PATENT-CLASS-29-527.2	c 24	N77-19171 *	US-PATENT-CLASS-29-630	c 09	N73-28083 *	US-PATENT-CLASS-29-468	c 05	N72-11085 *
US-PATENT-CLASS-29-558	c 37	N91-32508 *	US-PATENT-CLASS-29-739	c 44	N79-24431 *	US-PATENT-CLASS-29-913	c 43	N81-26509 *
US-PATENT-CLASS-29-568	c 37	N91-31656 *	US-PATENT-CLASS-29-764	c 60	N82-24839 *	US-PATENT-CLASS-29-97	c 43	N81-26509 *
US-PATENT-CLASS-29-57.4	c 44	N79-24431 *	US-PATENT-CLASS-29-809	c 44	N79-24431 *	US-PATENT-CLASS-29-91	c 43	N79-26439 *
US-PATENT-CLASS-29-570	c 26	N72-28761 *	US-PATENT-CLASS-29-81C	c 75	N78-27913 *	US-PATENT-CLASS-29-91	c 35	N84-33768 *
US-PATENT-CLASS-29-571	c 35	N75-13213 *	US-PATENT-CLASS-29-81D	c 37	N76-18454 *	US-PATENT-CLASS-29-92	c 43	N81-26509 *
US-PATENT-CLASS-29-571	c 33	N78-27326 *	US-PATENT-CLASS-29-825	c 44	N84-28205 *	US-PATENT-CLASS-29-97	c 46	N74-23068 *
US-PATENT-CLASS-29-571	c 33	N81-26360 *	US-PATENT-CLASS-29-832	c 44	N81-14389 *	US-PATENT-CLASS-29-96	c 46	N74-23069 *
US-PATENT-CLASS-29-572	c 09	N71-23027 *	US-PATENT-CLASS-29-888.046	c 37	N90-22042 *	US-PATENT-CLASS-3-1.1	c 05	N73-32013 *
US-PATENT-CLASS-29-572	c 03	N71-24681 *	US-PATENT-CLASS-29-898.01	c 37	N93-14871 *	US-PATENT-CLASS-3-1.1	c 52	N77-14738 *
US-PATENT-CLASS-29-572	c 03	N72-22041 *	US-PATENT-CLASS-29-898.07	c 37	N93-14871 *	US-PATENT-CLASS-3-1.1	c 54	N79-24652 *
US-PATENT-CLASS-29-572	c 44	N74-14784 *	US-PATENT-CLASS-29-898.08	c 37	N93-14871 *	US-PATENT-CLASS-3-1.1	c 74	N84-11921 *
US-PATENT-CLASS-29-572	c 44	N76-14600 *	US-PATENT-CLASS-29-91-R	c 33	N87-23904 *	US-PATENT-CLASS-3-1.2	c 52	N77-14735 *
US-PATENT-CLASS-29-572	c 44	N76-28635 *	US-PATENT-CLASS-29-91R	c 44	N85-21769 *	US-PATENT-CLASS-3-1.2	c 52	N78-10686 *
US-PATENT-CLASS-29-572	c 44	N77-10635 *	US-PATENT-CLASS-29-94R	c 44	N85-21769 *	US-PATENT-CLASS-3-1.9	c 27	N78-17215 *
US-PATENT-CLASS-29-572	c 44	N78-24609 *	US-PATENT-CLASS-29-90	c 03	N71-11057 *	US-PATENT-CLASS-3-1.9	c 52	N79-26772 *
US-PATENT-CLASS-29-572	c 44	N78-25527 *	US-PATENT-CLASS-29-90.44	c 37	N90-23742 *	US-PATENT-CLASS-3-12.5	c 54	N78-17676 *
US-PATENT-CLASS-29-572	c 44	N78-25528 *	US-PATENT-CLASS-29-90.44	c 05	N91-14345 *	US-PATENT-CLASS-3-12.5	c 54	N79-24652 *
US-PATENT-CLASS-29-572	c 44	N78-25529 *	US-PATENT-CLASS-29-90.52	c 37	N77-32500 *	US-PATENT-CLASS-3-12	c 05	N73-32013 *
US-PATENT-CLASS-29-572	c 44	N79-11468 *	US-PATENT-CLASS-29-90.52	c 37	N77-32501 *	US-PATENT-CLASS-3-12	c 52	N79-26772 *
US-PATENT-CLASS-29-572	c 44	N79-11472 *	US-PATENT-CLASS-29-90.53	c 44	N80-29834 *	US-PATENT-CLASS-3-14	c 52	N77-14735 *
US-PATENT-CLASS-29-572	c 44	N79-17314 *	US-PATENT-CLASS-29-90.55	c 44	N84-23018 *	US-PATENT-CLASS-3-15	c 52	N78-10686 *
US-PATENT-CLASS-29-572	c 44	N79-18444 *	US-PATENT-CLASS-29-90.55	c 37	N90-23742 *	US-PATENT-CLASS-3-1	c 52	N77-25772 *
US-PATENT-CLASS-29-572	c 44	N79-24431 *	US-PATENT-CLASS-29-90.55	c 05	N91-14345 *	US-PATENT-CLASS-3-21	c 54	N77-30749 *
US-PATENT-CLASS-29-572	c 44	N79-26475 *	US-PATENT-CLASS-292-DIG.14	c 37	N75-19685 *	US-PATENT-CLASS-3-29	c 52	N78-10686 *
US-PATENT-CLASS-29-572	c 44	N79-31752 *	US-PATENT-CLASS-292-DIG.39	c 37	N92-21500 *	US-PATENT-CLASS-3-2	c 05	N73-32013 *
US-PATENT-CLASS-29-572	c 44	N80-14474 *	US-PATENT-CLASS-292-DIG.49	c 37	N87-25582 *	US-PATENT-CLASS-3-2	c 54	N77-30749 *
US-PATENT-CLASS-29-572	c 44	N82-28780 *	US-PATENT-CLASS-292-DIG.66	c 37	N92-29120 *	US-PATENT-CLASS-3-2	c 52	N79-26772 *
US-PATENT-CLASS-29-572	c 44	N82-29709 *	US-PATENT-CLASS-292-108	c 37	N75-19685 *	US-PATENT-CLASS-3-6	c 05	N73-32013 *
US-PATENT-CLASS-29-572	c 44	N83-13579 *	US-PATENT-CLASS-292-110	c 37	N77-32499 *	US-PATENT-CLASS-30-102	c 37	N82-26672 *
US-PATENT-CLASS-29-572	c 76	N86-20150 *	US-PATENT-CLASS-292-110	c 37	N92-21500 *	US-PATENT-CLASS-30-180	c 37	N84-28085 *
US-PATENT-CLASS-29-572	c 44	N86-32875 *	US-PATENT-CLASS-292-122	c 37	N75-19685 *	US-PATENT-CLASS-30-188	c 37	N84-28085 *
US-PATENT-CLASS-29-573	c 14	N73-13417 *	US-PATENT-CLASS-292-201	c 37	N87-25582 *	US-PATENT-CLASS-30-228	c 15	N70-42017 *
US-PATENT-CLASS-29-575	c 76	N87-15882 *	US-PATENT-CLASS-292-251.5	c 31	N92-16161 *	US-PATENT-CLASS-30-228	c 37	N84-28085 *
US-PATENT-CLASS-29-576-E	c 76	N87-15882 *	US-PATENT-CLASS-292-252	c 37	N85-21649 *	US-PATENT-CLASS-30-249	c 37	N84-28085 *
US-PATENT-CLASS-29-576-J	c 76	N87-15882 *	US-PATENT-CLASS-292-27	c 37	N90-17154 *	US-PATENT-CLASS-30-272R	c 37	N84-28085 *
US-PATENT-CLASS-29-576-W	c 76	N87-15882 *	US-PATENT-CLASS-292-34	c 37	N90-17154 *	US-PATENT-CLASS-30-388	c 37	N91-31655 *
US-PATENT-CLASS-29-576B	c 44	N86-32875 *	US-PATENT-CLASS-292-60	c 37	N91-27561 *	US-PATENT-CLASS-30-90.6	c 37	N79-10419 *
US-PATENT-CLASS-29-576E	c 76	N85-30922 *	US-PATENT-CLASS-292-61	c 37	N91-27561 *	US-PATENT-CLASS-30-92	c 37	N91-31655 *
US-PATENT-CLASS-29-576J	c 35	N82-31659 *	US-PATENT-CLASS-292-64	c 37	N87-25582 *	US-PATENT-CLASS-301-5P	c 37	N74-18125 *
US-PATENT-CLASS-29-576J	c 76	N85-30922 *	US-PATENT-CLASS-294-1R	c 35	N76-16392 *	US-PATENT-CLASS-301-82	c 33	N79-10339 *
US-PATENT-CLASS-29-576S	c 35	N82-31659 *	US-PATENT-CLASS-294-106	c 37	N81-14320 *	US-PATENT-CLASS-302-66	c 25	N79-11152 *
US-PATENT-CLASS-29-576W	c 76	N85-30922 *	US-PATENT-CLASS-294-106	c 37	N88-23979 *	US-PATENT-CLASS-303-92	c 44	N79-14527 *

## REPORT NUMBER INDEX

## US-PATENT-CLASS-308-194

US-PATENT-CLASS-305-35EB	c 11	N73-26238 *	US-PATENT-CLASS-307-252J	c 09	N72-22201 *	US-PATENT-CLASS-307-321	c 33	N75-19520 *
US-PATENT-CLASS-305-36	c 37	N87-17034 *	US-PATENT-CLASS-307-252K	c 09	N72-22201 *	US-PATENT-CLASS-307-321	c 33	N75-25041 *
US-PATENT-CLASS-305-39	c 11	N73-26238 *	US-PATENT-CLASS-307-252L	c 33	N74-27682 *	US-PATENT-CLASS-307-322	c 10	N72-22236 *
US-PATENT-CLASS-305-51	c 37	N87-17034 *	US-PATENT-CLASS-307-252N	c 09	N72-23171 *	US-PATENT-CLASS-307-323	c 10	N72-22236 *
US-PATENT-CLASS-305-58PC	c 37	N87-17034 *	US-PATENT-CLASS-307-252O	c 33	N74-27682 *	US-PATENT-CLASS-307-350	c 33	N78-18308 *
US-PATENT-CLASS-305-58R	c 37	N87-17034 *	US-PATENT-CLASS-307-252R	c 09	N72-23171 *	US-PATENT-CLASS-307-352	c 33	N81-27396 *
US-PATENT-CLASS-307-103	c 09	N72-25262 *	US-PATENT-CLASS-307-252UA	c 33	N81-27396 *	US-PATENT-CLASS-307-353	c 33	N81-27396 *
US-PATENT-CLASS-307-104	c 09	N71-24892 *	US-PATENT-CLASS-307-252	c 10	N69-39888 *	US-PATENT-CLASS-307-353	c 33	N91-26438 *
US-PATENT-CLASS-307-106	c 09	N69-21468 *	US-PATENT-CLASS-307-252	c 09	N71-12514 *	US-PATENT-CLASS-307-354	c 33	N87-21235 *
US-PATENT-CLASS-307-106	c 33	N88-24862 *	US-PATENT-CLASS-307-253	c 10	N71-27126 *	US-PATENT-CLASS-307-35	c 33	N74-34638 *
US-PATENT-CLASS-307-110	c 33	N93-18278 *	US-PATENT-CLASS-307-254	c 10	N71-24799 *	US-PATENT-CLASS-307-360	c 33	N78-18308 *
US-PATENT-CLASS-307-118	c 09	N72-27227 *	US-PATENT-CLASS-307-254	c 09	N72-22200 *	US-PATENT-CLASS-307-38	c 03	N73-31988 *
US-PATENT-CLASS-307-119	c 33	N79-28415 *	US-PATENT-CLASS-307-257	c 09	N72-21247 *	US-PATENT-CLASS-307-415	c 33	N82-24418 *
US-PATENT-CLASS-307-126	c 14	N71-27407 *	US-PATENT-CLASS-307-259	c 09	N72-21247 *	US-PATENT-CLASS-307-425	c 36	N87-25567 *
US-PATENT-CLASS-307-127	c 33	N74-14956 *	US-PATENT-CLASS-307-259	c 09	N72-23171 *	US-PATENT-CLASS-307-490	c 33	N87-22895 *
US-PATENT-CLASS-307-131	c 44	N87-21410 *	US-PATENT-CLASS-307-259	c 10	N73-13235 *	US-PATENT-CLASS-307-520	c 33	N85-29145 *
US-PATENT-CLASS-307-136	c 09	N69-27500 *	US-PATENT-CLASS-307-260	c 09	N71-23311 *	US-PATENT-CLASS-307-521	c 33	N85-29145 *
US-PATENT-CLASS-307-141.8	c 03	N72-25020 *	US-PATENT-CLASS-307-260	c 05	N71-23317 *	US-PATENT-CLASS-307-529	c 33	N85-29145 *
US-PATENT-CLASS-307-149	c 09	N71-13486 *	US-PATENT-CLASS-307-260	c 33	N75-19515 *	US-PATENT-CLASS-307-53	c 10	N71-26626 *
US-PATENT-CLASS-307-149	c 54	N75-12616 *	US-PATENT-CLASS-307-261	c 09	N71-33109 *	US-PATENT-CLASS-307-53	c 33	N78-17296 *
US-PATENT-CLASS-307-151	c 32	N78-24391 *	US-PATENT-CLASS-307-261	c 09	N72-25251 *	US-PATENT-CLASS-307-566	c 33	N86-20672 *
US-PATENT-CLASS-307-157	c 16	N73-32391 *	US-PATENT-CLASS-307-261	c 33	N87-21235 *	US-PATENT-CLASS-307-570	c 33	N86-20672 *
US-PATENT-CLASS-307-18	c 03	N73-31988 *	US-PATENT-CLASS-307-262	c 10	N72-16172 *	US-PATENT-CLASS-307-572	c 33	N86-20672 *
US-PATENT-CLASS-307-18	c 33	N74-34638 *	US-PATENT-CLASS-307-262	c 09	N72-22197 *	US-PATENT-CLASS-307-63	c 44	N80-14472 *
US-PATENT-CLASS-307-201	c 32	N92-22033 *	US-PATENT-CLASS-307-262	c 09	N72-33204 *	US-PATENT-CLASS-307-64	c 33	N77-13036 *
US-PATENT-CLASS-307-201	c 63	N93-24599 *	US-PATENT-CLASS-307-263	c 09	N71-23270 *	US-PATENT-CLASS-307-64	c 44	N85-21769 *
US-PATENT-CLASS-307-204	c 35	N75-30504 *	US-PATENT-CLASS-307-263	c 09	N71-28926 *	US-PATENT-CLASS-307-64	c 44	N87-21410 *
US-PATENT-CLASS-307-205	c 33	N75-14957 *	US-PATENT-CLASS-307-264	c 33	N86-20672 *	US-PATENT-CLASS-307-66	c 44	N80-14472 *
US-PATENT-CLASS-307-206	c 10	N72-22236 *	US-PATENT-CLASS-307-265	c 09	N69-39987 *	US-PATENT-CLASS-307-66	c 44	N85-21769 *
US-PATENT-CLASS-307-207	c 08	N71-29034 *	US-PATENT-CLASS-307-265	c 10	N71-23029 *	US-PATENT-CLASS-307-66	c 44	N87-21410 *
US-PATENT-CLASS-307-207	c 09	N73-13209 *	US-PATENT-CLASS-307-265	c 09	N71-28468 *	US-PATENT-CLASS-307-69	c 33	N78-17296 *
US-PATENT-CLASS-307-208	c 33	N75-14957 *	US-PATENT-CLASS-307-265	c 10	N71-28860 *	US-PATENT-CLASS-307-80	c 44	N87-21410 *
US-PATENT-CLASS-307-211	c 35	N75-30504 *	US-PATENT-CLASS-307-265	c 08	N71-29138 *	US-PATENT-CLASS-307-81	c 09	N72-17157 *
US-PATENT-CLASS-307-215	c 10	N71-28860 *	US-PATENT-CLASS-307-265	c 09	N71-29139 *	US-PATENT-CLASS-307-82	c 33	N79-24254 *
US-PATENT-CLASS-307-215	c 09	N71-29139 *	US-PATENT-CLASS-307-265	c 33	N78-18308 *	US-PATENT-CLASS-307-82	c 33	N85-29147 *
US-PATENT-CLASS-307-215	c 10	N72-22236 *	US-PATENT-CLASS-307-267	c 09	N71-20447 *	US-PATENT-CLASS-307-83	c 09	N72-25262 *
US-PATENT-CLASS-307-215	c 09	N73-13209 *	US-PATENT-CLASS-307-267	c 33	N74-32711 *	US-PATENT-CLASS-307-87	c 33	N84-33660 *
US-PATENT-CLASS-307-215	c 33	N74-22814 *	US-PATENT-CLASS-307-267	c 33	N75-18479 *	US-PATENT-CLASS-307-88.3	c 09	N72-25258 *
US-PATENT-CLASS-307-216	c 08	N71-18751 *	US-PATENT-CLASS-307-268	c 09	N69-24317 *	US-PATENT-CLASS-307-88.5	c 09	N70-34819 *
US-PATENT-CLASS-307-219	c 35	N75-30504 *	US-PATENT-CLASS-307-269	c 60	N81-15706 *	US-PATENT-CLASS-307-88.5	c 09	N70-40272 *
US-PATENT-CLASS-307-219	c 60	N81-15706 *	US-PATENT-CLASS-307-270	c 33	N78-17294 *	US-PATENT-CLASS-307-88.5	c 09	N70-41675 *
US-PATENT-CLASS-307-220	c 10	N73-26229 *	US-PATENT-CLASS-307-270	c 33	N86-20672 *	US-PATENT-CLASS-307-88.5	c 10	N70-42032 *
US-PATENT-CLASS-307-221R	c 10	N73-20254 *	US-PATENT-CLASS-307-271	c 10	N73-32145 *	US-PATENT-CLASS-307-88.5	c 09	N71-10673 *
US-PATENT-CLASS-307-221R	c 33	N76-14373 *	US-PATENT-CLASS-307-271	c 33	N85-29145 *	US-PATENT-CLASS-307-88.5	c 10	N71-15910 *
US-PATENT-CLASS-307-222	c 09	N69-27463 *	US-PATENT-CLASS-307-272.1	c 33	N92-16196 *	US-PATENT-CLASS-307-88.5	c 10	N71-16042 *
US-PATENT-CLASS-307-222	c 08	N71-29034 *	US-PATENT-CLASS-307-273	c 10	N71-18723 *	US-PATENT-CLASS-307-88.5	c 10	N71-28739 *
US-PATENT-CLASS-307-223B	c 09	N72-22201 *	US-PATENT-CLASS-307-273	c 09	N71-27016 *	US-PATENT-CLASS-307-88MP	c 09	N72-22197 *
US-PATENT-CLASS-307-223	c 09	N72-17157 *	US-PATENT-CLASS-307-273	c 09	N71-28468 *	US-PATENT-CLASS-307-88	c 08	N70-34743 *
US-PATENT-CLASS-307-225R	c 33	N74-10223 *	US-PATENT-CLASS-307-273	c 10	N71-28860 *	US-PATENT-CLASS-307-88	c 09	N70-38604 *
US-PATENT-CLASS-307-225R	c 33	N75-31330 *	US-PATENT-CLASS-307-273	c 09	N71-29139 *	US-PATENT-CLASS-307-88	c 09	N71-24803 *
US-PATENT-CLASS-307-225R	c 33	N77-24375 *	US-PATENT-CLASS-307-273	c 10	N72-20221 *	US-PATENT-CLASS-307-88	c 09	N71-26000 *
US-PATENT-CLASS-307-225R	c 60	N81-15706 *	US-PATENT-CLASS-307-280	c 33	N77-21314 *	US-PATENT-CLASS-307-92	c 09	N72-27227 *
US-PATENT-CLASS-307-227	c 09	N72-17157 *	US-PATENT-CLASS-307-284	c 09	N72-22201 *	US-PATENT-CLASS-307-98	c 33	N79-28415 *
US-PATENT-CLASS-307-227	c 33	N75-19522 *	US-PATENT-CLASS-307-288	c 09	N71-23015 *	US-PATENT-CLASS-308-DIG.1	c 15	N72-17451 *
US-PATENT-CLASS-307-229	c 09	N71-12520 *	US-PATENT-CLASS-307-288	c 09	N71-28468 *	US-PATENT-CLASS-308-DIG.1	c 37	N79-10418 *
US-PATENT-CLASS-307-229	c 09	N72-23173 *	US-PATENT-CLASS-307-288	c 10	N72-20221 *	US-PATENT-CLASS-308-DIG.8	c 24	N79-17916 *
US-PATENT-CLASS-307-229	c 33	N75-18479 *	US-PATENT-CLASS-307-288	c 09	N72-22202 *	US-PATENT-CLASS-308-DIG.9	c 24	N79-17916 *
US-PATENT-CLASS-307-229	c 33	N77-17354 *	US-PATENT-CLASS-307-289	c 10	N71-19547 *	US-PATENT-CLASS-308-10	c 15	N71-22997 *
US-PATENT-CLASS-307-229	c 33	N78-32339 *	US-PATENT-CLASS-307-289	c 03	N73-31988 *	US-PATENT-CLASS-308-10	c 15	N72-33476 *
US-PATENT-CLASS-307-230	c 10	N72-16172 *	US-PATENT-CLASS-307-290	c 33	N74-22814 *	US-PATENT-CLASS-308-10	c 35	N74-18323 *
US-PATENT-CLASS-307-230	c 09	N72-21245 *	US-PATENT-CLASS-307-291	c 60	N81-15706 *	US-PATENT-CLASS-308-10	c 37	N75-18574 *
US-PATENT-CLASS-307-230	c 09	N73-20232 *	US-PATENT-CLASS-307-294	c 09	N71-29139 *	US-PATENT-CLASS-308-10	c 37	N76-18459 *
US-PATENT-CLASS-307-230	c 33	N74-32712 *	US-PATENT-CLASS-307-295	c 10	N72-17171 *	US-PATENT-CLASS-308-10	c 37	N77-17464 *
US-PATENT-CLASS-307-230	c 33	N77-17354 *	US-PATENT-CLASS-307-295	c 10	N72-20223 *	US-PATENT-CLASS-308-10	c 44	N78-24608 *
US-PATENT-CLASS-307-230	c 33	N78-32339 *	US-PATENT-CLASS-307-295	c 09	N72-21245 *	US-PATENT-CLASS-308-10	c 37	N78-27424 *
US-PATENT-CLASS-307-231	c 09	N72-22202 *	US-PATENT-CLASS-307-295	c 09	N72-33204 *	US-PATENT-CLASS-308-10	c 35	N79-26372 *
US-PATENT-CLASS-307-232	c 33	N77-21314 *	US-PATENT-CLASS-307-295	c 33	N74-34638 *	US-PATENT-CLASS-308-10	c 71	N81-15767 *
US-PATENT-CLASS-307-232	c 33	N79-11313 *	US-PATENT-CLASS-307-295	c 33	N77-13315 *	US-PATENT-CLASS-308-10	c 44	N83-28574 *
US-PATENT-CLASS-307-233R	c 32	N79-10262 *	US-PATENT-CLASS-307-296.2	c 33	N92-16196 *	US-PATENT-CLASS-308-10	c 37	N83-32067 *
US-PATENT-CLASS-307-233R	c 33	N81-17348 *	US-PATENT-CLASS-307-296.7	c 33	N92-16196 *	US-PATENT-CLASS-308-10	c 37	N83-34323 *
US-PATENT-CLASS-307-233	c 09	N72-25257 *	US-PATENT-CLASS-307-296	c 08	N71-12494 *	US-PATENT-CLASS-308-10	c 71	N83-36846 *
US-PATENT-CLASS-307-233	c 10	N73-26229 *	US-PATENT-CLASS-307-296	c 07	N71-28430 *	US-PATENT-CLASS-308-10	c 37	N85-20337 *
US-PATENT-CLASS-307-233	c 33	N77-13315 *	US-PATENT-CLASS-307-297	c 33	N78-17294 *	US-PATENT-CLASS-308-121	c 37	N74-32921 *
US-PATENT-CLASS-307-234	c 10	N71-23315 *	US-PATENT-CLASS-307-299	c 08	N72-21198 *	US-PATENT-CLASS-308-121	c 37	N75-30562 *
US-PATENT-CLASS-307-234	c 09	N71-27016 *	US-PATENT-CLASS-307-299	c 26	N72-21701 *	US-PATENT-CLASS-308-121	c 37	N79-10418 *
US-PATENT-CLASS-307-234	c 08	N71-29138 *	US-PATENT-CLASS-307-299	c 03	N73-31988 *	US-PATENT-CLASS-308-122	c 37	N76-15461 *
US-PATENT-CLASS-307-235R	c 33	N75-18479 *	US-PATENT-CLASS-307-300	c 10	N71-27126 *	US-PATENT-CLASS-308-160	c 37	N76-15461 *
US-PATENT-CLASS-307-235	c 10	N71-19471 *	US-PATENT-CLASS-307-303	c 08	N72-21198 *	US-PATENT-CLASS-308-160	c 37	N76-29588 *
US-PATENT-CLASS-307-235	c 09	N71-23545 *	US-PATENT-CLASS-307-303	c 33	N92-16196 *	US-PATENT-CLASS-308-160	c 37	N79-10418 *
US-PATENT-CLASS-307-235	c 10	N71-24862 *	US-PATENT-CLASS-307-304	c 09	N72-22201 *	US-PATENT-CLASS-308-163	c 37	N79-10418 *
US-PATENT-CLASS-307-237	c 09	N72-22200 *	US-PATENT-CLASS-307-304	c 09	N73-20232 *	US-PATENT-CLASS-308-163	c 37	N79-10418 *
US-PATENT-CLASS-307-237	c 32	N74-19788 *	US-PATENT-CLASS-307-304	c 33	N74-34638 *	US-PATENT-CLASS-308-168	c 24	N79-17916 *
US-PATENT-CLASS-307-238	c 33	N75-31331 *	US-PATENT-CLASS-307-305	c 09	N72-23171 *	US-PATENT-CLASS-308-170	c 15	N71-28465 *
US-PATENT-CLASS-307-238	c 33	N77-21314 *	US-PATENT-CLASS-307-306	c 33	N78-13320 *	US-PATENT-CLASS-308-170	c 37	N76-29588 *
US-PATENT-CLASS-307-241	c 09	N72-22201 *	US-PATENT-CLASS-307-306	c 33	N81-17348 *	US-PATENT-CLASS-308-171	c 24	N79-17916 *
US-PATENT-CLASS-307-242	c 10	N73-13235 *	US-PATENT-CLASS-307-308	c 14	N73-28488 *	US-PATENT-CLASS-308-172	c 37	N79-10418 *
US-PATENT-CLASS-307-243	c 09	N71-12516 *	US-PATENT-CLASS-307-309	c 35	N75-13213 *	US-PATENT-CLASS-308-174	c 54	N75-12616 *
US-PATENT-CLASS-307-243	c 08	N72-2162 *	US-PATENT-CLASS-307-310	c 09	N73-14214 *	US-PATENT-CLASS-308-176	c 15	N71-22982 *
US-PATENT-CLASS-307-243	c 33	N74-22814 *	US-PATENT-CLASS-307-311	c 14	N72-18411 *	US-PATENT-CLASS-308-177	c 15	N71-29136 *
US-PATENT-CLASS-307-246	c 09	N71-27016 *	US-PATENT-CLASS-307-311	c 08	N72-21198 *	US-PATENT-CLASS-308-187	c 15	N71-26189 *
US-PATENT-CLASS-307-247	c 09	N71-29139 *	US-PATENT-CLASS-307-311	c 09	N73-14214 *	US-PATENT-CLASS-308-188	c 15	N73-30458 *
US-PATENT-CLASS-307-247	c 09	N72-22202 *	US-PATENT-CLASS-307-313	c 33	N92-16196 *	US-PATENT-CLASS-308-188	c 37	N74-21064 *
US-PATENT-CLASS-307-251	c 09	N71-33109 *	US-PATENT-CLASS-307-317	c 10	N72-20221 *	US-PATENT-CLASS-308-191	c 37	N74-21064 *
US-PATENT-CLASS-307-251	c 08	N72-2162 *	US-PATENT-CLASS-307-317	c 09	N72-22200 *	US-PATENT-CLASS-308-191	c 37	N75-31446 *
US-PATENT-CLASS-307-252F	c 09	N72-17153 *	US-PATENT-CLASS-307-317	c 09	N72-22201 *	US-PATENT-CLASS-308-193	c 15	N73-30458 *
US-PATENT-CLASS-307-252J	c 09	N72-17153 *	US-PATENT-CLASS-307-31	c 44	N87-21410 *	US-PATENT-CLASS-308-194	c 37	N79-11404 *

## US-PATENT-CLASS-308-195

## REPORT NUMBER INDEX

US-PATENT-CLASS-308-195	c 15	N72-22490 *	US-PATENT-CLASS-310-334	c 35	N80-20559 *	US-PATENT-CLASS-313-218	c 28	N73-27699 *
US-PATENT-CLASS-308-195	c 37	N75-31446 *	US-PATENT-CLASS-310-334	c 35	N84-22932 *	US-PATENT-CLASS-313-224	c 25	N72-24753 *
US-PATENT-CLASS-308-195	c 37	N77-32500 *	US-PATENT-CLASS-310-334	c 71	N91-14808 *	US-PATENT-CLASS-313-224	c 33	N74-12913 *
US-PATENT-CLASS-308-195	c 37	N77-32501 *	US-PATENT-CLASS-310-336	c 38	N79-14398 *	US-PATENT-CLASS-313-224	c 33	N77-21315 *
US-PATENT-CLASS-308-1	c 31	N71-26537 *	US-PATENT-CLASS-310-338	c 35	N89-14407 *	US-PATENT-CLASS-313-224	c 31	N78-17238 *
US-PATENT-CLASS-308-2A	c 15	N72-26371 *	US-PATENT-CLASS-310-339	c 76	N91-14872 *	US-PATENT-CLASS-313-22	c 09	N71-26787 *
US-PATENT-CLASS-308-2A	c 15	N73-12488 *	US-PATENT-CLASS-310-340	c 76	N91-14872 *	US-PATENT-CLASS-313-22	c 31	N78-17237 *
US-PATENT-CLASS-308-2A	c 37	N84-12492 *	US-PATENT-CLASS-310-360	c 35	N80-20559 *	US-PATENT-CLASS-313-22	c 31	N78-25256 *
US-PATENT-CLASS-308-201	c 37	N75-31446 *	US-PATENT-CLASS-310-366	c 35	N84-22932 *	US-PATENT-CLASS-313-22	c 34	N79-20336 *
US-PATENT-CLASS-308-2	c 15	N71-23812 *	US-PATENT-CLASS-310-4A	c 37	N77-19458 *	US-PATENT-CLASS-313-230	c 28	N71-28850 *
US-PATENT-CLASS-308-35	c 15	N73-32359 *	US-PATENT-CLASS-310-4R	c 33	N74-27683 *	US-PATENT-CLASS-313-230	c 28	N73-27699 *
US-PATENT-CLASS-308-5R	c 37	N77-28486 *	US-PATENT-CLASS-310-4R	c 73	N77-18891 *	US-PATENT-CLASS-313-230	c 20	N77-20162 *
US-PATENT-CLASS-308-5R	c 37	N79-10418 *	US-PATENT-CLASS-310-40	c 20	N75-24837 *	US-PATENT-CLASS-313-231.3	c 20	N77-20162 *
US-PATENT-CLASS-308-5	c 15	N71-10617 *	US-PATENT-CLASS-310-42	c 14	N72-22439 *	US-PATENT-CLASS-313-231.3	c 75	N78-27913 *
US-PATENT-CLASS-308-5	c 15	N72-11388 *	US-PATENT-CLASS-310-46	c 33	N79-20314 *	US-PATENT-CLASS-313-231.4	c 20	N77-10148 *
US-PATENT-CLASS-308-5	c 15	N72-17451 *	US-PATENT-CLASS-310-4	c 09	N69-21313 *	US-PATENT-CLASS-313-231.4	c 72	N80-33186 *
US-PATENT-CLASS-308-72	c 37	N76-15461 *	US-PATENT-CLASS-310-4	c 03	N69-39898 *	US-PATENT-CLASS-313-231	c 06	N69-39898 *
US-PATENT-CLASS-308-72	c 37	N77-32500 *	US-PATENT-CLASS-310-4	c 09	N69-39929 *	US-PATENT-CLASS-313-231	c 09	N71-23190 *
US-PATENT-CLASS-308-72	c 37	N79-11404 *	US-PATENT-CLASS-310-4	c 03	N70-34134 *	US-PATENT-CLASS-313-231	c 09	N71-33519 *
US-PATENT-CLASS-308-73	c 37	N74-21061 *	US-PATENT-CLASS-310-4	c 03	N71-11055 *	US-PATENT-CLASS-313-231	c 25	N72-24753 *
US-PATENT-CLASS-308-73	c 37	N75-30562 *	US-PATENT-CLASS-310-4	c 22	N71-23599 *	US-PATENT-CLASS-313-231	c 25	N72-32688 *
US-PATENT-CLASS-308-73	c 37	N76-15461 *	US-PATENT-CLASS-310-4	c 09	N71-24807 *	US-PATENT-CLASS-313-231	c 28	N73-24783 *
US-PATENT-CLASS-308-73	c 37	N77-28486 *	US-PATENT-CLASS-310-4	c 33	N71-27862 *	US-PATENT-CLASS-313-231	c 25	N73-25760 *
US-PATENT-CLASS-308-78	c 24	N79-17916 *	US-PATENT-CLASS-310-4	c 09	N71-28421 *	US-PATENT-CLASS-313-236	c 09	N71-26182 *
US-PATENT-CLASS-308-78R	c 24	N79-17916 *	US-PATENT-CLASS-310-4	c 09	N72-25260 *	US-PATENT-CLASS-313-237	c 09	N71-26182 *
US-PATENT-CLASS-308-9	c 15	N70-34664 *	US-PATENT-CLASS-310-4	c 09	N72-27228 *	US-PATENT-CLASS-313-237	c 33	N87-28832 *
US-PATENT-CLASS-308-9	c 15	N70-38620 *	US-PATENT-CLASS-310-4	c 20	N75-24837 *	US-PATENT-CLASS-313-240	c 20	N77-10148 *
US-PATENT-CLASS-308-9	c 15	N70-39896 *	US-PATENT-CLASS-310-4	c 36	N75-30524 *	US-PATENT-CLASS-313-250	c 31	N76-31365 *
US-PATENT-CLASS-308-9	c 15	N71-20739 *	US-PATENT-CLASS-310-4	c 44	N76-16612 *	US-PATENT-CLASS-313-271	c 25	N71-20747 *
US-PATENT-CLASS-308-9	c 14	N71-26627 *	US-PATENT-CLASS-310-51	c 15	N71-27169 *	US-PATENT-CLASS-313-278	c 33	N87-28832 *
US-PATENT-CLASS-308-9	c 15	N72-17451 *	US-PATENT-CLASS-310-52	c 20	N75-24837 *	US-PATENT-CLASS-313-306	c 31	N76-31365 *
US-PATENT-CLASS-308-9	c 15	N73-32359 *	US-PATENT-CLASS-310-54	c 09	N71-20446 *	US-PATENT-CLASS-313-309	c 10	N72-27246 *
US-PATENT-CLASS-308-9	c 37	N76-15461 *	US-PATENT-CLASS-310-5	c 03	N70-35408 *	US-PATENT-CLASS-313-309	c 31	N76-31365 *
US-PATENT-CLASS-308-9	c 37	N77-28486 *	US-PATENT-CLASS-310-68B	c 35	N84-28017 *	US-PATENT-CLASS-313-311	c 73	N77-18891 *
US-PATENT-CLASS-308-9	c 37	N79-10418 *	US-PATENT-CLASS-310-68	c 15	N72-25456 *	US-PATENT-CLASS-313-32	c 33	N74-12913 *
US-PATENT-CLASS-31-35	c 31	N85-21404 *	US-PATENT-CLASS-310-77	c 37	N85-30333 *	US-PATENT-CLASS-313-32	c 33	N77-21315 *
US-PATENT-CLASS-310-101	c 15	N71-24696 *	US-PATENT-CLASS-310-8.2	c 35	N76-15432 *	US-PATENT-CLASS-313-336	c 10	N72-27246 *
US-PATENT-CLASS-310-10	c 03	N69-39890 *	US-PATENT-CLASS-310-8.5	c 14	N71-22993 *	US-PATENT-CLASS-313-338	c 31	N76-31365 *
US-PATENT-CLASS-310-10	c 09	N71-23443 *	US-PATENT-CLASS-310-800	c 76	N83-34796 *	US-PATENT-CLASS-313-348	c 35	N82-24471 *
US-PATENT-CLASS-310-10	c 09	N71-24904 *	US-PATENT-CLASS-310-80	c 15	N72-25456 *	US-PATENT-CLASS-313-351	c 10	N72-27246 *
US-PATENT-CLASS-310-10	c 09	N72-25255 *	US-PATENT-CLASS-310-82	c 33	N79-20314 *	US-PATENT-CLASS-313-351	c 70	N84-28565 *
US-PATENT-CLASS-310-10	c 20	N75-24837 *	US-PATENT-CLASS-310-82	c 37	N92-33634 *	US-PATENT-CLASS-313-352	c 09	N71-22987 *
US-PATENT-CLASS-310-111	c 33	N77-26387 *	US-PATENT-CLASS-310-83	c 15	N72-25456 *	US-PATENT-CLASS-313-355	c 28	N73-27699 *
US-PATENT-CLASS-310-112	c 37	N92-33634 *	US-PATENT-CLASS-310-83	c 33	N92-15331 *	US-PATENT-CLASS-313-356	c 14	N72-29464 *
US-PATENT-CLASS-310-11	c 25	N69-21929 *	US-PATENT-CLASS-310-9.1	c 15	N71-21311 *	US-PATENT-CLASS-313-359.1	c 72	N87-21660 *
US-PATENT-CLASS-310-11	c 03	N69-39983 *	US-PATENT-CLASS-310-90.5	c 37	N87-17038 *	US-PATENT-CLASS-313-35	c 34	N79-20336 *
US-PATENT-CLASS-310-11	c 03	N70-36803 *	US-PATENT-CLASS-310-90.5	c 37	N91-21539 *	US-PATENT-CLASS-313-360	c 20	N77-20162 *
US-PATENT-CLASS-310-11	c 14	N72-22439 *	US-PATENT-CLASS-310-90.5	c 70	N91-21824 *	US-PATENT-CLASS-313-361.1	c 72	N87-21660 *
US-PATENT-CLASS-310-11	c 12	N72-25292 *	US-PATENT-CLASS-310-90.5	c 37	N92-29099 *	US-PATENT-CLASS-313-361	c 20	N77-10148 *
US-PATENT-CLASS-310-11	c 35	N74-21018 *	US-PATENT-CLASS-310-93	c 15	N71-17652 *	US-PATENT-CLASS-313-362.1	c 72	N87-21660 *
US-PATENT-CLASS-310-11	c 36	N75-32441 *	US-PATENT-CLASS-310-93	c 37	N85-30333 *	US-PATENT-CLASS-313-362	c 72	N80-27163 *
US-PATENT-CLASS-310-11	c 44	N83-28573 *	US-PATENT-CLASS-311-37	c 35	N75-29380 *	US-PATENT-CLASS-313-362	c 72	N80-33186 *
US-PATENT-CLASS-310-11	c 27	N91-14489 *	US-PATENT-CLASS-312-196	c 54	N88-24163 *	US-PATENT-CLASS-313-363	c 72	N80-27163 *
US-PATENT-CLASS-310-12	c 33	N82-24421 *	US-PATENT-CLASS-312-1	c 05	N71-23080 *	US-PATENT-CLASS-313-442	c 74	N78-18905 *
US-PATENT-CLASS-310-12	c 37	N83-32067 *	US-PATENT-CLASS-312-1	c 05	N73-20137 *	US-PATENT-CLASS-313-44	c 15	N69-24319 *
US-PATENT-CLASS-310-153	c 44	N78-24608 *	US-PATENT-CLASS-312-1	c 37	N74-20063 *	US-PATENT-CLASS-313-502	c 76	N91-21911 *
US-PATENT-CLASS-310-154	c 44	N78-24608 *	US-PATENT-CLASS-312-208	c 54	N88-24163 *	US-PATENT-CLASS-313-502	c 74	N91-31950 *
US-PATENT-CLASS-310-154	c 35	N84-28017 *	US-PATENT-CLASS-312-209	c 37	N74-18123 *	US-PATENT-CLASS-313-503	c 76	N91-21911 *
US-PATENT-CLASS-310-15	c 09	N72-25255 *	US-PATENT-CLASS-312-257	c 31	N72-22874 *	US-PATENT-CLASS-313-503	c 74	N91-31950 *
US-PATENT-CLASS-310-15	c 44	N83-28574 *	US-PATENT-CLASS-312-296	c 09	N71-18600 *	US-PATENT-CLASS-313-505	c 33	N87-28831 *
US-PATENT-CLASS-310-15	c 33	N87-23904 *	US-PATENT-CLASS-312-300	c 54	N88-24163 *	US-PATENT-CLASS-313-506	c 33	N87-28831 *
US-PATENT-CLASS-310-168	c 09	N71-25999 *	US-PATENT-CLASS-312-319	c 37	N79-33467 *	US-PATENT-CLASS-313-506	c 76	N91-21911 *
US-PATENT-CLASS-310-168	c 33	N77-26387 *	US-PATENT-CLASS-312-7.2	c 54	N88-24163 *	US-PATENT-CLASS-313-506	c 74	N91-31950 *
US-PATENT-CLASS-310-171	c 35	N84-28017 *	US-PATENT-CLASS-313-DIG.8	c 28	N73-24783 *	US-PATENT-CLASS-313-509	c 33	N87-28831 *
US-PATENT-CLASS-310-178	c 44	N78-24608 *	US-PATENT-CLASS-313-104	c 14	N73-32317 *	US-PATENT-CLASS-313-509	c 74	N91-31950 *
US-PATENT-CLASS-310-20	c 71	N79-20827 *	US-PATENT-CLASS-313-106	c 24	N83-10117 *	US-PATENT-CLASS-313-60	c 33	N77-22386 *
US-PATENT-CLASS-310-22	c 31	N85-21404 *	US-PATENT-CLASS-313-106	c 70	N84-28565 *	US-PATENT-CLASS-313-61S	c 73	N74-26767 *
US-PATENT-CLASS-310-231	c 33	N79-20314 *	US-PATENT-CLASS-313-106	c 31	N86-32587 *	US-PATENT-CLASS-313-61S	c 37	N78-13436 *
US-PATENT-CLASS-310-254	c 09	N71-25999 *	US-PATENT-CLASS-313-107	c 24	N83-10117 *	US-PATENT-CLASS-313-63	c 28	N70-41576 *
US-PATENT-CLASS-310-265	c 33	N92-15331 *	US-PATENT-CLASS-313-107	c 70	N84-28565 *	US-PATENT-CLASS-313-63	c 09	N71-10618 *
US-PATENT-CLASS-310-269	c 44	N78-24608 *	US-PATENT-CLASS-313-107	c 31	N86-32587 *	US-PATENT-CLASS-313-63	c 28	N71-26781 *
US-PATENT-CLASS-310-26	c 71	N79-20827 *	US-PATENT-CLASS-313-109.5	c 09	N71-33519 *	US-PATENT-CLASS-313-63	c 28	N73-24783 *
US-PATENT-CLASS-310-26	c 33	N92-15331 *	US-PATENT-CLASS-313-11.5	c 28	N70-39925 *	US-PATENT-CLASS-313-63	c 28	N73-27699 *
US-PATENT-CLASS-310-2	c 03	N72-23048 *	US-PATENT-CLASS-313-110	c 09	N71-12521 *	US-PATENT-CLASS-313-63	c 75	N75-13625 *
US-PATENT-CLASS-310-300	c 71	N84-23233 *	US-PATENT-CLASS-313-131A	c 33	N85-21491 *	US-PATENT-CLASS-313-7	c 14	N71-18482 *
US-PATENT-CLASS-310-306	c 33	N80-18287 *	US-PATENT-CLASS-313-146	c 33	N77-22386 *	US-PATENT-CLASS-313-7	c 14	N73-32324 *
US-PATENT-CLASS-310-306	c 44	N83-32175 *	US-PATENT-CLASS-313-153	c 33	N74-12913 *	US-PATENT-CLASS-313-93	c 35	N74-26949 *
US-PATENT-CLASS-310-306	c 34	N85-29179 *	US-PATENT-CLASS-313-156	c 25	N70-34661 *	US-PATENT-CLASS-313-93	c 35	N82-24471 *
US-PATENT-CLASS-310-306	c 37	N87-23970 *	US-PATENT-CLASS-313-156	c 72	N80-27163 *	US-PATENT-CLASS-313-94	c 33	N76-31409 *
US-PATENT-CLASS-310-308	c 33	N92-22042 *	US-PATENT-CLASS-313-161	c 25	N73-25760 *	US-PATENT-CLASS-313-94	c 74	N78-18905 *
US-PATENT-CLASS-310-309	c 33	N92-22042 *	US-PATENT-CLASS-313-161	c 09	N73-30181 *	US-PATENT-CLASS-314-129	c 15	N69-24266 *
US-PATENT-CLASS-310-30	c 44	N80-29834 *	US-PATENT-CLASS-313-161	c 33	N77-21315 *	US-PATENT-CLASS-315-DIG.2	c 16	N73-32391 *
US-PATENT-CLASS-310-30	c 33	N87-23904 *	US-PATENT-CLASS-313-175	c 33	N77-21316 *	US-PATENT-CLASS-315-101	c 16	N73-32391 *
US-PATENT-CLASS-310-311	c 35	N80-20559 *	US-PATENT-CLASS-313-175	c 31	N78-17238 *	US-PATENT-CLASS-315-108	c 09	N71-33519 *
US-PATENT-CLASS-310-317	c 35	N84-22932 *	US-PATENT-CLASS-313-176	c 31	N78-17238 *	US-PATENT-CLASS-315-108	c 33	N77-21316 *
US-PATENT-CLASS-310-319	c 33	N80-23559 *	US-PATENT-CLASS-313-180	c 33	N77-21316 *	US-PATENT-CLASS-315-108	c 36	N78-17366 *
US-PATENT-CLASS-310-322	c 71	N79-20827 *	US-PATENT-CLASS-313-180	c 31	N78-17238 *	US-PATENT-CLASS-315-10	c 33	N74-21850 *
US-PATENT-CLASS-310-323	c 71	N91-14808 *	US-PATENT-CLASS-313-182	c 33	N77-22386 *	US-PATENT-CLASS-315-10	c 33	N75-26244 *
US-PATENT-CLASS-310-324	c 33	N86-20671 *	US-PATENT-CLASS-313-184	c 33	N77-21315 *	US-PATENT-CLASS-315-110	c 33	N77-21316 *
US-PATENT-CLASS-310-325	c 71	N91-14808 *	US-PATENT-CLASS-313-184	c 33	N77-21316 *	US-PATENT-CLASS-315-111.2	c 75	N78-27913 *
US-PATENT-CLASS-310-326	c 38	N79-14398 *	US-PATENT-CLASS-313-184	c 31	N78-17238 *	US-PATENT-CLASS-315-111.31	c 33	N85-21491 *
US-PATENT-CLASS-310-327	c 35	N80-20559 *	US-PATENT-CLASS-313-186	c 25	N72-24753 *	US-PATENT-CLASS-315-111.3	c 20	N77-10148 *
US-PATENT-CLASS-310-330	c 76	N91-14872 *	US-PATENT-CLASS-313-209	c 33	N74-12913 *	US-PATENT-CLASS-315-111.3	c 20	N77-20162 *
US-PATENT-CLASS-310-331	c 76	N91-14872 *	US-PATENT-CLASS-313-212	c 25	N72-24753 *	US-PATENT-CLASS-315-111.41	c 72	N88-24253 *
US-PATENT-CLASS-310-332	c 76	N83-34796 *	US-PATENT-CLASS-313-217	c 28	N73-27699 *	US-PATENT-CLASS-315-111.6	c 75	N76-14931 *
US-PATENT-CLASS-310-334	c 71	N79-20827 *	US-PATENT-CLASS-313-217	c 33	N74-12913 *	US-PATENT-CLASS-315-111.6	c 20	N77-20162 *



## REPORT NUMBER INDEX

## US-PATENT-CLASS-318-568.20

US-PATENT-CLASS-315-111.71	c 72	N88-24253 *	US-PATENT-CLASS-315-39.3	c 33	N86-21742 *	US-PATENT-CLASS-317-31	c 10	N71-23543 *
US-PATENT-CLASS-315-111.81	c 33	N85-21491 *	US-PATENT-CLASS-315-3	c 33	N83-31952 *	US-PATENT-CLASS-317-31	c 33	N74-17929 *
US-PATENT-CLASS-315-111.81	c 33	N87-21234 *	US-PATENT-CLASS-315-3	c 33	N90-22724 *	US-PATENT-CLASS-317-31	c 33	N77-14333 *
US-PATENT-CLASS-315-111.81	c 72	N88-24253 *	US-PATENT-CLASS-315-4	c 33	N83-31952 *	US-PATENT-CLASS-317-33SC	c 33	N74-14956 *
US-PATENT-CLASS-315-111	c 25	N70-33267 *	US-PATENT-CLASS-315-5.35	c 33	N74-10195 *	US-PATENT-CLASS-317-33	c 10	N71-26531 *
US-PATENT-CLASS-315-111	c 25	N70-41628 *	US-PATENT-CLASS-315-5.35	c 33	N83-31952 *	US-PATENT-CLASS-317-33	c 09	N71-27001 *
US-PATENT-CLASS-315-111	c 25	N71-15562 *	US-PATENT-CLASS-315-5.38	c 09	N73-13208 *	US-PATENT-CLASS-317-33	c 10	N71-27366 *
US-PATENT-CLASS-315-111	c 24	N71-16213 *	US-PATENT-CLASS-315-5.38	c 33	N74-10195 *	US-PATENT-CLASS-317-33	c 09	N71-29008 *
US-PATENT-CLASS-315-111	c 25	N71-21693 *	US-PATENT-CLASS-315-5.38	c 33	N82-24415 *	US-PATENT-CLASS-317-43	c 33	N74-14956 *
US-PATENT-CLASS-315-111	c 28	N71-26781 *	US-PATENT-CLASS-315-5.38	c 24	N83-10117 *	US-PATENT-CLASS-317-46	c 33	N74-14956 *
US-PATENT-CLASS-315-111	c 25	N71-29184 *	US-PATENT-CLASS-315-5.38	c 33	N83-31952 *	US-PATENT-CLASS-317-47	c 33	N74-14956 *
US-PATENT-CLASS-315-111	c 09	N71-33519 *	US-PATENT-CLASS-315-5.38	c 70	N84-28565 *	US-PATENT-CLASS-317-48	c 33	N74-14956 *
US-PATENT-CLASS-315-111	c 25	N72-24753 *	US-PATENT-CLASS-315-5.38	c 37	N85-33489 *	US-PATENT-CLASS-317-54	c 09	N71-29008 *
US-PATENT-CLASS-315-111	c 25	N72-32688 *	US-PATENT-CLASS-315-5.38	c 31	N86-32587 *	US-PATENT-CLASS-317-60	c 09	N71-29008 *
US-PATENT-CLASS-315-111	c 14	N73-30391 *	US-PATENT-CLASS-315-5	c 33	N83-31952 *	US-PATENT-CLASS-317-9	c 09	N71-22700 *
US-PATENT-CLASS-315-111	c 75	N75-13625 *	US-PATENT-CLASS-317-DIG.3	c 10	N71-26334 *	US-PATENT-CLASS-317-9	c 09	N71-27961 *
US-PATENT-CLASS-315-111	c 33	N75-29318 *	US-PATENT-CLASS-317-DIG.6	c 10	N73-26228 *	US-PATENT-CLASS-318-107	c 44	N87-21410 *
US-PATENT-CLASS-315-111	c 37	N75-29426 *	US-PATENT-CLASS-317-100	c 10	N71-28783 *	US-PATENT-CLASS-318-116	c 71	N79-20827 *
US-PATENT-CLASS-315-111	c 33	N74-21850 *	US-PATENT-CLASS-317-100	c 10	N73-25243 *	US-PATENT-CLASS-318-116	c 71	N84-23233 *
US-PATENT-CLASS-315-12	c 33	N74-21850 *	US-PATENT-CLASS-317-101A	c 09	N72-33205 *	US-PATENT-CLASS-318-116	c 33	N87-28833 *
US-PATENT-CLASS-315-135	c 09	N72-25250 *	US-PATENT-CLASS-317-101A	c 23	N73-13660 *	US-PATENT-CLASS-318-135	c 33	N82-24421 *
US-PATENT-CLASS-315-145	c 33	N80-14330 *	US-PATENT-CLASS-317-101DH	c 15	N72-22486 *	US-PATENT-CLASS-318-135	c 37	N91-21539 *
US-PATENT-CLASS-315-151	c 14	N72-27411 *	US-PATENT-CLASS-317-101DH	c 10	N73-25243 *	US-PATENT-CLASS-318-137	c 33	N75-19524 *
US-PATENT-CLASS-315-153	c 14	N73-16483 *	US-PATENT-CLASS-317-101	c 09	N71-26133 *	US-PATENT-CLASS-318-138	c 09	N71-10677 *
US-PATENT-CLASS-315-153	c 74	N79-12890 *	US-PATENT-CLASS-317-117	c 15	N72-22486 *	US-PATENT-CLASS-318-138	c 14	N71-17585 *
US-PATENT-CLASS-315-156	c 14	N72-27411 *	US-PATENT-CLASS-317-120	c 15	N72-22486 *	US-PATENT-CLASS-318-138	c 10	N71-18772 *
US-PATENT-CLASS-315-158	c 14	N72-27411 *	US-PATENT-CLASS-317-122	c 15	N71-18701 *	US-PATENT-CLASS-318-138	c 09	N71-25999 *
US-PATENT-CLASS-315-160	c 09	N71-12540 *	US-PATENT-CLASS-317-123	c 09	N71-24892 *	US-PATENT-CLASS-318-138	c 33	N77-26386 *
US-PATENT-CLASS-315-169R	c 23	N73-13660 *	US-PATENT-CLASS-317-140	c 09	N70-34502 *	US-PATENT-CLASS-318-138	c 33	N81-20352 *
US-PATENT-CLASS-315-169R	c 36	N75-19652 *	US-PATENT-CLASS-317-148.5	c 10	N71-23271 *	US-PATENT-CLASS-318-138	c 33	N87-21233 *
US-PATENT-CLASS-315-169TV	c 23	N73-13660 *	US-PATENT-CLASS-317-148.5	c 09	N71-24892 *	US-PATENT-CLASS-318-15	c 37	N80-32716 *
US-PATENT-CLASS-315-172	c 33	N88-24862 *	US-PATENT-CLASS-317-153	c 10	N71-26334 *	US-PATENT-CLASS-318-161	c 44	N87-21410 *
US-PATENT-CLASS-315-173	c 33	N88-24862 *	US-PATENT-CLASS-317-155.5	c 09	N71-29008 *	US-PATENT-CLASS-318-167	c 33	N75-19524 *
US-PATENT-CLASS-315-176	c 33	N77-28385 *	US-PATENT-CLASS-317-157.5	c 15	N69-21472 *	US-PATENT-CLASS-318-176	c 33	N75-19524 *
US-PATENT-CLASS-315-18	c 32	N74-20813 *	US-PATENT-CLASS-317-158	c 15	N73-28516 *	US-PATENT-CLASS-318-183	c 33	N75-19524 *
US-PATENT-CLASS-315-18	c 33	N75-19517 *	US-PATENT-CLASS-317-158	c 26	N73-28710 *	US-PATENT-CLASS-318-200.105	c 08	N71-27057 *
US-PATENT-CLASS-315-200-R	c 33	N88-23942 *	US-PATENT-CLASS-317-158	c 15	N73-32361 *	US-PATENT-CLASS-318-200	c 33	N78-10376 *
US-PATENT-CLASS-315-208	c 33	N83-34189 *	US-PATENT-CLASS-317-16	c 09	N69-39897 *	US-PATENT-CLASS-318-222	c 07	N71-33613 *
US-PATENT-CLASS-315-209CD	c 37	N79-11405 *	US-PATENT-CLASS-317-16	c 33	N74-17929 *	US-PATENT-CLASS-318-227	c 33	N75-15874 *
US-PATENT-CLASS-315-209SC	c 37	N79-11405 *	US-PATENT-CLASS-317-2D	c 33	N77-10429 *	US-PATENT-CLASS-318-227	c 33	N77-26386 *
US-PATENT-CLASS-315-211	c 33	N74-20859 *	US-PATENT-CLASS-317-20	c 10	N71-26531 *	US-PATENT-CLASS-318-227	c 33	N78-10376 *
US-PATENT-CLASS-315-22R	c 10	N73-12173 *	US-PATENT-CLASS-317-230	c 09	N71-27232 *	US-PATENT-CLASS-318-22	c 15	N71-17694 *
US-PATENT-CLASS-315-224	c 33	N83-34189 *	US-PATENT-CLASS-317-230	c 26	N72-28761 *	US-PATENT-CLASS-318-230	c 07	N71-33613 *
US-PATENT-CLASS-315-225	c 33	N83-34189 *	US-PATENT-CLASS-317-231	c 09	N71-27232 *	US-PATENT-CLASS-318-230	c 10	N73-32145 *
US-PATENT-CLASS-315-227-R	c 33	N88-23942 *	US-PATENT-CLASS-317-234A	c 15	N73-14469 *	US-PATENT-CLASS-318-230	c 33	N75-15874 *
US-PATENT-CLASS-315-228	c 33	N74-20859 *	US-PATENT-CLASS-317-234D	c 14	N72-31446 *	US-PATENT-CLASS-318-230	c 33	N78-10376 *
US-PATENT-CLASS-315-22	c 10	N72-20225 *	US-PATENT-CLASS-317-234E	c 33	N74-12951 *	US-PATENT-CLASS-318-231	c 10	N73-32145 *
US-PATENT-CLASS-315-22	c 32	N74-20813 *	US-PATENT-CLASS-317-234F	c 33	N74-12951 *	US-PATENT-CLASS-318-231	c 33	N75-15874 *
US-PATENT-CLASS-315-22	c 33	N78-17293 *	US-PATENT-CLASS-317-234G	c 14	N72-31446 *	US-PATENT-CLASS-318-254	c 09	N71-25999 *
US-PATENT-CLASS-315-237	c 33	N83-34189 *	US-PATENT-CLASS-317-234G	c 15	N73-14469 *	US-PATENT-CLASS-318-254	c 09	N73-32107 *
US-PATENT-CLASS-315-241-R	c 33	N88-23942 *	US-PATENT-CLASS-317-234G	c 09	N73-27150 *	US-PATENT-CLASS-318-254	c 33	N77-26386 *
US-PATENT-CLASS-315-241R	c 37	N79-11405 *	US-PATENT-CLASS-317-234J	c 26	N72-25679 *	US-PATENT-CLASS-318-254	c 33	N81-20352 *
US-PATENT-CLASS-315-241R	c 33	N83-34189 *	US-PATENT-CLASS-317-234L	c 09	N73-27150 *	US-PATENT-CLASS-318-254	c 33	N82-26569 *
US-PATENT-CLASS-315-241R	c 09	N71-13518 *	US-PATENT-CLASS-317-234M	c 09	N73-27150 *	US-PATENT-CLASS-318-254	c 33	N87-21233 *
US-PATENT-CLASS-315-248	c 09	N73-30181 *	US-PATENT-CLASS-317-234M	c 33	N74-12951 *	US-PATENT-CLASS-318-257	c 10	N71-18724 *
US-PATENT-CLASS-315-24	c 08	N71-20571 *	US-PATENT-CLASS-317-234N	c 09	N73-27150 *	US-PATENT-CLASS-318-258	c 09	N71-26092 *
US-PATENT-CLASS-315-254	c 33	N88-23942 *	US-PATENT-CLASS-317-234N	c 33	N74-12951 *	US-PATENT-CLASS-318-260	c 09	N70-38712 *
US-PATENT-CLASS-315-255	c 33	N88-23942 *	US-PATENT-CLASS-317-234R	c 09	N73-27150 *	US-PATENT-CLASS-318-265	c 15	N71-24895 *
US-PATENT-CLASS-315-258	c 16	N73-32391 *	US-PATENT-CLASS-317-234R	c 33	N74-12951 *	US-PATENT-CLASS-318-267	c 37	N77-27400 *
US-PATENT-CLASS-315-25	c 10	N72-20225 *	US-PATENT-CLASS-317-234V	c 26	N72-21701 *	US-PATENT-CLASS-318-308	c 11	N72-20244 *
US-PATENT-CLASS-315-260	c 33	N80-14330 *	US-PATENT-CLASS-317-234V	c 09	N73-15235 *	US-PATENT-CLASS-318-314	c 10	N71-20448 *
US-PATENT-CLASS-315-26	c 09	N71-23189 *	US-PATENT-CLASS-317-234	c 14	N69-23191 *	US-PATENT-CLASS-318-314	c 09	N75-24758 *
US-PATENT-CLASS-315-276	c 33	N88-23942 *	US-PATENT-CLASS-317-234	c 09	N69-27422 *	US-PATENT-CLASS-318-317	c 09	N71-28886 *
US-PATENT-CLASS-315-277	c 33	N88-23942 *	US-PATENT-CLASS-317-234	c 26	N71-18064 *	US-PATENT-CLASS-318-318	c 09	N71-24805 *
US-PATENT-CLASS-315-297	c 14	N72-27411 *	US-PATENT-CLASS-317-235AG	c 09	N73-15235 *	US-PATENT-CLASS-318-318	c 09	N75-24758 *
US-PATENT-CLASS-315-3.5	c 09	N73-13208 *	US-PATENT-CLASS-317-235AJ	c 26	N72-25679 *	US-PATENT-CLASS-318-31	c 15	N71-28952 *
US-PATENT-CLASS-315-3.5	c 33	N79-10339 *	US-PATENT-CLASS-317-235AJ	c 09	N72-33205 *	US-PATENT-CLASS-318-327	c 11	N72-20244 *
US-PATENT-CLASS-315-3.5	c 33	N82-26568 *	US-PATENT-CLASS-317-235AM	c 09	N73-19235 *	US-PATENT-CLASS-318-328	c 09	N73-32107 *
US-PATENT-CLASS-315-3.5	c 33	N84-16452 *	US-PATENT-CLASS-317-235A	c 26	N72-25679 *	US-PATENT-CLASS-318-331	c 09	N71-28886 *
US-PATENT-CLASS-315-3.5	c 37	N85-33489 *	US-PATENT-CLASS-317-235A	c 09	N72-33205 *	US-PATENT-CLASS-318-341	c 10	N73-32145 *
US-PATENT-CLASS-315-3.5	c 33	N86-21742 *	US-PATENT-CLASS-317-235H	c 35	N75-13213 *	US-PATENT-CLASS-318-341	c 09	N75-24758 *
US-PATENT-CLASS-315-3.5	c 33	N90-22724 *	US-PATENT-CLASS-317-235K	c 09	N73-15235 *	US-PATENT-CLASS-318-345	c 09	N71-28886 *
US-PATENT-CLASS-315-3.5	c 33	N79-10339 *	US-PATENT-CLASS-317-235M	c 14	N72-31446 *	US-PATENT-CLASS-318-376	c 10	N71-16030 *
US-PATENT-CLASS-315-3.6	c 33	N82-24415 *	US-PATENT-CLASS-317-235N	c 09	N73-19235 *	US-PATENT-CLASS-318-376	c 11	N72-20244 *
US-PATENT-CLASS-315-3.6	c 33	N82-26568 *	US-PATENT-CLASS-317-235N	c 35	N74-15090 *	US-PATENT-CLASS-318-382	c 15	N71-24655 *
US-PATENT-CLASS-315-3.6	c 33	N84-16452 *	US-PATENT-CLASS-317-235R	c 26	N72-21701 *	US-PATENT-CLASS-318-434	c 33	N90-21951 *
US-PATENT-CLASS-315-3.6	c 33	N84-27974 *	US-PATENT-CLASS-317-235R	c 26	N72-25679 *	US-PATENT-CLASS-318-438	c 33	N84-22885 *
US-PATENT-CLASS-315-3.6	c 33	N86-21742 *	US-PATENT-CLASS-317-235R	c 14	N72-31446 *	US-PATENT-CLASS-318-439	c 33	N81-20352 *
US-PATENT-CLASS-315-30R	c 10	N72-31273 *	US-PATENT-CLASS-317-235R	c 09	N73-19235 *	US-PATENT-CLASS-318-439	c 33	N87-21233 *
US-PATENT-CLASS-315-307	c 14	N72-27411 *	US-PATENT-CLASS-317-235R	c 09	N73-32112 *	US-PATENT-CLASS-318-468	c 37	N77-27400 *
US-PATENT-CLASS-315-30	c 33	N75-27250 *	US-PATENT-CLASS-317-235T	c 09	N73-19235 *	US-PATENT-CLASS-318-46	c 44	N85-21769 *
US-PATENT-CLASS-315-310	c 14	N72-27411 *	US-PATENT-CLASS-317-235UA	c 09	N73-19235 *	US-PATENT-CLASS-318-470	c 37	N77-27400 *
US-PATENT-CLASS-315-311	c 14	N72-27411 *	US-PATENT-CLASS-317-235WW	c 09	N73-32112 *	US-PATENT-CLASS-318-489	c 02	N73-19004 *
US-PATENT-CLASS-315-324	c 09	N73-30181 *	US-PATENT-CLASS-317-235	c 09	N69-24318 *	US-PATENT-CLASS-318-48	c 37	N86-27629 *
US-PATENT-CLASS-315-326	c 25	N72-24753 *	US-PATENT-CLASS-317-235	c 09	N72-33205 *	US-PATENT-CLASS-318-504	c 09	N71-28886 *
US-PATENT-CLASS-315-334	c 33	N80-14330 *	US-PATENT-CLASS-317-238	c 09	N71-27232 *	US-PATENT-CLASS-318-561	c 33	N82-18493 *
US-PATENT-CLASS-315-344	c 33	N77-21315 *	US-PATENT-CLASS-317-245	c 33	N79-21265 *	US-PATENT-CLASS-318-561	c 33	N90-21951 *
US-PATENT-CLASS-315-349	c 09	N72-25250 *	US-PATENT-CLASS-317-246	c 14	N69-21541 *	US-PATENT-CLASS-318-561	c 37	N91-21544 *
US-PATENT-CLASS-315-356	c 16	N73-32391 *	US-PATENT-CLASS-317-246	c 33	N76-21390 *	US-PATENT-CLASS-318-564	c 60	N82-29013 *
US-PATENT-CLASS-315-358	c 25	N72-24753 *	US-PATENT-CLASS-317-246	c 35	N76-22509 *	US-PATENT-CLASS-318-567	c 63	N92-33019 *
US-PATENT-CLASS-315-367	c 33	N75-26244 *	US-PATENT-CLASS-317-247	c 14	N72-24477 *	US-PATENT-CLASS-318-568.11	c 63	N91-31885 *
US-PATENT-CLASS-315-369	c 33	N75-26244 *	US-PATENT-CLASS-317-258	c 09	N71-13522 *	US-PATENT-CLASS-318-568.11	c 63	N92-33019 *
US-PATENT-CLASS-315-36	c 10	N72-27246 *	US-PATENT-CLASS-317-258	c 33	N76-15373 *	US-PATENT-CLASS-318-568.16	c 37	N91-21542 *
US-PATENT-CLASS-315-387	c 33	N75-26244 *	US-PATENT-CLASS-317-261	c 26	N72-28761 *	US-PATENT-CLASS-318-568.19	c 63	N92-33019 *
US-PATENT-CLASS-315-39.3	c 33	N84-16452 *	US-PATENT-CLASS-317-261	c 33	N76-15373 *	US-PATENT-CLASS-318-568.1	c 33	N91-31528 *
US-PATENT-CLASS-315-39.3	c 33	N84-27974 *	US-PATENT-CLASS-317-31	c 09	N71-12526 *	US-PATENT-CLASS-318-568.20	c 37	N91-21542 *



## US-PATENT-CLASS-318-568.21

## REPORT NUMBER INDEX

US-PATENT-CLASS-318-568.21	c 37	N91-21542 *	US-PATENT-CLASS-320-40	c 44	N78-14625 *	US-PATENT-CLASS-323-269	c 33	N83-27126 *
US-PATENT-CLASS-318-568.2	c 33	N91-31528 *	US-PATENT-CLASS-320-48	c 03	N72-25020 *	US-PATENT-CLASS-323-300	c 33	N84-27975 *
US-PATENT-CLASS-318-571	c 10	N71-27136 *	US-PATENT-CLASS-320-51	c 33	N91-14537 *	US-PATENT-CLASS-323-303	c 33	N83-27126 *
US-PATENT-CLASS-318-573	c 35	N79-14348 *	US-PATENT-CLASS-320-53	c 33	N78-17296 *	US-PATENT-CLASS-323-311	c 33	N91-27479 *
US-PATENT-CLASS-318-573	c 33	N91-31528 *	US-PATENT-CLASS-320-6	c 44	N78-14625 *	US-PATENT-CLASS-323-312	c 33	N91-27479 *
US-PATENT-CLASS-318-573	c 63	N91-31885 *	US-PATENT-CLASS-320-9	c 44	N78-25531 *	US-PATENT-CLASS-323-350	c 33	N83-27126 *
US-PATENT-CLASS-318-576	c 09	N72-21246 *	US-PATENT-CLASS-321-1.5	c 09	N73-32109 *	US-PATENT-CLASS-323-354	c 33	N90-19492 *
US-PATENT-CLASS-318-577	c 37	N86-21850 *	US-PATENT-CLASS-321-10	c 09	N72-17154 *	US-PATENT-CLASS-323-38	c 09	N72-21243 *
US-PATENT-CLASS-318-580	c 08	N74-10942 *	US-PATENT-CLASS-321-11	c 09	N69-39984 *	US-PATENT-CLASS-323-44F	c 33	N79-17133 *
US-PATENT-CLASS-318-580	c 04	N82-23231 *	US-PATENT-CLASS-321-11	c 09	N72-25252 *	US-PATENT-CLASS-323-48	c 09	N71-27053 *
US-PATENT-CLASS-318-584	c 08	N81-24106 *	US-PATENT-CLASS-321-11	c 10	N73-26228 *	US-PATENT-CLASS-323-48	c 09	N72-25262 *
US-PATENT-CLASS-318-584	c 08	N86-27288 *	US-PATENT-CLASS-321-12	c 10	N71-27366 *	US-PATENT-CLASS-323-4	c 33	N78-17294 *
US-PATENT-CLASS-318-585	c 08	N79-23097 *	US-PATENT-CLASS-321-13	c 33	N77-14333 *	US-PATENT-CLASS-323-56	c 10	N71-22961 *
US-PATENT-CLASS-318-587	c 35	N84-33769 *	US-PATENT-CLASS-321-14	c 09	N72-22196 *	US-PATENT-CLASS-323-56	c 09	N71-24893 *
US-PATENT-CLASS-318-594	c 35	N79-14348 *	US-PATENT-CLASS-321-15	c 09	N72-22203 *	US-PATENT-CLASS-323-56	c 09	N72-22196 *
US-PATENT-CLASS-318-599	c 10	N71-24861 *	US-PATENT-CLASS-321-15	c 33	N75-19522 *	US-PATENT-CLASS-323-60	c 09	N71-27053 *
US-PATENT-CLASS-318-602	c 33	N74-29556 *	US-PATENT-CLASS-321-18	c 09	N72-22203 *	US-PATENT-CLASS-323-82	c 09	N72-25262 *
US-PATENT-CLASS-318-603	c 33	N74-29556 *	US-PATENT-CLASS-321-18	c 09	N72-25251 *	US-PATENT-CLASS-323-89C	c 09	N72-22196 *
US-PATENT-CLASS-318-605	c 31	N86-29055 *	US-PATENT-CLASS-321-18	c 09	N72-25252 *	US-PATENT-CLASS-323-8	c 10	N71-10578 *
US-PATENT-CLASS-318-608	c 33	N75-13139 *	US-PATENT-CLASS-321-18	c 33	N74-1049 *	US-PATENT-CLASS-323-901	c 33	N84-33663 *
US-PATENT-CLASS-318-611	c 37	N85-30333 *	US-PATENT-CLASS-321-19	c 09	N72-22196 *	US-PATENT-CLASS-323-903	c 33	N90-20320 *
US-PATENT-CLASS-318-615	c 33	N90-21951 *	US-PATENT-CLASS-321-19	c 09	N72-25252 *	US-PATENT-CLASS-323-93	c 33	N77-31404 *
US-PATENT-CLASS-318-616	c 08	N79-23097 *	US-PATENT-CLASS-321-19	c 33	N77-10428 *	US-PATENT-CLASS-324-5R	c 16	N73-13489 *
US-PATENT-CLASS-318-618	c 33	N90-21951 *	US-PATENT-CLASS-321-25	c 09	N72-22196 *	US-PATENT-CLASS-324-5	c 14	N71-20428 *
US-PATENT-CLASS-318-620	c 33	N82-18493 *	US-PATENT-CLASS-321-2	c 03	N69-21330 *	US-PATENT-CLASS-324-DIG.1	c 33	N75-19520 *
US-PATENT-CLASS-318-621	c 33	N82-18493 *	US-PATENT-CLASS-321-2	c 03	N69-25146 *	US-PATENT-CLASS-324-DIG.1	c 33	N75-25041 *
US-PATENT-CLASS-318-622	c 33	N82-18493 *	US-PATENT-CLASS-321-2	c 03	N71-12255 *	US-PATENT-CLASS-324-0.5	c 14	N71-26137 *
US-PATENT-CLASS-318-628	c 08	N74-10942 *	US-PATENT-CLASS-321-2	c 09	N71-23188 *	US-PATENT-CLASS-324-0.5	c 14	N71-26266 *
US-PATENT-CLASS-318-628	c 37	N91-21544 *	US-PATENT-CLASS-321-2	c 03	N71-23239 *	US-PATENT-CLASS-324-0.5	c 36	N79-14362 *
US-PATENT-CLASS-318-632	c 37	N86-27629 *	US-PATENT-CLASS-321-2	c 10	N71-26085 *	US-PATENT-CLASS-324-102	c 09	N72-11225 *
US-PATENT-CLASS-318-636	c 31	N86-29055 *	US-PATENT-CLASS-321-2	c 09	N72-22196 *	US-PATENT-CLASS-324-102	c 33	N74-17930 *
US-PATENT-CLASS-318-640	c 33	N75-13139 *	US-PATENT-CLASS-321-2	c 09	N72-22203 *	US-PATENT-CLASS-324-102	c 33	N75-19521 *
US-PATENT-CLASS-318-640	c 54	N75-27758 *	US-PATENT-CLASS-321-2	c 03	N72-23048 *	US-PATENT-CLASS-324-102	c 33	N79-11315 *
US-PATENT-CLASS-318-640	c 35	N79-14348 *	US-PATENT-CLASS-321-2	c 09	N72-25249 *	US-PATENT-CLASS-324-102	c 33	N79-14305 *
US-PATENT-CLASS-318-640	c 37	N81-27519 *	US-PATENT-CLASS-321-2	c 09	N72-25251 *	US-PATENT-CLASS-324-103	c 10	N71-27338 *
US-PATENT-CLASS-318-640	c 08	N86-27288 *	US-PATENT-CLASS-321-2	c 09	N72-25252 *	US-PATENT-CLASS-324-106	c 14	N70-38602 *
US-PATENT-CLASS-318-646	c 37	N91-21544 *	US-PATENT-CLASS-321-2	c 09	N72-25253 *	US-PATENT-CLASS-324-106	c 08	N71-29138 *
US-PATENT-CLASS-318-648	c 37	N91-21544 *	US-PATENT-CLASS-321-2	c 09	N72-25254 *	US-PATENT-CLASS-324-107	c 10	N71-27338 *
US-PATENT-CLASS-318-648	c 39	N93-13420 *	US-PATENT-CLASS-321-2	c 33	N74-1049 *	US-PATENT-CLASS-324-112	c 33	N79-14305 *
US-PATENT-CLASS-318-649	c 33	N75-13139 *	US-PATENT-CLASS-321-2	c 33	N77-10428 *	US-PATENT-CLASS-324-113	c 09	N70-41655 *
US-PATENT-CLASS-318-649	c 39	N93-13420 *	US-PATENT-CLASS-321-45C	c 10	N73-26228 *	US-PATENT-CLASS-324-113	c 33	N75-19521 *
US-PATENT-CLASS-318-653	c 10	N71-27136 *	US-PATENT-CLASS-321-45ER	c 09	N72-25252 *	US-PATENT-CLASS-324-113	c 33	N79-11315 *
US-PATENT-CLASS-318-661	c 31	N86-29055 *	US-PATENT-CLASS-321-45R	c 09	N72-25252 *	US-PATENT-CLASS-324-113	c 33	N79-14305 *
US-PATENT-CLASS-318-663	c 37	N81-33483 *	US-PATENT-CLASS-321-45R	c 09	N72-25254 *	US-PATENT-CLASS-324-115	c 14	N71-26244 *
US-PATENT-CLASS-318-663	c 37	N86-27629 *	US-PATENT-CLASS-321-45R	c 33	N74-22864 *	US-PATENT-CLASS-324-115	c 10	N72-20222 *
US-PATENT-CLASS-318-664	c 33	N74-29556 *	US-PATENT-CLASS-321-45S	c 33	N74-1049 *	US-PATENT-CLASS-324-115	c 17	N91-14371 *
US-PATENT-CLASS-318-675	c 33	N75-13139 *	US-PATENT-CLASS-321-45	c 09	N71-24800 *	US-PATENT-CLASS-324-117	c 14	N71-23037 *
US-PATENT-CLASS-318-675	c 37	N77-27400 *	US-PATENT-CLASS-321-45	c 09	N72-22203 *	US-PATENT-CLASS-324-117	c 33	N89-29681 *
US-PATENT-CLASS-318-685	c 33	N83-35227 *	US-PATENT-CLASS-321-47	c 09	N71-33109 *	US-PATENT-CLASS-324-118	c 33	N74-17930 *
US-PATENT-CLASS-318-729	c 33	N83-34190 *	US-PATENT-CLASS-321-47	c 09	N72-25253 *	US-PATENT-CLASS-324-119	c 09	N72-11225 *
US-PATENT-CLASS-318-729	c 33	N84-14424 *	US-PATENT-CLASS-321-48	c 12	N71-20896 *	US-PATENT-CLASS-324-120	c 14	N71-19431 *
US-PATENT-CLASS-318-729	c 33	N84-22885 *	US-PATENT-CLASS-321-5	c 08	N71-18752 *	US-PATENT-CLASS-324-120	c 09	N71-23021 *
US-PATENT-CLASS-318-729	c 33	N84-22886 *	US-PATENT-CLASS-321-60	c 14	N71-23174 *	US-PATENT-CLASS-324-123C	c 33	N79-22373 *
US-PATENT-CLASS-318-729	c 33	N84-27975 *	US-PATENT-CLASS-321-61	c 09	N71-27364 *	US-PATENT-CLASS-324-123R	c 09	N72-11225 *
US-PATENT-CLASS-318-729	c 33	N84-33661 *	US-PATENT-CLASS-321-64	c 09	N71-27364 *	US-PATENT-CLASS-324-127	c 33	N79-18193 *
US-PATENT-CLASS-318-729	c 44	N85-21769 *	US-PATENT-CLASS-321-69	c 10	N71-26414 *	US-PATENT-CLASS-324-127	c 33	N89-29681 *
US-PATENT-CLASS-318-729	c 33	N85-22877 *	US-PATENT-CLASS-321-6R	c 35	N74-18090 *	US-PATENT-CLASS-324-130	c 35	N78-28411 *
US-PATENT-CLASS-318-798	c 33	N83-34190 *	US-PATENT-CLASS-321-9	c 10	N71-25139 *	US-PATENT-CLASS-324-132	c 09	N71-13530 *
US-PATENT-CLASS-318-798	c 33	N83-35227 *	US-PATENT-CLASS-322-2R	c 07	N83-20944 *	US-PATENT-CLASS-324-132	c 10	N72-20222 *
US-PATENT-CLASS-318-798	c 33	N84-14424 *	US-PATENT-CLASS-322-25	c 33	N84-33660 *	US-PATENT-CLASS-324-133	c 10	N71-27338 *
US-PATENT-CLASS-318-798	c 33	N84-22885 *	US-PATENT-CLASS-322-29	c 33	N83-28319 *	US-PATENT-CLASS-324-133	c 33	N79-10337 *
US-PATENT-CLASS-318-799	c 33	N81-27395 *	US-PATENT-CLASS-322-29	c 33	N84-33660 *	US-PATENT-CLASS-324-133	c 33	N79-11315 *
US-PATENT-CLASS-318-799	c 33	N84-16455 *	US-PATENT-CLASS-322-2	c 03	N72-30048 *	US-PATENT-CLASS-324-133	c 33	N79-14305 *
US-PATENT-CLASS-318-800	c 33	N83-31953 *	US-PATENT-CLASS-322-32	c 09	N71-27364 *	US-PATENT-CLASS-324-133	c 33	N79-18193 *
US-PATENT-CLASS-318-802	c 33	N84-33661 *	US-PATENT-CLASS-322-35	c 33	N83-28319 *	US-PATENT-CLASS-324-158-D	c 33	N87-22894 *
US-PATENT-CLASS-318-803	c 33	N83-10345 *	US-PATENT-CLASS-322-47	c 33	N83-28319 *	US-PATENT-CLASS-324-158-R	c 33	N87-22894 *
US-PATENT-CLASS-318-803	c 33	N83-31953 *	US-PATENT-CLASS-322-47	c 33	N84-33660 *	US-PATENT-CLASS-324-158D	c 15	N72-25457 *
US-PATENT-CLASS-318-805	c 33	N84-22885 *	US-PATENT-CLASS-322-95	c 33	N83-28319 *	US-PATENT-CLASS-324-158D	c 76	N76-20994 *
US-PATENT-CLASS-318-805	c 33	N82-26569 *	US-PATENT-CLASS-322-95	c 33	N84-33660 *	US-PATENT-CLASS-324-158D	c 44	N80-18551 *
US-PATENT-CLASS-318-806	c 33	N83-34190 *	US-PATENT-CLASS-322-96	c 33	N77-26387 *	US-PATENT-CLASS-324-158D	c 76	N84-35112 *
US-PATENT-CLASS-318-806	c 33	N83-35227 *	US-PATENT-CLASS-323-DIG.1	c 09	N72-21243 *	US-PATENT-CLASS-324-158D	c 76	N85-30923 *
US-PATENT-CLASS-318-806	c 33	N84-14424 *	US-PATENT-CLASS-323-DIG.1	c 09	N72-25249 *	US-PATENT-CLASS-324-158F	c 33	N91-14552 *
US-PATENT-CLASS-318-809	c 33	N83-31953 *	US-PATENT-CLASS-323-DIG.1	c 33	N74-1049 *	US-PATENT-CLASS-324-158P	c 33	N91-14552 *
US-PATENT-CLASS-318-809	c 33	N84-27975 *	US-PATENT-CLASS-323-DIG.1	c 33	N77-10428 *	US-PATENT-CLASS-324-158R	c 76	N76-20994 *
US-PATENT-CLASS-318-810	c 33	N81-27395 *	US-PATENT-CLASS-323-106	c 33	N74-22885 *	US-PATENT-CLASS-324-158R	c 33	N85-30187 *
US-PATENT-CLASS-318-810	c 33	N84-22885 *	US-PATENT-CLASS-323-122	c 33	N74-22885 *	US-PATENT-CLASS-324-158T	c 15	N72-25457 *
US-PATENT-CLASS-318-812	c 33	N82-26569 *	US-PATENT-CLASS-323-128	c 33	N72-22885 *	US-PATENT-CLASS-324-158T	c 35	N75-12270 *
US-PATENT-CLASS-318-812	c 33	N84-22886 *	US-PATENT-CLASS-323-15	c 20	N79-20179 *	US-PATENT-CLASS-324-158T	c 76	N76-20994 *
US-PATENT-CLASS-318-812	c 33	N85-22877 *	US-PATENT-CLASS-323-17	c 44	N80-14472 *	US-PATENT-CLASS-324-158T	c 33	N80-14332 *
US-PATENT-CLASS-318-830	c 33	N82-26569 *	US-PATENT-CLASS-323-17	c 09	N72-25249 *	US-PATENT-CLASS-324-158T	c 76	N84-35112 *
US-PATENT-CLASS-318-8	c 37	N86-27629 *	US-PATENT-CLASS-323-17	c 33	N77-10428 *	US-PATENT-CLASS-324-158	c 09	N69-21926 *
US-PATENT-CLASS-32-28	c 05	N73-27062 *	US-PATENT-CLASS-323-18	c 33	N78-17295 *	US-PATENT-CLASS-324-163	c 35	N77-30436 *
US-PATENT-CLASS-32-58	c 05	N73-27062 *	US-PATENT-CLASS-323-19	c 08	N72-31226 *	US-PATENT-CLASS-324-165	c 35	N77-30436 *
US-PATENT-CLASS-320-13	c 03	N71-29129 *	US-PATENT-CLASS-323-19	c 33	N78-17296 *	US-PATENT-CLASS-324-173	c 35	N78-32396 *
US-PATENT-CLASS-320-13	c 44	N78-25531 *	US-PATENT-CLASS-323-19	c 44	N80-14472 *	US-PATENT-CLASS-324-174	c 35	N77-30436 *
US-PATENT-CLASS-320-15	c 44	N78-14625 *	US-PATENT-CLASS-323-20	c 14	N71-27407 *	US-PATENT-CLASS-324-181	c 09	N71-24717 *
US-PATENT-CLASS-320-15	c 44	N78-25531 *	US-PATENT-CLASS-323-20	c 20	N79-20179 *	US-PATENT-CLASS-324-186	c 09	N72-25257 *
US-PATENT-CLASS-320-17	c 03	N71-24605 *	US-PATENT-CLASS-323-22T	c 09	N72-21243 *	US-PATENT-CLASS-324-186	c 52	N74-12778 *
US-PATENT-CLASS-320-18	c 44	N78-14625 *	US-PATENT-CLASS-323-22T	c 09	N72-25249 *	US-PATENT-CLASS-324-20R	c 09	N72-23172 *
US-PATENT-CLASS-320-21	c 44	N76-18643 *	US-PATENT-CLASS-323-22T	c 33	N77-10428 *	US-PATENT-CLASS-324-20R	c 44	N79-12541 *
US-PATENT-CLASS-320-22	c 44	N76-18643 *	US-PATENT-CLASS-323-22T	c 33	N79-23345 *	US-PATENT-CLASS-324-205	c 70	N92-29130 *
US-PATENT-CLASS-320-23	c 03	N71-19438 *	US-PATENT-CLASS-323-22	c 09	N71-21449 *	US-PATENT-CLASS-324-207.16	c 35	N93-26103 *
US-PATENT-CLASS-320-2	c 44	N77-14581 *	US-PATENT-CLASS-323-22	c 09	N71-23316 *	US-PATENT-CLASS-324-207	c 35	N78-32396 *
US-PATENT-CLASS-320-32	c 44	N78-25531 *	US-PATENT-CLASS-323-23	c 33	N77-10428 *	US-PATENT-CLASS-324-209	c 26	N90-21170 *
US-PATENT-CLASS-320-39	c 03	N71-24719 *	US-PATENT-CLASS-323-243	c 33	N84-16455 *	US-PATENT-CLASS-324-209	c 39	N92-29155 *
US-PATENT-CLASS-320-39	c 44	N78-25531 *	US-PATENT-CLASS-323-246	c 33	N84-16455 *	US-PATENT-CLASS-324-209	c 26	N93-14705 *

## REPORT NUMBER INDEX

## US-PATENT-CLASS-325-480

US-PATENT-CLASS-324-220	c 35	N93-26103 *	US-PATENT-CLASS-324-61R	c 14	N72-24477 *	US-PATENT-CLASS-324-96	c 26	N72-25680 *
US-PATENT-CLASS-324-222	c 39	N93-20118 *	US-PATENT-CLASS-324-61R	c 35	N76-22509 *	US-PATENT-CLASS-324-96	c 33	N79-10337 *
US-PATENT-CLASS-324-224	c 38	N92-29154 *	US-PATENT-CLASS-324-61	c 14	N69-39785 *	US-PATENT-CLASS-324-99D	c 33	N79-22373 *
US-PATENT-CLASS-324-226	c 35	N86-32698 *	US-PATENT-CLASS-324-61	c 14	N70-36618 *	US-PATENT-CLASS-325-10	c 07	N72-12081 *
US-PATENT-CLASS-324-226	c 26	N90-21170 *	US-PATENT-CLASS-324-61	c 14	N71-10797 *	US-PATENT-CLASS-325-113	c 07	N71-24840 *
US-PATENT-CLASS-324-226	c 39	N92-28757 *	US-PATENT-CLASS-324-61	c 18	N71-27397 *	US-PATENT-CLASS-325-113	c 07	N73-25160 *
US-PATENT-CLASS-324-226	c 38	N92-29154 *	US-PATENT-CLASS-324-61	c 14	N72-22442 *	US-PATENT-CLASS-325-113	c 52	N74-26625 *
US-PATENT-CLASS-324-226	c 39	N92-29155 *	US-PATENT-CLASS-324-62R	c 14	N73-30388 *	US-PATENT-CLASS-325-114	c 07	N72-25171 *
US-PATENT-CLASS-324-226	c 26	N90-21170 *	US-PATENT-CLASS-324-62	c 33	N80-32650 *	US-PATENT-CLASS-325-114	c 03	N76-32140 *
US-PATENT-CLASS-324-227	c 39	N92-29155 *	US-PATENT-CLASS-324-62	c 33	N90-19492 *	US-PATENT-CLASS-325-115	c 03	N76-32140 *
US-PATENT-CLASS-324-227	c 26	N93-14705 *	US-PATENT-CLASS-324-64	c 15	N72-21464 *	US-PATENT-CLASS-325-118	c 17	N78-17140 *
US-PATENT-CLASS-324-227	c 39	N92-29155 *	US-PATENT-CLASS-324-64	c 33	N80-32650 *	US-PATENT-CLASS-325-12	c 07	N73-20174 *
US-PATENT-CLASS-324-22	c 44	N79-12541 *	US-PATENT-CLASS-324-65-P	c 35	N85-34373 *	US-PATENT-CLASS-325-139	c 07	N73-25160 *
US-PATENT-CLASS-324-232	c 26	N93-14705 *	US-PATENT-CLASS-324-65P	c 14	N73-20478 *	US-PATENT-CLASS-325-13	c 07	N72-12081 *
US-PATENT-CLASS-324-234	c 27	N90-23544 *	US-PATENT-CLASS-324-65R	c 15	N72-23497 *	US-PATENT-CLASS-325-141	c 07	N72-25173 *
US-PATENT-CLASS-324-233	c 26	N90-21170 *	US-PATENT-CLASS-324-65R	c 33	N85-30187 *	US-PATENT-CLASS-325-141	c 52	N74-26625 *
US-PATENT-CLASS-324-235	c 39	N92-28757 *	US-PATENT-CLASS-324-65R	c 14	N71-27186 *	US-PATENT-CLASS-325-143	c 05	N71-12342 *
US-PATENT-CLASS-324-235	c 39	N92-29155 *	US-PATENT-CLASS-324-662	c 33	N93-26104 *	US-PATENT-CLASS-325-145	c 32	N77-14292 *
US-PATENT-CLASS-324-235	c 27	N90-23544 *	US-PATENT-CLASS-324-66	c 05	N72-16015 *	US-PATENT-CLASS-325-148	c 12	N74-19790 *
US-PATENT-CLASS-324-238	c 35	N86-32698 *	US-PATENT-CLASS-324-681	c 33	N93-26104 *	US-PATENT-CLASS-325-14	c 37	N76-21250 *
US-PATENT-CLASS-324-239	c 26	N90-21170 *	US-PATENT-CLASS-324-683	c 33	N93-26104 *	US-PATENT-CLASS-325-14	c 32	N80-20448 *
US-PATENT-CLASS-324-239	c 39	N92-29101 *	US-PATENT-CLASS-324-687	c 63	N93-14701 *	US-PATENT-CLASS-325-151.11	c 08	N71-27057 *
US-PATENT-CLASS-324-239	c 39	N92-29155 *	US-PATENT-CLASS-324-690	c 33	N93-26104 *	US-PATENT-CLASS-325-159	c 33	N78-32340 *
US-PATENT-CLASS-324-240	c 35	N86-32698 *	US-PATENT-CLASS-324-699	c 39	N93-29612 *	US-PATENT-CLASS-325-163	c 07	N71-23405 *
US-PATENT-CLASS-324-244	c 70	N92-29130 *	US-PATENT-CLASS-324-70	c 14	N70-41332 *	US-PATENT-CLASS-325-16	c 07	N71-27056 *
US-PATENT-CLASS-324-249	c 35	N78-32397 *	US-PATENT-CLASS-324-70	c 14	N71-22990 *	US-PATENT-CLASS-325-17	c 07	N73-20174 *
US-PATENT-CLASS-324-250	c 35	N84-12444 *	US-PATENT-CLASS-324-70	c 10	N71-24863 *	US-PATENT-CLASS-325-185	c 07	N71-28430 *
US-PATENT-CLASS-324-261	c 70	N92-29130 *	US-PATENT-CLASS-324-71.3	c 72	N84-28575 *	US-PATENT-CLASS-325-186	c 03	N76-32140 *
US-PATENT-CLASS-324-262	c 35	N84-22928 *	US-PATENT-CLASS-324-71.5	c 76	N85-30923 *	US-PATENT-CLASS-325-187	c 33	N78-32340 *
US-PATENT-CLASS-324-262	c 35	N86-32698 *	US-PATENT-CLASS-324-71C	c 35	N76-22509 *	US-PATENT-CLASS-325-23	c 07	N71-27056 *
US-PATENT-CLASS-324-262	c 38	N92-29154 *	US-PATENT-CLASS-324-71C	c 35	N82-11431 *	US-PATENT-CLASS-325-29	c 09	N72-22202 *
US-PATENT-CLASS-324-262	c 35	N93-26103 *	US-PATENT-CLASS-324-71R	c 09	N72-21246 *	US-PATENT-CLASS-325-302	c 07	N72-25173 *
US-PATENT-CLASS-324-262	c 03	N72-25020 *	US-PATENT-CLASS-324-71R	c 15	N72-21464 *	US-PATENT-CLASS-325-304	c 32	N76-14321 *
US-PATENT-CLASS-324-29.5	c 14	N73-30388 *	US-PATENT-CLASS-324-718	c 39	N93-29612 *	US-PATENT-CLASS-325-305	c 07	N71-10775 *
US-PATENT-CLASS-324-29.5	c 44	N74-27519 *	US-PATENT-CLASS-324-71	c 09	N71-24843 *	US-PATENT-CLASS-325-305	c 10	N71-20841 *
US-PATENT-CLASS-324-30B	c 33	N76-19339 *	US-PATENT-CLASS-324-72.5	c 44	N74-27519 *	US-PATENT-CLASS-325-305	c 07	N71-23098 *
US-PATENT-CLASS-324-30R	c 14	N73-20478 *	US-PATENT-CLASS-324-72.5	c 72	N84-28575 *	US-PATENT-CLASS-325-305	c 32	N80-18253 *
US-PATENT-CLASS-324-32	c 35	N90-22023 *	US-PATENT-CLASS-324-72	c 10	N71-19421 *	US-PATENT-CLASS-325-306	c 32	N76-14321 *
US-PATENT-CLASS-324-32	c 14	N71-16014 *	US-PATENT-CLASS-324-72	c 14	N71-23699 *	US-PATENT-CLASS-325-307	c 32	N80-18253 *
US-PATENT-CLASS-324-32	c 33	N75-18477 *	US-PATENT-CLASS-324-72	c 07	N73-20175 *	US-PATENT-CLASS-325-30	c 32	N74-26654 *
US-PATENT-CLASS-324-32	c 33	N75-19522 *	US-PATENT-CLASS-324-72	c 14	N73-32318 *	US-PATENT-CLASS-325-30	c 32	N75-24981 *
US-PATENT-CLASS-324-32	c 35	N78-28411 *	US-PATENT-CLASS-324-72	c 33	N74-27862 *	US-PATENT-CLASS-325-30	c 32	N77-30308 *
US-PATENT-CLASS-324-33	c 25	N69-39884 *	US-PATENT-CLASS-324-72	c 33	N75-26246 *	US-PATENT-CLASS-325-31	c 07	N71-20791 *
US-PATENT-CLASS-324-33	c 14	N70-35666 *	US-PATENT-CLASS-324-72	c 33	N77-10429 *	US-PATENT-CLASS-325-320	c 33	N74-12887 *
US-PATENT-CLASS-324-33	c 24	N71-20518 *	US-PATENT-CLASS-324-72	c 33	N79-10337 *	US-PATENT-CLASS-325-320	c 32	N74-20809 *
US-PATENT-CLASS-324-33	c 14	N71-21090 *	US-PATENT-CLASS-324-72	c 33	N79-14305 *	US-PATENT-CLASS-325-320	c 32	N74-20811 *
US-PATENT-CLASS-324-33	c 14	N71-27090 *	US-PATENT-CLASS-324-72	c 47	N82-24779 *	US-PATENT-CLASS-325-320	c 33	N74-27705 *
US-PATENT-CLASS-324-34FL	c 35	N74-21018 *	US-PATENT-CLASS-324-72	c 47	N93-10108 *	US-PATENT-CLASS-325-321	c 07	N72-20140 *
US-PATENT-CLASS-324-34R	c 26	N76-18257 *	US-PATENT-CLASS-324-73AT	c 08	N72-22166 *	US-PATENT-CLASS-325-321	c 32	N74-20810 *
US-PATENT-CLASS-324-34	c 25	N71-16073 *	US-PATENT-CLASS-324-73AT	c 33	N81-26359 *	US-PATENT-CLASS-325-321	c 32	N76-16249 *
US-PATENT-CLASS-324-404	c 44	N80-18551 *	US-PATENT-CLASS-324-73R	c 33	N83-18996 *	US-PATENT-CLASS-325-323	c 32	N77-10392 *
US-PATENT-CLASS-324-40	c 38	N74-15395 *	US-PATENT-CLASS-324-73	c 14	N71-28991 *	US-PATENT-CLASS-325-325	c 07	N71-24613 *
US-PATENT-CLASS-324-41	c 10	N72-28240 *	US-PATENT-CLASS-324-74	c 35	N78-28411 *	US-PATENT-CLASS-325-325	c 07	N72-25173 *
US-PATENT-CLASS-324-427	c 35	N85-21596 *	US-PATENT-CLASS-324-77-E	c 33	N89-14385 *	US-PATENT-CLASS-325-325	c 07	N73-13149 *
US-PATENT-CLASS-324-43R	c 35	N76-16390 *	US-PATENT-CLASS-324-77-R	c 33	N89-14385 *	US-PATENT-CLASS-325-346	c 10	N73-16205 *
US-PATENT-CLASS-324-43	c 14	N69-27423 *	US-PATENT-CLASS-324-77B	c 60	N75-13539 *	US-PATENT-CLASS-325-346	c 32	N74-30523 *
US-PATENT-CLASS-324-43	c 09	N70-40123 *	US-PATENT-CLASS-324-77B	c 32	N79-10262 *	US-PATENT-CLASS-325-346	c 32	N77-24331 *
US-PATENT-CLASS-324-43	c 14	N71-15962 *	US-PATENT-CLASS-324-77CS	c 32	N92-29124 *	US-PATENT-CLASS-325-347	c 07	N71-33696 *
US-PATENT-CLASS-324-43	c 14	N71-26135 *	US-PATENT-CLASS-324-77C	c 32	N79-10262 *	US-PATENT-CLASS-325-348	c 07	N71-33696 *
US-PATENT-CLASS-324-43	c 14	N71-27325 *	US-PATENT-CLASS-324-77C	c 32	N92-29124 *	US-PATENT-CLASS-325-349	c 32	N77-10392 *
US-PATENT-CLASS-324-457	c 72	N84-28575 *	US-PATENT-CLASS-324-77G	c 08	N72-20177 *	US-PATENT-CLASS-325-363	c 07	N71-11267 *
US-PATENT-CLASS-324-466	c 33	N83-31954 *	US-PATENT-CLASS-324-77H	c 35	N75-21582 *	US-PATENT-CLASS-325-363	c 14	N71-26774 *
US-PATENT-CLASS-324-51	c 33	N80-26599 *	US-PATENT-CLASS-324-77K	c 35	N79-10391 *	US-PATENT-CLASS-325-363	c 14	N72-28437 *
US-PATENT-CLASS-324-51	c 33	N81-26359 *	US-PATENT-CLASS-324-77R	c 10	N73-25240 *	US-PATENT-CLASS-325-363	c 10	N73-25241 *
US-PATENT-CLASS-324-51	c 33	N82-24420 *	US-PATENT-CLASS-324-77R	c 47	N82-24779 *	US-PATENT-CLASS-325-363	c 35	N80-18359 *
US-PATENT-CLASS-324-52	c 14	N72-17325 *	US-PATENT-CLASS-324-77	c 09	N71-10659 *	US-PATENT-CLASS-325-369	c 07	N71-27056 *
US-PATENT-CLASS-324-52	c 14	N73-28486 *	US-PATENT-CLASS-324-77	c 07	N71-24622 *	US-PATENT-CLASS-325-372	c 32	N76-14321 *
US-PATENT-CLASS-324-52	c 33	N79-18193 *	US-PATENT-CLASS-324-78-D	c 33	N89-14385 *	US-PATENT-CLASS-325-373	c 07	N72-33146 *
US-PATENT-CLASS-324-52	c 33	N82-24420 *	US-PATENT-CLASS-324-78-F	c 33	N89-14385 *	US-PATENT-CLASS-325-38B	c 35	N74-17885 *
US-PATENT-CLASS-324-54	c 33	N75-18477 *	US-PATENT-CLASS-324-78D	c 09	N72-25257 *	US-PATENT-CLASS-325-38	c 07	N72-20140 *
US-PATENT-CLASS-324-57DE	c 33	N78-25319 *	US-PATENT-CLASS-324-78D	c 52	N74-12778 *	US-PATENT-CLASS-325-38	c 07	N72-25173 *
US-PATENT-CLASS-324-57H	c 35	N77-32455 *	US-PATENT-CLASS-324-78D	c 32	N90-17005 *	US-PATENT-CLASS-325-39	c 07	N72-11149 *
US-PATENT-CLASS-324-57PS	c 35	N75-21582 *	US-PATENT-CLASS-324-78E	c 32	N92-29124 *	US-PATENT-CLASS-325-40	c 07	N73-26118 *
US-PATENT-CLASS-324-57R	c 15	N72-21464 *	US-PATENT-CLASS-324-78E	c 14	N73-24473 *	US-PATENT-CLASS-325-419	c 10	N73-16205 *
US-PATENT-CLASS-324-57R	c 14	N73-30388 *	US-PATENT-CLASS-324-78F	c 32	N92-29124 *	US-PATENT-CLASS-325-419	c 07	N73-28012 *
US-PATENT-CLASS-324-57R	c 35	N74-18090 *	US-PATENT-CLASS-324-78J	c 10	N73-25240 *	US-PATENT-CLASS-325-419	c 32	N74-20810 *
US-PATENT-CLASS-324-57R	c 33	N79-10338 *	US-PATENT-CLASS-324-78J	c 33	N75-19515 *	US-PATENT-CLASS-325-419	c 32	N74-20811 *
US-PATENT-CLASS-324-57R	c 35	N79-14349 *	US-PATENT-CLASS-324-78J	c 32	N90-17005 *	US-PATENT-CLASS-325-419	c 32	N80-18253 *
US-PATENT-CLASS-324-57SS	c 33	N78-25319 *	US-PATENT-CLASS-324-79D	c 14	N73-30388 *	US-PATENT-CLASS-325-41	c 10	N71-26577 *
US-PATENT-CLASS-324-57	c 10	N71-16057 *	US-PATENT-CLASS-324-79D	c 33	N76-16331 *	US-PATENT-CLASS-325-41	c 32	N77-12240 *
US-PATENT-CLASS-324-57	c 09	N71-20569 *	US-PATENT-CLASS-324-79D	c 61	N93-14882 *	US-PATENT-CLASS-325-41	c 32	N79-10263 *
US-PATENT-CLASS-324-58.5A	c 33	N75-26245 *	US-PATENT-CLASS-324-79R	c 14	N72-27408 *	US-PATENT-CLASS-325-420	c 07	N73-30113 *
US-PATENT-CLASS-324-58.5B	c 43	N78-10529 *	US-PATENT-CLASS-324-79R	c 33	N84-16454 *	US-PATENT-CLASS-325-422	c 07	N73-30113 *
US-PATENT-CLASS-324-58.5C	c 33	N75-26245 *	US-PATENT-CLASS-324-79R	c 61	N93-14882 *	US-PATENT-CLASS-325-423	c 32	N74-20809 *
US-PATENT-CLASS-324-58.5	c 15	N71-17822 *	US-PATENT-CLASS-324-83A	c 10	N72-20224 *	US-PATENT-CLASS-325-42	c 07	N71-11266 *
US-PATENT-CLASS-324-58.5	c 25	N71-20563 *	US-PATENT-CLASS-324-83A	c 33	N84-16454 *	US-PATENT-CLASS-325-42	c 32	N76-21366 *
US-PATENT-CLASS-324-58.5	c 14	N71-26137 *	US-PATENT-CLASS-324-83D	c 33	N79-10338 *	US-PATENT-CLASS-325-42	c 32	N77-30308 *
US-PATENT-CLASS-324-58.5	c 18	N71-27397 *	US-PATENT-CLASS-324-83Q	c 35	N74-21017 *	US-PATENT-CLASS-325-445	c 07	N72-20141 *
US-PATENT-CLASS-324-58A	c 33	N78-25319 *	US-PATENT-CLASS-324-83Q	c 33	N75-26243 *	US-PATENT-CLASS-325-446	c 09	N69-24324 *
US-PATENT-CLASS-324-59	c 35	N77-32455 *	US-PATENT-CLASS-324-83Q	c 61	N93-14882 *	US-PATENT-CLASS-325-45	c 07	N73-25160 *
US-PATENT-CLASS-324-5	c 14	N71-28991 *	US-PATENT-CLASS-324-83R	c 33	N84-16454 *	US-PATENT-CLASS-325-473	c 07	N71-33696 *
US-PATENT-CLASS-324-60C	c 35	N75-12270 *	US-PATENT-CLASS-324-85	c 10	N72-20224 *	US-PATENT-CLASS-325-473	c 10	N73-12244 *
US-PATENT-CLASS-324-60C	c 76	N76-20994 *	US-PATENT-CLASS-324-85	c 33	N79-10338 *	US-PATENT-CLASS-325-473	c 32	N77-30308 *
US-PATENT-CLASS-324-601	c 33	N91-14552 *	US-PATENT-CLASS-324-92	c 26	N72-25680 *	US-PATENT-CLASS-325-476	c 32	N77-10392 *
US-PATENT-CLASS-324-60	c 33	N77-31404 *	US-PATENT-CLASS-324-95	c 10	N71-12554 *	US-PATENT-CLASS-325-478	c 07	N71-33696 *
US-PATENT-CLASS-324-61-R	c 35	N87-22953 *	US-PATENT-CLASS-324-95	c 14	N73-30388 *	US-PATENT-CLASS-325-480	c 07	N71-33696 *
US-PATENT-CLASS-324-61-R	c 35	N88-29149 *						

## US-PATENT-CLASS-325-480

## REPORT NUMBER INDEX

US-PATENT-CLASS-325-480	c 10	N73-12244 *	US-PATENT-CLASS-328-165	c 07	N71-33696 *	US-PATENT-CLASS-329-306	c 04	N91-14321 *
US-PATENT-CLASS-325-482	c 07	N71-33696 *	US-PATENT-CLASS-328-166	c 10	N72-20223 *	US-PATENT-CLASS-329-310	c 32	N92-21712 *
US-PATENT-CLASS-325-492	c 09	N72-17153 *	US-PATENT-CLASS-328-166	c 33	N82-29539 *	US-PATENT-CLASS-329-349	c 33	N91-26438 *
US-PATENT-CLASS-325-492	c 09	N72-22202 *	US-PATENT-CLASS-328-167	c 10	N71-22986 *	US-PATENT-CLASS-329-361	c 33	N91-26438 *
US-PATENT-CLASS-325-4	c 07	N71-16088 *	US-PATENT-CLASS-328-167	c 08	N71-29034 *	US-PATENT-CLASS-329-363	c 33	N91-14550 *
US-PATENT-CLASS-325-4	c 07	N71-19773 *	US-PATENT-CLASS-328-167	c 10	N72-17171 *	US-PATENT-CLASS-329-50	c 33	N74-17930 *
US-PATENT-CLASS-325-4	c 07	N71-24621 *	US-PATENT-CLASS-328-167	c 09	N71-29034 *	US-PATENT-CLASS-329-50	c 35	N81-19427 *
US-PATENT-CLASS-325-4	c 07	N72-11149 *	US-PATENT-CLASS-328-167	c 09	N73-20231 *	US-PATENT-CLASS-33.8UB	c 27	N81-15104 *
US-PATENT-CLASS-325-4	c 07	N72-12080 *	US-PATENT-CLASS-328-167	c 08	N73-26175 *	US-PATENT-CLASS-33-DIG.13	c 35	N75-12273 *
US-PATENT-CLASS-325-4	c 07	N72-20140 *	US-PATENT-CLASS-328-167	c 33	N82-24417 *	US-PATENT-CLASS-33-DIG.3	c 04	N84-14132 *
US-PATENT-CLASS-325-4	c 07	N72-25171 *	US-PATENT-CLASS-328-167	c 33	N85-29145 *	US-PATENT-CLASS-33-1G	c 37	N76-21554 *
US-PATENT-CLASS-325-4	c 07	N73-20174 *	US-PATENT-CLASS-328-168	c 32	N74-19788 *	US-PATENT-CLASS-33-1M	c 35	N74-32877 *
US-PATENT-CLASS-325-4	c 15	N75-13007 *	US-PATENT-CLASS-328-16	c 10	N72-20223 *	US-PATENT-CLASS-33-1N	c 43	N79-26439 *
US-PATENT-CLASS-325-4	c 32	N75-26195 *	US-PATENT-CLASS-328-171	c 10	N71-24844 *	US-PATENT-CLASS-33-1Q	c 43	N79-26439 *
US-PATENT-CLASS-325-4	c 32	N77-20289 *	US-PATENT-CLASS-328-172	c 32	N74-19788 *	US-PATENT-CLASS-33-1SA	c 14	N72-28436 *
US-PATENT-CLASS-325-4	c 32	N79-11265 *	US-PATENT-CLASS-328-172	c 33	N78-17294 *	US-PATENT-CLASS-33-1SA	c 19	N74-21015 *
US-PATENT-CLASS-325-4	c 32	N80-20448 *	US-PATENT-CLASS-328-186	c 09	N72-17157 *	US-PATENT-CLASS-33-10	c 35	N92-22039 *
US-PATENT-CLASS-325-51	c 07	N72-25173 *	US-PATENT-CLASS-328-187	c 10	N73-20254 *	US-PATENT-CLASS-33-125R	c 52	N80-27072 *
US-PATENT-CLASS-325-55	c 07	N72-25173 *	US-PATENT-CLASS-328-189	c 14	N72-27408 *	US-PATENT-CLASS-33-125	c 14	N72-11364 *
US-PATENT-CLASS-325-58	c 07	N72-11149 *	US-PATENT-CLASS-328-190	c 33	N76-14371 *	US-PATENT-CLASS-33-143C	c 52	N82-22875 *
US-PATENT-CLASS-325-58	c 07	N72-20140 *	US-PATENT-CLASS-328-192	c 60	N81-15706 *	US-PATENT-CLASS-33-147D	c 37	N88-14361 *
US-PATENT-CLASS-325-58	c 07	N72-25173 *	US-PATENT-CLASS-328-1	c 23	N71-16099 *	US-PATENT-CLASS-33-147	c 15	N71-19489 *
US-PATENT-CLASS-325-58	c 32	N78-15323 *	US-PATENT-CLASS-328-1	c 10	N71-19472 *	US-PATENT-CLASS-33-148D	c 35	N75-19615 *
US-PATENT-CLASS-325-58	c 32	N79-20296 *	US-PATENT-CLASS-328-1	c 09	N72-22200 *	US-PATENT-CLASS-33-149	c 14	N71-17657 *
US-PATENT-CLASS-325-5	c 07	N73-20174 *	US-PATENT-CLASS-328-207	c 09	N71-28468 *	US-PATENT-CLASS-33-15A	c 08	N72-11172 *
US-PATENT-CLASS-325-60	c 08	N71-19763 *	US-PATENT-CLASS-328-207	c 10	N71-28860 *	US-PATENT-CLASS-33-15D	c 35	N92-22039 *
US-PATENT-CLASS-325-60	c 07	N73-16121 *	US-PATENT-CLASS-328-207	c 09	N71-29139 *	US-PATENT-CLASS-33-155R	c 33	N76-19338 *
US-PATENT-CLASS-325-60	c 32	N75-24981 *	US-PATENT-CLASS-328-207	c 10	N72-20223 *	US-PATENT-CLASS-33-169F	c 35	N84-28018 *
US-PATENT-CLASS-325-61	c 07	N73-25160 *	US-PATENT-CLASS-328-20	c 10	N72-20223 *	US-PATENT-CLASS-33-174B	c 37	N76-21554 *
US-PATENT-CLASS-325-62	c 08	N72-25208 *	US-PATENT-CLASS-328-230	c 35	N84-12444 *	US-PATENT-CLASS-33-174D	c 33	N76-19338 *
US-PATENT-CLASS-325-62	c 44	N74-19870 *	US-PATENT-CLASS-328-233	c 10	N71-22962 *	US-PATENT-CLASS-33-174L	c 43	N79-26439 *
US-PATENT-CLASS-325-63	c 10	N71-19467 *	US-PATENT-CLASS-328-233	c 75	N75-13625 *	US-PATENT-CLASS-33-174S	c 14	N72-22445 *
US-PATENT-CLASS-325-63	c 07	N73-20174 *	US-PATENT-CLASS-328-233	c 37	N78-17388 *	US-PATENT-CLASS-33-174	c 14	N69-21363 * #
US-PATENT-CLASS-325-63	c 32	N78-15323 *	US-PATENT-CLASS-328-24	c 09	N72-33204 *	US-PATENT-CLASS-33-174	c 14	N71-17658 *
US-PATENT-CLASS-325-63	c 32	N79-20296 *	US-PATENT-CLASS-328-28	c 33	N87-21235 *	US-PATENT-CLASS-33-174	c 14	N71-24693 *
US-PATENT-CLASS-325-64	c 07	N72-25173 *	US-PATENT-CLASS-328-37	c 08	N71-12503 *	US-PATENT-CLASS-33-180R	c 35	N75-12273 *
US-PATENT-CLASS-325-65	c 07	N70-41331 *	US-PATENT-CLASS-328-37	c 10	N73-20254 *	US-PATENT-CLASS-33-189	c 15	N71-26145 *
US-PATENT-CLASS-325-65	c 07	N70-41372 *	US-PATENT-CLASS-328-37	c 33	N76-14373 *	US-PATENT-CLASS-33-19.2	c 35	N92-10186 *
US-PATENT-CLASS-325-65	c 07	N71-11284 *	US-PATENT-CLASS-328-37	c 33	N81-17239 *	US-PATENT-CLASS-33-1	c 14	N70-36907 *
US-PATENT-CLASS-325-65	c 32	N77-30308 *	US-PATENT-CLASS-328-38	c 10	N72-20223 *	US-PATENT-CLASS-33-204C	c 08	N72-11172 *
US-PATENT-CLASS-325-66	c 17	N78-17140 *	US-PATENT-CLASS-328-38	c 33	N77-24375 *	US-PATENT-CLASS-33-207	c 15	N71-15571 *
US-PATENT-CLASS-325-67	c 07	N71-26292 *	US-PATENT-CLASS-328-39	c 33	N77-24375 *	US-PATENT-CLASS-33-23.02	c 35	N92-10186 *
US-PATENT-CLASS-325-67	c 10	N73-25241 *	US-PATENT-CLASS-328-4-8	c 33	N77-24375 *	US-PATENT-CLASS-33-23R	c 35	N74-32877 *
US-PATENT-CLASS-325-67	c 35	N75-21582 *	US-PATENT-CLASS-328-41	c 33	N75-31330 *	US-PATENT-CLASS-33-261	c 35	N91-14591 *
US-PATENT-CLASS-325-67	c 32	N79-11265 *	US-PATENT-CLASS-328-42	c 08	N71-19432 *	US-PATENT-CLASS-33-263	c 09	N81-14356 *
US-PATENT-CLASS-325-7	c 07	N73-20174 *	US-PATENT-CLASS-328-44	c 08	N71-29034 *	US-PATENT-CLASS-33-268	c 89	N74-30886 *
US-PATENT-CLASS-325-8	c 07	N73-20174 *	US-PATENT-CLASS-328-48	c 14	N73-30386 *	US-PATENT-CLASS-33-285	c 36	N74-21091 *
US-PATENT-CLASS-325-8	c 32	N80-20448 *	US-PATENT-CLASS-328-48	c 33	N74-10223 *	US-PATENT-CLASS-33-286	c 18	N76-14186 *
US-PATENT-CLASS-325-9	c 07	N73-20174 *	US-PATENT-CLASS-328-48	c 60	N81-15706 *	US-PATENT-CLASS-33-293	c 35	N84-16523 *
US-PATENT-CLASS-325-9	c 32	N80-20448 *	US-PATENT-CLASS-328-49	c 10	N71-27137 *	US-PATENT-CLASS-33-31	c 14	N71-21079 *
US-PATENT-CLASS-328-104	c 08	N72-22162 *	US-PATENT-CLASS-328-55	c 33	N81-17349 *	US-PATENT-CLASS-33-322	c 06	N83-33882 *
US-PATENT-CLASS-328-104	c 10	N73-13235 *	US-PATENT-CLASS-328-58	c 08	N71-29138 *	US-PATENT-CLASS-33-348	c 04	N84-14132 *
US-PATENT-CLASS-328-106	c 09	N72-22201 *	US-PATENT-CLASS-328-58	c 33	N74-32711 *	US-PATENT-CLASS-33-356	c 04	N76-20114 *
US-PATENT-CLASS-328-110	c 09	N71-12519 *	US-PATENT-CLASS-328-58	c 33	N75-18479 *	US-PATENT-CLASS-33-356	c 04	N77-19056 *
US-PATENT-CLASS-328-111	c 60	N77-12721 *	US-PATENT-CLASS-328-59	c 33	N75-19515 *	US-PATENT-CLASS-33-356	c 04	N84-14132 *
US-PATENT-CLASS-328-115	c 33	N75-18479 *	US-PATENT-CLASS-328-61	c 09	N71-23525 *	US-PATENT-CLASS-33-361	c 04	N84-14132 *
US-PATENT-CLASS-328-116	c 09	N69-39885 * #	US-PATENT-CLASS-328-61	c 10	N73-20254 *	US-PATENT-CLASS-33-366	c 35	N78-32395 *
US-PATENT-CLASS-328-120	c 09	N71-27016 *	US-PATENT-CLASS-328-61	c 35	N75-30504 *	US-PATENT-CLASS-33-46R	c 19	N74-21015 *
US-PATENT-CLASS-328-123	c 60	N74-12888 *	US-PATENT-CLASS-328-62	c 35	N75-30504 *	US-PATENT-CLASS-33-520	c 35	N92-22039 *
US-PATENT-CLASS-328-129	c 14	N73-30386 *	US-PATENT-CLASS-328-63	c 33	N76-14371 *	US-PATENT-CLASS-33-536	c 37	N89-28831 *
US-PATENT-CLASS-328-133	c 09	N71-24596 *	US-PATENT-CLASS-328-63	c 33	N77-24375 *	US-PATENT-CLASS-33-542	c 35	N93-26103 *
US-PATENT-CLASS-328-133	c 10	N72-20224 *	US-PATENT-CLASS-328-67	c 10	N71-28960 *	US-PATENT-CLASS-33-644	c 35	N92-22039 *
US-PATENT-CLASS-328-133	c 33	N75-26243 *	US-PATENT-CLASS-328-67	c 33	N82-24418 *	US-PATENT-CLASS-33-72	c 15	N72-11386 *
US-PATENT-CLASS-328-133	c 33	N77-13315 *	US-PATENT-CLASS-328-67	c 33	N88-24862 *	US-PATENT-CLASS-33-75R	c 14	N72-28436 *
US-PATENT-CLASS-328-133	c 33	N79-11313 *	US-PATENT-CLASS-328-71	c 60	N81-15706 *	US-PATENT-CLASS-33-96	c 33	N75-30430 *
US-PATENT-CLASS-328-133	c 33	N84-16454 *	US-PATENT-CLASS-328-92	c 10	N71-28860 *	US-PATENT-CLASS-330-103	c 32	N74-22096 *
US-PATENT-CLASS-328-134	c 08	N71-18692 *	US-PATENT-CLASS-329-104	c 07	N71-11282 *	US-PATENT-CLASS-330-107	c 10	N72-11256 *
US-PATENT-CLASS-328-134	c 14	N73-30386 *	US-PATENT-CLASS-329-104	c 33	N74-12887 *	US-PATENT-CLASS-330-107	c 10	N72-17172 *
US-PATENT-CLASS-328-134	c 33	N76-16331 *	US-PATENT-CLASS-329-104	c 32	N77-24331 *	US-PATENT-CLASS-330-107	c 33	N84-14421 *
US-PATENT-CLASS-328-134	c 33	N81-17349 *	US-PATENT-CLASS-329-107	c 35	N81-19427 *	US-PATENT-CLASS-330-107	c 33	N87-22895 *
US-PATENT-CLASS-328-136	c 09	N72-25257 *	US-PATENT-CLASS-329-107	c 32	N87-21207 *	US-PATENT-CLASS-330-109	c 10	N72-11256 *
US-PATENT-CLASS-328-140	c 09	N72-25257 *	US-PATENT-CLASS-329-119	c 33	N77-21314 *	US-PATENT-CLASS-330-109	c 10	N72-17171 *
US-PATENT-CLASS-328-142	c 09	N72-21245 *	US-PATENT-CLASS-329-120	c 07	N73-30113 *	US-PATENT-CLASS-330-109	c 10	N72-17172 *
US-PATENT-CLASS-328-145	c 32	N76-14321 *	US-PATENT-CLASS-329-122	c 10	N71-19469 *	US-PATENT-CLASS-330-109	c 09	N73-20231 *
US-PATENT-CLASS-328-145	c 09	N72-23173 *	US-PATENT-CLASS-329-122	c 07	N73-28012 *	US-PATENT-CLASS-330-109	c 33	N82-24417 *
US-PATENT-CLASS-328-145	c 33	N78-32339 *	US-PATENT-CLASS-329-122	c 33	N74-12867 *	US-PATENT-CLASS-330-109	c 33	N84-14421 *
US-PATENT-CLASS-328-147	c 33	N87-21235 *	US-PATENT-CLASS-329-122	c 32	N74-20811 *	US-PATENT-CLASS-330-109	c 33	N84-22887 *
US-PATENT-CLASS-328-150	c 33	N78-18308 *	US-PATENT-CLASS-329-122	c 33	N77-14334 *	US-PATENT-CLASS-330-10	c 33	N74-14939 *
US-PATENT-CLASS-328-151	c 09	N72-22200 *	US-PATENT-CLASS-329-122	c 32	N77-24331 *	US-PATENT-CLASS-330-110	c 33	N83-36356 *
US-PATENT-CLASS-328-151	c 33	N75-18479 *	US-PATENT-CLASS-329-122	c 32	N79-14267 *	US-PATENT-CLASS-330-11	c 09	N71-13531 *
US-PATENT-CLASS-328-151	c 33	N81-27396 *	US-PATENT-CLASS-329-122	c 33	N81-33405 *	US-PATENT-CLASS-330-11	c 10	N71-33129 *
US-PATENT-CLASS-328-151	c 33	N91-14550 *	US-PATENT-CLASS-329-124	c 33	N77-14334 *	US-PATENT-CLASS-330-11	c 09	N72-17156 *
US-PATENT-CLASS-328-154	c 08	N72-22162 *	US-PATENT-CLASS-329-124	c 33	N78-32338 *	US-PATENT-CLASS-330-124	c 07	N71-28430 *
US-PATENT-CLASS-328-154	c 10	N73-13235 *	US-PATENT-CLASS-329-124	c 32	N84-27952 *	US-PATENT-CLASS-330-12	c 10	N72-33230 *
US-PATENT-CLASS-328-154	c 33	N74-22814 *	US-PATENT-CLASS-329-126	c 33	N74-12887 *	US-PATENT-CLASS-330-13	c 10	N71-26415 *
US-PATENT-CLASS-328-155	c 10	N72-16172 *	US-PATENT-CLASS-329-140	c 07	N71-24583 *	US-PATENT-CLASS-330-13	c 33	N75-30428 *
US-PATENT-CLASS-328-155	c 09	N72-33204 *	US-PATENT-CLASS-329-145	c 07	N71-33696 *	US-PATENT-CLASS-330-14	c 09	N70-35440 *
US-PATENT-CLASS-328-155	c 33	N74-17927 *	US-PATENT-CLASS-329-161	c 07	N72-20141 *	US-PATENT-CLASS-330-14	c 33	N77-14335 *
US-PATENT-CLASS-328-155	c 17	N76-22245 *	US-PATENT-CLASS-329-162	c 07	N72-20141 *	US-PATENT-CLASS-330-16	c 10	N71-33129 *
US-PATENT-CLASS-328-155	c 32	N88-29076 *	US-PATENT-CLASS-329-166	c 33	N75-19520 *	US-PATENT-CLASS-330-176	c 10	N72-17171 *
US-PATENT-CLASS-328-160	c 32	N74-19788 *	US-PATENT-CLASS-329-166	c 33	N75-25041 *	US-PATENT-CLASS-330-18	c 09	N72-17155 *
US-PATENT-CLASS-328-161	c 33	N77-17354 *	US-PATENT-CLASS-329-204	c 33	N75-19520 *	US-PATENT-CLASS-330-18	c 33	N75-30428 *
US-PATENT-CLASS-328-163	c 33	N79-10338 *	US-PATENT-CLASS-329-204	c 33	N75-25041 *	US-PATENT-CLASS-330-200	c 07	N71-28430 *
US-PATENT-CLASS-328-164	c 07	N71-33696 *	US-PATENT-CLASS-329-205	c 33	N77-21314 *	US-PATENT-CLASS-330-207A	c 33	N75-30429 *
US-PATENT-CLASS-328-164	c 33	N87-21235 *	US-PATENT-CLASS-329-304	c 32	N91-25318 *	US-PATENT-CLASS-330-20	c 09	N73-20232 *
US-PATENT-CLASS-328-165	c 09	N71-24806 *	US-PATENT-CLASS-329-304	c 32	N91-27439 *	US-PATENT-CLASS-330-22	c 09	N71-10798 *

## REPORT NUMBER INDEX

## US-PATENT-CLASS-333-12

US-PATENT-CLASS-330-22	c 09	N73-20232 *	US-PATENT-CLASS-331-107G	c 26	N72-25679 *	US-PATENT-CLASS-331-94.5A	c 36	N75-27364 *
US-PATENT-CLASS-330-24	c 10	N71-33129 *	US-PATENT-CLASS-331-107G	c 09	N73-15235 *	US-PATENT-CLASS-331-94.5C	c 36	N75-31427 *
US-PATENT-CLASS-330-24	c 33	N75-30429 *	US-PATENT-CLASS-331-107	c 09	N71-18721 *	US-PATENT-CLASS-331-94.5C	c 36	N76-18428 *
US-PATENT-CLASS-330-258	c 33	N86-20670 *	US-PATENT-CLASS-331-107	c 26	N72-21701 *	US-PATENT-CLASS-331-94.5C	c 36	N76-24553 *
US-PATENT-CLASS-330-261	c 33	N86-20670 *	US-PATENT-CLASS-331-108A	c 33	N74-20862 *	US-PATENT-CLASS-331-94.5C	c 36	N76-29575 *
US-PATENT-CLASS-330-26	c 10	N72-17172 *	US-PATENT-CLASS-331-108D	c 33	N86-32624 *	US-PATENT-CLASS-331-94.5C	c 36	N80-14384 *
US-PATENT-CLASS-330-27R	c 10	N72-31273 *	US-PATENT-CLASS-331-109	c 10	N71-27271 *	US-PATENT-CLASS-331-94.5C	c 36	N82-13415 *
US-PATENT-CLASS-330-277	c 33	N84-22887 *	US-PATENT-CLASS-331-109	c 33	N74-26732 *	US-PATENT-CLASS-331-94.5D	c 33	N74-20859 *
US-PATENT-CLASS-330-282	c 33	N83-36356 *	US-PATENT-CLASS-331-110	c 07	N72-11150 *	US-PATENT-CLASS-331-94.5D	c 36	N77-19416 *
US-PATENT-CLASS-330-289	c 33	N83-34191 *	US-PATENT-CLASS-331-111	c 10	N71-23669 *	US-PATENT-CLASS-331-94.5D	c 36	N77-25502 *
US-PATENT-CLASS-330-289	c 33	N84-16454 *	US-PATENT-CLASS-331-111	c 09	N72-21247 *	US-PATENT-CLASS-331-94.5D	c 35	N77-27366 *
US-PATENT-CLASS-330-28	c 33	N74-21851 *	US-PATENT-CLASS-331-113A	c 09	N72-25253 *	US-PATENT-CLASS-331-94.5D	c 36	N82-13415 *
US-PATENT-CLASS-330-28	c 33	N77-14335 *	US-PATENT-CLASS-331-113A	c 09	N72-25254 *	US-PATENT-CLASS-331-94.5G	c 36	N75-31426 *
US-PATENT-CLASS-330-290	c 33	N82-24417 *	US-PATENT-CLASS-331-113A	c 09	N74-11049 *	US-PATENT-CLASS-331-94.5G	c 36	N77-19416 *
US-PATENT-CLASS-330-294	c 33	N82-24417 *	US-PATENT-CLASS-331-113R	c 33	N82-18494 *	US-PATENT-CLASS-331-94.5G	c 36	N78-17366 *
US-PATENT-CLASS-330-294	c 33	N84-22887 *	US-PATENT-CLASS-331-113	c 09	N70-38995 *	US-PATENT-CLASS-331-94.5G	c 36	N78-27402 *
US-PATENT-CLASS-330-294	c 33	N87-22895 *	US-PATENT-CLASS-331-113	c 10	N71-19418 *	US-PATENT-CLASS-331-94.5G	c 36	N79-18307 *
US-PATENT-CLASS-330-29	c 09	N69-24330 *	US-PATENT-CLASS-331-113	c 09	N71-19470 *	US-PATENT-CLASS-331-94.5G	c 33	N82-24418 *
US-PATENT-CLASS-330-29	c 10	N72-28241 *	US-PATENT-CLASS-331-113	c 10	N71-25950 *	US-PATENT-CLASS-331-94.5K	c 36	N74-15145 *
US-PATENT-CLASS-330-2	c 09	N69-39986 *	US-PATENT-CLASS-331-113	c 09	N71-28810 *	US-PATENT-CLASS-331-94.5L	c 72	N79-13826 *
US-PATENT-CLASS-330-2	c 09	N72-25250 *	US-PATENT-CLASS-331-114	c 33	N77-17351 *	US-PATENT-CLASS-331-94.5M	c 36	N75-19654 *
US-PATENT-CLASS-330-2	c 33	N78-10375 *	US-PATENT-CLASS-331-115	c 10	N72-33230 *	US-PATENT-CLASS-331-94.5PE	c 36	N75-32441 *
US-PATENT-CLASS-330-2	c 33	N79-22373 *	US-PATENT-CLASS-331-115	c 33	N72-20862 *	US-PATENT-CLASS-331-94.5PE	c 36	N77-19416 *
US-PATENT-CLASS-330-30D	c 10	N72-20221 *	US-PATENT-CLASS-331-116FE	c 33	N86-19515 *	US-PATENT-CLASS-331-94.5PE	c 36	N78-27402 *
US-PATENT-CLASS-330-30D	c 09	N73-20232 *	US-PATENT-CLASS-331-116FE	c 33	N87-21232 *	US-PATENT-CLASS-331-94.5PE	c 72	N79-13826 *
US-PATENT-CLASS-330-302	c 33	N85-29145 *	US-PATENT-CLASS-331-116R	c 33	N90-23635 *	US-PATENT-CLASS-331-94.5P	c 33	N82-24418 *
US-PATENT-CLASS-330-306	c 33	N82-24417 *	US-PATENT-CLASS-331-116R	c 10	N72-33230 *	US-PATENT-CLASS-331-94.5P	c 36	N75-19655 *
US-PATENT-CLASS-330-306	c 33	N85-29145 *	US-PATENT-CLASS-331-116R	c 33	N74-20862 *	US-PATENT-CLASS-331-94.5P	c 36	N75-31426 *
US-PATENT-CLASS-330-30	c 09	N71-19466 *	US-PATENT-CLASS-331-116R	c 33	N86-32624 *	US-PATENT-CLASS-331-94.5P	c 36	N77-25502 *
US-PATENT-CLASS-330-30	c 09	N71-19516 *	US-PATENT-CLASS-331-117FE	c 33	N86-19515 *	US-PATENT-CLASS-331-94.5P	c 36	N78-27402 *
US-PATENT-CLASS-330-30	c 09	N71-27016 *	US-PATENT-CLASS-331-117R	c 33	N87-21232 *	US-PATENT-CLASS-331-94.5P	c 72	N79-13826 *
US-PATENT-CLASS-330-310	c 33	N83-34191 *	US-PATENT-CLASS-331-117FE	c 33	N90-23635 *	US-PATENT-CLASS-331-94.5P	c 36	N79-18307 *
US-PATENT-CLASS-330-311	c 33	N86-20670 *	US-PATENT-CLASS-331-117R	c 33	N74-26732 *	US-PATENT-CLASS-331-94.5P	c 36	N80-14384 *
US-PATENT-CLASS-330-31	c 10	N71-26331 *	US-PATENT-CLASS-331-117	c 33	N71-27271 *	US-PATENT-CLASS-331-94.5P	c 36	N82-13415 *
US-PATENT-CLASS-330-31	c 10	N72-17172 *	US-PATENT-CLASS-331-117	c 10	N71-27271 *	US-PATENT-CLASS-331-94.5S	c 36	N74-15145 *
US-PATENT-CLASS-330-35	c 09	N72-17156 *	US-PATENT-CLASS-331-12	c 09	N72-22203 *	US-PATENT-CLASS-331-94.5S	c 36	N77-25499 *
US-PATENT-CLASS-330-35	c 09	N73-20232 *	US-PATENT-CLASS-331-12	c 33	N78-32338 *	US-PATENT-CLASS-331-94.5T	c 35	N77-27366 *
US-PATENT-CLASS-330-35	c 33	N74-14939 *	US-PATENT-CLASS-331-135	c 10	N73-32145 *	US-PATENT-CLASS-331-94.5T	c 36	N78-17366 *
US-PATENT-CLASS-330-4.3	c 16	N73-32391 *	US-PATENT-CLASS-331-14	c 09	N72-21247 *	US-PATENT-CLASS-331-94.5	c 16	N71-18614 *
US-PATENT-CLASS-330-4.3	c 36	N75-19655 *	US-PATENT-CLASS-331-14	c 33	N74-10194 *	US-PATENT-CLASS-331-94.5	c 16	N71-24832 *
US-PATENT-CLASS-330-4.3	c 36	N75-27364 *	US-PATENT-CLASS-331-14	c 33	N79-11313 *	US-PATENT-CLASS-331-94.5	c 23	N71-26722 *
US-PATENT-CLASS-330-4.3	c 36	N75-32441 *	US-PATENT-CLASS-331-159	c 33	N74-20862 *	US-PATENT-CLASS-331-94.5	c 15	N71-27135 *
US-PATENT-CLASS-330-4.3	c 36	N76-29575 *	US-PATENT-CLASS-331-162	c 33	N88-26596 *	US-PATENT-CLASS-331-94.5	c 23	N71-29125 *
US-PATENT-CLASS-330-4.3	c 36	N77-25502 *	US-PATENT-CLASS-331-177R	c 33	N87-22895 *	US-PATENT-CLASS-331-94.5	c 16	N71-33410 *
US-PATENT-CLASS-330-4.3	c 73	N78-19920 *	US-PATENT-CLASS-331-177R	c 09	N73-15235 *	US-PATENT-CLASS-331-94.5	c 16	N72-12440 *
US-PATENT-CLASS-330-4.3	c 36	N82-28616 *	US-PATENT-CLASS-331-177V	c 33	N77-17351 *	US-PATENT-CLASS-331-94.5	c 25	N72-24753 *
US-PATENT-CLASS-330-4.5	c 09	N72-25258 *	US-PATENT-CLASS-331-177V	c 10	N71-27271 *	US-PATENT-CLASS-331-94.5	c 16	N72-25485 *
US-PATENT-CLASS-330-4.9	c 33	N74-32660 *	US-PATENT-CLASS-331-178	c 33	N74-10194 *	US-PATENT-CLASS-331-94.5	c 07	N73-26119 *
US-PATENT-CLASS-330-40	c 07	N71-28430 *	US-PATENT-CLASS-331-17	c 10	N71-20852 *	US-PATENT-CLASS-331-94.5	c 09	N73-32111 *
US-PATENT-CLASS-330-40	c 09	N72-17155 *	US-PATENT-CLASS-331-17	c 10	N73-27171 *	US-PATENT-CLASS-331-94.5	c 16	N73-32391 *
US-PATENT-CLASS-330-40	c 09	N73-20232 *	US-PATENT-CLASS-331-17	c 33	N74-10194 *	US-PATENT-CLASS-331-94.5	c 36	N76-18427 *
US-PATENT-CLASS-330-40	c 33	N75-30428 *	US-PATENT-CLASS-331-17	c 32	N88-29076 *	US-PATENT-CLASS-331-94.5G	c 36	N75-32441 *
US-PATENT-CLASS-330-43	c 33	N79-10339 *	US-PATENT-CLASS-331-183	c 33	N74-26732 *	US-PATENT-CLASS-331-94	c 16	N70-41578 *
US-PATENT-CLASS-330-43	c 33	N82-26568 *	US-PATENT-CLASS-331-18	c 10	N71-26374 *	US-PATENT-CLASS-331-94	c 16	N72-28521 *
US-PATENT-CLASS-330-43	c 33	N86-21742 *	US-PATENT-CLASS-331-18	c 33	N74-10194 *	US-PATENT-CLASS-331-94	c 16	N73-13489 *
US-PATENT-CLASS-330-49	c 14	N70-35220 *	US-PATENT-CLASS-331-18	c 33	N75-25040 *	US-PATENT-CLASS-331-94	c 35	N76-15436 *
US-PATENT-CLASS-330-4	c 16	N71-15550 *	US-PATENT-CLASS-331-1	c 52	N91-14709 *	US-PATENT-CLASS-331-94	c 36	N76-31512 *
US-PATENT-CLASS-330-4	c 16	N71-24831 *	US-PATENT-CLASS-331-23	c 09	N72-21247 *	US-PATENT-CLASS-331-94	c 36	N79-14362 *
US-PATENT-CLASS-330-4	c 16	N72-28521 *	US-PATENT-CLASS-331-23	c 33	N77-14334 *	US-PATENT-CLASS-331-94	c 36	N80-18372 *
US-PATENT-CLASS-330-4	c 36	N75-15029 *	US-PATENT-CLASS-331-23	c 33	N79-11313 *	US-PATENT-CLASS-331-96	c 33	N85-29143 *
US-PATENT-CLASS-330-4	c 36	N76-31512 *	US-PATENT-CLASS-331-25	c 10	N73-27171 *	US-PATENT-CLASS-332-10	c 08	N71-29138 *
US-PATENT-CLASS-330-4	c 36	N78-18410 *	US-PATENT-CLASS-331-25	c 33	N75-25040 *	US-PATENT-CLASS-332-11D	c 35	N74-17885 *
US-PATENT-CLASS-330-4	c 36	N80-18372 *	US-PATENT-CLASS-331-25	c 32	N88-29076 *	US-PATENT-CLASS-332-16	c 33	N77-21314 *
US-PATENT-CLASS-330-4	c 36	N83-35350 *	US-PATENT-CLASS-331-27	c 33	N79-11313 *	US-PATENT-CLASS-332-18	c 33	N77-17351 *
US-PATENT-CLASS-330-5.5	c 71	N77-26919 *	US-PATENT-CLASS-331-2	c 33	N86-20668 *	US-PATENT-CLASS-332-19	c 10	N71-23544 *
US-PATENT-CLASS-330-51	c 10	N71-28859 *	US-PATENT-CLASS-331-30	c 09	N72-21247 *	US-PATENT-CLASS-332-1	c 10	N71-23084 *
US-PATENT-CLASS-330-51	c 33	N79-22373 *	US-PATENT-CLASS-331-31	c 33	N85-29143 *	US-PATENT-CLASS-332-21	c 08	N72-25208 *
US-PATENT-CLASS-330-52	c 71	N78-14867 *	US-PATENT-CLASS-331-34	c 07	N72-11150 *	US-PATENT-CLASS-332-22	c 32	N77-14292 *
US-PATENT-CLASS-330-53	c 33	N74-32660 *	US-PATENT-CLASS-331-36C	c 33	N77-14334 *	US-PATENT-CLASS-332-22	c 33	N81-15192 *
US-PATENT-CLASS-330-59	c 09	N72-25250 *	US-PATENT-CLASS-331-36C	c 33	N85-29143 *	US-PATENT-CLASS-332-23A	c 32	N87-25511 *
US-PATENT-CLASS-330-59	c 33	N74-21851 *	US-PATENT-CLASS-331-3	c 35	N76-15436 *	US-PATENT-CLASS-332-23R	c 32	N77-14292 *
US-PATENT-CLASS-330-59	c 33	N77-14335 *	US-PATENT-CLASS-331-3	c 33	N85-29143 *	US-PATENT-CLASS-332-23R	c 33	N81-15192 *
US-PATENT-CLASS-330-5	c 33	N75-27251 *	US-PATENT-CLASS-331-3	c 33	N88-26596 *	US-PATENT-CLASS-332-29	c 07	N71-28429 *
US-PATENT-CLASS-330-61	c 09	N71-23097 *	US-PATENT-CLASS-331-44	c 14	N72-27408 *	US-PATENT-CLASS-332-2	c 35	N75-19614 *
US-PATENT-CLASS-330-63	c 33	N75-30428 *	US-PATENT-CLASS-331-45	c 10	N73-16206 *	US-PATENT-CLASS-332-30V	c 33	N77-14334 *
US-PATENT-CLASS-330-69	c 33	N74-32712 *	US-PATENT-CLASS-331-48	c 33	N81-17349 *	US-PATENT-CLASS-332-30V	c 33	N77-17351 *
US-PATENT-CLASS-330-69	c 33	N75-19518 *	US-PATENT-CLASS-331-4	c 09	N69-21543 *	US-PATENT-CLASS-332-30	c 10	N71-27271 *
US-PATENT-CLASS-330-6	c 35	N75-13213 *	US-PATENT-CLASS-331-4	c 33	N74-10194 *	US-PATENT-CLASS-332-30	c 07	N71-28429 *
US-PATENT-CLASS-330-70CR	c 10	N73-27171 *	US-PATENT-CLASS-331-4	c 33	N78-32338 *	US-PATENT-CLASS-332-30	c 33	N77-21314 *
US-PATENT-CLASS-330-70R	c 09	N72-21245 *	US-PATENT-CLASS-331-56	c 33	N87-21232 *	US-PATENT-CLASS-332-31	c 08	N71-12500 *
US-PATENT-CLASS-330-80T	c 09	N73-20232 *	US-PATENT-CLASS-331-62	c 33	N74-11049 *	US-PATENT-CLASS-332-31	c 26	N72-21701 *
US-PATENT-CLASS-330-85	c 09	N72-21245 *	US-PATENT-CLASS-331-64	c 33	N78-32338 *	US-PATENT-CLASS-332-47	c 33	N75-19520 *
US-PATENT-CLASS-330-86	c 09	N73-20231 *	US-PATENT-CLASS-331-65	c 35	N75-29380 *	US-PATENT-CLASS-332-51W	c 07	N72-20141 *
US-PATENT-CLASS-330-86	c 33	N75-19518 *	US-PATENT-CLASS-331-65	c 33	N80-23559 *	US-PATENT-CLASS-332-52	c 33	N77-21314 *
US-PATENT-CLASS-330-86	c 33	N79-22373 *	US-PATENT-CLASS-331-66	c 07	N72-11150 *	US-PATENT-CLASS-332-7.51	c 16	N72-25485 *
US-PATENT-CLASS-330-8	c 33	N81-24338 *	US-PATENT-CLASS-331-66	c 33	N86-32624 *	US-PATENT-CLASS-332-7.51	c 07	N73-26119 *
US-PATENT-CLASS-330-8	c 33	N89-29681 *	US-PATENT-CLASS-331-78	c 09	N71-23598 *	US-PATENT-CLASS-332-7.51	c 33	N74-20859 *
US-PATENT-CLASS-330-94	c 10	N72-17172 *	US-PATENT-CLASS-331-78	c 08	N73-12175 *	US-PATENT-CLASS-332-7.51	c 36	N76-18427 *
US-PATENT-CLASS-330-9	c 33	N74-14939 *	US-PATENT-CLASS-331-78	c 33	N75-19515 *	US-PATENT-CLASS-332-7.5	c 36	N75-15029 *
US-PATENT-CLASS-331-DIG.1	c 36	N75-30524 *	US-PATENT-CLASS-331-7	c 07	N72-11150 *	US-PATENT-CLASS-332-7.5	c 36	N78-18410 *
US-PATENT-CLASS-331-DIG.2	c 33	N81-33405 *	US-PATENT-CLASS-331-82	c 33	N84-27974 *	US-PATENT-CLASS-332-7.5	c 36	N83-35350 *
US-PATENT-CLASS-331-1A	c 33	N86-20668 *	US-PATENT-CLASS-331-82	c 33	N90-22224 *	US-PATENT-CLASS-332-751	c 36	N80-16321 *
US-PATENT-CLASS-331-1A	c 33	N74-10194 *	US-PATENT-CLASS-331-90	c 09	N73-15235 *	US-PATENT-CLASS-332-9R	c 08	N71-29138 *
US-PATENT-CLASS-331-1A	c 33	N75-25040 *	US-PATENT-CLASS-331-94.1	c 33	N85-29143 *	US-PATENT-CLASS-332-9	c 07	N71-12390 *
US-PATENT-CLASS-331-1A	c 33	N79-11313 *	US-PATENT-CLASS-331-94.1	c 33	N88-26596 *	US-PATENT-CLASS-333-104	c 33	N82-16340 *
US-PATENT-CLASS-331-107A	c 71	N77-26919 *	US-PATENT-CLASS-331-94.5A	c 16	N73-33397 *	US-PATENT-CLASS-333-12	c 32	N80-32605 *

## US-PATENT-CLASS-333-12

## REPORT NUMBER INDEX

US-PATENT-CLASS-333-12	c 33	N81-27397 *	US-PATENT-CLASS-336-198	c 33	N85-29146 *	US-PATENT-CLASS-34-160	c 14	N73-28489 *
US-PATENT-CLASS-333-14	c 32	N74-19788 *	US-PATENT-CLASS-336-198	c 33	N91-14539 *	US-PATENT-CLASS-34-162	c 14	N73-28489 *
US-PATENT-CLASS-333-161	c 74	N92-28571 *	US-PATENT-CLASS-336-200	c 26	N73-26752 *	US-PATENT-CLASS-34-162	c 35	N74-15831 *
US-PATENT-CLASS-333-162	c 33	N84-16452 *	US-PATENT-CLASS-336-205	c 33	N91-14539 *	US-PATENT-CLASS-34-57A	c 35	N83-24828 *
US-PATENT-CLASS-333-162	c 33	N84-27974 *	US-PATENT-CLASS-336-210	c 33	N74-17928 *	US-PATENT-CLASS-340-12R	c 35	N74-16135 *
US-PATENT-CLASS-333-16	c 33	N74-17927 *	US-PATENT-CLASS-336-220	c 09	N72-27226 *	US-PATENT-CLASS-340-12R	c 46	N79-23555 *
US-PATENT-CLASS-333-17R	c 33	N78-32340 *	US-PATENT-CLASS-336-229	c 33	N91-14539 *	US-PATENT-CLASS-340-146.1AL	c 08	N72-25210 *
US-PATENT-CLASS-333-17	c 44	N74-19870 *	US-PATENT-CLASS-336-60	c 09	N72-27226 *	US-PATENT-CLASS-340-146.1AL	c 08	N73-12175 *
US-PATENT-CLASS-333-18	c 33	N74-17927 *	US-PATENT-CLASS-336-83	c 33	N82-24422 *	US-PATENT-CLASS-340-146.1AL	c 32	N77-12240 *
US-PATENT-CLASS-333-18	c 32	N76-21366 *	US-PATENT-CLASS-336-84C	c 33	N85-29146 *	US-PATENT-CLASS-340-146.1AQ	c 08	N73-12177 *
US-PATENT-CLASS-333-204	c 33	N81-17348 *	US-PATENT-CLASS-337-114	c 09	N71-29035 *	US-PATENT-CLASS-340-146.1AQ	c 32	N74-32598 *
US-PATENT-CLASS-333-20	c 33	N82-24418 *	US-PATENT-CLASS-337-121	c 09	N71-29035 *	US-PATENT-CLASS-340-146.1AV	c 08	N73-12177 *
US-PATENT-CLASS-333-21A	c 07	N71-33606 *	US-PATENT-CLASS-337-140	c 37	N86-19604 *	US-PATENT-CLASS-340-146.1AV	c 32	N77-12240 *
US-PATENT-CLASS-333-21R	c 33	N75-30430 *	US-PATENT-CLASS-337-14	c 31	N83-31897 *	US-PATENT-CLASS-340-146.1AX	c 32	N79-10263 *
US-PATENT-CLASS-333-214	c 33	N87-22895 *	US-PATENT-CLASS-337-334	c 37	N77-19458 *	US-PATENT-CLASS-340-146.1C	c 07	N73-20176 *
US-PATENT-CLASS-333-217	c 33	N87-22895 *	US-PATENT-CLASS-337-354	c 15	N72-12409 *	US-PATENT-CLASS-340-146.1E	c 32	N79-10263 *
US-PATENT-CLASS-333-21	c 07	N71-10676 *	US-PATENT-CLASS-337-359	c 15	N72-12409 *	US-PATENT-CLASS-340-146.1	c 09	N71-18843 *
US-PATENT-CLASS-333-22F	c 32	N83-27085 *	US-PATENT-CLASS-337-393	c 37	N87-23970 *	US-PATENT-CLASS-340-146.1	c 08	N71-22749 *
US-PATENT-CLASS-333-231	c 33	N85-29143 *	US-PATENT-CLASS-337-75	c 15	N72-12409 *	US-PATENT-CLASS-340-146.1	c 10	N71-26103 *
US-PATENT-CLASS-333-24.2	c 36	N83-35350 *	US-PATENT-CLASS-337	c 25	N79-28253 *	US-PATENT-CLASS-340-146.1	c 08	N71-27255 *
US-PATENT-CLASS-333-24R	c 09	N72-29172 *	US-PATENT-CLASS-338-100	c 35	N78-17359 *	US-PATENT-CLASS-340-146.1	c 08	N72-22167 *
US-PATENT-CLASS-333-24R	c 36	N80-18372 *	US-PATENT-CLASS-338-114	c 52	N74-27864 *	US-PATENT-CLASS-340-146.1	c 08	N72-25207 *
US-PATENT-CLASS-333-246	c 33	N82-16340 *	US-PATENT-CLASS-338-128	c 33	N92-29153 *	US-PATENT-CLASS-340-146.1	c 07	N73-13149 *
US-PATENT-CLASS-333-247	c 33	N91-14552 *	US-PATENT-CLASS-338-13	c 24	N75-30260 *	US-PATENT-CLASS-340-146.2	c 08	N71-12505 *
US-PATENT-CLASS-333-252	c 32	N80-32605 *	US-PATENT-CLASS-338-162	c 37	N75-13265 *	US-PATENT-CLASS-340-146.2	c 08	N71-23295 *
US-PATENT-CLASS-333-254	c 32	N83-27085 *	US-PATENT-CLASS-338-18	c 35	N79-33449 *	US-PATENT-CLASS-340-146.3H	c 74	N81-19896 *
US-PATENT-CLASS-333-262	c 33	N80-18285 *	US-PATENT-CLASS-338-22SD	c 35	N92-33614 *	US-PATENT-CLASS-340-146.3P	c 43	N77-10584 *
US-PATENT-CLASS-333-30	c 10	N71-25900 *	US-PATENT-CLASS-338-221	c 33	N91-14537 *	US-PATENT-CLASS-340-146.3Q	c 43	N77-10584 *
US-PATENT-CLASS-333-6	c 07	N71-33606 *	US-PATENT-CLASS-338-229	c 35	N77-24454 *	US-PATENT-CLASS-340-146.3S	c 74	N81-19896 *
US-PATENT-CLASS-333-70CR	c 10	N72-17171 *	US-PATENT-CLASS-338-25	c 35	N77-21393 *	US-PATENT-CLASS-340-146.3Y	c 74	N81-19896 *
US-PATENT-CLASS-333-70R	c 32	N77-18307 *	US-PATENT-CLASS-338-25	c 35	N82-24470 *	US-PATENT-CLASS-340-147C	c 60	N76-14818 *
US-PATENT-CLASS-333-72	c 10	N71-25900 *	US-PATENT-CLASS-338-25	c 35	N82-24470 *	US-PATENT-CLASS-340-147R	c 07	N73-20176 *
US-PATENT-CLASS-333-72	c 71	N77-26919 *	US-PATENT-CLASS-338-275	c 35	N75-30260 *	US-PATENT-CLASS-340-147R	c 60	N76-14818 *
US-PATENT-CLASS-333-73R	c 09	N73-26195 *	US-PATENT-CLASS-338-283	c 24	N77-20400 *	US-PATENT-CLASS-340-147SY	c 17	N76-22245 *
US-PATENT-CLASS-333-73S	c 09	N73-26195 *	US-PATENT-CLASS-338-28	c 35	N77-24454 *	US-PATENT-CLASS-340-147	c 09	N70-33182 *
US-PATENT-CLASS-333-73W	c 07	N72-20141 *	US-PATENT-CLASS-338-28	c 35	N82-24470 *	US-PATENT-CLASS-340-147	c 09	N70-38998 *
US-PATENT-CLASS-333-73	c 07	N69-24323 *	US-PATENT-CLASS-338-28	c 33	N75-31329 *	US-PATENT-CLASS-340-15.5GC	c 14	N73-26432 *
US-PATENT-CLASS-333-73	c 09	N71-23573 *	US-PATENT-CLASS-338-2	c 33	N80-20560 *	US-PATENT-CLASS-340-150	c 10	N71-27272 *
US-PATENT-CLASS-333-75	c 32	N77-18307 *	US-PATENT-CLASS-338-2	c 35	N80-20702 *	US-PATENT-CLASS-340-151	c 33	N72-78862 *
US-PATENT-CLASS-333-76	c 32	N77-18307 *	US-PATENT-CLASS-338-2	c 52	N84-12443 *	US-PATENT-CLASS-340-163	c 07	N73-20176 *
US-PATENT-CLASS-333-79	c 10	N70-41964 *	US-PATENT-CLASS-338-2	c 35	N84-33589 *	US-PATENT-CLASS-340-164	c 10	N71-27272 *
US-PATENT-CLASS-333-79	c 09	N72-25256 *	US-PATENT-CLASS-338-309	c 27	N78-13320 *	US-PATENT-CLASS-340-166	c 10	N71-27272 *
US-PATENT-CLASS-333-7	c 07	N71-33606 *	US-PATENT-CLASS-338-32S	c 33	N74-14935 *	US-PATENT-CLASS-340-166	c 10	N73-32144 *
US-PATENT-CLASS-333-7	c 07	N72-25170 *	US-PATENT-CLASS-338-320	c 33	N91-14537 *	US-PATENT-CLASS-340-167	c 07	N72-25173 *
US-PATENT-CLASS-333-80R	c 33	N74-32712 *	US-PATENT-CLASS-338-32	c 33	N78-17359 *	US-PATENT-CLASS-340-171	c 09	N72-22202 *
US-PATENT-CLASS-333-80T	c 10	N72-33230 *	US-PATENT-CLASS-338-36	c 35	N92-29097 *	US-PATENT-CLASS-340-171	c 16	N73-16536 *
US-PATENT-CLASS-333-80	c 09	N71-12517 *	US-PATENT-CLASS-338-4	c 35	N71-15974 *	US-PATENT-CLASS-340-172.5	c 08	N69-21928 *
US-PATENT-CLASS-333-80	c 09	N72-21245 *	US-PATENT-CLASS-338-5	c 52	N74-27864 *	US-PATENT-CLASS-340-172.5	c 09	N69-24333 *
US-PATENT-CLASS-333-81B	c 14	N73-13420 *	US-PATENT-CLASS-338-5	c 52	N71-21583 *	US-PATENT-CLASS-340-172.5	c 08	N71-12502 *
US-PATENT-CLASS-333-81R	c 07	N72-25170 *	US-PATENT-CLASS-338-64	c 09	N76-14430 *	US-PATENT-CLASS-340-172.5	c 08	N71-12506 *
US-PATENT-CLASS-333-81R	c 33	N78-32340 *	US-PATENT-CLASS-338-6	c 35	N76-29895 *	US-PATENT-CLASS-340-172.5	c 31	N71-15566 *
US-PATENT-CLASS-333-81R	c 32	N80-14281 *	US-PATENT-CLASS-338-6	c 52	N75-13265 *	US-PATENT-CLASS-340-172.5	c 08	N71-19288 *
US-PATENT-CLASS-333-81	c 07	N71-29065 *	US-PATENT-CLASS-338-75	c 37	N71-20842 *	US-PATENT-CLASS-340-172.5	c 08	N71-22707 *
US-PATENT-CLASS-333-82A	c 09	N73-26195 *	US-PATENT-CLASS-338-82	c 09	N74-32877 *	US-PATENT-CLASS-340-172.5	c 08	N71-22710 *
US-PATENT-CLASS-333-82B	c 32	N77-18307 *	US-PATENT-CLASS-338-89	c 35	N75-13265 *	US-PATENT-CLASS-340-172.5	c 07	N71-24624 *
US-PATENT-CLASS-333-83BT	c 33	N75-30430 *	US-PATENT-CLASS-338-97	c 37	N78-17359 *	US-PATENT-CLASS-340-172.5	c 08	N71-27255 *
US-PATENT-CLASS-333-83R	c 36	N74-11313 *	US-PATENT-CLASS-338-99	c 35	N76-16332 *	US-PATENT-CLASS-340-172.5	c 07	N72-25172 *
US-PATENT-CLASS-333-83	c 09	N71-24841 *	US-PATENT-CLASS-339-143C	c 33	N72-25256 *	US-PATENT-CLASS-340-172.5	c 08	N72-25207 *
US-PATENT-CLASS-333-84M	c 09	N73-26195 *	US-PATENT-CLASS-339-143R	c 09	N72-25256 *	US-PATENT-CLASS-340-172.5	c 09	N72-25248 *
US-PATENT-CLASS-333-8	c 07	N69-24334 *	US-PATENT-CLASS-339-147R	c 09	N69-21470 *	US-PATENT-CLASS-340-172.5	c 08	N73-13187 *
US-PATENT-CLASS-333-95	c 07	N71-27191 *	US-PATENT-CLASS-339-150	c 09	N76-27567 *	US-PATENT-CLASS-340-172.5	c 60	N76-18800 *
US-PATENT-CLASS-333-96	c 09	N71-20445 *	US-PATENT-CLASS-339-17M	c 37	N72-28225 *	US-PATENT-CLASS-340-172.5	c 60	N76-21914 *
US-PATENT-CLASS-333-96	c 07	N71-27191 *	US-PATENT-CLASS-339-17R	c 15	N72-17455 *	US-PATENT-CLASS-340-172.5	c 60	N77-12721 *
US-PATENT-CLASS-333-97R	c 36	N74-11313 *	US-PATENT-CLASS-339-176MF	c 09	N70-34596 *	US-PATENT-CLASS-340-172.5	c 60	N77-14751 *
US-PATENT-CLASS-333-97	c 07	N69-27462 *	US-PATENT-CLASS-339-176M	c 15	N70-36494 *	US-PATENT-CLASS-340-172.5	c 60	N77-19760 *
US-PATENT-CLASS-333-98P	c 07	N72-25170 *	US-PATENT-CLASS-339-176	c 09	N71-20851 *	US-PATENT-CLASS-340-173.2	c 08	N72-21198 *
US-PATENT-CLASS-333-98P	c 09	N72-29172 *	US-PATENT-CLASS-339-176	c 09	N69-27431 *	US-PATENT-CLASS-340-173CA	c 33	N75-31331 *
US-PATENT-CLASS-333-98R	c 07	N72-25170 *	US-PATENT-CLASS-339-177	c 09	N71-17685 *	US-PATENT-CLASS-340-173CR	c 60	N74-12888 *
US-PATENT-CLASS-333-98R	c 09	N72-29172 *	US-PATENT-CLASS-339-17	c 14	N71-26133 *	US-PATENT-CLASS-340-173LM	c 60	N74-12888 *
US-PATENT-CLASS-333-98R	c 14	N73-13420 *	US-PATENT-CLASS-339-17	c 15	N76-27567 *	US-PATENT-CLASS-340-173LS	c 08	N72-21198 *
US-PATENT-CLASS-333-98R	c 33	N75-30430 *	US-PATENT-CLASS-339-18C	c 37	N76-16332 *	US-PATENT-CLASS-340-173LS	c 36	N75-19652 *
US-PATENT-CLASS-333-98S	c 07	N72-25170 *	US-PATENT-CLASS-339-198R	c 33	N76-16332 *	US-PATENT-CLASS-340-173	c 10	N73-32144 *
US-PATENT-CLASS-333-98	c 09	N71-23548 *	US-PATENT-CLASS-339-218M	c 09	N77-14738 *	US-PATENT-CLASS-340-174.1L	c 35	N74-11283 *
US-PATENT-CLASS-333-98	c 09	N71-24808 *	US-PATENT-CLASS-339-242	c 33	N84-14423 *	US-PATENT-CLASS-340-174.1M	c 36	N74-13205 *
US-PATENT-CLASS-333-99S	c 32	N80-32605 *	US-PATENT-CLASS-339-252R	c 52	N76-16332 *	US-PATENT-CLASS-340-174.1M	c 35	N78-29421 *
US-PATENT-CLASS-333-99S	c 74	N92-28571 *	US-PATENT-CLASS-339-258RR	c 33	N84-14423 *	US-PATENT-CLASS-340-174.1R	c 35	N79-16246 *
US-PATENT-CLASS-335-100	c 37	N85-30333 *	US-PATENT-CLASS-339-262RR	c 33	N72-20200 *	US-PATENT-CLASS-340-174.1R	c 21	N73-13644 *
US-PATENT-CLASS-335-205	c 09	N72-20199 *	US-PATENT-CLASS-339-275R	c 33	N72-20200 *	US-PATENT-CLASS-340-174.1	c 08	N71-21042 *
US-PATENT-CLASS-335-216	c 16	N71-28554 *	US-PATENT-CLASS-339-275T	c 09	N72-17455 *	US-PATENT-CLASS-340-174.1	c 07	N71-23001 *
US-PATENT-CLASS-335-216	c 23	N71-29049 *	US-PATENT-CLASS-339-276T	c 09	N83-20944 *	US-PATENT-CLASS-340-174.1	c 08	N71-27210 *
US-PATENT-CLASS-335-216	c 26	N73-32571 *	US-PATENT-CLASS-339-278M	c 15	N72-25450 *	US-PATENT-CLASS-340-174AG	c 23	N72-17747 *
US-PATENT-CLASS-335-216	c 20	N75-24837 *	US-PATENT-CLASS-339-3R	c 07	N72-17455 *	US-PATENT-CLASS-340-174CS	c 08	N72-21199 *
US-PATENT-CLASS-335-216	c 33	N79-21264 *	US-PATENT-CLASS-339-45M	c 15	N83-20944 *	US-PATENT-CLASS-340-174CT	c 23	N72-17747 *
US-PATENT-CLASS-335-222	c 35	N84-28017 *	US-PATENT-CLASS-339-46	c 15	N71-23049 *	US-PATENT-CLASS-340-174GA	c 23	N72-17747 *
US-PATENT-CLASS-335-229	c 33	N82-24421 *	US-PATENT-CLASS-339-5R	c 07	N84-14423 *	US-PATENT-CLASS-340-174LC	c 08	N72-21199 *
US-PATENT-CLASS-335-256	c 33	N82-11357 *	US-PATENT-CLASS-339-5R	c 15	N72-28225 *	US-PATENT-CLASS-340-174MA	c 24	N75-13032 *
US-PATENT-CLASS-335-266	c 33	N82-11357 *	US-PATENT-CLASS-339-64M	c 33	N72-25450 *	US-PATENT-CLASS-340-174M	c 08	N72-21199 *
US-PATENT-CLASS-335-266	c 33	N82-24421 *	US-PATENT-CLASS-339-75MP	c 09	N69-21927 *	US-PATENT-CLASS-340-174SC	c 23	N72-17747 *
US-PATENT-CLASS-335-296	c 09	N73-30185 *	US-PATENT-CLASS-339-91B	c 15	N72-28225 *	US-PATENT-CLASS-340-174Y	c 36	N74-13205 *
US-PATENT-CLASS-335-297	c 09	N73-30185 *	US-PATENT-CLASS-339-94M	c 09	N69-39734 *	US-PATENT-CLASS-340-174YC	c 35	N78-29421 *
US-PATENT-CLASS-335-300	c 09	N70-41929 *	US-PATENT-CLASS-339-95	c 09	N73-28489 *	US-PATENT-CLASS-340-174	c 08	N71-12504 *
US-PATENT-CLASS-336-DIG.1	c 26	N73-26752 *	US-PATENT-CLASS-339-12R	c 52	N78-24365 *	US-PATENT-CLASS-340-174	c 09	N71-12515 *
US-PATENT-CLASS-336-DIG.1	c 33	N79-17133 *	US-PATENT-CLASS-34-155	c 14				
US-PATENT-CLASS-336-12R	c 33	N82-24422 *	US-PATENT-CLASS-34-15	c 28				
US-PATENT-CLASS-336-178	c 09	N72-17154 *						
US-PATENT-CLASS-336-198	c 09	N72-27226 *						



## REPORT NUMBER INDEX

US-PATENT-CLASS-340-174 ..... c 08 N71-18595 \*  
 US-PATENT-CLASS-340-174 ..... c 08 N71-18694 \*  
 US-PATENT-CLASS-340-174 ..... c 10 N71-23033 \*  
 US-PATENT-CLASS-340-174 ..... c 10 N71-26418 \*  
 US-PATENT-CLASS-340-174 ..... c 10 N71-26434 \*  
 US-PATENT-CLASS-340-174 ..... c 08 N71-28925 \*  
 US-PATENT-CLASS-340-174 ..... c 10 N71-29135 \*  
 US-PATENT-CLASS-340-177VA ..... c 06 N80-18036 \*  
 US-PATENT-CLASS-340-177 ..... c 09 N72-17153 \*  
 US-PATENT-CLASS-340-182 ..... c 33 N74-27862 \*  
 US-PATENT-CLASS-340-183 ..... c 52 N74-26625 \*  
 US-PATENT-CLASS-340-189M ..... c 17 N76-29347 \*  
 US-PATENT-CLASS-340-198 ..... c 14 N70-33179 \*  
 US-PATENT-CLASS-340-198 ..... c 07 N71-11298 \*  
 US-PATENT-CLASS-340-200 ..... c 33 N74-27862 \*  
 US-PATENT-CLASS-340-200 ..... c 33 N77-31404 \*  
 US-PATENT-CLASS-340-203 ..... c 09 N72-22202 \*  
 US-PATENT-CLASS-340-203 ..... c 52 N74-26625 \*  
 US-PATENT-CLASS-340-206 ..... c 17 N76-29347 \*  
 US-PATENT-CLASS-340-207P ..... c 17 N76-22245 \*  
 US-PATENT-CLASS-340-207R ..... c 52 N74-26625 \*  
 US-PATENT-CLASS-340-207 ..... c 07 N73-25160 \*  
 US-PATENT-CLASS-340-210 ..... c 03 N72-20031 \*  
 US-PATENT-CLASS-340-213.1 ..... c 10 N71-19417 \*  
 US-PATENT-CLASS-340-213R ..... c 54 N78-32720 \*  
 US-PATENT-CLASS-340-213 ..... c 10 N71-27272 \*  
 US-PATENT-CLASS-340-223 ..... c 10 N73-32144 \*  
 US-PATENT-CLASS-340-224 ..... c 37 N77-19458 \*  
 US-PATENT-CLASS-340-227R ..... c 14 N72-25412 \*  
 US-PATENT-CLASS-340-227 ..... c 10 N71-16058 \*  
 US-PATENT-CLASS-340-227 ..... c 14 N71-27186 \*  
 US-PATENT-CLASS-340-228.2 ..... c 10 N72-17173 \*  
 US-PATENT-CLASS-340-228S ..... c 14 N73-16484 \*  
 US-PATENT-CLASS-340-233 ..... c 14 N71-25901 \*  
 US-PATENT-CLASS-340-235 ..... c 10 N71-26334 \*  
 US-PATENT-CLASS-340-237S ..... c 45 N76-17656 \*  
 US-PATENT-CLASS-340-240 ..... c 09 N72-27227 \*  
 US-PATENT-CLASS-340-242 ..... c 35 N75-19612 \*  
 US-PATENT-CLASS-340-248 ..... c 10 N71-27338 \*  
 US-PATENT-CLASS-340-258R ..... c 07 N73-25160 \*  
 US-PATENT-CLASS-340-258 ..... c 10 N72-28240 \*  
 US-PATENT-CLASS-340-25 ..... c 14 N73-16483 \*  
 US-PATENT-CLASS-340-262 ..... c 54 N78-32720 \*  
 US-PATENT-CLASS-340-26 ..... c 21 N72-22619 \*  
 US-PATENT-CLASS-340-26 ..... c 04 N82-16059 \*  
 US-PATENT-CLASS-340-27AT ..... c 21 N73-14692 \*  
 US-PATENT-CLASS-340-27NA ..... c 21 N73-13643 \*  
 US-PATENT-CLASS-340-27NA ..... c 06 N82-16075 \*  
 US-PATENT-CLASS-340-27R ..... c 14 N73-16483 \*  
 US-PATENT-CLASS-340-27R ..... c 14 N73-20474 \*  
 US-PATENT-CLASS-340-27SS ..... c 35 N78-14364 \*  
 US-PATENT-CLASS-340-271 ..... c 35 N77-30436 \*  
 US-PATENT-CLASS-340-277 ..... c 10 N73-30205 \*  
 US-PATENT-CLASS-340-279 ..... c 05 N72-16015 \*  
 US-PATENT-CLASS-340-279 ..... c 10 N73-30205 \*  
 US-PATENT-CLASS-340-279 ..... c 54 N78-32720 \*  
 US-PATENT-CLASS-340-285 ..... c 14 N71-25901 \*  
 US-PATENT-CLASS-340-285 ..... c 54 N78-32720 \*  
 US-PATENT-CLASS-340-309.1 ..... c 54 N78-32720 \*  
 US-PATENT-CLASS-340-309.4 ..... c 33 N81-14221 \*  
 US-PATENT-CLASS-340-310A ..... c 33 N81-14221 \*  
 US-PATENT-CLASS-340-310R ..... c 33 N81-14221 \*  
 US-PATENT-CLASS-340-324AD ..... c 33 N75-19517 \*  
 US-PATENT-CLASS-340-324A ..... c 09 N72-25248 \*  
 US-PATENT-CLASS-340-324R ..... c 26 N72-25680 \*  
 US-PATENT-CLASS-340-324 ..... c 08 N71-12507 \*  
 US-PATENT-CLASS-340-324 ..... c 09 N71-33519 \*  
 US-PATENT-CLASS-340-332 ..... c 09 N72-25250 \*  
 US-PATENT-CLASS-340-336 ..... c 09 N71-33519 \*  
 US-PATENT-CLASS-340-33 ..... c 21 N73-13643 \*  
 US-PATENT-CLASS-340-347AD ..... c 14 N71-28991 \*  
 US-PATENT-CLASS-340-347AD ..... c 08 N72-21200 \*  
 US-PATENT-CLASS-340-347AD ..... c 08 N72-22163 \*  
 US-PATENT-CLASS-340-347AD ..... c 08 N72-22166 \*  
 US-PATENT-CLASS-340-347AD ..... c 08 N72-31226 \*  
 US-PATENT-CLASS-340-347AD ..... c 08 N73-20217 \*  
 US-PATENT-CLASS-340-347AD ..... c 35 N74-17885 \*  
 US-PATENT-CLASS-340-347AD ..... c 35 N74-32877 \*  
 US-PATENT-CLASS-340-347AD ..... c 33 N76-18345 \*  
 US-PATENT-CLASS-340-347AD ..... c 60 N77-32731 \*  
 US-PATENT-CLASS-340-347CC ..... c 31 N86-29055 \*  
 US-PATENT-CLASS-340-347DA ..... c 08 N71-27057 \*  
 US-PATENT-CLASS-340-347DA ..... c 08 N72-20176 \*  
 US-PATENT-CLASS-340-347DA ..... c 08 N72-25206 \*  
 US-PATENT-CLASS-340-347DA ..... c 08 N73-32081 \*  
 US-PATENT-CLASS-340-347DD ..... c 10 N71-33407 \*  
 US-PATENT-CLASS-340-347DD ..... c 08 N72-18184 \*  
 US-PATENT-CLASS-340-347DD ..... c 08 N72-20176 \*  
 US-PATENT-CLASS-340-347DD ..... c 08 N72-21197 \*  
 US-PATENT-CLASS-340-347DD ..... c 08 N73-21176 \*  
 US-PATENT-CLASS-340-347DD ..... c 60 N76-23850 \*  
 US-PATENT-CLASS-340-347DD ..... c 32 N77-12239 \*  
 US-PATENT-CLASS-340-347DD ..... c 60 N78-17691 \*  
 US-PATENT-CLASS-340-347DD ..... c 60 N79-20751 \*  
 US-PATENT-CLASS-340-347DD ..... c 33 N82-26570 \*  
 US-PATENT-CLASS-340-347DD ..... c 32 N86-27513 \*

US-PATENT-CLASS-340-347P ..... c 60 N76-23850 \*  
 US-PATENT-CLASS-340-347P ..... c 35 N77-30436 \*  
 US-PATENT-CLASS-340-347R ..... c 08 N72-22165 \*  
 US-PATENT-CLASS-340-347SH ..... c 33 N77-31404 \*  
 US-PATENT-CLASS-340-347SY ..... c 62 N76-31946 \*  
 US-PATENT-CLASS-340-347SY ..... c 35 N77-30436 \*  
 US-PATENT-CLASS-340-347SY ..... c 31 N86-29055 \*  
 US-PATENT-CLASS-340-347 ..... c 08 N70-35423 \*  
 US-PATENT-CLASS-340-347 ..... c 08 N70-40125 \*  
 US-PATENT-CLASS-340-347 ..... c 08 N71-12501 \*  
 US-PATENT-CLASS-340-347 ..... c 08 N71-18594 \*  
 US-PATENT-CLASS-340-347 ..... c 08 N71-19435 \*  
 US-PATENT-CLASS-340-347 ..... c 08 N71-19544 \*  
 US-PATENT-CLASS-340-347 ..... c 08 N71-19687 \*  
 US-PATENT-CLASS-340-347 ..... c 08 N71-24650 \*  
 US-PATENT-CLASS-340-347 ..... c 10 N71-25917 \*  
 US-PATENT-CLASS-340-347 ..... c 10 N71-26544 \*  
 US-PATENT-CLASS-340-347 ..... c 08 N73-28045 \*  
 US-PATENT-CLASS-340-348 ..... c 08 N72-22167 \*  
 US-PATENT-CLASS-340-38P ..... c 66 N76-19888 \*  
 US-PATENT-CLASS-340-403 ..... c 10 N71-27272 \*  
 US-PATENT-CLASS-340-407 ..... c 71 N74-21014 \*  
 US-PATENT-CLASS-340-407 ..... c 82 N87-29372 \*  
 US-PATENT-CLASS-340-412 ..... c 10 N71-24798 \*  
 US-PATENT-CLASS-340-415 ..... c 10 N73-32144 \*  
 US-PATENT-CLASS-340-418 ..... c 14 N73-16484 \*  
 US-PATENT-CLASS-340-5C ..... c 14 N73-27379 \*  
 US-PATENT-CLASS-340-5H ..... c 32 N77-21267 \*  
 US-PATENT-CLASS-340-5R ..... c 35 N74-16135 \*  
 US-PATENT-CLASS-340-518 ..... c 35 N83-34272 \*  
 US-PATENT-CLASS-340-555 ..... c 74 N85-22139 \*  
 US-PATENT-CLASS-340-562 ..... c 63 N93-14701 \*  
 US-PATENT-CLASS-340-566 ..... c 35 N83-34272 \*  
 US-PATENT-CLASS-340-57 ..... c 14 N71-15620 \*  
 US-PATENT-CLASS-340-580 ..... c 35 N88-29149 \*  
 US-PATENT-CLASS-340-601 ..... c 47 N93-10108 \*  
 US-PATENT-CLASS-340-602 ..... c 33 N80-23559 \*  
 US-PATENT-CLASS-340-604 ..... c 33 N80-23559 \*  
 US-PATENT-CLASS-340-605 ..... c 25 N86-27431 \*  
 US-PATENT-CLASS-340-611 ..... c 35 N93-29503 \*  
 US-PATENT-CLASS-340-650 ..... c 33 N79-18193 \*  
 US-PATENT-CLASS-340-664 ..... c 33 N79-18193 \*  
 US-PATENT-CLASS-340-683 ..... c 37 N91-14607 \*  
 US-PATENT-CLASS-340-692 ..... c 76 N90-24168 \*  
 US-PATENT-CLASS-340-705 ..... c 06 N84-27733 \*  
 US-PATENT-CLASS-340-8LF ..... c 71 N79-23753 \*  
 US-PATENT-CLASS-340-8R ..... c 35 N74-16135 \*  
 US-PATENT-CLASS-340-825.21 ..... c 60 N84-28492 \*  
 US-PATENT-CLASS-340-825.5 ..... c 60 N84-28492 \*  
 US-PATENT-CLASS-340-825.5 ..... c 17 N87-16863 \*  
 US-PATENT-CLASS-340-825.5 ..... c 62 N91-14772 \*  
 US-PATENT-CLASS-340-825.69 ..... c 35 N90-23707 \*  
 US-PATENT-CLASS-340-825.89 ..... c 33 N82-29538 \*  
 US-PATENT-CLASS-340-870.13 ..... c 35 N84-22934 \*  
 US-PATENT-CLASS-340-870.18 ..... c 17 N87-16863 \*  
 US-PATENT-CLASS-340-870.24 ..... c 33 N81-14221 \*  
 US-PATENT-CLASS-340-870.37 ..... c 63 N93-14701 \*  
 US-PATENT-CLASS-340-870.37 ..... c 33 N93-16104 \*  
 US-PATENT-CLASS-340-905 ..... c 35 N84-33769 \*  
 US-PATENT-CLASS-340-945 ..... c 06 N87-22678 \*  
 US-PATENT-CLASS-340-967 ..... c 08 N87-20999 \*  
 US-PATENT-CLASS-340-968 ..... c 06 N86-27280 \*  
 US-PATENT-CLASS-340-971 ..... c 06 N84-27733 \*  
 US-PATENT-CLASS-340-971 ..... c 06 N87-22678 \*  
 US-PATENT-CLASS-340-975 ..... c 06 N84-27733 \*  
 US-PATENT-CLASS-340-975 ..... c 06 N87-22678 \*  
 US-PATENT-CLASS-340-978 ..... c 06 N84-27733 \*  
 US-PATENT-CLASS-340-97 ..... c 21 N73-13643 \*  
 US-PATENT-CLASS-340-980 ..... c 06 N84-27733 \*  
 US-PATENT-CLASS-340-988 ..... c 35 N84-33769 \*  
 US-PATENT-CLASS-342-100 ..... c 61 N93-14882 \*  
 US-PATENT-CLASS-342-105 ..... c 32 N90-20280 \*  
 US-PATENT-CLASS-342-114 ..... c 32 N90-20280 \*  
 US-PATENT-CLASS-342-125 ..... c 32 N88-26568 \*  
 US-PATENT-CLASS-342-127 ..... c 32 N88-26568 \*  
 US-PATENT-CLASS-342-165 ..... c 32 N89-28672 \*  
 US-PATENT-CLASS-342-191 ..... c 43 N91-32546 \*  
 US-PATENT-CLASS-342-195 ..... c 33 N89-14384 \*  
 US-PATENT-CLASS-342-195 ..... c 32 N90-20280 \*  
 US-PATENT-CLASS-342-1 ..... c 32 N89-28672 \*  
 US-PATENT-CLASS-342-25 ..... c 43 N91-14642 \*  
 US-PATENT-CLASS-342-25 ..... c 43 N91-32546 \*  
 US-PATENT-CLASS-342-26 ..... c 43 N91-21621 \*  
 US-PATENT-CLASS-342-26 ..... c 43 N91-32546 \*  
 US-PATENT-CLASS-342-351 ..... c 32 N93-29087 \*  
 US-PATENT-CLASS-342-352 ..... c 04 N91-14321 \*  
 US-PATENT-CLASS-342-357 ..... c 04 N91-14321 \*  
 US-PATENT-CLASS-342-357 ..... c 43 N91-21621 \*  
 US-PATENT-CLASS-342-374 ..... c 32 N89-11961 \*  
 US-PATENT-CLASS-342-375 ..... c 32 N89-11961 \*  
 US-PATENT-CLASS-342-418 ..... c 04 N91-14321 \*  
 US-PATENT-CLASS-342-43 ..... c 32 N88-26568 \*  
 US-PATENT-CLASS-342-51 ..... c 32 N88-26568 \*  
 US-PATENT-CLASS-342-52 ..... c 43 N91-21621 \*  
 US-PATENT-CLASS-342-54 ..... c 09 N91-14356 \*  
 US-PATENT-CLASS-342-5 ..... c 32 N89-28672 \*

## US-PATENT-CLASS-343-17.7

US-PATENT-CLASS-343-DIG.2 ..... c 07 N73-24176 \*  
 US-PATENT-CLASS-343-DIG.2 ..... c 33 N74-20860 \*  
 US-PATENT-CLASS-343-DIG.2 ..... c 37 N86-25791 \*  
 US-PATENT-CLASS-343-DIG.2 ..... c 32 N89-25363 \*  
 US-PATENT-CLASS-343-DIG.3 ..... c 09 N72-12136 \*  
 US-PATENT-CLASS-343-DIG2 ..... c 07 N83-20944 \*  
 US-PATENT-CLASS-343-100AP ..... c 33 N83-36355 \*  
 US-PATENT-CLASS-343-100CL ..... c 32 N77-32342 \*  
 US-PATENT-CLASS-343-100CL ..... c 32 N79-14268 \*  
 US-PATENT-CLASS-343-100CL ..... c 32 N81-29308 \*  
 US-PATENT-CLASS-343-100CL ..... c 32 N83-18975 \*  
 US-PATENT-CLASS-343-100CL ..... c 32 N83-19968 \*  
 US-PATENT-CLASS-343-100ME ..... c 14 N72-28437 \*  
 US-PATENT-CLASS-343-100ME ..... c 14 N73-26432 \*  
 US-PATENT-CLASS-343-100ME ..... c 46 N80-14603 \*  
 US-PATENT-CLASS-343-100ME ..... c 35 N80-18359 \*  
 US-PATENT-CLASS-343-100ME ..... c 46 N82-12685 \*  
 US-PATENT-CLASS-343-100ME ..... c 06 N83-10040 \*  
 US-PATENT-CLASS-343-100PE ..... c 32 N75-24982 \*  
 US-PATENT-CLASS-343-100PE ..... c 33 N81-26358 \*  
 US-PATENT-CLASS-343-100PE ..... c 46 N82-12685 \*  
 US-PATENT-CLASS-343-100R ..... c 35 N82-15381 \*  
 US-PATENT-CLASS-343-100R ..... c 10 N73-16206 \*  
 US-PATENT-CLASS-343-100R ..... c 33 N80-18287 \*  
 US-PATENT-CLASS-343-100SA ..... c 10 N73-16206 \*  
 US-PATENT-CLASS-343-100SA ..... c 33 N74-20860 \*  
 US-PATENT-CLASS-343-100SA ..... c 17 N76-21250 \*  
 US-PATENT-CLASS-343-100SA ..... c 32 N80-28578 \*  
 US-PATENT-CLASS-343-100ST ..... c 07 N72-21116 \*  
 US-PATENT-CLASS-343-100ST ..... c 33 N74-20860 \*  
 US-PATENT-CLASS-343-100ST ..... c 32 N75-15854 \*  
 US-PATENT-CLASS-343-100ST ..... c 17 N76-21250 \*  
 US-PATENT-CLASS-343-100ST ..... c 32 N77-20289 \*  
 US-PATENT-CLASS-343-100ST ..... c 33 N80-18287 \*  
 US-PATENT-CLASS-343-100TD ..... c 32 N79-24210 \*  
 US-PATENT-CLASS-343-100TD ..... c 32 N81-14185 \*  
 US-PATENT-CLASS-343-100 ..... c 10 N71-18722 \*  
 US-PATENT-CLASS-343-100 ..... c 07 N71-19854 \*  
 US-PATENT-CLASS-343-100 ..... c 30 N71-23723 \*  
 US-PATENT-CLASS-343-100 ..... c 07 N71-24621 \*  
 US-PATENT-CLASS-343-100 ..... c 09 N71-24804 \*  
 US-PATENT-CLASS-343-100 ..... c 31 N71-24813 \*  
 US-PATENT-CLASS-343-100 ..... c 07 N71-27056 \*  
 US-PATENT-CLASS-343-100 ..... c 07 N71-28900 \*  
 US-PATENT-CLASS-343-105R ..... c 32 N75-26194 \*  
 US-PATENT-CLASS-343-105R ..... c 04 N84-27713 \*  
 US-PATENT-CLASS-343-108R ..... c 04 N74-13420 \*  
 US-PATENT-CLASS-343-10 ..... c 32 N77-32342 \*  
 US-PATENT-CLASS-343-11R ..... c 09 N73-12211 \*  
 US-PATENT-CLASS-343-11VB ..... c 09 N73-12211 \*  
 US-PATENT-CLASS-343-112CA ..... c 21 N73-13643 \*  
 US-PATENT-CLASS-343-112CA ..... c 21 N73-30641 \*  
 US-PATENT-CLASS-343-112CA ..... c 03 N75-30132 \*  
 US-PATENT-CLASS-343-112D ..... c 14 N72-28437 \*  
 US-PATENT-CLASS-343-112D ..... c 32 N75-26194 \*  
 US-PATENT-CLASS-343-112D ..... c 46 N80-14603 \*  
 US-PATENT-CLASS-343-112R ..... c 09 N73-32110 \*  
 US-PATENT-CLASS-343-112R ..... c 17 N78-17140 \*  
 US-PATENT-CLASS-343-112R ..... c 04 N80-32359 \*  
 US-PATENT-CLASS-343-112R ..... c 32 N81-27341 \*  
 US-PATENT-CLASS-343-112TC ..... c 17 N76-21250 \*  
 US-PATENT-CLASS-343-112 ..... c 21 N71-13958 \*  
 US-PATENT-CLASS-343-112 ..... c 02 N71-19287 \*  
 US-PATENT-CLASS-343-112 ..... c 21 N71-24948 \*  
 US-PATENT-CLASS-343-113R ..... c 09 N73-32110 \*  
 US-PATENT-CLASS-343-113R ..... c 44 N78-28594 \*  
 US-PATENT-CLASS-343-113 ..... c 10 N71-21473 \*  
 US-PATENT-CLASS-343-113 ..... c 07 N71-24625 \*  
 US-PATENT-CLASS-343-117R ..... c 32 N79-13214 \*  
 US-PATENT-CLASS-343-117 ..... c 07 N71-27056 \*  
 US-PATENT-CLASS-343-118 ..... c 32 N79-13214 \*  
 US-PATENT-CLASS-343-119 ..... c 44 N78-28594 \*  
 US-PATENT-CLASS-343-12R ..... c 08 N72-25209 \*  
 US-PATENT-CLASS-343-12 ..... c 21 N70-41930 \*  
 US-PATENT-CLASS-343-12 ..... c 10 N72-20224 \*  
 US-PATENT-CLASS-343-13-R ..... c 74 N85-34629 \*  
 US-PATENT-CLASS-343-13 ..... c 09 N71-18598 \*  
 US-PATENT-CLASS-343-14 ..... c 07 N70-41680 \*  
 US-PATENT-CLASS-343-14 ..... c 08 N72-25209 \*  
 US-PATENT-CLASS-343-14 ..... c 14 N73-25461 \*  
 US-PATENT-CLASS-343-14 ..... c 32 N79-14267 \*  
 US-PATENT-CLASS-343-14 ..... c 31 N79-28370 \*  
 US-PATENT-CLASS-343-16M ..... c 10 N72-22235 \*  
 US-PATENT-CLASS-343-16M ..... c 44 N78-28594 \*  
 US-PATENT-CLASS-343-16 ..... c 09 N71-20864 \*  
 US-PATENT-CLASS-343-16 ..... c 10 N71-21483 \*  
 US-PATENT-CLASS-343-17.1PF ..... c 32 N82-23376 \*  
 US-PATENT-CLASS-343-17.2-PC ..... c 32 N85-34327 \*  
 US-PATENT-CLASS-343-17.2PC ..... c 35 N79-10391 \*  
 US-PATENT-CLASS-343-17.2 ..... c 07 N70-36911 \*  
 US-PATENT-CLASS-343-17.5 ..... c 14 N73-25461 \*  
 US-PATENT-CLASS-343-17.5 ..... c 32 N75-15854 \*  
 US-PATENT-CLASS-343-17.5 ..... c 32 N84-22820 \*  
 US-PATENT-CLASS-343-17.7 ..... c 07 N71-12391 \*  
 US-PATENT-CLASS-343-17.7 ..... c 44 N74-19870 \*  
 US-PATENT-CLASS-343-17.7 ..... c 32 N77-31350 \*



## US-PATENT-CLASS-343-17.7

## REPORT NUMBER INDEX

US-PATENT-CLASS-343-17.7	c 32	N79-11265 *	US-PATENT-CLASS-343-708	c 09	N71-22888 *	US-PATENT-CLASS-343-840	c 07	N71-27233 *
US-PATENT-CLASS-343-17.7	c 32	N84-27951 *	US-PATENT-CLASS-343-708	c 07	N71-22984 *	US-PATENT-CLASS-343-840	c 09	N72-12136 *
US-PATENT-CLASS-343-17.7	c 33	N85-21493 *	US-PATENT-CLASS-343-708	c 07	N71-28980 *	US-PATENT-CLASS-343-840	c 07	N72-32169 *
US-PATENT-CLASS-343-176	c 07	N71-27056 *	US-PATENT-CLASS-343-708	c 09	N72-25247 *	US-PATENT-CLASS-343-840	c 32	N76-18295 *
US-PATENT-CLASS-343-176	c 32	N76-14321 *	US-PATENT-CLASS-343-708	c 32	N74-20864 *	US-PATENT-CLASS-343-840	c 33	N83-36355 *
US-PATENT-CLASS-343-179	c 07	N72-11149 *	US-PATENT-CLASS-343-708	c 32	N82-11336 *	US-PATENT-CLASS-343-844	c 32	N71-11264 *
US-PATENT-CLASS-343-179	c 07	N73-20174 *	US-PATENT-CLASS-343-718	c 09	N71-18720 *	US-PATENT-CLASS-343-844	c 32	N80-28578 *
US-PATENT-CLASS-343-179	c 32	N78-15323 *	US-PATENT-CLASS-343-720	c 09	N72-12136 *	US-PATENT-CLASS-343-846	c 33	N76-14372 *
US-PATENT-CLASS-343-179	c 32	N79-20296 *	US-PATENT-CLASS-343-725	c 07	N73-28013 *	US-PATENT-CLASS-343-846	c 32	N82-11336 *
US-PATENT-CLASS-343-18A	c 32	N80-14281 *	US-PATENT-CLASS-343-727	c 32	N81-14187 *	US-PATENT-CLASS-343-853	c 07	N72-11148 *
US-PATENT-CLASS-343-18B	c 32	N74-12912 *	US-PATENT-CLASS-343-727	c 32	N82-11336 *	US-PATENT-CLASS-343-853	c 07	N72-22127 *
US-PATENT-CLASS-343-18B	c 32	N77-21267 *	US-PATENT-CLASS-343-729	c 07	N73-28013 *	US-PATENT-CLASS-343-853	c 07	N72-25174 *
US-PATENT-CLASS-343-18B	c 43	N80-18498 *	US-PATENT-CLASS-343-730	c 32	N74-20863 *	US-PATENT-CLASS-343-853	c 09	N72-31235 *
US-PATENT-CLASS-343-18D	c 43	N80-18498 *	US-PATENT-CLASS-343-754	c 09	N73-19234 *	US-PATENT-CLASS-343-853	c 10	N73-16206 *
US-PATENT-CLASS-343-18	c 31	N70-37981 *	US-PATENT-CLASS-343-755	c 33	N76-27472 *	US-PATENT-CLASS-343-853	c 32	N74-20863 *
US-PATENT-CLASS-343-18	c 07	N70-40063 *	US-PATENT-CLASS-343-755	c 32	N81-25278 *	US-PATENT-CLASS-343-853	c 32	N74-20864 *
US-PATENT-CLASS-343-18	c 30	N70-40309 *	US-PATENT-CLASS-343-761	c 33	N75-19516 *	US-PATENT-CLASS-343-854	c 07	N69-27460 *
US-PATENT-CLASS-343-18	c 07	N70-41678 *	US-PATENT-CLASS-343-761	c 32	N76-21365 *	US-PATENT-CLASS-343-854	c 07	N71-27233 *
US-PATENT-CLASS-343-200	c 07	N73-16121 *	US-PATENT-CLASS-343-762	c 07	N72-25174 *	US-PATENT-CLASS-343-854	c 09	N73-19234 *
US-PATENT-CLASS-343-204	c 07	N73-26118 *	US-PATENT-CLASS-343-766	c 35	N92-33010 *	US-PATENT-CLASS-343-854	c 33	N74-20860 *
US-PATENT-CLASS-343-225	c 17	N78-17140 *	US-PATENT-CLASS-343-768	c 10	N71-26142 *	US-PATENT-CLASS-343-854	c 33	N76-27472 *
US-PATENT-CLASS-343-225	c 43	N85-21723 *	US-PATENT-CLASS-343-769	c 32	N74-20864 *	US-PATENT-CLASS-343-854	c 32	N79-11264 *
US-PATENT-CLASS-343-352	c 46	N85-21846 *	US-PATENT-CLASS-343-770	c 09	N72-31235 *	US-PATENT-CLASS-343-854	c 32	N80-28578 *
US-PATENT-CLASS-343-356	c 04	N84-22546 *	US-PATENT-CLASS-343-770	c 33	N76-14372 *	US-PATENT-CLASS-343-872	c 07	N71-28980 *
US-PATENT-CLASS-343-357	c 04	N84-22546 *	US-PATENT-CLASS-343-771	c 07	N71-28809 *	US-PATENT-CLASS-343-873	c 07	N71-19493 *
US-PATENT-CLASS-343-357	c 04	N86-27270 *	US-PATENT-CLASS-343-771	c 07	N72-11148 *	US-PATENT-CLASS-343-873	c 09	N72-25247 *
US-PATENT-CLASS-343-376	c 33	N85-21493 *	US-PATENT-CLASS-343-771	c 09	N72-21244 *	US-PATENT-CLASS-343-876	c 32	N76-15329 *
US-PATENT-CLASS-343-418	c 04	N86-27270 *	US-PATENT-CLASS-343-771	c 07	N72-22127 *	US-PATENT-CLASS-343-876	c 32	N85-29118 *
US-PATENT-CLASS-343-460	c 46	N85-21846 *	US-PATENT-CLASS-343-771	c 09	N72-25247 *	US-PATENT-CLASS-343-880	c 07	N73-26117 *
US-PATENT-CLASS-343-5-CD	c 43	N86-19711 *	US-PATENT-CLASS-343-771	c 09	N72-31235 *	US-PATENT-CLASS-343-880	c 18	N80-14183 *
US-PATENT-CLASS-343-5-CM	c 32	N84-34651 *	US-PATENT-CLASS-343-772	c 07	N72-20141 *	US-PATENT-CLASS-343-880	c 32	N89-25363 *
US-PATENT-CLASS-343-5-CM	c 32	N85-34327 *	US-PATENT-CLASS-343-772	c 32	N81-25278 *	US-PATENT-CLASS-343-881	c 37	N86-25789 *
US-PATENT-CLASS-343-5-CM	c 43	N86-19711 *	US-PATENT-CLASS-343-773	c 07	N72-20141 *	US-PATENT-CLASS-343-882	c 33	N76-32457 *
US-PATENT-CLASS-343-5-DP	c 32	N84-34651 *	US-PATENT-CLASS-343-776	c 07	N71-12396 *	US-PATENT-CLASS-343-882	c 37	N86-25789 *
US-PATENT-CLASS-343-5-FT	c 32	N84-34651 *	US-PATENT-CLASS-343-777	c 07	N71-27233 *	US-PATENT-CLASS-343-883	c 07	N73-26117 *
US-PATENT-CLASS-343-5-VQ	c 43	N86-19711 *	US-PATENT-CLASS-343-777	c 07	N72-25174 *	US-PATENT-CLASS-343-883	c 18	N80-14183 *
US-PATENT-CLASS-343-5-W	c 32	N85-34327 *	US-PATENT-CLASS-343-777	c 32	N89-11961 *	US-PATENT-CLASS-343-883	c 37	N86-25791 *
US-PATENT-CLASS-343-5CM	c 07	N72-21118 *	US-PATENT-CLASS-343-778	c 32	N89-11961 *	US-PATENT-CLASS-343-884	c 07	N71-27191 *
US-PATENT-CLASS-343-5CM	c 32	N77-21267 *	US-PATENT-CLASS-343-779	c 07	N71-11285 *	US-PATENT-CLASS-343-889	c 07	N73-26117 *
US-PATENT-CLASS-343-5CM	c 32	N77-32342 *	US-PATENT-CLASS-343-779	c 10	N72-22235 *	US-PATENT-CLASS-343-893	c 09	N72-21244 *
US-PATENT-CLASS-343-5CM	c 35	N79-10391 *	US-PATENT-CLASS-343-779	c 07	N72-25174 *	US-PATENT-CLASS-343-893	c 07	N73-28013 *
US-PATENT-CLASS-343-5CM	c 32	N79-14268 *	US-PATENT-CLASS-343-779	c 32	N76-15329 *	US-PATENT-CLASS-343-895	c 09	N73-19234 *
US-PATENT-CLASS-343-5CM	c 43	N80-18498 *	US-PATENT-CLASS-343-779	c 33	N76-27472 *	US-PATENT-CLASS-343-895	c 07	N73-26117 *
US-PATENT-CLASS-343-5CM	c 32	N82-12297 *	US-PATENT-CLASS-343-779	c 32	N89-11961 *	US-PATENT-CLASS-343-895	c 32	N80-23524 *
US-PATENT-CLASS-343-5CM	c 32	N83-18975 *	US-PATENT-CLASS-343-781CA	c 32	N78-31321 *	US-PATENT-CLASS-343-895	c 32	N82-27558 *
US-PATENT-CLASS-343-5CM	c 32	N83-19968 *	US-PATENT-CLASS-343-781P	c 46	N82-12685 *	US-PATENT-CLASS-343-9PS	c 32	N83-19968 *
US-PATENT-CLASS-343-5CM	c 32	N83-31918 *	US-PATENT-CLASS-343-781P	c 32	N81-25278 *	US-PATENT-CLASS-343-9PS	c 32	N83-31918 *
US-PATENT-CLASS-343-5DP	c 07	N72-11149 *	US-PATENT-CLASS-343-781	c 09	N70-35219 *	US-PATENT-CLASS-343-9R	c 32	N84-22820 *
US-PATENT-CLASS-343-5DP	c 09	N73-12211 *	US-PATENT-CLASS-343-781	c 09	N70-35382 *	US-PATENT-CLASS-343-909	c 32	N74-11000 *
US-PATENT-CLASS-343-5DP	c 32	N77-32342 *	US-PATENT-CLASS-343-781	c 09	N70-35425 *	US-PATENT-CLASS-343-909	c 35	N76-15435 *
US-PATENT-CLASS-343-5DP	c 32	N82-23376 *	US-PATENT-CLASS-343-781	c 07	N72-32169 *	US-PATENT-CLASS-343-909	c 33	N79-28416 *
US-PATENT-CLASS-343-5GC	c 32	N75-24982 *	US-PATENT-CLASS-343-781	c 32	N74-11000 *	US-PATENT-CLASS-343-909	c 32	N80-14281 *
US-PATENT-CLASS-343-5MM	c 32	N77-21267 *	US-PATENT-CLASS-343-781	c 33	N75-19516 *	US-PATENT-CLASS-343-912	c 07	N72-21117 *
US-PATENT-CLASS-343-5NA	c 31	N79-28370 *	US-PATENT-CLASS-343-781	c 32	N76-21365 *	US-PATENT-CLASS-343-912	c 07	N72-22127 *
US-PATENT-CLASS-343-5W	c 35	N79-10391 *	US-PATENT-CLASS-343-782	c 07	N73-14130 *	US-PATENT-CLASS-343-912	c 32	N76-18295 *
US-PATENT-CLASS-343-5W	c 43	N80-18498 *	US-PATENT-CLASS-343-782	c 32	N78-31321 *	US-PATENT-CLASS-343-915	c 31	N71-16102 *
US-PATENT-CLASS-343-5W	c 46	N85-21846 *	US-PATENT-CLASS-343-784	c 07	N71-28980 *	US-PATENT-CLASS-343-915	c 09	N71-20658 *
US-PATENT-CLASS-343-6BR	c 32	N77-20289 *	US-PATENT-CLASS-343-786	c 07	N71-15907 *	US-PATENT-CLASS-343-915	c 07	N72-32169 *
US-PATENT-CLASS-343-6.5R	c 07	N72-12080 *	US-PATENT-CLASS-343-786	c 07	N71-22750 *	US-PATENT-CLASS-343-915	c 07	N73-14130 *
US-PATENT-CLASS-343-6.5R	c 07	N72-21118 *	US-PATENT-CLASS-343-786	c 07	N71-26101 *	US-PATENT-CLASS-343-915	c 07	N73-24176 *
US-PATENT-CLASS-343-6.5R	c 07	N72-25171 *	US-PATENT-CLASS-343-786	c 07	N71-27233 *	US-PATENT-CLASS-343-915	c 32	N76-18295 *
US-PATENT-CLASS-343-6.5R	c 08	N72-25209 *	US-PATENT-CLASS-343-786	c 07	N72-20141 *	US-PATENT-CLASS-343-915	c 33	N76-32457 *
US-PATENT-CLASS-343-6.5R	c 07	N73-25161 *	US-PATENT-CLASS-343-786	c 10	N72-22235 *	US-PATENT-CLASS-343-915	c 32	N89-25363 *
US-PATENT-CLASS-343-6.5R	c 21	N73-30641 *	US-PATENT-CLASS-343-786	c 07	N72-25174 *	US-PATENT-CLASS-343-9	c 32	N75-15854 *
US-PATENT-CLASS-343-6.5R	c 32	N74-12912 *	US-PATENT-CLASS-343-786	c 09	N72-31235 *	US-PATENT-CLASS-343-9	c 32	N79-10264 *
US-PATENT-CLASS-343-6.5R	c 32	N75-15854 *	US-PATENT-CLASS-343-786	c 32	N74-20863 *	US-PATENT-CLASS-346-107A	c 14	N72-18411 *
US-PATENT-CLASS-343-6.5R	c 03	N75-30132 *	US-PATENT-CLASS-343-786	c 32	N76-15330 *	US-PATENT-CLASS-346-107	c 23	N71-23976 *
US-PATENT-CLASS-343-6.5R	c 32	N77-20289 *	US-PATENT-CLASS-343-786	c 32	N76-21365 *	US-PATENT-CLASS-346-108	c 35	N74-15831 *
US-PATENT-CLASS-343-6.5SS	c 32	N74-12912 *	US-PATENT-CLASS-343-786	c 32	N80-23524 *	US-PATENT-CLASS-346-110	c 14	N73-32322 *
US-PATENT-CLASS-343-6.5	c 21	N71-11766 *	US-PATENT-CLASS-343-786	c 32	N80-29539 *	US-PATENT-CLASS-346-138	c 21	N73-13644 *
US-PATENT-CLASS-343-6.5	c 10	N71-23099 *	US-PATENT-CLASS-343-786	c 32	N81-25278 *	US-PATENT-CLASS-346-138	c 35	N74-15831 *
US-PATENT-CLASS-343-6.8R	c 04	N86-19304 *	US-PATENT-CLASS-343-789	c 32	N81-14187 *	US-PATENT-CLASS-346-1	c 12	N71-20815 *
US-PATENT-CLASS-343-6.8R	c 07	N72-12080 *	US-PATENT-CLASS-343-789	c 32	N82-27558 *	US-PATENT-CLASS-346-1	c 09	N72-21246 *
US-PATENT-CLASS-343-6.8R	c 07	N73-25161 *	US-PATENT-CLASS-343-795	c 32	N82-11336 *	US-PATENT-CLASS-346-23	c 14	N72-18411 *
US-PATENT-CLASS-343-6.8R	c 14	N73-25461 *	US-PATENT-CLASS-343-797	c 09	N71-24842 *	US-PATENT-CLASS-346-24	c 35	N74-15831 *
US-PATENT-CLASS-343-6R	c 32	N79-10264 *	US-PATENT-CLASS-343-797	c 07	N72-22127 *	US-PATENT-CLASS-346-29	c 09	N72-21246 *
US-PATENT-CLASS-343-6	c 30	N71-16090 *	US-PATENT-CLASS-343-797	c 09	N72-31235 *	US-PATENT-CLASS-346-33R	c 35	N74-32877 *
US-PATENT-CLASS-343-7.4	c 10	N72-22235 *	US-PATENT-CLASS-343-797	c 07	N73-28013 *	US-PATENT-CLASS-346-44	c 09	N69-21467 *
US-PATENT-CLASS-343-7.4	c 32	N79-13214 *	US-PATENT-CLASS-343-797	c 32	N74-20863 *	US-PATENT-CLASS-346-50	c 14	N71-21006 *
US-PATENT-CLASS-343-7.5	c 07	N69-39974 *	US-PATENT-CLASS-343-797	c 33	N76-14372 *	US-PATENT-CLASS-346-74MD	c 21	N73-13644 *
US-PATENT-CLASS-343-7.5	c 09	N71-24595 *	US-PATENT-CLASS-343-797	c 32	N81-14187 *	US-PATENT-CLASS-346-74MT	c 35	N79-16246 *
US-PATENT-CLASS-343-7.5	c 07	N72-11149 *	US-PATENT-CLASS-343-799	c 07	N71-27233 *	US-PATENT-CLASS-346R	c 73	N77-18891 *
US-PATENT-CLASS-343-7.5	c 44	N74-19870 *	US-PATENT-CLASS-343-803	c 07	N73-28013 *	US-PATENT-CLASS-349	c 25	N79-28253 *
US-PATENT-CLASS-343-7.5	c 32	N82-23376 *	US-PATENT-CLASS-343-819	c 32	N93-29507 *	US-PATENT-CLASS-35-10.2	c 14	N71-15621 *
US-PATENT-CLASS-343-700MS	c 32	N78-24391 *	US-PATENT-CLASS-343-823	c 07	N71-28979 *	US-PATENT-CLASS-35-12C	c 19	N73-27377 *
US-PATENT-CLASS-343-700MS	c 32	N80-32604 *	US-PATENT-CLASS-343-830	c 32	N80-32604 *	US-PATENT-CLASS-35-12C	c 09	N75-15662 *
US-PATENT-CLASS-343-700MS	c 32	N82-11336 *	US-PATENT-CLASS-343-833	c 31	N70-34135 *	US-PATENT-CLASS-35-12C	c 74	N79-13855 *
US-PATENT-CLASS-343-700MS	c 32	N93-29507 *	US-PATENT-CLASS-343-833	c 32	N93-29507 *	US-PATENT-CLASS-35-12E	c 09	N74-30597 *
US-PATENT-CLASS-343-700	c 32	N93-29087 *	US-PATENT-CLASS-343-834	c 32	N93-29507 *	US-PATENT-CLASS-35-12E	c 09	N79-31228 *
US-PATENT-CLASS-343-703	c 09	N71-13521 *	US-PATENT-CLASS-343-837	c 07	N72-32169 *	US-PATENT-CLASS-35-12H	c 09	N79-31228 *
US-PATENT-CLASS-343-703	c 07	N71-24614 *	US-PATENT-CLASS-343-837	c 07	N73-14130 *	US-PATENT-CLASS-35-12N	c 09	N76-24280 *
US-PATENT-CLASS-343-705	c 07	N70-38200 *	US-PATENT-CLASS-343-837	c 33	N75-19516 *	US-PATENT-CLASS-35-12N	c 09	N78-18083 *
US-PATENT-CLASS-343-705	c 07	N70-40202 *	US-PATENT-CLASS-343-837	c 32	N76-15329 *	US-PATENT-CLASS-35-12N	c 74	N79-13855 *
US-PATENT-CLASS-343-705	c 31	N71-10747 *	US-PATENT-CLASS-343-837	c 32	N76-18295 *	US-PATENT-CLASS-35-12	c 11	N70-34815 *
US-PATENT-CLASS-343-705	c 03	N76-32140 *	US-PATENT-CLASS-343-837	c 32	N78-31321 *	US-PATENT-CLASS-35-12	c 31	N70-34966 *
US-PATENT-CLASS-343-706	c 07	N72-21117 *	US-PATENT-CLASS-343-839	c 09	N73-19234 *	US-PATENT-CLASS-35-12	c 11	N71-10746 *

## REPORT NUMBER INDEX

## US-PATENT-CLASS-356-108

US-PATENT-CLASS-35-12	c 11	N71-10748 *	US-PATENT-CLASS-350-286	c 74	N83-10900 *	US-PATENT-CLASS-350-453	c 36	N82-32712 *
US-PATENT-CLASS-35-12	c 11	N71-10776 *	US-PATENT-CLASS-350-287	c 15	N72-11386 *	US-PATENT-CLASS-350-486	c 74	N83-13978 *
US-PATENT-CLASS-35-12	c 11	N71-18773 *	US-PATENT-CLASS-350-287	c 74	N83-13978 *	US-PATENT-CLASS-350-49	c 14	N72-22441 *
US-PATENT-CLASS-35-12	c 11	N71-19494 *	US-PATENT-CLASS-350-287	c 35	N91-14590 *	US-PATENT-CLASS-350-500	c 35	N91-14590 *
US-PATENT-CLASS-35-12	c 11	N71-21474 *	US-PATENT-CLASS-350-288	c 23	N71-29123 *	US-PATENT-CLASS-350-505	c 74	N85-23396 *
US-PATENT-CLASS-35-12	c 18	N76-14186 *	US-PATENT-CLASS-350-288	c 12	N76-15189 *	US-PATENT-CLASS-350-505	c 74	N86-28732 *
US-PATENT-CLASS-35-17	c 05	N71-24606 *	US-PATENT-CLASS-350-288	c 74	N77-28933 *	US-PATENT-CLASS-350-529	c 37	N91-21545 *
US-PATENT-CLASS-35-19	c 10	N71-27365 *	US-PATENT-CLASS-350-288	c 44	N79-11471 *	US-PATENT-CLASS-350-52	c 14	N72-22441 *
US-PATENT-CLASS-35-22R	c 05	N73-13114 *	US-PATENT-CLASS-350-288	c 44	N79-24433 *	US-PATENT-CLASS-350-52	c 14	N72-22444 *
US-PATENT-CLASS-35-29	c 11	N71-16028 *	US-PATENT-CLASS-350-292	c 35	N75-12273 *	US-PATENT-CLASS-350-537	c 74	N86-20125 *
US-PATENT-CLASS-35-29	c 05	N71-28619 *	US-PATENT-CLASS-350-292	c 44	N79-14529 *	US-PATENT-CLASS-350-55	c 23	N71-33229 *
US-PATENT-CLASS-35-35A	c 71	N74-21014 *	US-PATENT-CLASS-350-292	c 44	N79-24432 *	US-PATENT-CLASS-350-55	c 14	N73-30393 *
US-PATENT-CLASS-35-45	c 14	N70-35394 *	US-PATENT-CLASS-350-293	c 16	N73-16536 *	US-PATENT-CLASS-350-55	c 23	N73-30666 *
US-PATENT-CLASS-35-49	c 12	N69-39988 *	US-PATENT-CLASS-350-293	c 12	N76-15189 *	US-PATENT-CLASS-350-55	c 89	N79-10969 *
US-PATENT-CLASS-35-8	c 05	N72-16015 *	US-PATENT-CLASS-350-293	c 44	N76-24696 *	US-PATENT-CLASS-350-55	c 74	N80-33210 *
US-PATENT-CLASS-350-100	c 36	N77-25501 *	US-PATENT-CLASS-350-293	c 44	N78-10554 *	US-PATENT-CLASS-350-572	c 36	N88-14350 *
US-PATENT-CLASS-350-102	c 23	N71-29123 *	US-PATENT-CLASS-350-293	c 44	N79-14529 *	US-PATENT-CLASS-350-573	c 36	N88-14350 *
US-PATENT-CLASS-350-102	c 36	N77-25501 *	US-PATENT-CLASS-350-294	c 89	N79-10969 *	US-PATENT-CLASS-350-576	c 35	N91-14591 *
US-PATENT-CLASS-350-102	c 18	N91-27200 *	US-PATENT-CLASS-350-294	c 44	N79-24432 *	US-PATENT-CLASS-350-580	c 74	N86-20125 *
US-PATENT-CLASS-350-107	c 18	N91-27200 *	US-PATENT-CLASS-350-294	c 32	N80-24510 *	US-PATENT-CLASS-350-58	c 14	N71-15604 *
US-PATENT-CLASS-350-138	c 23	N72-27728 *	US-PATENT-CLASS-350-295	c 44	N77-32583 *	US-PATENT-CLASS-350-6.5	c 32	N80-24510 *
US-PATENT-CLASS-350-145	c 74	N77-20882 *	US-PATENT-CLASS-350-295	c 44	N80-14473 *	US-PATENT-CLASS-350-6.5	c 74	N87-21679 *
US-PATENT-CLASS-350-147	c 14	N72-27409 *	US-PATENT-CLASS-350-296	c 44	N79-24432 *	US-PATENT-CLASS-350-6.6	c 32	N80-24510 *
US-PATENT-CLASS-350-150	c 26	N72-25680 *	US-PATENT-CLASS-350-296	c 44	N80-14473 *	US-PATENT-CLASS-350-619	c 74	N85-23396 *
US-PATENT-CLASS-350-150	c 36	N76-18427 *	US-PATENT-CLASS-350-299	c 74	N74-21304 *	US-PATENT-CLASS-350-6	c 14	N69-27461 *
US-PATENT-CLASS-350-151	c 36	N74-13205 *	US-PATENT-CLASS-350-299	c 44	N76-24696 *	US-PATENT-CLASS-350-6	c 36	N74-15145 *
US-PATENT-CLASS-350-151	c 35	N78-29421 *	US-PATENT-CLASS-350-299	c 74	N77-28932 *	US-PATENT-CLASS-350-79	c 14	N72-32452 *
US-PATENT-CLASS-350-157	c 74	N79-14891 *	US-PATENT-CLASS-350-299	c 44	N78-10554 *	US-PATENT-CLASS-350-7	c 74	N74-15095 *
US-PATENT-CLASS-350-159	c 74	N78-17865 *	US-PATENT-CLASS-350-299	c 44	N78-31526 *	US-PATENT-CLASS-350-86	c 14	N72-22445 *
US-PATENT-CLASS-350-160R	c 14	N72-25410 *	US-PATENT-CLASS-350-299	c 44	N79-11471 *	US-PATENT-CLASS-350-96.10	c 74	N84-11921 *
US-PATENT-CLASS-350-160R	c 26	N72-25680 *	US-PATENT-CLASS-350-299	c 44	N79-24433 *	US-PATENT-CLASS-350-96.15	c 74	N84-11921 *
US-PATENT-CLASS-350-160	c 36	N76-18427 *	US-PATENT-CLASS-350-299	c 36	N84-14509 *	US-PATENT-CLASS-350-96.15	c 74	N85-29749 *
US-PATENT-CLASS-350-161	c 26	N72-27784 *	US-PATENT-CLASS-350-2	c 23	N71-30027 *	US-PATENT-CLASS-350-96.16	c 74	N83-29032 *
US-PATENT-CLASS-350-161	c 36	N75-31427 *	US-PATENT-CLASS-350-3.5	c 16	N71-15551 *	US-PATENT-CLASS-350-96.21	c 74	N89-25689 *
US-PATENT-CLASS-350-162.13	c 74	N89-14078 *	US-PATENT-CLASS-350-3.5	c 16	N71-15565 *	US-PATENT-CLASS-350-96.25	c 33	N81-29342 *
US-PATENT-CLASS-350-162.13	c 74	N91-25840 *	US-PATENT-CLASS-350-3.5	c 16	N71-15567 *	US-PATENT-CLASS-350-96.25	c 74	N89-25689 *
US-PATENT-CLASS-350-162R	c 74	N80-21140 *	US-PATENT-CLASS-350-3.5	c 16	N71-26154 *	US-PATENT-CLASS-350-96.29	c 74	N91-21871 *
US-PATENT-CLASS-350-162SF	c 23	N73-30666 *	US-PATENT-CLASS-350-3.5	c 16	N71-29131 *	US-PATENT-CLASS-350-96R	c 60	N77-14751 *
US-PATENT-CLASS-350-162SF	c 74	N76-31998 *	US-PATENT-CLASS-350-3.5	c 14	N72-17324 *	US-PATENT-CLASS-350-96R	c 60	N77-32731 *
US-PATENT-CLASS-350-162SF	c 74	N77-28932 *	US-PATENT-CLASS-350-3.5	c 16	N73-30476 *	US-PATENT-CLASS-350-96R	c 60	N78-10709 *
US-PATENT-CLASS-350-162SF	c 36	N77-32478 *	US-PATENT-CLASS-350-3.5	c 35	N74-15146 *	US-PATENT-CLASS-350-96WG	c 36	N75-31427 *
US-PATENT-CLASS-350-162	c 14	N72-17323 *	US-PATENT-CLASS-350-3.5	c 35	N74-17153 *	US-PATENT-CLASS-350-96WG	c 36	N76-18428 *
US-PATENT-CLASS-350-163	c 36	N88-14350 *	US-PATENT-CLASS-350-3.5	c 35	N74-26946 *	US-PATENT-CLASS-350-96WG	c 36	N76-24553 *
US-PATENT-CLASS-350-165	c 27	N83-12333 *	US-PATENT-CLASS-350-3.5	c 35	N75-25124 *	US-PATENT-CLASS-350-96	c 07	N71-26291 *
US-PATENT-CLASS-350-166	c 44	N78-34448 *	US-PATENT-CLASS-350-3.5	c 35	N75-27328 *	US-PATENT-CLASS-350-97	c 18	N91-27200 *
US-PATENT-CLASS-350-168	c 74	N85-23396 *	US-PATENT-CLASS-350-3.5	c 35	N76-18402 *	US-PATENT-CLASS-351-166	c 74	N78-32854 *
US-PATENT-CLASS-350-16	c 14	N72-22444 *	US-PATENT-CLASS-350-3.5	c 35	N78-17357 *	US-PATENT-CLASS-351-203	c 52	N89-16256 *
US-PATENT-CLASS-350-170	c 73	N78-32848 *	US-PATENT-CLASS-350-3.5	c 38	N78-32447 *	US-PATENT-CLASS-351-206	c 52	N87-24874 *
US-PATENT-CLASS-350-170	c 74	N83-10900 *	US-PATENT-CLASS-350-3.64	c 35	N91-13694 *	US-PATENT-CLASS-351-206	c 52	N92-28755 *
US-PATENT-CLASS-350-171	c 23	N72-23695 *	US-PATENT-CLASS-350-3.68	c 74	N91-25840 *	US-PATENT-CLASS-351-208	c 52	N87-24874 *
US-PATENT-CLASS-350-171	c 74	N83-17305 *	US-PATENT-CLASS-350-3.73	c 36	N87-23960 *	US-PATENT-CLASS-351-221	c 52	N92-28755 *
US-PATENT-CLASS-350-172	c 74	N84-23248 *	US-PATENT-CLASS-350-81	c 36	N87-23960 *	US-PATENT-CLASS-351-237	c 52	N89-16256 *
US-PATENT-CLASS-350-173	c 73	N78-32848 *	US-PATENT-CLASS-350-301	c 74	N81-17886 *	US-PATENT-CLASS-351-23	c 05	N73-26072 *
US-PATENT-CLASS-350-173	c 74	N83-36898 *	US-PATENT-CLASS-350-310	c 11	N69-24321 *	US-PATENT-CLASS-351-23	c 52	N76-30793 *
US-PATENT-CLASS-350-173	c 74	N84-23248 *	US-PATENT-CLASS-350-310	c 23	N71-24868 *	US-PATENT-CLASS-351-30	c 05	N73-26072 *
US-PATENT-CLASS-350-173	c 74	N77-20882 *	US-PATENT-CLASS-350-310	c 23	N71-29123 *	US-PATENT-CLASS-351-30	c 52	N76-30793 *
US-PATENT-CLASS-350-174	c 73	N78-32848 *	US-PATENT-CLASS-350-310	c 23	N71-33229 *	US-PATENT-CLASS-351-36	c 05	N73-26072 *
US-PATENT-CLASS-350-174	c 36	N88-14350 *	US-PATENT-CLASS-350-310	c 23	N72-22673 *	US-PATENT-CLASS-351-36	c 52	N76-30793 *
US-PATENT-CLASS-350-175E	c 74	N80-27185 *	US-PATENT-CLASS-350-310	c 74	N77-28933 *	US-PATENT-CLASS-351-38	c 54	N75-27759 *
US-PATENT-CLASS-350-175FS	c 14	N72-25414 *	US-PATENT-CLASS-350-311	c 74	N75-25706 *	US-PATENT-CLASS-352-169	c 14	N73-14427 *
US-PATENT-CLASS-350-175NG	c 27	N78-31233 *	US-PATENT-CLASS-350-312	c 16	N72-12440 *	US-PATENT-CLASS-352-171	c 35	N82-26628 *
US-PATENT-CLASS-350-189	c 23	N71-24857 *	US-PATENT-CLASS-350-312	c 74	N85-29750 *	US-PATENT-CLASS-352-84	c 16	N71-33410 *
US-PATENT-CLASS-350-199	c 14	N73-30393 *	US-PATENT-CLASS-350-315	c 74	N86-29650 *	US-PATENT-CLASS-352-84	c 14	N72-18411 *
US-PATENT-CLASS-350-19	c 14	N72-22441 *	US-PATENT-CLASS-350-316	c 27	N83-36220 *	US-PATENT-CLASS-353-54	c 34	N74-23066 *
US-PATENT-CLASS-350-1	c 23	N69-24332 *	US-PATENT-CLASS-350-318	c 74	N86-29650 *	US-PATENT-CLASS-353-61	c 34	N74-23066 *
US-PATENT-CLASS-350-1	c 07	N71-29065 *	US-PATENT-CLASS-350-319	c 74	N85-29750 *	US-PATENT-CLASS-354-118	c 74	N81-17886 *
US-PATENT-CLASS-350-1	c 16	N72-12440 *	US-PATENT-CLASS-350-319	c 74	N86-20125 *	US-PATENT-CLASS-354-217	c 35	N82-26628 *
US-PATENT-CLASS-350-1	c 24	N76-24363 *	US-PATENT-CLASS-350-319	c 09	N87-14355 *	US-PATENT-CLASS-354-234	c 33	N74-20861 *
US-PATENT-CLASS-350-1	c 74	N78-15879 *	US-PATENT-CLASS-350-320	c 74	N77-28933 *	US-PATENT-CLASS-354-234	c 70	N74-21300 *
US-PATENT-CLASS-350-202	c 23	N73-20741 *	US-PATENT-CLASS-350-320	c 44	N77-32583 *	US-PATENT-CLASS-354-289	c 35	N82-26628 *
US-PATENT-CLASS-350-202	c 74	N77-28932 *	US-PATENT-CLASS-350-320	c 73	N78-32848 *	US-PATENT-CLASS-354-479	c 74	N86-28732 *
US-PATENT-CLASS-350-203	c 14	N72-25409 *	US-PATENT-CLASS-350-320	c 44	N79-14529 *	US-PATENT-CLASS-354-62	c 52	N87-24874 *
US-PATENT-CLASS-350-204	c 14	N73-30393 *	US-PATENT-CLASS-350-320	c 74	N85-29749 *	US-PATENT-CLASS-354-77	c 74	N79-20856 *
US-PATENT-CLASS-350-204	c 74	N78-17866 *	US-PATENT-CLASS-350-320	c 35	N91-13694 *	US-PATENT-CLASS-355-18	c 14	N73-33361 *
US-PATENT-CLASS-350-211	c 44	N76-14602 *	US-PATENT-CLASS-350-321	c 74	N85-29750 *	US-PATENT-CLASS-356-103	c 14	N71-28994 *
US-PATENT-CLASS-350-213	c 14	N71-15622 *	US-PATENT-CLASS-350-331-R	c 74	N89-14078 *	US-PATENT-CLASS-356-103	c 36	N75-10528 *
US-PATENT-CLASS-350-226	c 74	N80-27185 *	US-PATENT-CLASS-350-335	c 74	N86-21348 *	US-PATENT-CLASS-356-103	c 74	N78-13874 *
US-PATENT-CLASS-350-236	c 74	N74-15095 *	US-PATENT-CLASS-350-337	c 74	N89-14078 *	US-PATENT-CLASS-356-104	c 16	N71-24074 *
US-PATENT-CLASS-350-23	c 14	N72-22441 *	US-PATENT-CLASS-350-342	c 76	N85-33826 *	US-PATENT-CLASS-356-104	c 74	N78-13874 *
US-PATENT-CLASS-350-253	c 35	N77-27366 *	US-PATENT-CLASS-350-342	c 74	N89-14078 *	US-PATENT-CLASS-356-106LR	c 36	N75-19653 *
US-PATENT-CLASS-350-25	c 74	N80-21138 *	US-PATENT-CLASS-350-353	c 74	N83-19597 *	US-PATENT-CLASS-356-106R	c 72	N74-19130 *
US-PATENT-CLASS-350-269	c 33	N74-20861 *	US-PATENT-CLASS-350-353	c 74	N91-26918 *	US-PATENT-CLASS-356-106R	c 36	N76-14447 *
US-PATENT-CLASS-350-26	c 14	N72-22441 *	US-PATENT-CLASS-350-354	c 32	N86-20647 *	US-PATENT-CLASS-356-106R	c 35	N77-10493 *
US-PATENT-CLASS-350-270	c 70	N74-21300 *	US-PATENT-CLASS-350-354	c 74	N89-14077 *	US-PATENT-CLASS-356-106R	c 47	N77-10753 *
US-PATENT-CLASS-350-275	c 09	N71-19479 *	US-PATENT-CLASS-350-354	c 35	N91-13694 *	US-PATENT-CLASS-356-106S	c 23	N73-13661 *
US-PATENT-CLASS-350-276-R	c 74	N86-20125 *	US-PATENT-CLASS-350-354	c 74	N91-26918 *	US-PATENT-CLASS-356-106S	c 35	N76-31490 *
US-PATENT-CLASS-350-276R	c 74	N86-28732 *	US-PATENT-CLASS-350-356	c 74	N90-22383 *	US-PATENT-CLASS-356-106S	c 35	N78-18391 *
US-PATENT-CLASS-350-285	c 14	N71-15605 *	US-PATENT-CLASS-350-358	c 36	N82-29589 *	US-PATENT-CLASS-356-106S	c 35	N74-23040 *
US-PATENT-CLASS-350-285	c 14	N71-17662 *	US-PATENT-CLASS-350-358	c 74	N91-26918 *	US-PATENT-CLASS-356-106	c 14	N71-17627 *
US-PATENT-CLASS-350-285	c 19	N71-26674 *	US-PATENT-CLASS-350-359	c 36	N80-16321 *	US-PATENT-CLASS-356-106	c 14	N71-17655 *
US-PATENT-CLASS-350-285	c 15	N72-11386 *	US-PATENT-CLASS-350-35	c 14	N72-22441 *	US-PATENT-CLASS-356-106	c 14	N71-27215 *
US-PATENT-CLASS-350-285	c 16	N73-33397 *	US-PATENT-CLASS-350-36	c 14	N72-22441 *	US-PATENT-CLASS-356-106	c 14	N73-12446 *
US-PATENT-CLASS-350-285	c 74	N74-15095 *	US-PATENT-CLASS-350-370	c 35	N81-33448 *	US-PATENT-CLASS-356-106	c 35	N74-15146 *
US-PATENT-CLASS-350-285	c 74	N80-21138 *	US-PATENT-CLASS-350-443	c 74	N84-23248 *	US-PATENT-CLASS-356-107	c 16	N71-24170 *
US-PATENT-CLASS-350-286	c 07	N71-29065 *	US-PATENT-CLASS-350-445	c 74	N83-36898 *	US-PATENT-CLASS-356-108	c 26	N73-26751 *
US-PATENT-CLASS-350-286	c 73	N78-32848 *	US-PATENT-CLASS-350-448	c 74	N86-20125 *	US-PATENT-CLASS-356-108	c 16	N73-30476 *

US-PATENT-CLASS-356-109	c 16	N73-30476 *	US-PATENT-CLASS-356-236	c 74	N77-21941 *	US-PATENT-CLASS-356-394	c 33	N83-18996 *
US-PATENT-CLASS-356-110	c 14	N73-25463 *	US-PATENT-CLASS-356-236	c 74	N86-26190 *	US-PATENT-CLASS-356-399	c 74	N91-32922 *
US-PATENT-CLASS-356-110	c 35	N78-10891 *	US-PATENT-CLASS-356-237	c 74	N77-10899 *	US-PATENT-CLASS-356-4	c 74	N86-21348 *
US-PATENT-CLASS-356-112	c 72	N74-19310 *	US-PATENT-CLASS-356-237	c 38	N78-17395 *	US-PATENT-CLASS-356-4.5	c 74	N86-32266 *
US-PATENT-CLASS-356-113	c 14	N72-17323 *	US-PATENT-CLASS-356-237	c 38	N78-17396 *	US-PATENT-CLASS-356-402	c 74	N86-29650 *
US-PATENT-CLASS-356-113	c 35	N74-23040 *	US-PATENT-CLASS-356-237	c 35	N79-28527 *	US-PATENT-CLASS-356-404	c 35	N79-28527 *
US-PATENT-CLASS-356-114	c 14	N73-12446 *	US-PATENT-CLASS-356-239	c 74	N77-10899 *	US-PATENT-CLASS-356-406	c 52	N81-27783 *
US-PATENT-CLASS-356-114	c 35	N76-31490 *	US-PATENT-CLASS-356-241	c 14	N72-32452 *	US-PATENT-CLASS-356-407	c 43	N79-17288 *
US-PATENT-CLASS-356-117	c 23	N71-16101 *	US-PATENT-CLASS-356-243	c 36	N80-16321 *	US-PATENT-CLASS-356-407	c 52	N81-27783 *
US-PATENT-CLASS-356-120	c 74	N78-27904 *	US-PATENT-CLASS-356-244	c 14	N72-17323 *	US-PATENT-CLASS-356-409	c 36	N87-28006 *
US-PATENT-CLASS-356-123	c 74	N76-19935 *	US-PATENT-CLASS-356-244	c 35	N76-31490 *	US-PATENT-CLASS-356-414	c 74	N92-29117 *
US-PATENT-CLASS-356-124	c 74	N76-19935 *	US-PATENT-CLASS-356-244	c 35	N80-28687 *	US-PATENT-CLASS-356-416	c 43	N79-17288 *
US-PATENT-CLASS-356-124	c 74	N79-11865 *	US-PATENT-CLASS-356-244	c 74	N86-26190 *	US-PATENT-CLASS-356-416	c 52	N81-27783 *
US-PATENT-CLASS-356-128	c 76	N87-25862 *	US-PATENT-CLASS-356-246	c 35	N74-27860 *	US-PATENT-CLASS-356-419	c 74	N86-29650 *
US-PATENT-CLASS-356-129	c 74	N79-20856 *	US-PATENT-CLASS-356-246	c 74	N78-17867 *	US-PATENT-CLASS-356-432	c 74	N81-17887 *
US-PATENT-CLASS-356-129	c 76	N87-25862 *	US-PATENT-CLASS-356-246	c 74	N87-14971 *	US-PATENT-CLASS-356-432	c 25	N81-25159 *
US-PATENT-CLASS-356-138	c 14	N72-20379 *	US-PATENT-CLASS-356-248	c 14	N72-22444 *	US-PATENT-CLASS-356-432	c 38	N92-29154 *
US-PATENT-CLASS-356-138	c 16	N73-33397 *	US-PATENT-CLASS-356-256	c 36	N87-28006 *	US-PATENT-CLASS-356-434	c 35	N84-34705 *
US-PATENT-CLASS-356-141	c 14	N72-27409 *	US-PATENT-CLASS-356-28.5	c 32	N80-24510 *	US-PATENT-CLASS-356-437	c 25	N81-14015 *
US-PATENT-CLASS-356-141	c 14	N73-28490 *	US-PATENT-CLASS-356-28.5	c 36	N81-24422 *	US-PATENT-CLASS-356-43	c 74	N74-15095 *
US-PATENT-CLASS-356-141	c 36	N74-21091 *	US-PATENT-CLASS-356-28.5	c 36	N82-32712 *	US-PATENT-CLASS-356-43	c 75	N74-30156 *
US-PATENT-CLASS-356-141	c 89	N74-30886 *	US-PATENT-CLASS-356-28.5	c 35	N86-32697 *	US-PATENT-CLASS-356-43	c 36	N85-21639 *
US-PATENT-CLASS-356-141	c 74	N77-22951 *	US-PATENT-CLASS-356-28.5	c 35	N87-14669 *	US-PATENT-CLASS-356-43	c 36	N90-17132 *
US-PATENT-CLASS-356-141	c 09	N91-14356 *	US-PATENT-CLASS-356-28.5	c 36	N87-17026 *	US-PATENT-CLASS-356-446	c 74	N86-26190 *
US-PATENT-CLASS-356-141	c 35	N91-15512 *	US-PATENT-CLASS-356-28.5	c 36	N88-14350 *	US-PATENT-CLASS-356-45	c 36	N85-21639 *
US-PATENT-CLASS-356-147	c 89	N74-30886 *	US-PATENT-CLASS-356-28.5	c 33	N89-14384 *	US-PATENT-CLASS-356-4	c 14	N72-17326 *
US-PATENT-CLASS-356-148	c 16	N73-33397 *	US-PATENT-CLASS-356-28.5	c 33	N89-14385 *	US-PATENT-CLASS-356-4	c 07	N73-26119 *
US-PATENT-CLASS-356-150	c 15	N71-28740 *	US-PATENT-CLASS-356-28.5	c 36	N90-25340 *	US-PATENT-CLASS-356-4	c 36	N74-15145 *
US-PATENT-CLASS-356-150	c 74	N80-21138 *	US-PATENT-CLASS-356-28	c 21	N71-19212 *	US-PATENT-CLASS-356-4	c 35	N75-15014 *
US-PATENT-CLASS-356-152	c 15	N71-28740 *	US-PATENT-CLASS-356-28	c 16	N71-24828 *	US-PATENT-CLASS-356-4	c 36	N83-34304 *
US-PATENT-CLASS-356-152	c 16	N72-13437 *	US-PATENT-CLASS-356-28	c 72	N74-19310 *	US-PATENT-CLASS-356-4	c 36	N88-24958 *
US-PATENT-CLASS-356-152	c 14	N72-20379 *	US-PATENT-CLASS-356-28	c 36	N75-15028 *	US-PATENT-CLASS-356-51	c 06	N72-31141 *
US-PATENT-CLASS-356-152	c 14	N72-27409 *	US-PATENT-CLASS-356-28	c 35	N75-16783 *	US-PATENT-CLASS-356-51	c 35	N75-30502 *
US-PATENT-CLASS-356-152	c 14	N73-25462 *	US-PATENT-CLASS-356-28	c 36	N76-14447 *	US-PATENT-CLASS-356-51	c 35	N83-21311 *
US-PATENT-CLASS-356-152	c 36	N74-15145 *	US-PATENT-CLASS-356-28	c 36	N77-25501 *	US-PATENT-CLASS-356-51	c 35	N84-34705 *
US-PATENT-CLASS-356-152	c 36	N74-21091 *	US-PATENT-CLASS-356-28	c 74	N78-17866 *	US-PATENT-CLASS-356-51	c 36	N87-28006 *
US-PATENT-CLASS-356-152	c 74	N74-21304 *	US-PATENT-CLASS-356-28	c 35	N79-18296 *	US-PATENT-CLASS-356-51	c 74	N93-29086 *
US-PATENT-CLASS-356-152	c 74	N77-22951 *	US-PATENT-CLASS-356-28	c 36	N80-16321 *	US-PATENT-CLASS-356-5	c 07	N73-26119 *
US-PATENT-CLASS-356-152	c 74	N80-21138 *	US-PATENT-CLASS-356-28	c 36	N87-17026 *	US-PATENT-CLASS-356-5	c 36	N74-15145 *
US-PATENT-CLASS-356-152	c 37	N81-27519 *	US-PATENT-CLASS-356-28	c 36	N90-25340 *	US-PATENT-CLASS-356-5	c 36	N75-15028 *
US-PATENT-CLASS-356-152	c 09	N91-14356 *	US-PATENT-CLASS-356-28	c 02	N92-34172 *	US-PATENT-CLASS-356-5	c 32	N82-23376 *
US-PATENT-CLASS-356-152	c 35	N91-15512 *	US-PATENT-CLASS-356-300	c 43	N79-17288 *	US-PATENT-CLASS-356-5	c 74	N85-34629 *
US-PATENT-CLASS-356-153	c 15	N71-28740 *	US-PATENT-CLASS-356-300	c 20	N93-18856 *	US-PATENT-CLASS-356-5	c 74	N86-32266 *
US-PATENT-CLASS-356-153	c 23	N71-29125 *	US-PATENT-CLASS-356-301	c 35	N87-14669 *	US-PATENT-CLASS-356-5	c 32	N87-14559 *
US-PATENT-CLASS-356-153	c 16	N73-33397 *	US-PATENT-CLASS-356-311	c 35	N86-25753 *	US-PATENT-CLASS-356-5	c 35	N91-15512 *
US-PATENT-CLASS-356-153	c 18	N76-14186 *	US-PATENT-CLASS-356-311	c 20	N93-18856 *	US-PATENT-CLASS-356-5	c 74	N91-27957 *
US-PATENT-CLASS-356-154	c 15	N71-26673 *	US-PATENT-CLASS-356-318	c 35	N86-25753 *	US-PATENT-CLASS-356-71	c 66	N76-19888 *
US-PATENT-CLASS-356-159	c 36	N78-14380 *	US-PATENT-CLASS-356-318	c 02	N92-34172 *	US-PATENT-CLASS-356-72	c 14	N71-23268 *
US-PATENT-CLASS-356-160	c 36	N78-14380 *	US-PATENT-CLASS-356-323	c 74	N85-23396 *	US-PATENT-CLASS-356-72	c 33	N73-27796 *
US-PATENT-CLASS-356-161	c 26	N73-26751 *	US-PATENT-CLASS-356-326	c 74	N93-29086 *	US-PATENT-CLASS-356-72	c 38	N78-32447 *
US-PATENT-CLASS-356-162	c 66	N76-19888 *	US-PATENT-CLASS-356-328	c 35	N80-26635 *	US-PATENT-CLASS-356-72	c 74	N80-33210 *
US-PATENT-CLASS-356-165	c 38	N78-17396 *	US-PATENT-CLASS-356-328	c 74	N93-13419 *	US-PATENT-CLASS-356-72	c 35	N86-32697 *
US-PATENT-CLASS-356-166	c 14	N71-23175 *	US-PATENT-CLASS-356-32	c 14	N72-11364 *	US-PATENT-CLASS-356-73.1	c 76	N90-24150 *
US-PATENT-CLASS-356-167	c 14	N72-11364 *	US-PATENT-CLASS-356-32	c 32	N73-20740 *	US-PATENT-CLASS-356-73	c 75	N74-30156 *
US-PATENT-CLASS-356-167	c 66	N76-19888 *	US-PATENT-CLASS-356-32	c 39	N81-25400 *	US-PATENT-CLASS-356-73	c 38	N78-32447 *
US-PATENT-CLASS-356-167	c 74	N78-27904 *	US-PATENT-CLASS-356-330	c 74	N85-23396 *	US-PATENT-CLASS-356-73	c 35	N84-33766 *
US-PATENT-CLASS-356-169	c 60	N78-10709 *	US-PATENT-CLASS-356-331	c 74	N85-23396 *	US-PATENT-CLASS-356-73	c 09	N86-32447 *
US-PATENT-CLASS-356-171	c 74	N77-22950 *	US-PATENT-CLASS-356-334	c 74	N80-21140 *	US-PATENT-CLASS-356-73	c 35	N86-32697 *
US-PATENT-CLASS-356-172	c 16	N73-33397 *	US-PATENT-CLASS-356-345	c 74	N81-17888 *	US-PATENT-CLASS-356-73	c 76	N90-24150 *
US-PATENT-CLASS-356-172	c 36	N74-21091 *	US-PATENT-CLASS-356-345	c 74	N81-29963 *	US-PATENT-CLASS-356-74	c 30	N71-15990 *
US-PATENT-CLASS-356-172	c 74	N77-22951 *	US-PATENT-CLASS-356-345	c 36	N84-14509 *	US-PATENT-CLASS-356-74	c 35	N84-33766 *
US-PATENT-CLASS-356-17	c 14	N72-21409 *	US-PATENT-CLASS-356-345	c 74	N86-21348 *	US-PATENT-CLASS-356-76	c 23	N71-26206 *
US-PATENT-CLASS-356-180	c 35	N74-27860 *	US-PATENT-CLASS-356-345	c 74	N91-21871 *	US-PATENT-CLASS-356-76	c 14	N71-29041 *
US-PATENT-CLASS-356-186	c 35	N75-19613 *	US-PATENT-CLASS-356-346	c 35	N80-20563 *	US-PATENT-CLASS-356-83	c 35	N75-19613 *
US-PATENT-CLASS-356-188	c 35	N84-33766 *	US-PATENT-CLASS-356-346	c 74	N81-29963 *	US-PATENT-CLASS-356-85	c 37	N74-18123 *
US-PATENT-CLASS-356-189	c 35	N75-19613 *	US-PATENT-CLASS-356-347	c 35	N84-22929 *	US-PATENT-CLASS-356-85	c 75	N74-30156 *
US-PATENT-CLASS-356-189	c 35	N84-33766 *	US-PATENT-CLASS-356-347	c 35	N89-26202 *	US-PATENT-CLASS-356-87	c 75	N74-30156 *
US-PATENT-CLASS-356-18	c 14	N72-21409 *	US-PATENT-CLASS-356-349	c 36	N82-16396 *	US-PATENT-CLASS-356-96	c 35	N75-19613 *
US-PATENT-CLASS-356-197	c 37	N74-18123 *	US-PATENT-CLASS-356-350	c 35	N81-33448 *	US-PATENT-CLASS-356-97	c 35	N77-14411 *
US-PATENT-CLASS-356-199	c 36	N78-14380 *	US-PATENT-CLASS-356-350	c 74	N87-32259 *	US-PATENT-CLASS-357-12	c 33	N85-21492 *
US-PATENT-CLASS-356-1	c 36	N83-34304 *	US-PATENT-CLASS-356-351	c 35	N81-33448 *	US-PATENT-CLASS-357-13	c 35	N90-17118 *
US-PATENT-CLASS-356-1	c 36	N88-24958 *	US-PATENT-CLASS-356-351	c 35	N85-30282 *	US-PATENT-CLASS-357-15	c 44	N78-13526 *
US-PATENT-CLASS-356-1	c 09	N91-14356 *	US-PATENT-CLASS-356-351	c 74	N92-22034 *	US-PATENT-CLASS-357-15	c 44	N79-11467 *
US-PATENT-CLASS-356-201	c 75	N74-30156 *	US-PATENT-CLASS-356-352	c 74	N81-17888 *	US-PATENT-CLASS-357-15	c 44	N81-29525 *
US-PATENT-CLASS-356-201	c 35	N77-14411 *	US-PATENT-CLASS-356-353	c 74	N83-32577 *	US-PATENT-CLASS-357-15	c 76	N86-20150 *
US-PATENT-CLASS-356-202	c 26	N73-26751 *	US-PATENT-CLASS-356-356	c 36	N81-24422 *	US-PATENT-CLASS-357-15	c 33	N91-14551 *
US-PATENT-CLASS-356-203	c 14	N71-26788 *	US-PATENT-CLASS-356-356	c 74	N93-11058 *	US-PATENT-CLASS-357-15	c 33	N91-21434 *
US-PATENT-CLASS-356-204	c 35	N77-14411 *	US-PATENT-CLASS-356-357	c 74	N83-21949 *	US-PATENT-CLASS-357-15	c 33	N92-16197 *
US-PATENT-CLASS-356-204	c 74	N78-17867 *	US-PATENT-CLASS-356-358	c 74	N81-17888 *	US-PATENT-CLASS-357-16	c 44	N78-13526 *
US-PATENT-CLASS-356-207	c 45	N76-17656 *	US-PATENT-CLASS-356-358	c 36	N81-24422 *	US-PATENT-CLASS-357-16	c 44	N79-11467 *
US-PATENT-CLASS-356-208	c 74	N78-33913 *	US-PATENT-CLASS-356-358	c 35	N85-30282 *	US-PATENT-CLASS-357-16	c 74	N91-25841 *
US-PATENT-CLASS-356-209	c 23	N71-16341 *	US-PATENT-CLASS-356-360	c 74	N92-22034 *	US-PATENT-CLASS-357-16	c 76	N93-11056 *
US-PATENT-CLASS-356-209	c 14	N71-28993 *	US-PATENT-CLASS-356-360	c 74	N93-11058 *	US-PATENT-CLASS-357-17	c 36	N85-30305 *
US-PATENT-CLASS-356-209	c 14	N72-17323 *	US-PATENT-CLASS-356-361	c 35	N89-26202 *	US-PATENT-CLASS-357-17	c 74	N91-25841 *
US-PATENT-CLASS-356-209	c 35	N76-31490 *	US-PATENT-CLASS-356-363	c 74	N83-32577 *	US-PATENT-CLASS-357-22	c 33	N79-11314 *
US-PATENT-CLASS-356-210	c 74	N79-11865 *	US-PATENT-CLASS-356-363	c 74	N92-22034 *	US-PATENT-CLASS-357-22	c 33	N79-12321 *
US-PATENT-CLASS-356-212	c 35	N77-31465 *	US-PATENT-CLASS-356-369	c 35	N80-28687 *	US-PATENT-CLASS-357-22	c 33	N90-20282 *
US-PATENT-CLASS-356-213	c 39	N81-25400 *	US-PATENT-CLASS-356-36	c 23	N71-16365 *	US-PATENT-CLASS-357-23.12	c 76	N87-13313 *
US-PATENT-CLASS-356-216	c 74	N74-15095 *	US-PATENT-CLASS-356-36	c 20	N93-18856 *	US-PATENT-CLASS-357-23.1	c 76	N87-13313 *
US-PATENT-CLASS-356-216	c 35	N80-18359 *	US-PATENT-CLASS-356-370	c 74	N92-29117 *	US-PATENT-CLASS-357-23.6	c 33	N86-19516 *
US-PATENT-CLASS-356-216	c 39	N81-25400 *	US-PATENT-CLASS-356-375	c 74	N91-32922 *	US-PATENT-CLASS-357-231	c 33	N88-14271 *
US-PATENT-CLASS-356-216	c 35	N84-22931 *	US-PATENT-CLASS-356-376	c 36	N88-24958 *	US-PATENT-CLASS-357-23	c 76	N75-25730 *
US-PATENT-CLASS-356-222	c 03	N72-20033 *	US-PATENT-CLASS-356-376	c 74	N93-11058 *	US-PATENT-CLASS-357-23	c 33	N79-12321 *
US-PATENT-CLASS-356-222	c 47	N83-32232 *	US-PATENT-CLASS-356-37	c 45	N76-21742 *	US-PATENT-CLASS-357-23	c 33	N81-26360 *
US-PATENT-CLASS-356-234	c 39	N81-25400 *	US-PATENT-CLASS-356-386	c 36	N82-16396 *	US-PATENT-CLASS-357-24	c 33	N75-31331 *
US-PATENT-CLASS-356-234	c 35	N84-22931 *	US-PATENT-CLASS-356-389	c 33	N87-14594 *	US-PATENT-CLASS-357-24	c 33	N88-14271 *

## REPORT NUMBER INDEX

## US-PATENT-CLASS-363-70

US-PATENT-CLASS-357-27	c 35	N91-14588 *	US-PATENT-CLASS-357-67	c 44	N79-31752 *	US-PATENT-CLASS-359-230	c 37	N92-29151 *
US-PATENT-CLASS-357-28	c 35	N92-33614 *	US-PATENT-CLASS-357-68	c 33	N90-20282 *	US-PATENT-CLASS-359-236	c 37	N92-29151 *
US-PATENT-CLASS-357-29	c 76	N75-25730 *	US-PATENT-CLASS-357-69	c 33	N92-16197 *	US-PATENT-CLASS-359-240	c 74	N92-16808 *
US-PATENT-CLASS-357-29	c 35	N84-33765 *	US-PATENT-CLASS-357-71S	c 33	N92-16197 *	US-PATENT-CLASS-359-241	c 74	N92-16808 *
US-PATENT-CLASS-357-29	c 76	N87-13313 *	US-PATENT-CLASS-357-72	c 33	N91-21434 *	US-PATENT-CLASS-359-241	c 74	N92-33028 *
US-PATENT-CLASS-357-29	c 35	N90-21358 *	US-PATENT-CLASS-357-73	c 33	N88-23941 *	US-PATENT-CLASS-359-246	c 74	N92-29117 *
US-PATENT-CLASS-357-29	c 33	N91-14551 *	US-PATENT-CLASS-357-74	c 37	N78-13320 *	US-PATENT-CLASS-359-247	c 74	N92-29117 *
US-PATENT-CLASS-357-29	c 33	N92-16196 *	US-PATENT-CLASS-357-74	c 33	N79-28549 *	US-PATENT-CLASS-359-281	c 74	N92-29117 *
US-PATENT-CLASS-357-30	c 44	N76-28635 *	US-PATENT-CLASS-357-76	c 33	N88-23941 *	US-PATENT-CLASS-359-308	c 74	N93-29086 *
US-PATENT-CLASS-357-30	c 44	N78-13526 *	US-PATENT-CLASS-357-79	c 37	N90-20282 *	US-PATENT-CLASS-359-362	c 74	N92-16810 *
US-PATENT-CLASS-357-30	c 44	N78-24609 *	US-PATENT-CLASS-357-7	c 33	N79-28549 *	US-PATENT-CLASS-359-498	c 36	N92-16290 *
US-PATENT-CLASS-357-30	c 44	N78-25527 *	US-PATENT-CLASS-357-81	c 37	N75-13131 *	US-PATENT-CLASS-359-557	c 74	N92-16811 *
US-PATENT-CLASS-357-30	c 44	N79-11467 *	US-PATENT-CLASS-357-81	c 37	N79-28549 *	US-PATENT-CLASS-359-559	c 74	N92-33022 *
US-PATENT-CLASS-357-30	c 44	N79-14528 *	US-PATENT-CLASS-357-81	c 33	N88-23941 *	US-PATENT-CLASS-359-559	c 60	N92-33057 *
US-PATENT-CLASS-357-30	c 44	N79-31752 *	US-PATENT-CLASS-357-82	c 37	N90-20282 *	US-PATENT-CLASS-359-561	c 74	N92-33022 *
US-PATENT-CLASS-357-30	c 44	N80-29835 *	US-PATENT-CLASS-357-82	c 33	N79-28549 *	US-PATENT-CLASS-359-561	c 60	N92-33057 *
US-PATENT-CLASS-357-30	c 44	N81-19558 *	US-PATENT-CLASS-357-83	c 76	N91-28014 *	US-PATENT-CLASS-359-572	c 74	N92-16810 *
US-PATENT-CLASS-357-30	c 44	N81-29525 *	US-PATENT-CLASS-357-83	c 37	N79-28549 *	US-PATENT-CLASS-359-67	c 39	N93-29613 *
US-PATENT-CLASS-357-30	c 44	N82-26777 *	US-PATENT-CLASS-357-90	c 35	N90-21358 *	US-PATENT-CLASS-359-744	c 74	N92-16810 *
US-PATENT-CLASS-357-30	c 44	N82-29709 *	US-PATENT-CLASS-357-91	c 76	N75-25730 *	US-PATENT-CLASS-359-74	c 39	N93-29613 *
US-PATENT-CLASS-357-30	c 44	N82-31764 *	US-PATENT-CLASS-357-91	c 33	N78-27326 *	US-PATENT-CLASS-359-7	c 74	N92-33022 *
US-PATENT-CLASS-357-30	c 44	N83-13579 *	US-PATENT-CLASS-357-91	c 44	N80-29835 *	US-PATENT-CLASS-359-813	c 74	N92-16811 *
US-PATENT-CLASS-357-30	c 44	N83-32177 *	US-PATENT-CLASS-357-91	c 33	N81-26360 *	US-PATENT-CLASS-359-819	c 74	N92-16811 *
US-PATENT-CLASS-357-30	c 35	N84-33765 *	US-PATENT-CLASS-358-101	c 44	N86-32875 *	US-PATENT-CLASS-359-82	c 39	N93-29613 *
US-PATENT-CLASS-357-30	c 33	N85-21492 *	US-PATENT-CLASS-358-101	c 37	N86-21850 *	US-PATENT-CLASS-359-859	c 74	N93-13419 *
US-PATENT-CLASS-357-30	c 44	N85-21768 *	US-PATENT-CLASS-358-103	c 32	N93-18284 *	US-PATENT-CLASS-36-119	c 54	N78-17675 *
US-PATENT-CLASS-357-30	c 44	N85-30475 *	US-PATENT-CLASS-358-103	c 18	N92-28750 *	US-PATENT-CLASS-36-92	c 54	N78-17675 *
US-PATENT-CLASS-357-30	c 33	N86-19516 *	US-PATENT-CLASS-358-104	c 32	N93-18284 *	US-PATENT-CLASS-360-101	c 35	N76-16391 *
US-PATENT-CLASS-357-30	c 76	N86-20150 *	US-PATENT-CLASS-358-104	c 09	N78-18083 *	US-PATENT-CLASS-360-10	c 35	N76-16391 *
US-PATENT-CLASS-357-30	c 44	N86-32875 *	US-PATENT-CLASS-358-104	c 74	N79-13855 *	US-PATENT-CLASS-360-25	c 35	N77-17426 *
US-PATENT-CLASS-357-30	c 76	N87-13313 *	US-PATENT-CLASS-358-105	c 36	N83-34304 *	US-PATENT-CLASS-360-26	c 33	N77-18353 *
US-PATENT-CLASS-357-30	c 33	N87-23879 *	US-PATENT-CLASS-358-105	c 39	N83-20280 *	US-PATENT-CLASS-360-31	c 35	N77-17426 *
US-PATENT-CLASS-357-30	c 33	N88-14271 *	US-PATENT-CLASS-358-105	c 74	N86-21348 *	US-PATENT-CLASS-360-35	c 35	N76-16391 *
US-PATENT-CLASS-357-30	c 33	N88-14271 *	US-PATENT-CLASS-358-105	c 17	N87-25348 *	US-PATENT-CLASS-360-48	c 60	N92-29132 *
US-PATENT-CLASS-357-30	c 76	N88-14836 *	US-PATENT-CLASS-358-105	c 54	N92-29129 *	US-PATENT-CLASS-360-51	c 33	N76-18353 *
US-PATENT-CLASS-357-30	c 35	N90-17118 *	US-PATENT-CLASS-358-106	c 39	N78-16387 *	US-PATENT-CLASS-360-98.01	c 60	N92-29132 *
US-PATENT-CLASS-357-30	c 35	N90-21358 *	US-PATENT-CLASS-358-107	c 35	N79-18296 *	US-PATENT-CLASS-360-9	c 35	N76-16391 *
US-PATENT-CLASS-357-30	c 33	N91-14551 *	US-PATENT-CLASS-358-107	c 36	N88-24958 *	US-PATENT-CLASS-361-100	c 33	N83-34190 *
US-PATENT-CLASS-357-30	c 35	N91-14588 *	US-PATENT-CLASS-358-108	c 32	N93-18284 *	US-PATENT-CLASS-361-141	c 33	N82-11357 *
US-PATENT-CLASS-357-30	c 33	N91-21434 *	US-PATENT-CLASS-358-109	c 32	N79-20297 *	US-PATENT-CLASS-361-148	c 70	N92-29130 *
US-PATENT-CLASS-357-30	c 74	N91-25841 *	US-PATENT-CLASS-358-109	c 33	N81-33403 *	US-PATENT-CLASS-361-149	c 70	N92-29130 *
US-PATENT-CLASS-357-30	c 44	N91-27614 *	US-PATENT-CLASS-358-109	c 43	N82-13465 *	US-PATENT-CLASS-361-170	c 33	N79-28415 *
US-PATENT-CLASS-357-30	c 76	N93-11056 *	US-PATENT-CLASS-358-109	c 36	N83-34304 *	US-PATENT-CLASS-361-218	c 03	N88-14083 *
US-PATENT-CLASS-357-30	c 74	N93-13419 *	US-PATENT-CLASS-358-109	c 32	N85-29117 *	US-PATENT-CLASS-361-222	c 03	N88-14083 *
US-PATENT-CLASS-357-32	c 35	N84-33765 *	US-PATENT-CLASS-358-109	c 35	N90-22769 *	US-PATENT-CLASS-361-226	c 28	N82-18401 *
US-PATENT-CLASS-357-32	c 33	N91-14551 *	US-PATENT-CLASS-358-111	c 52	N79-10724 *	US-PATENT-CLASS-361-230	c 28	N82-18401 *
US-PATENT-CLASS-357-34	c 74	N91-25841 *	US-PATENT-CLASS-358-113	c 35	N90-22770 *	US-PATENT-CLASS-361-267	c 70	N92-29130 *
US-PATENT-CLASS-357-35	c 33	N87-23879 *	US-PATENT-CLASS-358-125	c 74	N84-23247 *	US-PATENT-CLASS-361-283	c 33	N82-26572 *
US-PATENT-CLASS-357-40	c 36	N85-30305 *	US-PATENT-CLASS-358-125	c 74	N86-21348 *	US-PATENT-CLASS-361-334	c 35	N81-26431 *
US-PATENT-CLASS-357-41	c 33	N79-12321 *	US-PATENT-CLASS-358-12	c 74	N92-33017 *	US-PATENT-CLASS-361-383	c 31	N90-21215 *
US-PATENT-CLASS-357-42	c 76	N75-25730 *	US-PATENT-CLASS-358-133	c 32	N77-24328 *	US-PATENT-CLASS-361-384	c 31	N90-21215 *
US-PATENT-CLASS-357-45	c 33	N79-12321 *	US-PATENT-CLASS-358-133	c 32	N85-29117 *	US-PATENT-CLASS-361-385	c 31	N90-21215 *
US-PATENT-CLASS-357-45	c 44	N79-26475 *	US-PATENT-CLASS-358-133	c 17	N87-25348 *	US-PATENT-CLASS-361-386	c 24	N93-29614 *
US-PATENT-CLASS-357-46	c 36	N85-30305 *	US-PATENT-CLASS-358-133	c 32	N92-10128 *	US-PATENT-CLASS-361-394	c 32	N93-29087 *
US-PATENT-CLASS-357-46	c 74	N91-25841 *	US-PATENT-CLASS-358-135	c 74	N93-18276 *	US-PATENT-CLASS-361-395	c 32	N78-24391 *
US-PATENT-CLASS-357-47	c 33	N92-16197 *	US-PATENT-CLASS-358-135	c 32	N92-10128 *	US-PATENT-CLASS-361-56	c 33	N81-27397 *
US-PATENT-CLASS-357-4	c 33	N78-13320 *	US-PATENT-CLASS-358-138	c 32	N77-24328 *	US-PATENT-CLASS-361-65	c 33	N90-20320 *
US-PATENT-CLASS-357-4	c 76	N85-30922 *	US-PATENT-CLASS-358-138	c 17	N87-25348 *	US-PATENT-CLASS-361-79	c 33	N90-20320 *
US-PATENT-CLASS-357-4	c 35	N90-17118 *	US-PATENT-CLASS-358-142	c 74	N78-14889 *	US-PATENT-CLASS-361-91	c 33	N81-27397 *
US-PATENT-CLASS-357-4	c 35	N90-21358 *	US-PATENT-CLASS-358-160	c 60	N92-16563 *	US-PATENT-CLASS-362-11	c 74	N81-17886 *
US-PATENT-CLASS-357-4	c 76	N92-22041 *	US-PATENT-CLASS-358-161	c 32	N85-21427 *	US-PATENT-CLASS-362-241	c 74	N81-17886 *
US-PATENT-CLASS-357-4	c 76	N93-11056 *	US-PATENT-CLASS-358-168	c 32	N86-20647 *	US-PATENT-CLASS-362-269	c 17	N78-17140 *
US-PATENT-CLASS-357-50	c 76	N85-30922 *	US-PATENT-CLASS-358-174	c 32	N85-21427 *	US-PATENT-CLASS-363-100	c 33	N85-29147 *
US-PATENT-CLASS-357-52	c 76	N75-25730 *	US-PATENT-CLASS-358-181	c 32	N93-18284 *	US-PATENT-CLASS-363-101	c 33	N78-32341 *
US-PATENT-CLASS-357-52	c 44	N80-29835 *	US-PATENT-CLASS-358-183	c 60	N92-16563 *	US-PATENT-CLASS-363-101	c 33	N81-19392 *
US-PATENT-CLASS-357-52	c 76	N87-13313 *	US-PATENT-CLASS-358-213	c 33	N81-33403 *	US-PATENT-CLASS-363-132	c 33	N82-18494 *
US-PATENT-CLASS-357-54	c 76	N75-25730 *	US-PATENT-CLASS-358-213	c 33	N82-24416 *	US-PATENT-CLASS-363-134	c 33	N79-24257 *
US-PATENT-CLASS-357-55	c 33	N79-12321 *	US-PATENT-CLASS-358-213	c 74	N84-23247 *	US-PATENT-CLASS-363-147	c 44	N81-12542 *
US-PATENT-CLASS-357-55	c 33	N81-26360 *	US-PATENT-CLASS-358-217	c 32	N85-21427 *	US-PATENT-CLASS-363-16	c 33	N78-32341 *
US-PATENT-CLASS-357-55	c 33	N90-20282 *	US-PATENT-CLASS-358-219	c 32	N85-21427 *	US-PATENT-CLASS-363-17	c 33	N82-18494 *
US-PATENT-CLASS-357-55	c 33	N92-16197 *	US-PATENT-CLASS-358-222	c 74	N86-28732 *	US-PATENT-CLASS-363-19	c 33	N85-29147 *
US-PATENT-CLASS-357-56	c 33	N88-14271 *	US-PATENT-CLASS-358-225	c 74	N78-17865 *	US-PATENT-CLASS-363-21	c 33	N81-19392 *
US-PATENT-CLASS-357-58	c 33	N86-19516 *	US-PATENT-CLASS-358-22	c 60	N92-16563 *	US-PATENT-CLASS-363-21	c 33	N81-19393 *
US-PATENT-CLASS-357-58	c 35	N90-21358 *	US-PATENT-CLASS-358-231	c 74	N93-13711 *	US-PATENT-CLASS-363-22	c 33	N84-33663 *
US-PATENT-CLASS-357-58	c 33	N91-14551 *	US-PATENT-CLASS-358-232	c 74	N93-13711 *	US-PATENT-CLASS-363-23	c 33	N85-29147 *
US-PATENT-CLASS-357-59	c 44	N78-28635 *	US-PATENT-CLASS-358-36	c 32	N75-21485 *	US-PATENT-CLASS-363-24	c 33	N81-33404 *
US-PATENT-CLASS-357-59	c 44	N78-24609 *	US-PATENT-CLASS-358-41	c 74	N78-17865 *	US-PATENT-CLASS-363-25	c 33	N84-16453 *
US-PATENT-CLASS-357-59	c 44	N81-19558 *	US-PATENT-CLASS-358-44	c 74	N77-18893 *	US-PATENT-CLASS-363-27	c 44	N81-12542 *
US-PATENT-CLASS-357-59	c 33	N86-19516 *	US-PATENT-CLASS-358-55	c 74	N78-17865 *	US-PATENT-CLASS-363-36	c 33	N81-19393 *
US-PATENT-CLASS-357-5	c 33	N75-31332 *	US-PATENT-CLASS-358-61	c 74	N93-13711 *	US-PATENT-CLASS-363-40	c 33	N81-19393 *
US-PATENT-CLASS-357-5	c 33	N78-13320 *	US-PATENT-CLASS-358-81	c 32	N79-20297 *	US-PATENT-CLASS-363-47	c 33	N81-19393 *
US-PATENT-CLASS-357-5	c 76	N92-22040 *	US-PATENT-CLASS-358-88	c 74	N86-21348 *	US-PATENT-CLASS-363-49	c 33	N84-33663 *
US-PATENT-CLASS-357-5	c 76	N92-22041 *	US-PATENT-CLASS-358-88	c 32	N89-28676 *	US-PATENT-CLASS-363-53	c 33	N77-30365 *
US-PATENT-CLASS-357-60	c 33	N81-26360 *	US-PATENT-CLASS-358-88	c 74	N92-16809 *	US-PATENT-CLASS-363-54	c 33	N83-34190 *
US-PATENT-CLASS-357-61	c 33	N88-14271 *	US-PATENT-CLASS-358-91	c 74	N93-18276 *	US-PATENT-CLASS-363-56	c 33	N79-24254 *
US-PATENT-CLASS-357-61	c 35	N90-17118 *	US-PATENT-CLASS-358-92	c 32	N89-28676 *	US-PATENT-CLASS-363-56	c 33	N81-14220 *
US-PATENT-CLASS-357-63	c 33	N76-31409 *	US-PATENT-CLASS-358-92	c 74	N92-16809 *	US-PATENT-CLASS-363-57	c 33	N81-33404 *
US-PATENT-CLASS-357-63	c 44	N81-19558 *	US-PATENT-CLASS-358-93	c 35	N90-22770 *	US-PATENT-CLASS-363-60	c 33	N78-10377 *
US-PATENT-CLASS-357-63	c 44	N82-26777 *	US-PATENT-CLASS-358-96	c 52	N79-10724 *	US-PATENT-CLASS-363-60	c 44	N81-12542 *
US-PATENT-CLASS-357-65	c 44	N78-25527 *	US-PATENT-CLASS-359-849	c 74	N92-29122 *	US-PATENT-CLASS-363-61	c 33	N93-18278 *
US-PATENT-CLASS-357-65	c 44	N79-31752 *	US-PATENT-CLASS-359-107	c 60	N92-33057 *	US-PATENT-CLASS-363-61	c 33	N82-18494 *
US-PATENT-CLASS-357-65	c 33	N88-14271 *	US-PATENT-CLASS-359-108	c 60	N92-33057 *	US-PATENT-CLASS-363-65	c 33	N85-29147 *
US-PATENT-CLASS-357-67S	c 33	N91-21434 *	US-PATENT-CLASS-359-11	c 74	N92-16808 *	US-PATENT-CLASS-363-67	c 33	N84-16453 *
US-PATENT-CLASS-357-67	c 44	N78-25527 *	US-PATENT-CLASS-359-161	c 36	N93-18287 *	US-PATENT-CLASS-363-70	c 33	N77-30365 *
US-PATENT-CLASS-357-67	c 44	N79-11467 *						

## US-PATENT-CLASS-363-71

US-PATENT-CLASS-363-71 ..... c 33 N79-24254 \*  
US-PATENT-CLASS-363-71 ..... c 33 N79-24257 \*  
US-PATENT-CLASS-363-71 ..... c 33 N81-14220 \*  
US-PATENT-CLASS-363-71 ..... c 33 N84-16453 \*  
US-PATENT-CLASS-363-71 ..... c 33 N85-29147 \*  
US-PATENT-CLASS-363-78 ..... c 33 N81-14220 \*  
US-PATENT-CLASS-363-87 ..... c 33 N83-10345 \*  
US-PATENT-CLASS-363-89 ..... c 33 N78-10377 \*  
US-PATENT-CLASS-363-95 ..... c 33 N79-24257 \*  
US-PATENT-CLASS-363-97 ..... c 33 N79-24254 \*  
US-PATENT-CLASS-363-97 ..... c 09 N88-28939 \*  
US-PATENT-CLASS-364-DIG.1 ..... c 61 N93-18855 \*  
US-PATENT-CLASS-364-DIG.1 ..... c 60 N93-29608 \*  
US-PATENT-CLASS-364-106 ..... c 07 N81-19115 \*  
US-PATENT-CLASS-364-120 ..... c 52 N79-12694 \*  
US-PATENT-CLASS-364-131 ..... c 60 N89-26400 \*  
US-PATENT-CLASS-364-187 ..... c 61 N93-18855 \*  
US-PATENT-CLASS-364-191 ..... c 63 N92-33019 \*  
US-PATENT-CLASS-364-200 ..... c 62 N81-24779 \*  
US-PATENT-CLASS-364-200 ..... c 60 N81-27814 \*  
US-PATENT-CLASS-364-200 ..... c 60 N83-25378 \*  
US-PATENT-CLASS-364-200 ..... c 60 N83-32342 \*  
US-PATENT-CLASS-364-200 ..... c 32 N85-21428 \*  
US-PATENT-CLASS-364-200 ..... c 60 N85-21992 \*  
US-PATENT-CLASS-364-200 ..... c 60 N88-29310 \*  
US-PATENT-CLASS-364-200 ..... c 62 N91-25693 \* #  
US-PATENT-CLASS-364-228.3 ..... c 62 N91-14769 \*  
US-PATENT-CLASS-364-229.4 ..... c 60 N90-21527 \*  
US-PATENT-CLASS-364-229 ..... c 61 N93-18855 \*  
US-PATENT-CLASS-364-231.9 ..... c 62 N91-14769 \*  
US-PATENT-CLASS-364-231.9 ..... c 60 N93-29608 \*  
US-PATENT-CLASS-364-240 ..... c 61 N93-18855 \*  
US-PATENT-CLASS-364-243 ..... c 61 N93-18855 \*  
US-PATENT-CLASS-364-267.9 ..... c 60 N90-21527 \*  
US-PATENT-CLASS-364-280 ..... c 62 N91-14769 \*  
US-PATENT-CLASS-364-281.3 ..... c 62 N91-25693 \* #  
US-PATENT-CLASS-364-281.6 ..... c 62 N91-25693 \* #  
US-PATENT-CLASS-364-281.8 ..... c 62 N91-25693 \* #  
US-PATENT-CLASS-364-281 ..... c 62 N91-14769 \*  
US-PATENT-CLASS-364-281 ..... c 62 N91-25693 \* #  
US-PATENT-CLASS-364-300 ..... c 52 N79-12694 \*  
US-PATENT-CLASS-364-300 ..... c 62 N91-14769 \*  
US-PATENT-CLASS-364-400 ..... c 33 N85-29142 \*  
US-PATENT-CLASS-364-402 ..... c 62 N92-15620 \* #  
US-PATENT-CLASS-364-413 ..... c 39 N83-20280 \*  
US-PATENT-CLASS-364-415 ..... c 52 N79-12694 \*  
US-PATENT-CLASS-364-415 ..... c 35 N84-12445 \*  
US-PATENT-CLASS-364-417 ..... c 52 N79-10724 \*  
US-PATENT-CLASS-364-424.01 ..... c 54 N92-29129 \*  
US-PATENT-CLASS-364-427 ..... c 09 N90-20096 \*  
US-PATENT-CLASS-364-427 ..... c 04 N91-31120 \*  
US-PATENT-CLASS-364-428 ..... c 04 N91-31120 \*  
US-PATENT-CLASS-364-431 ..... c 07 N81-19115 \*  
US-PATENT-CLASS-364-433 ..... c 06 N86-27280 \*  
US-PATENT-CLASS-364-433 ..... c 09 N91-14356 \*  
US-PATENT-CLASS-364-434 ..... c 08 N79-23097 \*  
US-PATENT-CLASS-364-434 ..... c 08 N81-24106 \*  
US-PATENT-CLASS-364-435 ..... c 06 N86-27280 \*  
US-PATENT-CLASS-364-443 ..... c 47 N92-29148 \*  
US-PATENT-CLASS-364-452 ..... c 04 N84-27713 \*  
US-PATENT-CLASS-364-453 ..... c 18 N91-29152 \*  
US-PATENT-CLASS-364-453 ..... c 33 N85-29142 \*  
US-PATENT-CLASS-364-458 ..... c 32 N79-14267 \*  
US-PATENT-CLASS-364-459 ..... c 18 N92-28750 \*  
US-PATENT-CLASS-364-478 ..... c 37 N91-21544 \*  
US-PATENT-CLASS-364-481 ..... c 33 N90-19492 \*  
US-PATENT-CLASS-364-482 ..... c 33 N90-19492 \*  
US-PATENT-CLASS-364-484 ..... c 33 N89-14385 \*  
US-PATENT-CLASS-364-487 ..... c 17 N91-14371 \*  
US-PATENT-CLASS-364-500 ..... c 25 N88-29002 \*  
US-PATENT-CLASS-364-510 ..... c 34 N81-26402 \*  
US-PATENT-CLASS-364-513 ..... c 61 N91-14741 \*  
US-PATENT-CLASS-364-513 ..... c 37 N91-21542 \*  
US-PATENT-CLASS-364-513 ..... c 37 N91-21544 \*  
US-PATENT-CLASS-364-513 ..... c 33 N91-31528 \*  
US-PATENT-CLASS-364-513 ..... c 63 N91-31885 \*  
US-PATENT-CLASS-364-513 ..... c 62 N91-32852 \*  
US-PATENT-CLASS-364-514 ..... c 33 N81-33405 \*  
US-PATENT-CLASS-364-522 ..... c 39 N83-20280 \*  
US-PATENT-CLASS-364-550 ..... c 17 N91-14371 \*  
US-PATENT-CLASS-364-556 ..... c 36 N85-29264 \*  
US-PATENT-CLASS-364-557 ..... c 35 N84-14491 \*  
US-PATENT-CLASS-364-557 ..... c 25 N88-29002 \*  
US-PATENT-CLASS-364-558 ..... c 35 N84-14491 \*  
US-PATENT-CLASS-364-558 ..... c 07 N84-22559 \*  
US-PATENT-CLASS-364-559 ..... c 39 N83-20280 \*  
US-PATENT-CLASS-364-560 ..... c 43 N79-26439 \*  
US-PATENT-CLASS-364-561 ..... c 36 N88-24958 \*  
US-PATENT-CLASS-364-566 ..... c 18 N81-29152 \*  
US-PATENT-CLASS-364-571.01 ..... c 71 N93-24602 \*  
US-PATENT-CLASS-364-571 ..... c 34 N81-26402 \*  
US-PATENT-CLASS-364-571 ..... c 35 N84-14491 \*  
US-PATENT-CLASS-364-571 ..... c 33 N85-34333 \*  
US-PATENT-CLASS-364-571 ..... c 25 N88-29002 \*  
US-PATENT-CLASS-364-575 ..... c 74 N93-11058 \*  
US-PATENT-CLASS-364-578 ..... c 33 N85-34333 \*

US-PATENT-CLASS-364-578 ..... c 35 N90-23713 \*  
US-PATENT-CLASS-364-578 ..... c 61 N91-14741 \*  
US-PATENT-CLASS-364-578 ..... c 32 N91-25317 \*  
US-PATENT-CLASS-364-604 ..... c 32 N79-14267 \*  
US-PATENT-CLASS-364-713 ..... c 32 N79-20297 \*  
US-PATENT-CLASS-364-713 ..... c 74 N91-26918 \*  
US-PATENT-CLASS-364-717 ..... c 32 N82-31583 \*  
US-PATENT-CLASS-364-717 ..... c 33 N90-23636 \*  
US-PATENT-CLASS-364-723 ..... c 60 N85-33701 \*  
US-PATENT-CLASS-364-724.01 ..... c 33 N89-28713 \*  
US-PATENT-CLASS-364-724.05 ..... c 33 N89-28713 \*  
US-PATENT-CLASS-364-724.06 ..... c 61 N93-14882 \*  
US-PATENT-CLASS-364-724.07 ..... c 61 N93-14882 \*  
US-PATENT-CLASS-364-724.08 ..... c 61 N93-14882 \*  
US-PATENT-CLASS-364-728 ..... c 32 N79-14267 \*  
US-PATENT-CLASS-364-728 ..... c 60 N86-21154 \*  
US-PATENT-CLASS-364-728 ..... c 60 N88-24169 \*  
US-PATENT-CLASS-364-735 ..... c 33 N89-28713 \*  
US-PATENT-CLASS-364-746.1 ..... c 33 N90-23636 \*  
US-PATENT-CLASS-364-754 ..... c 33 N89-28713 \*  
US-PATENT-CLASS-364-757 ..... c 60 N88-24169 \*  
US-PATENT-CLASS-364-807 ..... c 62 N91-32852 \*  
US-PATENT-CLASS-364-807 ..... c 32 N92-22033 \*  
US-PATENT-CLASS-364-822 ..... c 32 N83-18975 \*  
US-PATENT-CLASS-364-822 ..... c 74 N86-21348 \*  
US-PATENT-CLASS-364-822 ..... c 74 N91-26918 \*  
US-PATENT-CLASS-364-825 ..... c 33 N82-24417 \*  
US-PATENT-CLASS-364-837 ..... c 74 N91-26918 \*  
US-PATENT-CLASS-364-841 ..... c 74 N91-26918 \*  
US-PATENT-CLASS-364-853 ..... c 60 N85-33701 \*  
US-PATENT-CLASS-364-861 ..... c 32 N83-18975 \*  
US-PATENT-CLASS-364-900 ..... c 52 N79-12694 \*  
US-PATENT-CLASS-364-900 ..... c 60 N79-20751 \*  
US-PATENT-CLASS-364-900 ..... c 60 N81-27814 \*  
US-PATENT-CLASS-364-900 ..... c 60 N83-32342 \*  
US-PATENT-CLASS-364-900 ..... c 60 N84-28491 \*  
US-PATENT-CLASS-364-900 ..... c 60 N84-28492 \*  
US-PATENT-CLASS-364-900 ..... c 33 N89-14384 \*  
US-PATENT-CLASS-364-900 ..... c 35 N90-23713 \*  
US-PATENT-CLASS-364-924.4 ..... c 35 N90-23713 \*  
US-PATENT-CLASS-364-925.1 ..... c 35 N90-23713 \*  
US-PATENT-CLASS-364-933.8 ..... c 35 N90-23713 \*  
US-PATENT-CLASS-364-934 ..... c 35 N90-23713 \*  
US-PATENT-CLASS-364-940.67 ..... c 60 N90-21527 \*  
US-PATENT-CLASS-364-942.51 ..... c 60 N90-21527 \*  
US-PATENT-CLASS-364-944 ..... c 60 N90-21527 \*  
US-PATENT-CLASS-364-975.5 ..... c 60 N90-21527 \*  
US-PATENT-CLASS-365-120 ..... c 33 N81-29342 \*  
US-PATENT-CLASS-365-131 ..... c 60 N93-22032 \*  
US-PATENT-CLASS-365-156 ..... c 60 N91-31810 \*  
US-PATENT-CLASS-365-158 ..... c 60 N93-14704 \*  
US-PATENT-CLASS-365-173 ..... c 60 N93-14704 \*  
US-PATENT-CLASS-365-200 ..... c 60 N91-31810 \*  
US-PATENT-CLASS-365-49 ..... c 60 N92-33057 \*  
US-PATENT-CLASS-365-768 ..... c 32 N86-27513 \*  
US-PATENT-CLASS-366-106 ..... c 71 N84-28568 \*  
US-PATENT-CLASS-366-114 ..... c 71 N83-35781 \*  
US-PATENT-CLASS-367-100 ..... c 32 N82-18443 \*  
US-PATENT-CLASS-367-102 ..... c 32 N82-18443 \*  
US-PATENT-CLASS-367-124 ..... c 35 N93-20569 \*  
US-PATENT-CLASS-367-156 ..... c 33 N92-15331 \*  
US-PATENT-CLASS-367-181 ..... c 33 N82-26572 \*  
US-PATENT-CLASS-367-189 ..... c 35 N84-22933 \*  
US-PATENT-CLASS-367-191 ..... c 71 N88-24241 \*  
US-PATENT-CLASS-367-26 ..... c 39 N80-10507 \*  
US-PATENT-CLASS-367-27 ..... c 31 N80-32584 \*  
US-PATENT-CLASS-367-36 ..... c 31 N80-32584 \*  
US-PATENT-CLASS-367-57 ..... c 31 N80-32584 \*  
US-PATENT-CLASS-367-88 ..... c 32 N82-18443 \*  
US-PATENT-CLASS-367-88 ..... c 32 N83-31918 \*  
US-PATENT-CLASS-367-88 ..... c 43 N86-19711 \*  
US-PATENT-CLASS-367-904 ..... c 36 N93-18287 \*  
US-PATENT-CLASS-367-908 ..... c 35 N89-14407 \*  
US-PATENT-CLASS-367-95 ..... c 32 N82-23376 \*  
US-PATENT-CLASS-367-99 ..... c 32 N87-14559 \*  
US-PATENT-CLASS-368-184 ..... c 33 N83-36357 \*  
US-PATENT-CLASS-368-200 ..... c 33 N83-36357 \*  
US-PATENT-CLASS-368-201 ..... c 33 N83-36357 \*  
US-PATENT-CLASS-368-47 ..... c 33 N81-14221 \*  
US-PATENT-CLASS-369-32 ..... c 60 N92-29132 \*  
US-PATENT-CLASS-369-44.26 ..... c 74 N92-29133 \*  
US-PATENT-CLASS-369-95 ..... c 60 N92-29132 \*  
US-PATENT-CLASS-37N ..... c 27 N81-15104 \*  
US-PATENT-CLASS-370-100 ..... c 60 N82-16747 \*  
US-PATENT-CLASS-370-16 ..... c 62 N90-19776 \*  
US-PATENT-CLASS-370-58 ..... c 60 N81-27814 \*  
US-PATENT-CLASS-370-67 ..... c 33 N82-29538 \*  
US-PATENT-CLASS-370-85.4 ..... c 62 N91-14772 \*  
US-PATENT-CLASS-370-85.6 ..... c 62 N91-14772 \*  
US-PATENT-CLASS-370-85.9 ..... c 62 N91-14772 \*  
US-PATENT-CLASS-370-85 ..... c 33 N81-14221 \*  
US-PATENT-CLASS-370-94.3 ..... c 62 N91-14772 \*  
US-PATENT-CLASS-371-041 ..... c 17 N90-21061 \*  
US-PATENT-CLASS-371-043 ..... c 17 N90-21061 \*  
US-PATENT-CLASS-371-11.3 ..... c 60 N90-21527 \*  
US-PATENT-CLASS-371-20 ..... c 33 N81-26359 \*

## REPORT NUMBER INDEX

US-PATENT-CLASS-371-25 ..... c 33 N81-26359 \*  
US-PATENT-CLASS-371-37.1 ..... c 33 N92-33011 \*  
US-PATENT-CLASS-371-37.4 ..... c 17 N90-21061 \*  
US-PATENT-CLASS-371-37 ..... c 60 N87-21591 \*  
US-PATENT-CLASS-371-38.1 ..... c 17 N90-21061 \*  
US-PATENT-CLASS-371-40.1 ..... c 60 N91-31810 \*  
US-PATENT-CLASS-371-40 ..... c 60 N87-21591 \*  
US-PATENT-CLASS-371-43 ..... c 33 N87-25531 \*  
US-PATENT-CLASS-371-43 ..... c 32 N91-14523 \*  
US-PATENT-CLASS-371-63 ..... c 17 N87-16863 \*  
US-PATENT-CLASS-371-67.1 ..... c 60 N93-22032 \*  
US-PATENT-CLASS-371-68.1 ..... c 60 N93-22032 \*  
US-PATENT-CLASS-371-68 ..... c 60 N82-29013 \*  
US-PATENT-CLASS-371-6 ..... c 32 N83-13323 \*  
US-PATENT-CLASS-371-8 ..... c 62 N90-19776 \*  
US-PATENT-CLASS-372-100 ..... c 36 N84-14509 \*  
US-PATENT-CLASS-372-103 ..... c 36 N84-28065 \*  
US-PATENT-CLASS-372-103 ..... c 36 N87-23960 \*  
US-PATENT-CLASS-372-105 ..... c 36 N92-16290 \*  
US-PATENT-CLASS-372-108 ..... c 36 N84-14509 \*  
US-PATENT-CLASS-372-108 ..... c 36 N93-14703 \*  
US-PATENT-CLASS-372-18 ..... c 36 N87-23960 \*  
US-PATENT-CLASS-372-19 ..... c 36 N91-17360 \* #  
US-PATENT-CLASS-372-20 ..... c 36 N84-22943 \*  
US-PATENT-CLASS-372-20 ..... c 36 N87-25567 \*  
US-PATENT-CLASS-372-20 ..... c 36 N93-14703 \*  
US-PATENT-CLASS-372-25 ..... c 33 N83-34189 \*  
US-PATENT-CLASS-372-25 ..... c 36 N92-31788 \*  
US-PATENT-CLASS-372-28 ..... c 36 N84-22943 \*  
US-PATENT-CLASS-372-30 ..... c 36 N92-31788 \*  
US-PATENT-CLASS-372-32 ..... c 36 N84-22943 \*  
US-PATENT-CLASS-372-32 ..... c 33 N85-34333 \*  
US-PATENT-CLASS-372-38 ..... c 36 N85-30305 \*  
US-PATENT-CLASS-372-39 ..... c 36 N91-17360 \* #  
US-PATENT-CLASS-372-41 ..... c 36 N91-15528 \*  
US-PATENT-CLASS-372-43 ..... c 36 N87-23960 \*  
US-PATENT-CLASS-372-45 ..... c 36 N93-13418 \*  
US-PATENT-CLASS-372-46 ..... c 36 N85-30305 \*  
US-PATENT-CLASS-372-46 ..... c 36 N93-13418 \*  
US-PATENT-CLASS-372-4 ..... c 36 N84-28065 \*  
US-PATENT-CLASS-372-4 ..... c 36 N87-25567 \*  
US-PATENT-CLASS-372-50 ..... c 36 N85-30305 \*  
US-PATENT-CLASS-372-55 ..... c 36 N84-16542 \*  
US-PATENT-CLASS-372-56 ..... c 36 N82-28616 \*  
US-PATENT-CLASS-372-56 ..... c 36 N83-10417 \*  
US-PATENT-CLASS-372-58 ..... c 36 N82-28616 \*  
US-PATENT-CLASS-372-59 ..... c 36 N83-10417 \*  
US-PATENT-CLASS-372-59 ..... c 25 N90-20154 \*  
US-PATENT-CLASS-372-59 ..... c 25 N91-21270 \*  
US-PATENT-CLASS-372-60 ..... c 36 N83-10417 \*  
US-PATENT-CLASS-372-61 ..... c 74 N87-14971 \*  
US-PATENT-CLASS-372-66 ..... c 36 N91-17360 \* #  
US-PATENT-CLASS-372-68 ..... c 36 N87-23961 \*  
US-PATENT-CLASS-372-69 ..... c 36 N87-25567 \*  
US-PATENT-CLASS-372-70 ..... c 36 N91-17360 \* #  
US-PATENT-CLASS-372-71 ..... c 36 N84-28065 \*  
US-PATENT-CLASS-372-71 ..... c 36 N91-15528 \*  
US-PATENT-CLASS-372-74 ..... c 35 N84-14509 \*  
US-PATENT-CLASS-372-75 ..... c 36 N91-15528 \*  
US-PATENT-CLASS-372-79 ..... c 36 N84-16542 \*  
US-PATENT-CLASS-372-79 ..... c 36 N86-29204 \*  
US-PATENT-CLASS-372-81 ..... c 36 N87-23961 \*  
US-PATENT-CLASS-372-82 ..... c 36 N82-28616 \*  
US-PATENT-CLASS-372-93 ..... c 36 N84-14509 \*  
US-PATENT-CLASS-372-93 ..... c 36 N84-28065 \*  
US-PATENT-CLASS-372-94 ..... c 36 N84-14509 \*  
US-PATENT-CLASS-372-95 ..... c 36 N84-28065 \*  
US-PATENT-CLASS-372-95 ..... c 36 N93-18277 \*  
US-PATENT-CLASS-372-96 ..... c 36 N93-14703 \*  
US-PATENT-CLASS-372-98 ..... c 36 N84-14509 \*  
US-PATENT-CLASS-372-99 ..... c 36 N87-25567 \*  
US-PATENT-CLASS-373-10 ..... c 35 N87-23944 \*  
US-PATENT-CLASS-373-15 ..... c 35 N87-23944 \*  
US-PATENT-CLASS-374-112 ..... c 47 N92-29148 \*  
US-PATENT-CLASS-374-115 ..... c 35 N86-19580 \*  
US-PATENT-CLASS-374-117 ..... c 52 N85-30618 \*  
US-PATENT-CLASS-374-119 ..... c 35 N93-29084 \*  
US-PATENT-CLASS-374-120 ..... c 35 N86-19580 \*  
US-PATENT-CLASS-374-122 ..... c 06 N83-10040 \*  
US-PATENT-CLASS-374-122 ..... c 43 N85-21723 \*  
US-PATENT-CLASS-374-122 ..... c 32 N87-21206 \*  
US-PATENT-CLASS-374-123 ..... c 06 N83-10040 \*  
US-PATENT-CLASS-374-124 ..... c 36 N90-17132 \*  
US-PATENT-CLASS-374-124 ..... c 35 N92-21710 \*  
US-PATENT-CLASS-374-126 ..... c 36 N90-17132 \*  
US-PATENT-CLASS-374-130 ..... c 36 N90-17132 \*  
US-PATENT-CLASS-374-135 ..... c 35 N92-21710 \*  
US-PATENT-CLASS-374-137 ..... c 36 N85-21639 \*  
US-PATENT-CLASS-374-160 ..... c 52 N85-30618 \*  
US-PATENT-CLASS-374-162R ..... c 74 N82-30071 \*  
US-PATENT-CLASS-374-162 ..... c 35 N90-22770 \*  
US-PATENT-CLASS-374-163 ..... c 35 N86-19580 \*  
US-PATENT-CLASS-374-175 ..... c 33 N92-33021 \*  
US-PATENT-CLASS-374-178 ..... c 35 N92-33614 \*  
US-PATENT-CLASS-374-17 ..... c 35 N83-29650 \*  
US-PATENT-CLASS-374-180 ..... c 35 N91-31608 \*



## REPORT NUMBER INDEX

## US-PATENT-CLASS-410-79

US-PATENT-CLASS-374-183	c 33	N86-32624 *	US-PATENT-CLASS-380-25	c 60	N90-25583 *	US-PATENT-CLASS-403-171	c 18	N91-21221 *
US-PATENT-CLASS-374-185	c 35	N92-33614 *	US-PATENT-CLASS-380-45	c 60	N90-25583 *	US-PATENT-CLASS-403-171	c 37	N93-20117 *
US-PATENT-CLASS-374-1	c 35	N84-28019 *	US-PATENT-CLASS-380-49	c 60	N90-25583 *	US-PATENT-CLASS-403-176	c 18	N91-21221 *
US-PATENT-CLASS-374-208	c 37	N85-21651 *	US-PATENT-CLASS-381-183	c 54	N89-29953 *	US-PATENT-CLASS-403-176	c 37	N93-20117 *
US-PATENT-CLASS-374-208	c 35	N91-31608 *	US-PATENT-CLASS-381-187	c 54	N89-29953 *	US-PATENT-CLASS-403-179	c 27	N76-14264 *
US-PATENT-CLASS-374-210	c 37	N85-21651 *	US-PATENT-CLASS-381-26	c 35	N91-27522 *	US-PATENT-CLASS-403-217	c 37	N82-32732 *
US-PATENT-CLASS-374-29	c 35	N91-31608 *	US-PATENT-CLASS-381-43	c 61	N93-18858 *	US-PATENT-CLASS-403-217	c 37	N88-29180 *
US-PATENT-CLASS-374-29	c 35	N92-22038 *	US-PATENT-CLASS-381-68.1	c 35	N91-27522 *	US-PATENT-CLASS-403-217	c 37	N88-29180 *
US-PATENT-CLASS-374-36	c 25	N88-29002 *	US-PATENT-CLASS-381-71	c 71	N91-27913 *	US-PATENT-CLASS-403-234	c 37	N92-29140 *
US-PATENT-CLASS-374-45	c 38	N92-29154 *	US-PATENT-CLASS-381-92	c 35	N91-27522 *	US-PATENT-CLASS-403-252	c 18	N91-21221 *
US-PATENT-CLASS-374-46	c 34	N83-34221 *	US-PATENT-CLASS-381-94	c 71	N91-27913 *	US-PATENT-CLASS-403-273	c 37	N77-23482 *
US-PATENT-CLASS-374-46	c 25	N86-19413 *	US-PATENT-CLASS-382-10	c 61	N93-18858 *	US-PATENT-CLASS-403-273	c 37	N93-20120 *
US-PATENT-CLASS-374-49	c 14	N91-27175 *	US-PATENT-CLASS-382-1	c 54	N92-29129 *	US-PATENT-CLASS-403-282	c 26	N83-10170 *
US-PATENT-CLASS-374-4	c 38	N92-29154 *	US-PATENT-CLASS-382-1	c 61	N93-18282 *	US-PATENT-CLASS-403-28	c 27	N76-14264 *
US-PATENT-CLASS-374-4	c 09	N93-11057 *	US-PATENT-CLASS-382-22	c 54	N92-29129 *	US-PATENT-CLASS-403-28	c 37	N85-29285 *
US-PATENT-CLASS-374-50	c 14	N91-27175 *	US-PATENT-CLASS-382-26	c 74	N93-11058 *	US-PATENT-CLASS-403-28	c 37	N92-29120 *
US-PATENT-CLASS-374-51	c 39	N83-32081 *	US-PATENT-CLASS-382-30	c 61	N93-18858 *	US-PATENT-CLASS-403-291	c 37	N91-17387 *
US-PATENT-CLASS-374-57	c 09	N93-11057 *	US-PATENT-CLASS-382-31	c 74	N89-14078 *	US-PATENT-CLASS-403-30	c 18	N89-28554 *
US-PATENT-CLASS-374-5	c 09	N93-11057 *	US-PATENT-CLASS-382-31	c 74	N91-25840 *	US-PATENT-CLASS-403-312	c 37	N86-27630 *
US-PATENT-CLASS-374-8	c 25	N86-19413 *	US-PATENT-CLASS-382-31	c 60	N92-33057 *	US-PATENT-CLASS-403-315	c 37	N82-24494 *
US-PATENT-CLASS-374-8	c 09	N91-21157 *	US-PATENT-CLASS-382-32	c 74	N91-25840 *	US-PATENT-CLASS-403-317	c 37	N82-32732 *
US-PATENT-CLASS-374-8	c 25	N91-32196 *	US-PATENT-CLASS-382-32	c 60	N92-33057 *	US-PATENT-CLASS-403-317	c 37	N85-21649 *
US-PATENT-CLASS-374-9	c 32	N87-21206 *	US-PATENT-CLASS-382-36	c 61	N93-18282 *	US-PATENT-CLASS-403-317	c 37	N91-14610 *
US-PATENT-CLASS-375-101	c 32	N87-25511 *	US-PATENT-CLASS-382-41	c 60	N89-26400 *	US-PATENT-CLASS-403-321	c 37	N93-20120 *
US-PATENT-CLASS-375-102	c 32	N87-25511 *	US-PATENT-CLASS-382-42	c 74	N86-21348 *	US-PATENT-CLASS-403-322	c 18	N84-22605 *
US-PATENT-CLASS-375-104	c 35	N81-19427 *	US-PATENT-CLASS-382-42	c 60	N88-24169 *	US-PATENT-CLASS-403-322	c 37	N85-30334 *
US-PATENT-CLASS-375-106	c 60	N82-16747 *	US-PATENT-CLASS-382-42	c 60	N89-26400 *	US-PATENT-CLASS-403-322	c 37	N85-30336 *
US-PATENT-CLASS-375-106	c 32	N82-31583 *	US-PATENT-CLASS-382-43	c 74	N91-25840 *	US-PATENT-CLASS-403-322	c 37	N90-17154 *
US-PATENT-CLASS-375-107	c 32	N81-14186 *	US-PATENT-CLASS-382-49	c 60	N89-26400 *	US-PATENT-CLASS-403-322	c 37	N91-14614 *
US-PATENT-CLASS-375-110	c 32	N87-21207 *	US-PATENT-CLASS-382-49	c 74	N91-25840 *	US-PATENT-CLASS-403-324	c 37	N93-23076 *
US-PATENT-CLASS-375-114	c 60	N82-16747 *	US-PATENT-CLASS-382-6	c 74	N91-25840 *	US-PATENT-CLASS-403-325	c 37	N90-17154 *
US-PATENT-CLASS-375-115	c 32	N81-15179 *	US-PATENT-CLASS-382-6	c 61	N93-18282 *	US-PATENT-CLASS-403-327	c 37	N91-14610 *
US-PATENT-CLASS-375-116	c 60	N82-16747 *	US-PATENT-CLASS-384-101	c 37	N85-33490 *	US-PATENT-CLASS-403-327	c 37	N91-14614 *
US-PATENT-CLASS-375-120	c 32	N84-27952 *	US-PATENT-CLASS-384-103	c 37	N86-19606 *	US-PATENT-CLASS-403-328	c 18	N86-20469 *
US-PATENT-CLASS-375-120	c 32	N87-21207 *	US-PATENT-CLASS-384-106	c 37	N86-19606 *	US-PATENT-CLASS-403-328	c 37	N90-17154 *
US-PATENT-CLASS-375-120	c 33	N87-25531 *	US-PATENT-CLASS-384-124	c 27	N83-34043 *	US-PATENT-CLASS-403-328	c 31	N92-16161 *
US-PATENT-CLASS-375-1	c 32	N81-15179 *	US-PATENT-CLASS-384-493	c 37	N93-26001 *	US-PATENT-CLASS-403-331	c 37	N82-32732 *
US-PATENT-CLASS-375-1	c 35	N81-19427 *	US-PATENT-CLASS-384-537	c 37	N93-26001 *	US-PATENT-CLASS-403-331	c 37	N91-14610 *
US-PATENT-CLASS-375-1	c 33	N81-33405 *	US-PATENT-CLASS-384-585	c 37	N93-26001 *	US-PATENT-CLASS-403-331	c 37	N91-14614 *
US-PATENT-CLASS-375-23	c 32	N87-21207 *	US-PATENT-CLASS-384-99	c 37	N85-33490 *	US-PATENT-CLASS-403-334	c 37	N91-15544 *
US-PATENT-CLASS-375-34	c 35	N81-19427 *	US-PATENT-CLASS-388-821	c 33	N90-21951 *	US-PATENT-CLASS-403-340	c 37	N82-32732 *
US-PATENT-CLASS-375-39	c 32	N87-25511 *	US-PATENT-CLASS-39-25.35	c 33	N86-20671 *	US-PATENT-CLASS-403-341	c 18	N87-27713 *
US-PATENT-CLASS-375-53	c 32	N81-14523 *	US-PATENT-CLASS-395-11	c 60	N93-20116 *	US-PATENT-CLASS-403-348	c 37	N85-30336 *
US-PATENT-CLASS-375-53	c 32	N91-25316 *	US-PATENT-CLASS-395-11	c 60	N93-29504 *	US-PATENT-CLASS-403-353	c 37	N93-20117 *
US-PATENT-CLASS-375-53	c 32	N91-25318 *	US-PATENT-CLASS-395-23	c 60	N93-20116 *	US-PATENT-CLASS-403-381	c 37	N91-14610 *
US-PATENT-CLASS-375-53	c 32	N91-27439 *	US-PATENT-CLASS-395-23	c 53	N93-29504 *	US-PATENT-CLASS-403-381	c 37	N93-20117 *
US-PATENT-CLASS-375-54	c 33	N81-15192 *	US-PATENT-CLASS-395-24	c 32	N92-22033 *	US-PATENT-CLASS-403-385	c 37	N91-14617 *
US-PATENT-CLASS-375-54	c 32	N87-25511 *	US-PATENT-CLASS-395-24	c 60	N93-20116 *	US-PATENT-CLASS-403-388	c 37	N86-27630 *
US-PATENT-CLASS-375-54	c 33	N87-25531 *	US-PATENT-CLASS-395-500	c 61	N93-18855 *	US-PATENT-CLASS-403-391	c 37	N91-14617 *
US-PATENT-CLASS-375-54	c 32	N91-25316 *	US-PATENT-CLASS-395-51	c 60	N93-29504 *	US-PATENT-CLASS-403-404	c 37	N92-29120 *
US-PATENT-CLASS-375-56	c 32	N91-27439 *	US-PATENT-CLASS-395-800	c 61	N93-18855 *	US-PATENT-CLASS-403-404	c 37	N93-20120 *
US-PATENT-CLASS-375-57	c 32	N91-14523 *	US-PATENT-CLASS-395-800	c 60	N93-29608 *	US-PATENT-CLASS-403-408.1	c 37	N86-27630 *
US-PATENT-CLASS-375-58	c 32	N81-15179 *	US-PATENT-CLASS-395-86	c 37	N92-22036 *	US-PATENT-CLASS-403-408	c 37	N85-29285 *
US-PATENT-CLASS-375-59	c 33	N87-25531 *	US-PATENT-CLASS-395-90	c 63	N92-33019 *	US-PATENT-CLASS-403-4	c 18	N89-28554 *
US-PATENT-CLASS-375-67	c 33	N81-15192 *	US-PATENT-CLASS-395-95	c 37	N92-22036 *	US-PATENT-CLASS-403-51	c 18	N89-28553 *
US-PATENT-CLASS-375-76	c 33	N87-25531 *	US-PATENT-CLASS-4-DIG.9	c 54	N91-14724 *	US-PATENT-CLASS-403-56	c 18	N85-29991 *
US-PATENT-CLASS-375-77	c 32	N84-27952 *	US-PATENT-CLASS-4-10	c 54	N74-20725 *	US-PATENT-CLASS-403-57	c 37	N91-17387 *
US-PATENT-CLASS-375-80	c 04	N91-14321 *	US-PATENT-CLASS-4-110	c 05	N72-22093 *	US-PATENT-CLASS-403-64	c 31	N86-19479 *
US-PATENT-CLASS-375-80	c 32	N92-21712 *	US-PATENT-CLASS-4-120	c 54	N74-20725 *	US-PATENT-CLASS-403-72	c 18	N91-27199 *
US-PATENT-CLASS-375-81	c 32	N84-27952 *	US-PATENT-CLASS-4-144.3	c 52	N81-24711 *	US-PATENT-CLASS-403-76	c 18	N85-29991 *
US-PATENT-CLASS-375-85	c 32	N91-25316 *	US-PATENT-CLASS-4-144.3	c 52	N81-28740 *	US-PATENT-CLASS-403-84	c 37	N93-23076 *
US-PATENT-CLASS-375-85	c 32	N91-27439 *	US-PATENT-CLASS-4-209R	c 54	N91-14723 *	US-PATENT-CLASS-403-85	c 18	N87-14373 *
US-PATENT-CLASS-375-86	c 32	N91-25318 *	US-PATENT-CLASS-4-316	c 54	N91-14723 *	US-PATENT-CLASS-403-90	c 18	N85-29991 *
US-PATENT-CLASS-375-86	c 32	N91-27439 *	US-PATENT-CLASS-4-316	c 54	N91-14723 *	US-PATENT-CLASS-403-93	c 37	N93-23076 *
US-PATENT-CLASS-375-88	c 17	N87-16863 *	US-PATENT-CLASS-4-482	c 54	N91-14724 *	US-PATENT-CLASS-403-97	c 37	N93-23076 *
US-PATENT-CLASS-375-94	c 04	N91-14321 *	US-PATENT-CLASS-4-482	c 54	N91-14724 *	US-PATENT-CLASS-405-188	c 18	N90-20126 *
US-PATENT-CLASS-375-94	c 32	N92-21712 *	US-PATENT-CLASS-4-498	c 44	N84-34792 *	US-PATENT-CLASS-405-188	c 18	N91-14374 *
US-PATENT-CLASS-375-97	c 32	N91-25316 *	US-PATENT-CLASS-4-661	c 54	N91-14724 *	US-PATENT-CLASS-405-229	c 44	N79-24432 *
US-PATENT-CLASS-375-99	c 35	N81-19427 *	US-PATENT-CLASS-4-661	c 54	N92-29137 *	US-PATENT-CLASS-405-263	c 44	N79-24432 *
US-PATENT-CLASS-376-127	c 72	N87-21661 *	US-PATENT-CLASS-4-99	c 05	N72-22093 *	US-PATENT-CLASS-406-155	c 37	N84-16561 *
US-PATENT-CLASS-376-159	c 25	N85-21279 *	US-PATENT-CLASS-40-28	c 12	N71-18603 *	US-PATENT-CLASS-406-197	c 25	N93-20570 *
US-PATENT-CLASS-377-111	c 60	N90-21525 *	US-PATENT-CLASS-40-703	c 35	N92-22038 *	US-PATENT-CLASS-407-117	c 37	N81-14319 *
US-PATENT-CLASS-377-114	c 60	N90-21525 *	US-PATENT-CLASS-403-DIG.1	c 31	N92-16161 *	US-PATENT-CLASS-407-85	c 37	N81-14319 *
US-PATENT-CLASS-377-116	c 60	N90-21525 *	US-PATENT-CLASS-403-102	c 37	N85-30336 *	US-PATENT-CLASS-408-1R	c 31	N87-25491 *
US-PATENT-CLASS-377-123	c 60	N90-21525 *	US-PATENT-CLASS-403-102	c 18	N87-14373 *	US-PATENT-CLASS-408-1R	c 37	N81-14319 *
US-PATENT-CLASS-377-126	c 60	N90-21525 *	US-PATENT-CLASS-403-105	c 37	N79-14382 *	US-PATENT-CLASS-408-1R	c 31	N83-27058 *
US-PATENT-CLASS-377-39	c 33	N89-14385 *	US-PATENT-CLASS-403-113	c 37	N86-19605 *	US-PATENT-CLASS-408-111	c 37	N74-25968 *
US-PATENT-CLASS-377-69	c 60	N90-21525 *	US-PATENT-CLASS-403-113	c 37	N86-19605 *	US-PATENT-CLASS-408-112	c 37	N75-25186 *
US-PATENT-CLASS-377-79	c 60	N90-21525 *	US-PATENT-CLASS-403-119	c 18	N87-14373 *	US-PATENT-CLASS-408-124	c 37	N93-14710 *
US-PATENT-CLASS-378-104	c 33	N85-29147 *	US-PATENT-CLASS-403-120	c 37	N86-19605 *	US-PATENT-CLASS-408-124	c 37	N93-18286 *
US-PATENT-CLASS-378-112	c 33	N85-29147 *	US-PATENT-CLASS-403-131	c 37	N91-21543 *	US-PATENT-CLASS-408-137	c 15	N71-33518 *
US-PATENT-CLASS-378-145	c 74	N93-14711 *	US-PATENT-CLASS-403-13	c 37	N92-29140 *	US-PATENT-CLASS-408-14	c 35	N92-21723 *
US-PATENT-CLASS-378-210	c 35	N92-29135 *	US-PATENT-CLASS-403-143	c 18	N85-29991 *	US-PATENT-CLASS-408-16	c 35	N92-21723 *
US-PATENT-CLASS-378-210	c 89	N92-33012 *	US-PATENT-CLASS-403-146	c 18	N87-14373 *	US-PATENT-CLASS-408-186	c 37	N75-25186 *
US-PATENT-CLASS-378-2	c 34	N83-19015 *	US-PATENT-CLASS-403-146	c 37	N91-15544 *	US-PATENT-CLASS-408-193	c 37	N75-25186 *
US-PATENT-CLASS-378-2	c 74	N84-11920 *	US-PATENT-CLASS-403-147	c 37	N91-15544 *	US-PATENT-CLASS-408-195	c 37	N75-25186 *
US-PATENT-CLASS-378-43	c 34	N83-19015 *	US-PATENT-CLASS-403-14	c 37	N93-20120 *	US-PATENT-CLASS-408-239R	c 37	N93-14710 *
US-PATENT-CLASS-378-43	c 74	N86-20124 *	US-PATENT-CLASS-403-156	c 37	N91-15544 *	US-PATENT-CLASS-408-239R	c 37	N93-18286 *
US-PATENT-CLASS-378-43	c 35	N92-29135 *	US-PATENT-CLASS-403-15	c 37	N85-30334 *	US-PATENT-CLASS-408-241R	c 37	N93-14710 *
US-PATENT-CLASS-378-43	c 89	N92-33012 *	US-PATENT-CLASS-403-163	c 18	N87-14373 *	US-PATENT-CLASS-408-241R	c 37	N93-18286 *
US-PATENT-CLASS-378-51	c 38	N90-23756 *	US-PATENT-CLASS-403-164	c 54	N86-29507 *	US-PATENT-CLASS-408-241S	c 35	N92-21723 *
US-PATENT-CLASS-378-58	c 74	N86-20126 *	US-PATENT-CLASS-403-16	c 37	N85-30334 *	US-PATENT-CLASS-408-61	c 31	N83-27058 *
US-PATENT-CLASS-378-58	c 38	N90-23756 *	US-PATENT-CLASS-403-171	c 31	N81-25258 *	US-PATENT-CLASS-408-80	c 37	N74-25968 *
US-PATENT-CLASS-378-59	c 74	N86-20126 *	US-PATENT-CLASS-403-171	c 31	N86-19479 *	US-PATENT-CLASS-409-131	c 31	N83-27058 *
US-PATENT-CLASS-378-85	c 74	N86-20124 *	US-PATENT-CLASS-403-171	c 37	N88-29180 *	US-PATENT-CLASS-410-156	c 27	N81-15104 *
US-PATENT-CLASS-378-85	c 74	N93-14711 *	US-PATENT-CLASS-403-171	c 37	N91-14614 *	US-PATENT-CLASS-410-79	c 37	N85-34401 *
							c 18	N85-29991 *



## US-PATENT-CLASS-410-80

## REPORT NUMBER INDEX

US-PATENT-CLASS-410-80	c 37	N91-27561 *	US-PATENT-CLASS-415-178	c 07	N83-31603 *	US-PATENT-CLASS-417-190	c 35	N91-21496 *
US-PATENT-CLASS-410-84	c 37	N91-27561 *	US-PATENT-CLASS-415-180	c 07	N77-23106 *	US-PATENT-CLASS-417-207	c 44	N76-29701 *
US-PATENT-CLASS-410-90	c 18	N85-29991 *	US-PATENT-CLASS-415-181	c 07	N78-10467 *	US-PATENT-CLASS-417-209	c 34	N76-17317 *
US-PATENT-CLASS-411-103	c 37	N85-30335 *	US-PATENT-CLASS-415-186	c 07	N74-28226 *	US-PATENT-CLASS-417-209	c 44	N76-29701 *
US-PATENT-CLASS-411-103	c 37	N93-22384 *	US-PATENT-CLASS-415-196	c 37	N74-31270 *	US-PATENT-CLASS-417-225	c 35	N92-29125 *
US-PATENT-CLASS-411-108	c 37	N85-30335 *	US-PATENT-CLASS-415-196	c 37	N80-26658 *	US-PATENT-CLASS-417-328	c 37	N78-10428 *
US-PATENT-CLASS-411-114	c 37	N92-29150 *	US-PATENT-CLASS-415-197	c 18	N82-19540 *	US-PATENT-CLASS-417-36	c 35	N84-28081 *
US-PATENT-CLASS-411-166	c 37	N87-22976 *	US-PATENT-CLASS-415-199	c 05	N82-20996 *	US-PATENT-CLASS-417-379	c 44	N75-19611 *
US-PATENT-CLASS-411-267	c 37	N92-29150 *	US-PATENT-CLASS-415-200	c 34	N80-14107 *	US-PATENT-CLASS-417-383	c 37	N76-29701 *
US-PATENT-CLASS-411-267	c 37	N93-13423 *	US-PATENT-CLASS-415-201	c 07	N79-20335 *	US-PATENT-CLASS-417-391	c 15	N73-24513 *
US-PATENT-CLASS-411-340	c 37	N93-22384 *	US-PATENT-CLASS-415-229	c 37	N83-31603 *	US-PATENT-CLASS-417-392	c 37	N84-28081 *
US-PATENT-CLASS-411-348	c 31	N92-16161 *	US-PATENT-CLASS-415-2R	c 44	N82-24639 *	US-PATENT-CLASS-417-395	c 35	N75-19611 *
US-PATENT-CLASS-411-353	c 37	N83-19091 *	US-PATENT-CLASS-415-2R	c 44	N84-23018 *	US-PATENT-CLASS-417-399	c 44	N83-14693 *
US-PATENT-CLASS-411-354	c 37	N92-21726 *	US-PATENT-CLASS-415-200	c 07	N79-14096 *	US-PATENT-CLASS-417-417	c 44	N83-28574 *
US-PATENT-CLASS-411-368	c 37	N85-29285 *	US-PATENT-CLASS-415-201	c 37	N79-18318 *	US-PATENT-CLASS-417-417	c 31	N85-21404 *
US-PATENT-CLASS-411-368	c 37	N87-22976 *	US-PATENT-CLASS-415-229	c 37	N79-14096 *	US-PATENT-CLASS-417-462	c 37	N80-31790 *
US-PATENT-CLASS-411-378	c 37	N85-29285 *	US-PATENT-CLASS-415-229	c 37	N91-14608 *	US-PATENT-CLASS-417-470	c 35	N74-15126 *
US-PATENT-CLASS-411-385	c 37	N92-21726 *	US-PATENT-CLASS-415-229	c 37	N80-21828 *	US-PATENT-CLASS-417-471	c 35	N74-15126 *
US-PATENT-CLASS-411-402	c 37	N93-22384 *	US-PATENT-CLASS-415-68	c 07	N83-31603 *	US-PATENT-CLASS-417-475	c 37	N86-32738 *
US-PATENT-CLASS-411-424	c 37	N87-22976 *	US-PATENT-CLASS-415-68	c 37	N85-29282 *	US-PATENT-CLASS-417-488	c 31	N85-21404 *
US-PATENT-CLASS-411-426	c 37	N85-29285 *	US-PATENT-CLASS-415-9	c 44	N79-14527 *	US-PATENT-CLASS-417-50	c 15	N71-27084 *
US-PATENT-CLASS-411-427	c 37	N87-22976 *	US-PATENT-CLASS-416-104	c 05	N77-17029 *	US-PATENT-CLASS-417-52	c 37	N74-27904 *
US-PATENT-CLASS-411-433	c 37	N92-29150 *	US-PATENT-CLASS-416-114	c 05	N81-19087 *	US-PATENT-CLASS-417-53	c 31	N90-23587 *
US-PATENT-CLASS-411-433	c 37	N93-13423 *	US-PATENT-CLASS-416-114	c 08	N87-23631 *	US-PATENT-CLASS-417-572	c 31	N90-23587 *
US-PATENT-CLASS-411-501	c 37	N85-29285 *	US-PATENT-CLASS-416-115	c 02	N72-11018 *	US-PATENT-CLASS-417-88	c 44	N78-32539 *
US-PATENT-CLASS-411-517	c 37	N83-19091 *	US-PATENT-CLASS-416-117	c 37	N84-12493 *	US-PATENT-CLASS-418-113	c 37	N82-16408 *
US-PATENT-CLASS-411-531	c 37	N85-29285 *	US-PATENT-CLASS-416-121	c 02	N72-11018 *	US-PATENT-CLASS-418-142	c 37	N82-16408 *
US-PATENT-CLASS-411-531	c 37	N87-22976 *	US-PATENT-CLASS-416-127	c 02	N72-11018 *	US-PATENT-CLASS-419-14	c 24	N91-27244 *
US-PATENT-CLASS-411-65	c 37	N92-21726 *	US-PATENT-CLASS-416-130	c 02	N72-11018 *	US-PATENT-CLASS-419-24	c 24	N90-23493 *
US-PATENT-CLASS-411-901	c 37	N92-21726 *	US-PATENT-CLASS-416-132B	c 37	N84-12493 *	US-PATENT-CLASS-419-24	c 24	N91-17145 *
US-PATENT-CLASS-411-908	c 37	N92-21726 *	US-PATENT-CLASS-416-132R	c 05	N79-17847 *	US-PATENT-CLASS-419-30	c 24	N91-27244 *
US-PATENT-CLASS-411-909	c 37	N92-29120 *	US-PATENT-CLASS-416-135	c 07	N77-32148 *	US-PATENT-CLASS-419-32	c 24	N91-27244 *
US-PATENT-CLASS-411-909	c 37	N93-13423 *	US-PATENT-CLASS-416-135	c 37	N78-10468 *	US-PATENT-CLASS-419-36	c 24	N90-23493 *
US-PATENT-CLASS-414-1	c 37	N80-14398 *	US-PATENT-CLASS-416-138	c 05	N77-17029 *	US-PATENT-CLASS-419-36	c 24	N91-17145 *
US-PATENT-CLASS-414-1	c 37	N81-14320 *	US-PATENT-CLASS-416-138	c 05	N79-17847 *	US-PATENT-CLASS-419-36	c 24	N91-27244 *
US-PATENT-CLASS-414-1	c 54	N86-28618 *	US-PATENT-CLASS-416-141	c 05	N77-17029 *	US-PATENT-CLASS-419-37	c 24	N90-23493 *
US-PATENT-CLASS-414-217	c 37	N85-29285 *	US-PATENT-CLASS-416-141	c 37	N78-10468 *	US-PATENT-CLASS-419-37	c 24	N91-17145 *
US-PATENT-CLASS-414-217	c 31	N91-15423 *	US-PATENT-CLASS-416-144	c 35	N78-24515 *	US-PATENT-CLASS-419-38	c 24	N91-27244 *
US-PATENT-CLASS-414-220	c 31	N91-15423 *	US-PATENT-CLASS-416-145	c 05	N85-29947 *	US-PATENT-CLASS-419-39	c 24	N91-27244 *
US-PATENT-CLASS-414-222	c 37	N82-32731 *	US-PATENT-CLASS-416-149	c 02	N72-11018 *	US-PATENT-CLASS-419-48	c 24	N91-17145 *
US-PATENT-CLASS-414-226	c 37	N82-32731 *	US-PATENT-CLASS-416-153	c 07	N77-14025 *	US-PATENT-CLASS-419-49	c 24	N91-17145 *
US-PATENT-CLASS-414-288	c 85	N85-34722 *	US-PATENT-CLASS-416-157B	c 07	N79-14095 *	US-PATENT-CLASS-419-49	c 24	N91-27244 *
US-PATENT-CLASS-414-328	c 85	N85-34722 *	US-PATENT-CLASS-416-158	c 08	N87-23631 *	US-PATENT-CLASS-419-8	c 24	N90-23493 *
US-PATENT-CLASS-414-373	c 85	N85-34722 *	US-PATENT-CLASS-416-160	c 07	N77-14025 *	US-PATENT-CLASS-419-8	c 24	N91-17145 *
US-PATENT-CLASS-414-4	c 37	N79-28551 *	US-PATENT-CLASS-416-160	c 07	N79-14095 *	US-PATENT-CLASS-42-1.13	c 03	N91-15142 *
US-PATENT-CLASS-414-4	c 54	N81-26718 *	US-PATENT-CLASS-416-162	c 07	N77-14025 *	US-PATENT-CLASS-42-1F	c 11	N72-22247 *
US-PATENT-CLASS-414-4	c 37	N86-20789 *	US-PATENT-CLASS-416-162	c 07	N79-14095 *	US-PATENT-CLASS-42-101	c 44	N86-25874 *
US-PATENT-CLASS-414-5	c 54	N86-28618 *	US-PATENT-CLASS-416-165	c 07	N77-14025 *	US-PATENT-CLASS-42-215	c 44	N76-29704 *
US-PATENT-CLASS-414-5	c 37	N93-23078 *	US-PATENT-CLASS-416-165	c 07	N77-14025 *	US-PATENT-CLASS-420-445	c 26	N82-31505 *
US-PATENT-CLASS-414-689	c 18	N89-12621 *	US-PATENT-CLASS-416-167	c 07	N79-14095 *	US-PATENT-CLASS-420-460	c 26	N87-14482 *
US-PATENT-CLASS-414-6	c 54	N79-24652 *	US-PATENT-CLASS-416-190	c 07	N77-32148 *	US-PATENT-CLASS-420-529	c 26	N89-28621 *
US-PATENT-CLASS-414-718	c 37	N86-20789 *	US-PATENT-CLASS-416-193A	c 07	N77-32148 *	US-PATENT-CLASS-420-533	c 26	N89-28621 *
US-PATENT-CLASS-414-718	c 18	N89-12621 *	US-PATENT-CLASS-416-193A	c 34	N83-27144 *	US-PATENT-CLASS-420-54	c 26	N89-14303 *
US-PATENT-CLASS-414-729	c 37	N91-14616 *	US-PATENT-CLASS-416-200	c 02	N72-11018 *	US-PATENT-CLASS-420-551	c 26	N82-31505 *
US-PATENT-CLASS-414-729	c 37	N93-29505 *	US-PATENT-CLASS-416-214A	c 07	N78-33101 *	US-PATENT-CLASS-420-588	c 26	N82-31505 *
US-PATENT-CLASS-414-730	c 37	N81-27519 *	US-PATENT-CLASS-416-220R	c 07	N77-27116 *	US-PATENT-CLASS-420-62	c 26	N89-14303 *
US-PATENT-CLASS-414-730	c 37	N86-19603 *	US-PATENT-CLASS-416-220R	c 37	N78-10468 *	US-PATENT-CLASS-420-79	c 26	N89-14303 *
US-PATENT-CLASS-414-735	c 54	N81-26718 *	US-PATENT-CLASS-416-221	c 07	N77-27116 *	US-PATENT-CLASS-420-80	c 26	N89-14303 *
US-PATENT-CLASS-414-735	c 18	N88-23828 *	US-PATENT-CLASS-416-223R	c 02	N89-14224 *	US-PATENT-CLASS-420-81	c 26	N89-14303 *
US-PATENT-CLASS-414-735	c 18	N89-12621 *	US-PATENT-CLASS-416-223R	c 02	N84-11136 *	US-PATENT-CLASS-421-209	c 33	N91-31529 *
US-PATENT-CLASS-414-737	c 37	N92-33018 *	US-PATENT-CLASS-416-223R	c 02	N84-28732 *	US-PATENT-CLASS-421-457	c 33	N91-31529 *
US-PATENT-CLASS-414-739	c 37	N82-32731 *	US-PATENT-CLASS-416-223	c 07	N74-28226 *	US-PATENT-CLASS-422-101	c 51	N91-31755 *
US-PATENT-CLASS-414-744A	c 54	N81-26718 *	US-PATENT-CLASS-416-224	c 24	N77-19170 *	US-PATENT-CLASS-422-102	c 76	N92-34171 *
US-PATENT-CLASS-414-750	c 18	N88-23828 *	US-PATENT-CLASS-416-224	c 07	N84-22560 *	US-PATENT-CLASS-422-103	c 35	N85-29213 *
US-PATENT-CLASS-414-753	c 37	N86-20789 *	US-PATENT-CLASS-416-228	c 05	N80-14107 *	US-PATENT-CLASS-422-104	c 09	N91-21157 *
US-PATENT-CLASS-414-786	c 85	N85-34722 *	US-PATENT-CLASS-416-230	c 24	N77-19170 *	US-PATENT-CLASS-422-109	c 54	N81-24724 *
US-PATENT-CLASS-414-7	c 54	N86-28618 *	US-PATENT-CLASS-416-233	c 07	N84-22560 *	US-PATENT-CLASS-422-110	c 35	N93-17626 *
US-PATENT-CLASS-414-7	c 54	N86-28620 *	US-PATENT-CLASS-416-237	c 07	N74-28226 *	US-PATENT-CLASS-422-111	c 35	N90-22025 *
US-PATENT-CLASS-414-7	c 37	N91-14616 *	US-PATENT-CLASS-416-238	c 05	N80-14107 *	US-PATENT-CLASS-422-121	c 35	N84-17555 *
US-PATENT-CLASS-414-7	c 37	N93-23078 *	US-PATENT-CLASS-416-238	c 05	N85-29947 *	US-PATENT-CLASS-422-126	c 35	N90-22025 *
US-PATENT-CLASS-414-8	c 54	N86-28618 *	US-PATENT-CLASS-416-241A	c 07	N77-32148 *	US-PATENT-CLASS-422-129	c 37	N85-21652 *
US-PATENT-CLASS-415-DIG.8	c 44	N82-24639 *	US-PATENT-CLASS-416-241R	c 26	N84-33555 *	US-PATENT-CLASS-422-136	c 24	N93-29609 *
US-PATENT-CLASS-415-DIG.8	c 44	N84-23018 *	US-PATENT-CLASS-416-242	c 02	N84-11136 *	US-PATENT-CLASS-422-169	c 35	N84-17555 *
US-PATENT-CLASS-415-101	c 44	N80-21828 *	US-PATENT-CLASS-416-242	c 02	N84-28732 *	US-PATENT-CLASS-422-176	c 34	N92-16243 *
US-PATENT-CLASS-415-115	c 07	N79-10057 *	US-PATENT-CLASS-416-244A	c 07	N78-33101 *	US-PATENT-CLASS-422-178	c 35	N84-17555 *
US-PATENT-CLASS-415-115	c 34	N83-27144 *	US-PATENT-CLASS-416-248	c 37	N78-10468 *	US-PATENT-CLASS-422-186	c 25	N82-28368 *
US-PATENT-CLASS-415-115	c 07	N84-33410 *	US-PATENT-CLASS-416-25	c 05	N75-12930 *	US-PATENT-CLASS-422-186	c 35	N84-17555 *
US-PATENT-CLASS-415-115	c 34	N85-33433 *	US-PATENT-CLASS-416-2	c 44	N79-14527 *	US-PATENT-CLASS-422-187	c 37	N80-10494 *
US-PATENT-CLASS-415-116	c 07	N79-10057 *	US-PATENT-CLASS-416-500	c 05	N81-19087 *	US-PATENT-CLASS-422-198	c 25	N82-28368 *
US-PATENT-CLASS-415-118	c 35	N83-35338 *	US-PATENT-CLASS-416-500	c 05	N85-29947 *	US-PATENT-CLASS-422-199	c 37	N80-10494 *
US-PATENT-CLASS-415-136	c 37	N88-23978 *	US-PATENT-CLASS-416-51	c 05	N79-17847 *	US-PATENT-CLASS-422-199	c 37	N85-21652 *
US-PATENT-CLASS-415-143	c 34	N79-20335 *	US-PATENT-CLASS-416-61	c 35	N78-24515 *	US-PATENT-CLASS-422-200	c 44	N83-10501 *
US-PATENT-CLASS-415-145	c 07	N77-28118 *	US-PATENT-CLASS-416-61	c 37	N79-14382 *	US-PATENT-CLASS-422-202	c 44	N83-10501 *
US-PATENT-CLASS-415-145	c 07	N82-32366 *	US-PATENT-CLASS-416-68	c 05	N79-17847 *	US-PATENT-CLASS-422-208	c 37	N80-10494 *
US-PATENT-CLASS-415-170.1	c 37	N91-14608 *	US-PATENT-CLASS-416-89	c 05	N79-17847 *	US-PATENT-CLASS-422-209	c 24	N93-29609 *
US-PATENT-CLASS-415-170-R	c 37	N88-23978 *	US-PATENT-CLASS-416-92	c 07	N84-22560 *	US-PATENT-CLASS-422-224	c 31	N80-18231 *
US-PATENT-CLASS-415-174.5	c 37	N91-14608 *	US-PATENT-CLASS-416-97A	c 34	N85-33433 *	US-PATENT-CLASS-422-224	c 44	N83-10501 *
US-PATENT-CLASS-415-174	c 37	N79-18318 *	US-PATENT-CLASS-416-97R	c 34	N83-27144 *	US-PATENT-CLASS-422-242	c 37	N80-10494 *
US-PATENT-CLASS-415-174	c 37	N80-26658 *	US-PATENT-CLASS-416-97R	c 07	N84-22560 *	US-PATENT-CLASS-422-245	c 76	N90-23242 *
US-PATENT-CLASS-415-174	c 37	N82-19540 *	US-PATENT-CLASS-416-9	c 37	N90-23742 *	US-PATENT-CLASS-422-245	c 76	N90-24169 *
US-PATENT-CLASS-415-174	c 27	N82-29453 *	US-PATENT-CLASS-417-138	c 35	N75-19611 *	US-PATENT-CLASS-422-245	c 76	N92-25398 *
US-PATENT-CLASS-415-174	c 18	N83-20996 *	US-PATENT-CLASS-417-141	c 44	N76-29701 *	US-PATENT-CLASS-422-245	c 76	N92-34171 *
US-PATENT-CLASS-415-174	c 37	N84-22957 *	US-PATENT-CLASS-417-152	c 15	N72-22489 *	US-PATENT-CLASS-422-246	c 76	N80-32244 *
US-PATENT-CLASS-415-174	c 37	N86-20788 *	US-PATENT-CLASS-417-159	c 09	N84-27749 *	US-PATENT-CLASS-422-246	c 33	N81-19389 *
US-PATENT-CLASS-415-175	c 07	N83-31603 *	US-PATENT-CLASS-417-15	c 37	N83-26078 *			
US-PATENT-CLASS-415-178	c 07	N82-32366 *						

## REPORT NUMBER INDEX

## US-PATENT-CLASS-427-376.7

US-PATENT-CLASS-422-246	c 76	N82-30105 *	US-PATENT-CLASS-423-583	c 26	N78-32229 *	US-PATENT-CLASS-427-196	c 27	N76-15310 *
US-PATENT-CLASS-422-246	c 76	N84-35113 *	US-PATENT-CLASS-423-600	c 25	N83-33977 *	US-PATENT-CLASS-427-203	c 27	N76-16229 *
US-PATENT-CLASS-422-246	c 76	N88-24544 *	US-PATENT-CLASS-423-625	c 15	N73-19457 *	US-PATENT-CLASS-427-204	c 27	N76-16229 *
US-PATENT-CLASS-422-247	c 76	N92-25398 *	US-PATENT-CLASS-423-625	c 26	N80-14229 *	US-PATENT-CLASS-427-205	c 27	N76-16229 *
US-PATENT-CLASS-422-249	c 33	N81-19389 *	US-PATENT-CLASS-423-630	c 27	N92-16122 *	US-PATENT-CLASS-427-205	c 27	N82-28441 *
US-PATENT-CLASS-422-249	c 76	N84-35113 *	US-PATENT-CLASS-423-644	c 36	N76-18427 *	US-PATENT-CLASS-427-215	c 27	N78-32260 *
US-PATENT-CLASS-422-249	c 76	N90-20896 *	US-PATENT-CLASS-423-648R	c 44	N77-22607 *	US-PATENT-CLASS-427-215	c 24	N83-33950 *
US-PATENT-CLASS-422-249	c 76	N88-14835 *	US-PATENT-CLASS-423-648R	c 28	N78-24365 *	US-PATENT-CLASS-427-216	c 33	N84-16456 *
US-PATENT-CLASS-422-251	c 76	N92-34171 *	US-PATENT-CLASS-423-648R	c 28	N80-20402 *	US-PATENT-CLASS-427-217	c 33	N84-16456 *
US-PATENT-CLASS-422-254	c 76	N88-14835 *	US-PATENT-CLASS-423-648R	c 28	N81-14103 *	US-PATENT-CLASS-427-219.2	c 27	N83-31855 *
US-PATENT-CLASS-422-260	c 76	N88-14835 *	US-PATENT-CLASS-423-648R	c 25	N82-28368 *	US-PATENT-CLASS-427-221	c 27	N81-19296 *
US-PATENT-CLASS-422-27	c 54	N81-24724 *	US-PATENT-CLASS-423-648R	c 25	N83-29324 *	US-PATENT-CLASS-427-226	c 33	N84-16456 *
US-PATENT-CLASS-422-30	c 54	N81-24724 *	US-PATENT-CLASS-423-649	c 25	N83-29324 *	US-PATENT-CLASS-427-226	c 44	N84-28205 *
US-PATENT-CLASS-422-34	c 54	N81-24724 *	US-PATENT-CLASS-423-650	c 44	N76-18642 *	US-PATENT-CLASS-427-228	c 26	N85-35267 *
US-PATENT-CLASS-422-3	c 54	N81-24724 *	US-PATENT-CLASS-423-650	c 44	N76-29700 *	US-PATENT-CLASS-427-229	c 25	N78-10225 *
US-PATENT-CLASS-422-40	c 35	N82-11432 *	US-PATENT-CLASS-423-650	c 44	N76-29704 *	US-PATENT-CLASS-427-229	c 37	N87-21334 *
US-PATENT-CLASS-422-41	c 52	N79-14749 *	US-PATENT-CLASS-423-650	c 44	N77-10636 *	US-PATENT-CLASS-427-230	c 37	N76-31524 *
US-PATENT-CLASS-422-48	c 52	N79-14749 *	US-PATENT-CLASS-423-650	c 28	N80-10374 *	US-PATENT-CLASS-427-240	c 37	N81-33482 *
US-PATENT-CLASS-422-50	c 76	N90-24169 *	US-PATENT-CLASS-423-655	c 28	N91-14495 *	US-PATENT-CLASS-427-241	c 24	N83-33950 *
US-PATENT-CLASS-422-52	c 51	N80-16714 *	US-PATENT-CLASS-423-658.5	c 28	N81-15119 *	US-PATENT-CLASS-427-243	c 31	N83-35177 *
US-PATENT-CLASS-422-52	c 51	N83-27569 *	US-PATENT-CLASS-424-12	c 25	N79-14169 *	US-PATENT-CLASS-427-244	c 25	N82-21268 *
US-PATENT-CLASS-422-56	c 76	N92-34171 *	US-PATENT-CLASS-424-12	c 51	N80-16715 *	US-PATENT-CLASS-427-244	c 24	N93-29023 *
US-PATENT-CLASS-422-62	c 35	N90-22025 *	US-PATENT-CLASS-424-156	c 25	N83-33977 *	US-PATENT-CLASS-427-245	c 27	N80-23452 *
US-PATENT-CLASS-422-68	c 51	N80-27067 *	US-PATENT-CLASS-424-180	c 52	N75-15270 *	US-PATENT-CLASS-427-245	c 31	N88-29052 *
US-PATENT-CLASS-422-78	c 25	N86-19413 *	US-PATENT-CLASS-424-247	c 52	N81-29764 *	US-PATENT-CLASS-427-246	c 25	N82-21268 *
US-PATENT-CLASS-422-78	c 09	N91-21157 *	US-PATENT-CLASS-424-267	c 52	N81-29764 *	US-PATENT-CLASS-427-247	c 31	N83-35177 *
US-PATENT-CLASS-422-80	c 25	N82-12166 *	US-PATENT-CLASS-424-274	c 52	N81-14613 *	US-PATENT-CLASS-427-248.1	c 27	N86-19458 *
US-PATENT-CLASS-422-80	c 09	N91-21157 *	US-PATENT-CLASS-424-274	c 52	N81-29764 *	US-PATENT-CLASS-427-248.1	c 35	N93-14714 *
US-PATENT-CLASS-422-83	c 34	N92-16243 *	US-PATENT-CLASS-424-3	c 51	N77-27677 *	US-PATENT-CLASS-427-248E	c 37	N78-13436 *
US-PATENT-CLASS-422-83	c 35	N93-17626 *	US-PATENT-CLASS-424-70	c 54	N92-29137 *	US-PATENT-CLASS-427-248J	c 44	N78-24609 *
US-PATENT-CLASS-422-86	c 35	N85-29213 *	US-PATENT-CLASS-425-DIG.43	c 31	N75-13111 *	US-PATENT-CLASS-427-248	c 44	N76-28635 *
US-PATENT-CLASS-422-88	c 35	N85-29213 *	US-PATENT-CLASS-425-10	c 31	N83-35176 *	US-PATENT-CLASS-427-249	c 44	N76-28635 *
US-PATENT-CLASS-422-93	c 34	N92-16243 *	US-PATENT-CLASS-425-113	c 15	N73-13464 *	US-PATENT-CLASS-427-249	c 44	N78-24609 *
US-PATENT-CLASS-422-93	c 35	N93-17626 *	US-PATENT-CLASS-425-128	c 31	N74-32920 *	US-PATENT-CLASS-427-250	c 12	N76-15189 *
US-PATENT-CLASS-422-98	c 35	N90-22025 *	US-PATENT-CLASS-425-133	c 15	N73-13464 *	US-PATENT-CLASS-427-250	c 44	N76-28635 *
US-PATENT-CLASS-422-99	c 51	N91-31755 *	US-PATENT-CLASS-425-176	c 15	N73-13464 *	US-PATENT-CLASS-427-250	c 37	N78-13436 *
US-PATENT-CLASS-422-99	c 76	N92-34171 *	US-PATENT-CLASS-425-28B	c 31	N74-32917 *	US-PATENT-CLASS-427-253	c 27	N82-28441 *
US-PATENT-CLASS-422-9	c 45	N80-14579 *	US-PATENT-CLASS-425-35	c 31	N74-32917 *	US-PATENT-CLASS-427-255.6	c 35	N93-14714 *
US-PATENT-CLASS-423-DIG.10	c 24	N84-22695 *	US-PATENT-CLASS-425-378R	c 31	N81-15154 *	US-PATENT-CLASS-427-255.7	c 35	N93-14714 *
US-PATENT-CLASS-423-DIG.10	c 31	N85-20153 *	US-PATENT-CLASS-425-4-R	c 27	N88-23894 *	US-PATENT-CLASS-427-255	c 37	N78-13436 *
US-PATENT-CLASS-423-131	c 28	N81-15119 *	US-PATENT-CLASS-425-405R	c 31	N75-13111 *	US-PATENT-CLASS-427-255	c 35	N93-14714 *
US-PATENT-CLASS-423-149	c 26	N80-14229 *	US-PATENT-CLASS-425-415	c 31	N74-32920 *	US-PATENT-CLASS-427-261	c 44	N78-25527 *
US-PATENT-CLASS-423-1	c 28	N81-15119 *	US-PATENT-CLASS-425-425	c 31	N90-19425 *	US-PATENT-CLASS-427-261	c 44	N79-11472 *
US-PATENT-CLASS-423-231	c 25	N74-12813 *	US-PATENT-CLASS-425-435	c 31	N90-19425 *	US-PATENT-CLASS-427-269	c 24	N93-29023 *
US-PATENT-CLASS-423-235	c 25	N82-28368 *	US-PATENT-CLASS-425-438	c 31	N75-13111 *	US-PATENT-CLASS-427-270	c 27	N76-16229 *
US-PATENT-CLASS-423-242	c 45	N79-12584 *	US-PATENT-CLASS-425-468	c 31	N75-13111 *	US-PATENT-CLASS-427-270	c 24	N93-29023 *
US-PATENT-CLASS-423-247	c 25	N91-21270 *	US-PATENT-CLASS-425-5	c 34	N90-23700 *	US-PATENT-CLASS-427-272	c 31	N90-19427 *
US-PATENT-CLASS-423-249	c 25	N76-27383 *	US-PATENT-CLASS-425-6	c 31	N81-33319 *	US-PATENT-CLASS-427-272	c 24	N90-25197 *
US-PATENT-CLASS-423-276	c 23	N87-23698 *	US-PATENT-CLASS-425-6	c 27	N82-28442 *	US-PATENT-CLASS-427-275	c 27	N76-16229 *
US-PATENT-CLASS-423-284	c 23	N87-23698 *	US-PATENT-CLASS-425-6	c 31	N83-31896 *	US-PATENT-CLASS-427-282	c 24	N90-25197 *
US-PATENT-CLASS-423-293	c 26	N80-14229 *	US-PATENT-CLASS-425-6	c 31	N83-35176 *	US-PATENT-CLASS-427-287	c 27	N76-16229 *
US-PATENT-CLASS-423-303	c 44	N84-23019 *	US-PATENT-CLASS-425-6	c 71	N84-28568 *	US-PATENT-CLASS-427-287	c 24	N93-29023 *
US-PATENT-CLASS-423-33-5	c 25	N79-28253 *	US-PATENT-CLASS-425-6	c 26	N86-32551 *	US-PATENT-CLASS-427-290	c 24	N90-25197 *
US-PATENT-CLASS-423-338	c 76	N87-29360 *	US-PATENT-CLASS-425-6	c 34	N90-23700 *	US-PATENT-CLASS-427-292	c 24	N79-17916 *
US-PATENT-CLASS-423-339	c 76	N87-29360 *	US-PATENT-CLASS-425-73	c 31	N90-19425 *	US-PATENT-CLASS-427-292	c 24	N83-13172 *
US-PATENT-CLASS-423-345	c 76	N76-25049 *	US-PATENT-CLASS-425-75	c 31	N90-19425 *	US-PATENT-CLASS-427-294	c 27	N79-14214 *
US-PATENT-CLASS-423-345	c 76	N79-23798 *	US-PATENT-CLASS-425-77	c 15	N72-20446 *	US-PATENT-CLASS-427-294	c 26	N85-35267 *
US-PATENT-CLASS-423-346	c 76	N76-25049 *	US-PATENT-CLASS-425-7	c 31	N83-35176 *	US-PATENT-CLASS-427-294	c 24	N92-16025 *
US-PATENT-CLASS-423-348	c 26	N80-14229 *	US-PATENT-CLASS-425-804	c 34	N90-23700 *	US-PATENT-CLASS-427-294	c 31	N93-26101 *
US-PATENT-CLASS-423-350	c 37	N80-10494 *	US-PATENT-CLASS-427-108	c 74	N92-29158 *	US-PATENT-CLASS-427-295	c 31	N93-26101 *
US-PATENT-CLASS-423-350	c 31	N80-18231 *	US-PATENT-CLASS-427-108	c 33	N93-20119 *	US-PATENT-CLASS-427-296	c 26	N84-22734 *
US-PATENT-CLASS-423-352	c 36	N76-18427 *	US-PATENT-CLASS-427-109	c 74	N92-29158 *	US-PATENT-CLASS-427-296	c 31	N93-26101 *
US-PATENT-CLASS-423-407	c 24	N76-14203 *	US-PATENT-CLASS-427-113	c 44	N76-28635 *	US-PATENT-CLASS-427-2	c 52	N90-20616 *
US-PATENT-CLASS-423-414	c 24	N84-22695 *	US-PATENT-CLASS-427-113	c 44	N78-24609 *	US-PATENT-CLASS-427-302	c 74	N78-32854 *
US-PATENT-CLASS-423-414	c 31	N85-20153 *	US-PATENT-CLASS-427-113	c 44	N84-28205 *	US-PATENT-CLASS-427-302	c 24	N83-13172 *
US-PATENT-CLASS-423-417	c 26	N80-14229 *	US-PATENT-CLASS-427-115	c 25	N82-21268 *	US-PATENT-CLASS-427-306	c 26	N84-22734 *
US-PATENT-CLASS-423-419P	c 25	N83-33977 *	US-PATENT-CLASS-427-115	c 26	N84-22734 *	US-PATENT-CLASS-427-318	c 26	N83-31795 *
US-PATENT-CLASS-423-439	c 24	N91-15320 *	US-PATENT-CLASS-427-115	c 44	N84-28205 *	US-PATENT-CLASS-427-322	c 34	N77-18382 *
US-PATENT-CLASS-423-439	c 27	N92-10090 *	US-PATENT-CLASS-427-123	c 44	N79-11472 *	US-PATENT-CLASS-427-322	c 74	N78-32854 *
US-PATENT-CLASS-423-445	c 24	N84-22695 *	US-PATENT-CLASS-427-124	c 37	N78-13436 *	US-PATENT-CLASS-427-322	c 27	N83-34039 *
US-PATENT-CLASS-423-445	c 31	N85-20153 *	US-PATENT-CLASS-427-125	c 26	N84-22734 *	US-PATENT-CLASS-427-327	c 24	N79-17916 *
US-PATENT-CLASS-423-445	c 24	N85-21267 *	US-PATENT-CLASS-427-125	c 44	N84-28205 *	US-PATENT-CLASS-427-328	c 24	N79-17916 *
US-PATENT-CLASS-423-446	c 15	N73-19457 *	US-PATENT-CLASS-427-126.6	c 26	N84-22734 *	US-PATENT-CLASS-427-340	c 27	N83-34039 *
US-PATENT-CLASS-423-446	c 24	N84-22695 *	US-PATENT-CLASS-427-126	c 37	N78-13436 *	US-PATENT-CLASS-427-343	c 44	N79-11472 *
US-PATENT-CLASS-423-446	c 31	N85-20153 *	US-PATENT-CLASS-427-130	c 44	N79-11472 *	US-PATENT-CLASS-427-343	c 76	N92-10681 *
US-PATENT-CLASS-423-446	c 24	N85-21267 *	US-PATENT-CLASS-427-130	c 44	N77-32583 *	US-PATENT-CLASS-427-344	c 35	N93-14714 *
US-PATENT-CLASS-423-447.2	c 24	N83-25789 *	US-PATENT-CLASS-427-140	c 27	N82-33520 *	US-PATENT-CLASS-427-346	c 71	N84-16940 *
US-PATENT-CLASS-423-447.2	c 24	N92-16025 *	US-PATENT-CLASS-427-140	c 24	N83-13172 *	US-PATENT-CLASS-427-34	c 34	N78-18355 *
US-PATENT-CLASS-423-447.6	c 24	N83-25789 *	US-PATENT-CLASS-427-160	c 34	N77-18382 *	US-PATENT-CLASS-427-34	c 24	N79-17916 *
US-PATENT-CLASS-423-447.7	c 24	N83-25789 *	US-PATENT-CLASS-427-160	c 44	N78-19599 *	US-PATENT-CLASS-427-34	c 27	N82-29453 *
US-PATENT-CLASS-423-448	c 24	N91-15320 *	US-PATENT-CLASS-427-162	c 12	N76-15189 *	US-PATENT-CLASS-427-34	c 27	N83-31855 *
US-PATENT-CLASS-423-448	c 27	N92-10090 *	US-PATENT-CLASS-427-162	c 27	N86-31727 *	US-PATENT-CLASS-427-34	c 31	N83-35177 *
US-PATENT-CLASS-423-448	c 24	N92-16025 *	US-PATENT-CLASS-427-164	c 27	N78-14164 *	US-PATENT-CLASS-427-34	c 37	N84-22957 *
US-PATENT-CLASS-423-449	c 24	N84-22695 *	US-PATENT-CLASS-427-164	c 27	N78-13123 *	US-PATENT-CLASS-427-34	c 26	N84-27855 *
US-PATENT-CLASS-423-449	c 31	N85-20153 *	US-PATENT-CLASS-427-164	c 74	N78-32854 *	US-PATENT-CLASS-427-34	c 75	N91-25875 *
US-PATENT-CLASS-423-449	c 24	N85-21267 *	US-PATENT-CLASS-427-164	c 27	N80-24437 *	US-PATENT-CLASS-427-350	c 24	N79-25142 *
US-PATENT-CLASS-423-460	c 24	N91-15320 *	US-PATENT-CLASS-427-164	c 27	N86-31727 *	US-PATENT-CLASS-427-352	c 27	N83-34039 *
US-PATENT-CLASS-423-460	c 27	N92-10090 *	US-PATENT-CLASS-427-165	c 27	N86-31727 *	US-PATENT-CLASS-427-355	c 24	N79-17916 *
US-PATENT-CLASS-423-460	c 24	N92-16025 *	US-PATENT-CLASS-427-178	c 24	N85-30027 *	US-PATENT-CLASS-427-367	c 24	N93-14706 *
US-PATENT-CLASS-423-489	c 24	N91-15320 *	US-PATENT-CLASS-427-180	c 31	N83-26101 *	US-PATENT-CLASS-427-372.2	c 27	N82-33520 *
US-PATENT-CLASS-423-539	c 25	N82-28368 *	US-PATENT-CLASS-427-185	c 24	N92-10070 *	US-PATENT-CLASS-427-372.2	c 44	N84-28205 *
US-PATENT-CLASS-423-540	c 25	N82-28368 *	US-PATENT-CLASS-427-191	c 26	N85-35267 *	US-PATENT-CLASS-427-372A	c 24	N79-25142 *
US-PATENT-CLASS-423-542	c 25	N82-28368 *	US-PATENT-CLASS-427-191	c 26	N86-32550 *	US-PATENT-CLASS-427-375	c 24	N92-10070 *
US-PATENT-CLASS-423-579	c 46	N74-13011 *	US-PATENT-CLASS-427-192	c 26	N86-32550 *	US-PATENT-CLASS-427-376.2	c 26	N85-35267 *
US-PATENT-CLASS-423-579	c 25	N82-28368 *	US-PATENT-CLASS-427-195	c 24	N92-10070 *	US-PATENT-CLASS-427-376.6	c 33	N84-16456 *
US-PATENT-CLASS-423-581	c 25	N79-10162 *	US-PATENT-CLASS-427-195	c 31	N93-26101 *	US-PATENT-CLASS-427-376.7	c 33	N84-16456 *
US-PATENT-CLASS-423-582	c 26	N78-32229 *						

## US-PATENT-CLASS-427-376A

US-PATENT-CLASS-427-376A ..... c 27 N78-32260 \*  
US-PATENT-CLASS-427-376B ..... c 27 N78-32260 \*  
US-PATENT-CLASS-427-376B ..... c 24 N79-17916 \*  
US-PATENT-CLASS-427-376C ..... c 24 N79-17916 \*  
US-PATENT-CLASS-427-376 ..... c 27 N76-22377 \*  
US-PATENT-CLASS-427-376 ..... c 27 N76-23426 \*  
US-PATENT-CLASS-427-377 ..... c 24 N93-29023 \*  
US-PATENT-CLASS-427-377 ..... c 27 N76-22377 \*  
US-PATENT-CLASS-427-379 ..... c 27 N76-23426 \*  
US-PATENT-CLASS-427-379 ..... c 27 N78-32260 \*  
US-PATENT-CLASS-427-379 ..... c 27 N81-19296 \*  
US-PATENT-CLASS-427-379 ..... c 24 N83-13171 \*  
US-PATENT-CLASS-427-379 ..... c 24 N83-13172 \*  
US-PATENT-CLASS-427-379 ..... c 44 N84-28205 \*  
US-PATENT-CLASS-427-37 ..... c 24 N85-30027 \*  
US-PATENT-CLASS-427-380 ..... c 27 N76-22377 \*  
US-PATENT-CLASS-427-380 ..... c 27 N76-23426 \*  
US-PATENT-CLASS-427-380 ..... c 27 N78-32260 \*  
US-PATENT-CLASS-427-380 ..... c 44 N84-28205 \*  
US-PATENT-CLASS-427-380 ..... c 26 N85-35267 \*  
US-PATENT-CLASS-427-384 ..... c 24 N83-13171 \*  
US-PATENT-CLASS-427-384 ..... c 24 N83-13172 \*  
US-PATENT-CLASS-427-385.5 ..... c 27 N81-14078 \*  
US-PATENT-CLASS-427-385.5 ..... c 27 N86-20561 \*  
US-PATENT-CLASS-427-385B ..... c 44 N78-25530 \*  
US-PATENT-CLASS-427-385C ..... c 44 N78-25530 \*  
US-PATENT-CLASS-427-386 ..... c 24 N78-27180 \*  
US-PATENT-CLASS-427-387 ..... c 74 N78-32854 \*  
US-PATENT-CLASS-427-387 ..... c 24 N83-13171 \*  
US-PATENT-CLASS-427-387 ..... c 24 N83-13172 \*  
US-PATENT-CLASS-427-388.1 ..... c 27 N86-20561 \*  
US-PATENT-CLASS-427-388A ..... c 24 N78-27180 \*  
US-PATENT-CLASS-427-38 ..... c 74 N78-32854 \*  
US-PATENT-CLASS-427-38 ..... c 27 N80-24437 \*  
US-PATENT-CLASS-427-38 ..... c 26 N85-29005 \*  
US-PATENT-CLASS-427-38 ..... c 27 N86-19458 \*  
US-PATENT-CLASS-427-38 ..... c 26 N88-14179 \*  
US-PATENT-CLASS-427-38 ..... c 74 N92-29158 \*  
US-PATENT-CLASS-427-393.3 ..... c 27 N82-16238 \*  
US-PATENT-CLASS-427-397.7 ..... c 27 N82-33520 \*  
US-PATENT-CLASS-427-397.7 ..... c 26 N85-35267 \*  
US-PATENT-CLASS-427-398A ..... c 44 N79-11472 \*  
US-PATENT-CLASS-427-399 ..... c 44 N79-11472 \*  
US-PATENT-CLASS-427-399 ..... c 36 N84-22944 \*  
US-PATENT-CLASS-427-39 ..... c 24 N85-21267 \*  
US-PATENT-CLASS-427-39 ..... c 31 N86-32587 \*  
US-PATENT-CLASS-427-400 ..... c 27 N83-34039 \*  
US-PATENT-CLASS-427-402 ..... c 27 N76-22377 \*  
US-PATENT-CLASS-427-402 ..... c 27 N76-23426 \*  
US-PATENT-CLASS-427-404 ..... c 24 N93-14706 \*  
US-PATENT-CLASS-427-405 ..... c 34 N78-18355 \*  
US-PATENT-CLASS-427-405 ..... c 27 N82-28441 \*  
US-PATENT-CLASS-427-405 ..... c 27 N83-31855 \*  
US-PATENT-CLASS-427-405 ..... c 26 N84-27855 \*  
US-PATENT-CLASS-427-407.1 ..... c 27 N83-34039 \*  
US-PATENT-CLASS-427-40 ..... c 27 N78-31233 \*  
US-PATENT-CLASS-427-40 ..... c 27 N79-18052 \*  
US-PATENT-CLASS-427-40 ..... c 27 N80-24437 \*  
US-PATENT-CLASS-427-419.1 ..... c 76 N92-22040 \*  
US-PATENT-CLASS-427-419.2 ..... c 26 N83-31795 \*  
US-PATENT-CLASS-427-419.2 ..... c 26 N84-27855 \*  
US-PATENT-CLASS-427-419.2 ..... c 76 N92-22040 \*  
US-PATENT-CLASS-427-419.2 ..... c 24 N93-14706 \*  
US-PATENT-CLASS-427-419A ..... c 34 N78-18355 \*  
US-PATENT-CLASS-427-41 ..... c 27 N78-31233 \*  
US-PATENT-CLASS-427-41 ..... c 74 N78-32854 \*  
US-PATENT-CLASS-427-41 ..... c 27 N79-14214 \*  
US-PATENT-CLASS-427-41 ..... c 27 N79-18052 \*  
US-PATENT-CLASS-427-41 ..... c 27 N80-23452 \*  
US-PATENT-CLASS-427-421 ..... c 71 N84-16940 \*  
US-PATENT-CLASS-427-421 ..... c 26 N86-32550 \*  
US-PATENT-CLASS-427-422 ..... c 24 N85-30027 \*  
US-PATENT-CLASS-427-423 ..... c 34 N78-18355 \*  
US-PATENT-CLASS-427-423 ..... c 27 N82-29453 \*  
US-PATENT-CLASS-427-423 ..... c 27 N83-31855 \*  
US-PATENT-CLASS-427-423 ..... c 31 N83-35177 \*  
US-PATENT-CLASS-427-423 ..... c 37 N84-22957 \*  
US-PATENT-CLASS-427-425 ..... c 37 N82-24492 \*  
US-PATENT-CLASS-427-426 ..... c 27 N76-15310 \*  
US-PATENT-CLASS-427-426 ..... c 71 N84-16940 \*  
US-PATENT-CLASS-427-427 ..... c 24 N78-24290 \*  
US-PATENT-CLASS-427-427 ..... c 26 N86-32550 \*  
US-PATENT-CLASS-427-429 ..... c 27 N81-14078 \*  
US-PATENT-CLASS-427-436 ..... c 33 N84-16456 \*  
US-PATENT-CLASS-427-437 ..... c 33 N84-16456 \*  
US-PATENT-CLASS-427-443.2 ..... c 25 N84-12262 \*  
US-PATENT-CLASS-427-443.2 ..... c 24 N92-16025 \*  
US-PATENT-CLASS-427-443 ..... c 44 N84-28205 \*  
US-PATENT-CLASS-427-44 ..... c 74 N78-32854 \*  
US-PATENT-CLASS-427-44 ..... c 27 N80-32516 \*  
US-PATENT-CLASS-427-456 ..... c 24 N93-14706 \*  
US-PATENT-CLASS-427-47 ..... c 44 N77-32583 \*  
US-PATENT-CLASS-427-47 ..... c 26 N85-29005 \*  
US-PATENT-CLASS-427-4 ..... c 51 N77-27677 \*  
US-PATENT-CLASS-427-526 ..... c 33 N93-20119 \*  
US-PATENT-CLASS-427-527 ..... c 35 N93-14714 \*

US-PATENT-CLASS-427-53.1 ..... c 36 N84-22944 \*  
US-PATENT-CLASS-427-53.1 ..... c 37 N84-22957 \*  
US-PATENT-CLASS-427-531 ..... c 44 N82-28780 \*  
US-PATENT-CLASS-427-535 ..... c 24 N93-29023 \*  
US-PATENT-CLASS-427-57 ..... c 71 N84-16940 \*  
US-PATENT-CLASS-427-58 ..... c 33 N84-16456 \*  
US-PATENT-CLASS-427-58 ..... c 35 N93-14714 \*  
US-PATENT-CLASS-427-62 ..... c 76 N92-10681 \*  
US-PATENT-CLASS-427-62 ..... c 76 N92-22040 \*  
US-PATENT-CLASS-427-63 ..... c 76 N92-22040 \*  
US-PATENT-CLASS-427-66 ..... c 74 N92-29158 \*  
US-PATENT-CLASS-427-66 ..... c 33 N93-20119 \*  
US-PATENT-CLASS-427-68 ..... c 74 N92-29158 \*  
US-PATENT-CLASS-427-68 ..... c 33 N93-20119 \*  
US-PATENT-CLASS-427-6 ..... c 71 N84-16940 \*  
US-PATENT-CLASS-427-74 ..... c 44 N82-28780 \*  
US-PATENT-CLASS-427-75 ..... c 44 N78-25527 \*  
US-PATENT-CLASS-427-75 ..... c 44 N79-11468 \*  
US-PATENT-CLASS-427-75 ..... c 44 N79-11472 \*  
US-PATENT-CLASS-427-75 ..... c 33 N84-16456 \*  
US-PATENT-CLASS-427-84 ..... c 44 N79-11472 \*  
US-PATENT-CLASS-427-85 ..... c 44 N85-20530 \*  
US-PATENT-CLASS-427-86 ..... c 44 N78-28635 \*  
US-PATENT-CLASS-427-86 ..... c 44 N78-24609 \*  
US-PATENT-CLASS-427-88 ..... c 44 N79-31752 \*  
US-PATENT-CLASS-427-88 ..... c 44 N83-13579 \*  
US-PATENT-CLASS-427-88 ..... c 33 N84-16456 \*  
US-PATENT-CLASS-427-89 ..... c 44 N83-13579 \*  
US-PATENT-CLASS-427-90 ..... c 44 N83-13579 \*  
US-PATENT-CLASS-427-91 ..... c 44 N83-13579 \*  
US-PATENT-CLASS-427-95 ..... c 25 N79-28253 \*  
US-PATENT-CLASS-427-96 ..... c 33 N84-16456 \*  
US-PATENT-CLASS-428-105 ..... c 24 N93-14700 \*  
US-PATENT-CLASS-428-109 ..... c 27 N76-14264 \*  
US-PATENT-CLASS-428-109 ..... c 33 N79-12331 \*  
US-PATENT-CLASS-428-113 ..... c 24 N81-14000 \*  
US-PATENT-CLASS-428-114 ..... c 24 N81-13999 \*  
US-PATENT-CLASS-428-114 ..... c 24 N81-14000 \*  
US-PATENT-CLASS-428-116 ..... c 24 N78-10214 \*  
US-PATENT-CLASS-428-116 ..... c 24 N78-17149 \*  
US-PATENT-CLASS-428-116 ..... c 24 N86-28131 \*  
US-PATENT-CLASS-428-117 ..... c 37 N76-24575 \*  
US-PATENT-CLASS-428-117 ..... c 24 N78-15180 \*  
US-PATENT-CLASS-428-117 ..... c 24 N79-16915 \*  
US-PATENT-CLASS-428-119 ..... c 24 N79-16915 \*  
US-PATENT-CLASS-428-133 ..... c 37 N79-10422 \*  
US-PATENT-CLASS-428-137 ..... c 24 N79-25142 \*  
US-PATENT-CLASS-428-138 ..... c 24 N78-10214 \*  
US-PATENT-CLASS-428-139 ..... c 23 N81-29160 \*  
US-PATENT-CLASS-428-140 ..... c 24 N81-14000 \*  
US-PATENT-CLASS-428-141 ..... c 24 N77-28225 \*  
US-PATENT-CLASS-428-141 ..... c 27 N82-28440 \*  
US-PATENT-CLASS-428-141 ..... c 27 N82-33521 \*  
US-PATENT-CLASS-428-155 ..... c 37 N84-22957 \*  
US-PATENT-CLASS-428-161 ..... c 24 N77-28225 \*  
US-PATENT-CLASS-428-179 ..... c 24 N93-14700 \*  
US-PATENT-CLASS-428-182 ..... c 18 N84-33450 \*  
US-PATENT-CLASS-428-182 ..... c 31 N89-12786 \*  
US-PATENT-CLASS-428-182 ..... c 24 N93-14700 \*  
US-PATENT-CLASS-428-184 ..... c 18 N84-33450 \*  
US-PATENT-CLASS-428-184 ..... c 24 N93-14700 \*  
US-PATENT-CLASS-428-185 ..... c 24 N93-14700 \*  
US-PATENT-CLASS-428-186 ..... c 24 N93-14700 \*  
US-PATENT-CLASS-428-189 ..... c 27 N79-12221 \*  
US-PATENT-CLASS-428-192 ..... c 27 N82-24339 \*  
US-PATENT-CLASS-428-193 ..... c 27 N82-24339 \*  
US-PATENT-CLASS-428-1 ..... c 39 N93-29613 \*  
US-PATENT-CLASS-428-202 ..... c 27 N84-14323 \*  
US-PATENT-CLASS-428-212 ..... c 27 N76-14264 \*  
US-PATENT-CLASS-428-212 ..... c 27 N79-12221 \*  
US-PATENT-CLASS-428-212 ..... c 27 N82-29456 \*  
US-PATENT-CLASS-428-212 ..... c 24 N92-21725 \*  
US-PATENT-CLASS-428-213 ..... c 24 N92-21725 \*  
US-PATENT-CLASS-428-213 ..... c 24 N93-14700 \*  
US-PATENT-CLASS-428-214 ..... c 27 N76-14264 \*  
US-PATENT-CLASS-428-215 ..... c 27 N92-10091 \*  
US-PATENT-CLASS-428-216 ..... c 76 N90-24168 \*  
US-PATENT-CLASS-428-218 ..... c 27 N82-29456 \*  
US-PATENT-CLASS-428-218 ..... c 24 N83-13171 \*  
US-PATENT-CLASS-428-220 ..... c 15 N79-26100 \*  
US-PATENT-CLASS-428-225 ..... c 31 N93-29611 \*  
US-PATENT-CLASS-428-241 ..... c 27 N82-24339 \*  
US-PATENT-CLASS-428-241 ..... c 27 N83-18908 \*  
US-PATENT-CLASS-428-242 ..... c 27 N82-24339 \*  
US-PATENT-CLASS-428-244 ..... c 27 N83-18908 \*  
US-PATENT-CLASS-428-245 ..... c 27 N82-24339 \*  
US-PATENT-CLASS-428-245 ..... c 27 N83-18908 \*  
US-PATENT-CLASS-428-246 ..... c 27 N84-14322 \*  
US-PATENT-CLASS-428-246 ..... c 33 N84-33394 \*  
US-PATENT-CLASS-428-247 ..... c 33 N79-12331 \*  
US-PATENT-CLASS-428-247 ..... c 33 N82-26571 \*  
US-PATENT-CLASS-428-251 ..... c 27 N82-24339 \*  
US-PATENT-CLASS-428-252 ..... c 54 N90-25498 \*  
US-PATENT-CLASS-428-257 ..... c 27 N82-24339 \*  
US-PATENT-CLASS-428-258 ..... c 33 N79-12331 \*  
US-PATENT-CLASS-428-259 ..... c 33 N79-12331 \*

US-PATENT-CLASS-428-260 ..... c 27 N81-27272 \*  
US-PATENT-CLASS-428-260 ..... c 27 N82-24339 \*  
US-PATENT-CLASS-428-260 ..... c 27 N83-18908 \*  
US-PATENT-CLASS-428-260 ..... c 27 N84-14322 \*  
US-PATENT-CLASS-428-260 ..... c 27 N85-34281 \*  
US-PATENT-CLASS-428-262 ..... c 27 N87-14516 \*  
US-PATENT-CLASS-428-263 ..... c 27 N82-16238 \*  
US-PATENT-CLASS-428-264 ..... c 27 N82-16238 \*  
US-PATENT-CLASS-428-265 ..... c 27 N82-16238 \*  
US-PATENT-CLASS-428-266 ..... c 27 N82-24339 \*  
US-PATENT-CLASS-428-267 ..... c 27 N82-16238 \*  
US-PATENT-CLASS-428-272 ..... c 27 N82-16238 \*  
US-PATENT-CLASS-428-280 ..... c 27 N79-12221 \*  
US-PATENT-CLASS-428-280 ..... c 03 N84-33394 \*  
US-PATENT-CLASS-428-282 ..... c 24 N79-25142 \*  
US-PATENT-CLASS-428-283 ..... c 24 N82-29362 \*  
US-PATENT-CLASS-428-283 ..... c 24 N82-29456 \*  
US-PATENT-CLASS-428-284 ..... c 24 N82-29362 \*  
US-PATENT-CLASS-428-285 ..... c 27 N79-12221 \*  
US-PATENT-CLASS-428-285 ..... c 24 N91-31236 \*  
US-PATENT-CLASS-428-286 ..... c 27 N79-12221 \*  
US-PATENT-CLASS-428-286 ..... c 24 N82-29362 \*  
US-PATENT-CLASS-428-287 ..... c 24 N82-29362 \*  
US-PATENT-CLASS-428-287 ..... c 03 N84-33394 \*  
US-PATENT-CLASS-428-288 ..... c 24 N82-29362 \*  
US-PATENT-CLASS-428-288 ..... c 27 N89-29538 \*  
US-PATENT-CLASS-428-289 ..... c 27 N82-29456 \*  
US-PATENT-CLASS-428-290 ..... c 24 N78-15180 \*  
US-PATENT-CLASS-428-290 ..... c 24 N79-25142 \*  
US-PATENT-CLASS-428-290 ..... c 27 N87-28657 \*  
US-PATENT-CLASS-428-290 ..... c 54 N90-25498 \*  
US-PATENT-CLASS-428-294 ..... c 24 N78-17150 \*  
US-PATENT-CLASS-428-294 ..... c 76 N83-34796 \*  
US-PATENT-CLASS-428-301 ..... c 24 N77-27188 \*  
US-PATENT-CLASS-428-302 ..... c 24 N78-17150 \*  
US-PATENT-CLASS-428-303 ..... c 27 N76-15310 \*  
US-PATENT-CLASS-428-304.4 ..... c 03 N84-33394 \*  
US-PATENT-CLASS-428-307.7 ..... c 27 N82-29456 \*  
US-PATENT-CLASS-428-307.7 ..... c 24 N92-16026 \*  
US-PATENT-CLASS-428-311.5 ..... c 27 N82-29456 \*  
US-PATENT-CLASS-428-312.6 ..... c 27 N82-29456 \*  
US-PATENT-CLASS-428-312.6 ..... c 44 N83-34448 \*  
US-PATENT-CLASS-428-312 ..... c 27 N78-32260 \*  
US-PATENT-CLASS-428-313 ..... c 24 N78-27180 \*  
US-PATENT-CLASS-428-315.5 ..... c 25 N92-33009 \*  
US-PATENT-CLASS-428-315.7 ..... c 25 N92-33009 \*  
US-PATENT-CLASS-428-317.9 ..... c 27 N82-29456 \*  
US-PATENT-CLASS-428-319.1 ..... c 03 N84-33394 \*  
US-PATENT-CLASS-428-325 ..... c 27 N82-32260 \*  
US-PATENT-CLASS-428-325 ..... c 27 N78-24566 \*  
US-PATENT-CLASS-428-325 ..... c 44 N83-34448 \*  
US-PATENT-CLASS-428-325 ..... c 24 N92-16026 \*  
US-PATENT-CLASS-428-328 ..... c 24 N77-27188 \*  
US-PATENT-CLASS-428-328 ..... c 54 N90-25498 \*  
US-PATENT-CLASS-428-331 ..... c 27 N78-32260 \*  
US-PATENT-CLASS-428-331 ..... c 27 N83-18908 \*  
US-PATENT-CLASS-428-332 ..... c 27 N76-22377 \*  
US-PATENT-CLASS-428-332 ..... c 27 N76-23426 \*  
US-PATENT-CLASS-428-332 ..... c 24 N78-27180 \*  
US-PATENT-CLASS-428-332 ..... c 27 N79-12221 \*  
US-PATENT-CLASS-428-332 ..... c 24 N79-25142 \*  
US-PATENT-CLASS-428-332 ..... c 27 N82-24340 \*  
US-PATENT-CLASS-428-334 ..... c 74 N78-15879 \*  
US-PATENT-CLASS-428-336 ..... c 74 N78-15879 \*  
US-PATENT-CLASS-428-336 ..... c 27 N86-31727 \*  
US-PATENT-CLASS-428-339 ..... c 27 N82-24340 \*  
US-PATENT-CLASS-428-341 ..... c 27 N78-32260 \*  
US-PATENT-CLASS-428-347 ..... c 27 N84-14323 \*  
US-PATENT-CLASS-428-35.9 ..... c 24 N90-25196 \*  
US-PATENT-CLASS-428-35 ..... c 34 N77-18382 \*  
US-PATENT-CLASS-428-366 ..... c 24 N79-24062 \*  
US-PATENT-CLASS-428-367 ..... c 27 N81-27272 \*  
US-PATENT-CLASS-428-367 ..... c 24 N83-33950 \*  
US-PATENT-CLASS-428-367 ..... c 27 N84-14322 \*  
US-PATENT-CLASS-428-367 ..... c 27 N87-28656 \*  
US-PATENT-CLASS-428-367 ..... c 27 N89-29538 \*  
US-PATENT-CLASS-428-367 ..... c 24 N90-25196 \*  
US-PATENT-CLASS-428-368 ..... c 24 N77-27188 \*  
US-PATENT-CLASS-428-368 ..... c 27 N83-18908 \*  
US-PATENT-CLASS-428-370 ..... c 27 N84-22745 \*  
US-PATENT-CLASS-428-375 ..... c 24 N79-16915 \*  
US-PATENT-CLASS-428-375 ..... c 24 N83-33950 \*  
US-PATENT-CLASS-428-375 ..... c 27 N89-29538 \*  
US-PATENT-CLASS-428-376 ..... c 24 N90-25196 \*  
US-PATENT-CLASS-428-379 ..... c 24 N90-25196 \*  
US-PATENT-CLASS-428-390 ..... c 27 N89-29538 \*  
US-PATENT-CLASS-428-392 ..... c 24 N83-33950 \*  
US-PATENT-CLASS-428-403 ..... c 27 N92-25397 \*  
US-PATENT-CLASS-428-404 ..... c 25 N92-33009 \*  
US-PATENT-CLASS-428-405 ..... c 27 N92-25397 \*  
US-PATENT-CLASS-428-406 ..... c 27 N78-32260 \*  
US-PATENT-CLASS-428-407 ..... c 27 N92-25397 \*  
US-PATENT-CLASS-428-408 ..... c 27 N81-27272 \*  
US-PATENT-CLASS-428-408 ..... c 27 N84-14322 \*  
US-PATENT-CLASS-428-408 ..... c 27 N84-22745 \*  
US-PATENT-CLASS-428-408 ..... c 27 N85-34281 \*

## REPORT NUMBER INDEX

## REPORT NUMBER INDEX

## US-PATENT-CLASS-429-13

US-PATENT-CLASS-428-408	c 24	N86-28131 *	US-PATENT-CLASS-428-473.5	c 27	N81-29229 *	US-PATENT-CLASS-428-681	c 24	N85-35233 *
US-PATENT-CLASS-428-408	c 27	N89-29538 *	US-PATENT-CLASS-428-473.5	c 27	N84-14322 *	US-PATENT-CLASS-428-682	c 24	N85-21266 *
US-PATENT-CLASS-428-408	c 52	N90-20616 *	US-PATENT-CLASS-428-473.5	c 27	N86-19458 *	US-PATENT-CLASS-428-682	c 24	N85-35233 *
US-PATENT-CLASS-428-409	c 39	N93-29613 *	US-PATENT-CLASS-428-473.5	c 27	N86-20561 *	US-PATENT-CLASS-428-683	c 24	N85-21266 *
US-PATENT-CLASS-428-410	c 23	N86-19376 *	US-PATENT-CLASS-428-473.5	c 24	N86-25416 *	US-PATENT-CLASS-428-684	c 24	N85-21266 *
US-PATENT-CLASS-428-410	c 27	N78-14164 *	US-PATENT-CLASS-428-473.5	c 27	N86-31726 #	US-PATENT-CLASS-428-690	c 76	N91-21911 *
US-PATENT-CLASS-428-411	c 27	N78-31233 *	US-PATENT-CLASS-428-473.5	c 27	N87-16909 *	US-PATENT-CLASS-428-698	c 76	N85-33826 *
US-PATENT-CLASS-428-411	c 27	N79-14214 *	US-PATENT-CLASS-428-473.5	c 27	N87-23736 *	US-PATENT-CLASS-428-698	c 26	N85-35267 *
US-PATENT-CLASS-428-412	c 27	N76-16230 *	US-PATENT-CLASS-428-474	c 34	N77-18382 *	US-PATENT-CLASS-428-698	c 27	N89-29538 *
US-PATENT-CLASS-428-412	c 27	N78-31233 *	US-PATENT-CLASS-428-474.4	c 24	N86-25416 *	US-PATENT-CLASS-428-698	c 24	N93-26100 *
US-PATENT-CLASS-428-412	c 74	N78-32854 *	US-PATENT-CLASS-428-474.4	c 54	N90-25498 *	US-PATENT-CLASS-428-702	c 27	N86-19458 *
US-PATENT-CLASS-428-412	c 27	N79-18052 *	US-PATENT-CLASS-428-474	c 27	N79-33316 *	US-PATENT-CLASS-428-702	c 27	N87-23736 *
US-PATENT-CLASS-428-412	c 27	N92-10091 *	US-PATENT-CLASS-428-474	c 27	N80-24437 *	US-PATENT-CLASS-428-704	c 26	N85-35267 *
US-PATENT-CLASS-428-413	c 27	N76-16230 *	US-PATENT-CLASS-428-477.7	c 24	N86-25416 *	US-PATENT-CLASS-428-71	c 24	N78-15180 *
US-PATENT-CLASS-428-413	c 15	N79-26100 *	US-PATENT-CLASS-428-477	c 27	N89-12741 *	US-PATENT-CLASS-428-71	c 03	N84-33394 *
US-PATENT-CLASS-428-413	c 24	N81-14000 *	US-PATENT-CLASS-428-480	c 24	N81-14000 *	US-PATENT-CLASS-428-71	c 27	N89-12741 *
US-PATENT-CLASS-428-413	c 27	N85-34281 *	US-PATENT-CLASS-428-480	c 39	N93-29613 *	US-PATENT-CLASS-428-73	c 24	N78-10214 *
US-PATENT-CLASS-428-413	c 27	N87-25469 *	US-PATENT-CLASS-428-493	c 27	N82-24340 *	US-PATENT-CLASS-428-73	c 24	N78-15180 *
US-PATENT-CLASS-428-414	c 15	N79-26100 *	US-PATENT-CLASS-428-49	c 27	N82-24339 *	US-PATENT-CLASS-428-73	c 24	N79-16915 *
US-PATENT-CLASS-428-416	c 27	N76-14264 *	US-PATENT-CLASS-428-49	c 27	N82-29456 *	US-PATENT-CLASS-428-74	c 24	N88-18628 *
US-PATENT-CLASS-428-417	c 27	N87-25469 *	US-PATENT-CLASS-428-500	c 27	N80-32516 *	US-PATENT-CLASS-428-76	c 03	N84-33394 *
US-PATENT-CLASS-428-418	c 24	N77-27188 *	US-PATENT-CLASS-428-500	c 27	N87-16909 *	US-PATENT-CLASS-428-76	c 24	N88-18628 *
US-PATENT-CLASS-428-418	c 15	N79-26100 *	US-PATENT-CLASS-428-515	c 27	N78-31233 *	US-PATENT-CLASS-428-76	c 27	N89-12741 *
US-PATENT-CLASS-428-419	c 27	N92-10091 *	US-PATENT-CLASS-428-522	c 27	N78-14164 *	US-PATENT-CLASS-428-77	c 27	N76-14264 *
US-PATENT-CLASS-428-421	c 34	N77-18382 *	US-PATENT-CLASS-428-523	c 27	N78-31233 *	US-PATENT-CLASS-428-77	c 27	N79-12221 *
US-PATENT-CLASS-428-421	c 15	N79-26100 *	US-PATENT-CLASS-428-528	c 24	N81-13999 *	US-PATENT-CLASS-428-78	c 27	N84-14323 *
US-PATENT-CLASS-428-421	c 27	N80-24437 *	US-PATENT-CLASS-428-538	c 27	N76-22377 *	US-PATENT-CLASS-428-901	c 76	N90-24168 *
US-PATENT-CLASS-428-421	c 76	N83-34796 *	US-PATENT-CLASS-428-538	c 27	N76-23426 *	US-PATENT-CLASS-428-902	c 24	N77-27188 *
US-PATENT-CLASS-428-421	c 27	N87-16909 *	US-PATENT-CLASS-428-538	c 27	N78-31233 *	US-PATENT-CLASS-428-902	c 24	N78-10214 *
US-PATENT-CLASS-428-421	c 27	N87-23736 *	US-PATENT-CLASS-428-539	c 27	N76-16229 *	US-PATENT-CLASS-428-902	c 24	N78-17149 *
US-PATENT-CLASS-428-422	c 27	N78-31233 *	US-PATENT-CLASS-428-541	c 24	N81-13999 *	US-PATENT-CLASS-428-902	c 24	N81-14000 *
US-PATENT-CLASS-428-422	c 76	N83-34796 *	US-PATENT-CLASS-428-551	c 24	N90-23493 *	US-PATENT-CLASS-428-902	c 31	N81-25258 *
US-PATENT-CLASS-428-422	c 27	N87-23736 *	US-PATENT-CLASS-428-552	c 24	N90-23493 *	US-PATENT-CLASS-428-902	c 27	N81-27272 *
US-PATENT-CLASS-428-422	c 54	N90-25498 *	US-PATENT-CLASS-428-564	c 26	N84-33555 *	US-PATENT-CLASS-428-902	c 27	N83-18908 *
US-PATENT-CLASS-428-423.5	c 03	N84-33394 *	US-PATENT-CLASS-428-58	c 27	N89-12741 *	US-PATENT-CLASS-428-902	c 24	N83-33950 *
US-PATENT-CLASS-428-425	c 24	N77-28225 *	US-PATENT-CLASS-428-593	c 24	N82-24296 *	US-PATENT-CLASS-428-902	c 27	N84-14322 *
US-PATENT-CLASS-428-426	c 74	N78-15879 *	US-PATENT-CLASS-428-593	c 24	N84-11214 *	US-PATENT-CLASS-428-902	c 27	N84-22745 *
US-PATENT-CLASS-428-426	c 24	N92-21725 *	US-PATENT-CLASS-428-594	c 24	N82-24296 *	US-PATENT-CLASS-428-903	c 24	N83-33950 *
US-PATENT-CLASS-428-427	c 27	N78-32260 *	US-PATENT-CLASS-428-594	c 24	N82-32417 *	US-PATENT-CLASS-428-911	c 27	N76-16230 *
US-PATENT-CLASS-428-427	c 44	N83-34448 *	US-PATENT-CLASS-428-595	c 18	N84-33450 *	US-PATENT-CLASS-428-911	c 24	N77-27188 *
US-PATENT-CLASS-428-428	c 27	N76-22377 *	US-PATENT-CLASS-428-604	c 24	N82-24296 *	US-PATENT-CLASS-428-913	c 34	N78-25350 *
US-PATENT-CLASS-428-428	c 27	N76-23426 *	US-PATENT-CLASS-428-604	c 24	N82-32417 *	US-PATENT-CLASS-428-913	c 27	N83-18908 *
US-PATENT-CLASS-428-428	c 74	N78-15879 *	US-PATENT-CLASS-428-607	c 24	N82-32417 *	US-PATENT-CLASS-428-913	c 76	N85-33826 *
US-PATENT-CLASS-428-428	c 27	N78-32260 *	US-PATENT-CLASS-428-607	c 26	N87-25455 *	US-PATENT-CLASS-428-913	c 39	N93-29613 *
US-PATENT-CLASS-428-428	c 44	N83-34448 *	US-PATENT-CLASS-428-607	c 24	N90-23480 *	US-PATENT-CLASS-428-920	c 27	N76-16230 *
US-PATENT-CLASS-428-428	c 24	N93-26100 *	US-PATENT-CLASS-428-608	c 24	N82-32417 *	US-PATENT-CLASS-428-920	c 27	N76-22377 *
US-PATENT-CLASS-428-432	c 27	N84-33589 *	US-PATENT-CLASS-428-614	c 27	N92-29090 *	US-PATENT-CLASS-428-920	c 27	N76-23426 *
US-PATENT-CLASS-428-432	c 76	N85-33826 *	US-PATENT-CLASS-428-614	c 24	N93-29614 *	US-PATENT-CLASS-428-920	c 24	N78-15180 *
US-PATENT-CLASS-428-432	c 24	N92-21725 *	US-PATENT-CLASS-428-623	c 27	N83-31855 *	US-PATENT-CLASS-428-920	c 27	N78-32260 *
US-PATENT-CLASS-428-433	c 24	N92-21725 *	US-PATENT-CLASS-428-623	c 24	N90-23480 *	US-PATENT-CLASS-428-920	c 27	N79-12221 *
US-PATENT-CLASS-428-446	c 27	N78-32260 *	US-PATENT-CLASS-428-627	c 24	N90-23480 *	US-PATENT-CLASS-428-920	c 24	N79-25142 *
US-PATENT-CLASS-428-446	c 27	N82-29456 *	US-PATENT-CLASS-428-629	c 44	N80-16452 *	US-PATENT-CLASS-428-920	c 15	N79-26100 *
US-PATENT-CLASS-428-446	c 27	N86-19458 *	US-PATENT-CLASS-428-632	c 26	N81-25188 *	US-PATENT-CLASS-428-920	c 27	N81-27272 *
US-PATENT-CLASS-428-446	c 24	N92-16026 *	US-PATENT-CLASS-428-632	c 26	N84-27855 *	US-PATENT-CLASS-428-920	c 27	N83-18908 *
US-PATENT-CLASS-428-447	c 27	N76-14264 *	US-PATENT-CLASS-428-632	c 26	N87-25455 *	US-PATENT-CLASS-428-920	c 27	N84-14322 *
US-PATENT-CLASS-428-447	c 27	N76-16230 *	US-PATENT-CLASS-428-633	c 24	N90-23480 *	US-PATENT-CLASS-428-920	c 27	N84-22745 *
US-PATENT-CLASS-428-447	c 27	N78-31233 *	US-PATENT-CLASS-428-633	c 34	N78-18355 *	US-PATENT-CLASS-428-920	c 24	N88-18628 *
US-PATENT-CLASS-428-447	c 74	N78-32854 *	US-PATENT-CLASS-428-633	c 27	N83-31855 *	US-PATENT-CLASS-428-920	c 24	N92-16026 *
US-PATENT-CLASS-428-447	c 27	N79-12221 *	US-PATENT-CLASS-428-633	c 24	N85-21266 *	US-PATENT-CLASS-428-921	c 27	N76-16230 *
US-PATENT-CLASS-428-447	c 27	N79-18052 *	US-PATENT-CLASS-428-639	c 24	N85-35233 *	US-PATENT-CLASS-428-921	c 24	N78-27180 *
US-PATENT-CLASS-428-447	c 24	N79-25142 *	US-PATENT-CLASS-428-639	c 26	N84-33555 *	US-PATENT-CLASS-428-921	c 24	N81-13999 *
US-PATENT-CLASS-428-447	c 27	N82-24339 *	US-PATENT-CLASS-428-63	c 24	N83-31712 *	US-PATENT-CLASS-428-921	c 03	N84-33394 *
US-PATENT-CLASS-428-447	c 27	N87-14516 *	US-PATENT-CLASS-428-641	c 26	N83-31795 *	US-PATENT-CLASS-428-921	c 24	N86-28131 *
US-PATENT-CLASS-428-447	c 27	N87-23736 *	US-PATENT-CLASS-428-641	c 76	N90-19884 *	US-PATENT-CLASS-428-922	c 27	N78-14164 *
US-PATENT-CLASS-428-447	c 54	N90-25498 *	US-PATENT-CLASS-428-650	c 44	N80-16452 *	US-PATENT-CLASS-428-938	c 27	N82-28441 *
US-PATENT-CLASS-428-448	c 27	N82-24339 *	US-PATENT-CLASS-428-650	c 26	N83-31795 *	US-PATENT-CLASS-428-93	c 34	N78-25350 *
US-PATENT-CLASS-428-44	c 24	N88-18628 *	US-PATENT-CLASS-428-651	c 26	N87-25455 *	US-PATENT-CLASS-428-941	c 27	N82-28441 *
US-PATENT-CLASS-428-44	c 27	N89-12741 *	US-PATENT-CLASS-428-652	c 34	N78-18355 *	US-PATENT-CLASS-428-94	c 34	N78-25350 *
US-PATENT-CLASS-428-450	c 27	N76-16229 *	US-PATENT-CLASS-428-652	c 44	N78-19599 *	US-PATENT-CLASS-428-95	c 34	N78-25350 *
US-PATENT-CLASS-428-450	c 27	N76-22377 *	US-PATENT-CLASS-428-656	c 24	N85-21266 *	US-PATENT-CLASS-428-96	c 34	N78-25350 *
US-PATENT-CLASS-428-450	c 27	N76-23426 *	US-PATENT-CLASS-428-656	c 24	N85-35233 *	US-PATENT-CLASS-428-97	c 34	N78-25350 *
US-PATENT-CLASS-428-450	c 27	N79-12221 *	US-PATENT-CLASS-428-658	c 44	N80-16452 *	US-PATENT-CLASS-429-101	c 44	N79-17313 *
US-PATENT-CLASS-428-450	c 26	N83-31795 *	US-PATENT-CLASS-428-660	c 26	N87-25455 *	US-PATENT-CLASS-429-101	c 44	N79-26474 *
US-PATENT-CLASS-428-450	c 76	N90-24168 *	US-PATENT-CLASS-428-660	c 27	N92-29090 *	US-PATENT-CLASS-429-101	c 33	N80-20487 *
US-PATENT-CLASS-428-451	c 27	N79-18052 *	US-PATENT-CLASS-428-661	c 27	N92-29090 *	US-PATENT-CLASS-429-103	c 33	N91-14538 *
US-PATENT-CLASS-428-457	c 27	N76-16229 *	US-PATENT-CLASS-428-666	c 24	N90-23480 *	US-PATENT-CLASS-429-103	c 44	N93-28974 *
US-PATENT-CLASS-428-457	c 24	N77-27188 *	US-PATENT-CLASS-428-667	c 34	N78-18355 *	US-PATENT-CLASS-429-104	c 33	N91-14536 *
US-PATENT-CLASS-428-457	c 24	N77-28225 *	US-PATENT-CLASS-428-667	c 44	N78-19599 *	US-PATENT-CLASS-429-105	c 44	N77-22606 *
US-PATENT-CLASS-428-457	c 26	N82-30371 *	US-PATENT-CLASS-428-675	c 44	N80-16452 *	US-PATENT-CLASS-429-105	c 33	N80-20467 *
US-PATENT-CLASS-428-457	c 76	N90-24168 *	US-PATENT-CLASS-428-678	c 26	N81-25188 *	US-PATENT-CLASS-429-105	c 44	N83-27344 *
US-PATENT-CLASS-428-458	c 24	N77-28225 *	US-PATENT-CLASS-428-678	c 27	N83-31855 *	US-PATENT-CLASS-429-107	c 44	N77-22606 *
US-PATENT-CLASS-428-458	c 24	N79-16915 *	US-PATENT-CLASS-428-678	c 26	N84-33555 *	US-PATENT-CLASS-429-107	c 33	N80-20487 *
US-PATENT-CLASS-428-458	c 27	N86-20561 *	US-PATENT-CLASS-428-678	c 24	N85-21266 *	US-PATENT-CLASS-429-107	c 44	N83-27344 *
US-PATENT-CLASS-428-458	c 54	N90-25498 *	US-PATENT-CLASS-428-678	c 24	N85-35233 *	US-PATENT-CLASS-429-109	c 33	N80-20487 *
US-PATENT-CLASS-428-458	c 27	N92-10091 *	US-PATENT-CLASS-428-679	c 44	N78-19599 *	US-PATENT-CLASS-429-109	c 44	N83-27344 *
US-PATENT-CLASS-428-461	c 34	N77-18382 *	US-PATENT-CLASS-428-679	c 26	N81-25188 *	US-PATENT-CLASS-429-109	c 44	N86-19721 *
US-PATENT-CLASS-428-462	c 27	N82-24340 *	US-PATENT-CLASS-428-679	c 24	N85-21266 *	US-PATENT-CLASS-429-111	c 25	N84-12262 *
US-PATENT-CLASS-428-466	c 27	N82-24340 *	US-PATENT-CLASS-428-679	c 24	N85-35233 *	US-PATENT-CLASS-429-111	c 44	N84-23019 *
US-PATENT-CLASS-428-469	c 27	N76-16229 *	US-PATENT-CLASS-428-680	c 44	N80-16452 *	US-PATENT-CLASS-429-11	c 44	N92-16457 *
US-PATENT-CLASS-428-469	c 26	N83-31795 *	US-PATENT-CLASS-428-680	c 26	N81-25188 *	US-PATENT-CLASS-429-120	c 44	N81-24521 *
US-PATENT-CLASS-428-469	c 24	N92-21725 *	US-PATENT-CLASS-428-680	c 26	N83-31795 *	US-PATENT-CLASS-429-120	c 33	N91-14538 *
US-PATENT-CLASS-428-471	c 26	N81-25188 *	US-PATENT-CLASS-428-680	c 24	N85-21266 *	US-PATENT-CLASS-429-120	c 44	N92-16457 *
US-PATENT-CLASS-428-472.2	c 24	N92-21725 *	US-PATENT-CLASS-428-680	c 24	N85-35233 *	US-PATENT-CLASS-429-139	c 27	N80-32516 *
US-PATENT-CLASS-428-472	c 26	N82-30371 *	US-PATENT-CLASS-428-680	c 24	N90-23480 *	US-PATENT-CLASS-429-139	c 27	N81-24257 *
US-PATENT-CLASS-428-473.5	c 27	N81-14078 *	US-PATENT-CLASS-428-681	c 24	N85-21266 *	US-PATENT-CLASS-429-13	c 44	N79-10513 *

## US-PATENT-CLASS-429-144

## REPORT NUMBER INDEX

US-PATENT-CLASS-429-144	c 44	N82-29708 *	US-PATENT-CLASS-434-2	c 32	N84-27951 *	US-PATENT-CLASS-436-143	c 35	N90-22025 *
US-PATENT-CLASS-429-144	c 44	N83-32176 *	US-PATENT-CLASS-434-34	c 14	N87-25344 *	US-PATENT-CLASS-436-155	c 25	N86-19413 *
US-PATENT-CLASS-429-15	c 44	N79-26474 *	US-PATENT-CLASS-434-34	c 14	N93-24598 *	US-PATENT-CLASS-436-2	c 35	N85-29213 *
US-PATENT-CLASS-429-15	c 44	N86-19721 *	US-PATENT-CLASS-434-35	c 09	N85-19990 *	US-PATENT-CLASS-436-518	c 51	N93-25994 *
US-PATENT-CLASS-429-160	c 44	N81-24521 *	US-PATENT-CLASS-434-38	c 36	N83-34304 *	US-PATENT-CLASS-436-52	c 35	N93-17626 *
US-PATENT-CLASS-429-164	c 44	N81-24521 *	US-PATENT-CLASS-434-403	c 31	N83-34073 *	US-PATENT-CLASS-436-55	c 35	N90-22025 *
US-PATENT-CLASS-429-16	c 44	N93-28974 *	US-PATENT-CLASS-434-42	c 09	N82-24212 *	US-PATENT-CLASS-436-9	c 35	N93-17626 *
US-PATENT-CLASS-429-190	c 44	N77-22606 *	US-PATENT-CLASS-434-43	c 09	N82-24212 *	US-PATENT-CLASS-437-105	c 76	N92-22035 *
US-PATENT-CLASS-429-192	c 33	N92-28753 *	US-PATENT-CLASS-434-49	c 09	N85-19990 *	US-PATENT-CLASS-437-107	c 76	N92-22035 *
US-PATENT-CLASS-429-193	c 44	N82-29710 *	US-PATENT-CLASS-434-4	c 36	N83-34304 *	US-PATENT-CLASS-437-128	c 76	N88-14836 *
US-PATENT-CLASS-429-19	c 44	N86-19721 *	US-PATENT-CLASS-434-4	c 35	N86-32697 *	US-PATENT-CLASS-437-131	c 76	N88-14836 *
US-PATENT-CLASS-429-206	c 25	N83-13188 *	US-PATENT-CLASS-434-59	c 54	N81-27806 *	US-PATENT-CLASS-437-133	c 76	N92-22035 *
US-PATENT-CLASS-429-206	c 33	N84-14422 *	US-PATENT-CLASS-434-88	c 31	N83-34073 *	US-PATENT-CLASS-437-187	c 76	N91-28014 *
US-PATENT-CLASS-429-206	c 33	N85-29144 *	US-PATENT-CLASS-435-160	c 23	N85-35227 *	US-PATENT-CLASS-437-197	c 76	N91-28014 *
US-PATENT-CLASS-429-213	c 33	N91-14536 *	US-PATENT-CLASS-435-240.240	c 51	N92-34232 *	US-PATENT-CLASS-437-199	c 76	N91-28014 *
US-PATENT-CLASS-429-223	c 26	N84-22734 *	US-PATENT-CLASS-435-240.241	c 51	N93-10110 *	US-PATENT-CLASS-437-200	c 24	N92-18561 *
US-PATENT-CLASS-429-223	c 33	N91-27478 *	US-PATENT-CLASS-435-240.24	c 51	N92-34229 *	US-PATENT-CLASS-437-225	c 72	N91-14813 *
US-PATENT-CLASS-429-229	c 33	N84-14422 *	US-PATENT-CLASS-435-240.24	c 51	N92-34231 *	US-PATENT-CLASS-437-228	c 72	N91-14813 *
US-PATENT-CLASS-429-234	c 26	N84-22734 *	US-PATENT-CLASS-435-240.24	c 51	N93-10109 *	US-PATENT-CLASS-437-229	c 25	N91-31258 *
US-PATENT-CLASS-429-23	c 44	N77-14581 *	US-PATENT-CLASS-435-240.24	c 51	N93-10110 *	US-PATENT-CLASS-437-235	c 72	N91-14813 *
US-PATENT-CLASS-429-249	c 27	N81-24257 *	US-PATENT-CLASS-435-240.25	c 51	N92-34229 *	US-PATENT-CLASS-437-238	c 72	N91-14813 *
US-PATENT-CLASS-429-249	c 23	N81-29160 *	US-PATENT-CLASS-435-240.25	c 51	N92-34231 *	US-PATENT-CLASS-437-239	c 72	N91-14813 *
US-PATENT-CLASS-429-249	c 33	N85-29144 *	US-PATENT-CLASS-435-240.25	c 51	N93-10109 *	US-PATENT-CLASS-437-247	c 76	N91-28014 *
US-PATENT-CLASS-429-251	c 44	N82-29708 *	US-PATENT-CLASS-435-240.25	c 51	N93-10110 *	US-PATENT-CLASS-437-248	c 76	N91-28014 *
US-PATENT-CLASS-429-251	c 44	N83-32176 *	US-PATENT-CLASS-435-240.46	c 51	N93-10109 *	US-PATENT-CLASS-437-2	c 44	N91-27614 *
US-PATENT-CLASS-429-253	c 44	N79-25481 *	US-PATENT-CLASS-435-240.46	c 51	N93-10110 *	US-PATENT-CLASS-437-3	c 76	N88-14836 *
US-PATENT-CLASS-429-253	c 27	N81-24257 *	US-PATENT-CLASS-435-284	c 51	N91-21700 *	US-PATENT-CLASS-437-40	c 24	N92-18561 *
US-PATENT-CLASS-429-253	c 23	N81-29160 *	US-PATENT-CLASS-435-284	c 51	N92-34232 *	US-PATENT-CLASS-437-7	c 76	N88-14836 *
US-PATENT-CLASS-429-253	c 25	N83-13188 *	US-PATENT-CLASS-435-285	c 51	N91-21700 *	US-PATENT-CLASS-437-85	c 76	N92-22035 *
US-PATENT-CLASS-429-254	c 44	N78-25530 *	US-PATENT-CLASS-435-285	c 51	N91-30667 *	US-PATENT-CLASS-437-8	c 76	N88-14836 *
US-PATENT-CLASS-429-254	c 44	N82-29708 *	US-PATENT-CLASS-435-286	c 51	N91-21700 *	US-PATENT-CLASS-437-903	c 76	N90-19884 *
US-PATENT-CLASS-429-254	c 44	N83-32176 *	US-PATENT-CLASS-435-286	c 51	N91-21701 *	US-PATENT-CLASS-437-907	c 24	N92-18561 *
US-PATENT-CLASS-429-27	c 27	N81-24257 *	US-PATENT-CLASS-435-286	c 51	N91-30667 *	US-PATENT-CLASS-437-930	c 72	N91-14813 *
US-PATENT-CLASS-429-27	c 23	N81-29160 *	US-PATENT-CLASS-435-286	c 35	N92-31790 *	US-PATENT-CLASS-437-935	c 24	N92-18561 *
US-PATENT-CLASS-429-27	c 44	N86-25874 *	US-PATENT-CLASS-435-286	c 51	N92-34229 *	US-PATENT-CLASS-437-936	c 72	N91-14813 *
US-PATENT-CLASS-429-27	c 44	N93-28974 *	US-PATENT-CLASS-435-286	c 51	N92-34231 *	US-PATENT-CLASS-437-936	c 76	N92-22035 *
US-PATENT-CLASS-429-28	c 27	N81-24257 *	US-PATENT-CLASS-435-286	c 51	N92-34232 *	US-PATENT-CLASS-437-942	c 24	N92-18561 *
US-PATENT-CLASS-429-28	c 23	N81-29160 *	US-PATENT-CLASS-435-289	c 51	N80-27067 *	US-PATENT-CLASS-437-945	c 76	N92-22035 *
US-PATENT-CLASS-429-29	c 44	N93-28974 *	US-PATENT-CLASS-435-289	c 51	N93-27569 *	US-PATENT-CLASS-437-969	c 76	N88-14836 *
US-PATENT-CLASS-429-30	c 44	N93-28974 *	US-PATENT-CLASS-435-289	c 51	N91-21701 *	US-PATENT-CLASS-437-973	c 24	N92-18561 *
US-PATENT-CLASS-429-33	c 44	N79-17313 *	US-PATENT-CLASS-435-290	c 51	N80-27067 *	US-PATENT-CLASS-439-131	c 37	N93-14712 *
US-PATENT-CLASS-429-33	c 44	N82-29710 *	US-PATENT-CLASS-435-291	c 51	N80-27067 *	US-PATENT-CLASS-439-139	c 37	N93-14712 *
US-PATENT-CLASS-429-34	c 44	N77-14581 *	US-PATENT-CLASS-435-291	c 51	N81-28698 *	US-PATENT-CLASS-439-271	c 33	N88-14770 *
US-PATENT-CLASS-429-34	c 44	N83-27344 *	US-PATENT-CLASS-435-291	c 35	N82-28604 *	US-PATENT-CLASS-439-310	c 37	N93-14712 *
US-PATENT-CLASS-429-40	c 44	N82-29710 *	US-PATENT-CLASS-435-291	c 51	N83-27569 *	US-PATENT-CLASS-439-578	c 33	N88-14270 *
US-PATENT-CLASS-429-40	c 44	N83-27344 *	US-PATENT-CLASS-435-292	c 51	N91-21700 *	US-PATENT-CLASS-44-1-SR	c 25	N85-35253 *
US-PATENT-CLASS-429-41	c 44	N79-10513 *	US-PATENT-CLASS-435-30	c 51	N91-31755 *	US-PATENT-CLASS-44-1R	c 44	N78-31527 *
US-PATENT-CLASS-429-42	c 44	N79-10513 *	US-PATENT-CLASS-435-311	c 51	N80-27067 *	US-PATENT-CLASS-44-1R	c 25	N81-33246 *
US-PATENT-CLASS-429-44	c 44	N84-29205 *	US-PATENT-CLASS-435-311	c 51	N91-14703 *	US-PATENT-CLASS-44-1SR	c 25	N82-29371 *
US-PATENT-CLASS-429-46	c 44	N93-28974 *	US-PATENT-CLASS-435-311	c 51	N91-21700 *	US-PATENT-CLASS-44-1SR	c 25	N83-31743 *
US-PATENT-CLASS-429-51	c 44	N86-19721 *	US-PATENT-CLASS-435-311	c 51	N91-21701 *	US-PATENT-CLASS-44-2	c 44	N78-31527 *
US-PATENT-CLASS-429-57	c 44	N86-25874 *	US-PATENT-CLASS-435-311	c 35	N92-31790 *	US-PATENT-CLASS-44-2	c 25	N81-33246 *
US-PATENT-CLASS-429-58	c 35	N85-21596 *	US-PATENT-CLASS-435-311	c 51	N92-34232 *	US-PATENT-CLASS-44-50	c 27	N81-17261 *
US-PATENT-CLASS-429-94	c 44	N81-24521 *	US-PATENT-CLASS-435-312	c 51	N91-21700 *	US-PATENT-CLASS-44-51	c 25	N79-11152 *
US-PATENT-CLASS-430-17	c 35	N82-11432 *	US-PATENT-CLASS-435-312	c 51	N91-30667 *	US-PATENT-CLASS-44-62	c 27	N81-17261 *
US-PATENT-CLASS-430-271	c 27	N81-25209 *	US-PATENT-CLASS-435-312	c 35	N92-31790 *	US-PATENT-CLASS-44-7R	c 28	N81-14103 *
US-PATENT-CLASS-430-325	c 27	N81-25209 *	US-PATENT-CLASS-435-312	c 51	N92-34231 *	US-PATENT-CLASS-44-77	c 06	N71-23499 *
US-PATENT-CLASS-430-329	c 27	N81-25209 *	US-PATENT-CLASS-435-312	c 51	N92-34232 *	US-PATENT-CLASS-441-83	c 03	N91-31113 *
US-PATENT-CLASS-430-330	c 27	N81-25209 *	US-PATENT-CLASS-435-313	c 51	N91-30667 *	US-PATENT-CLASS-445-35	c 37	N85-33489 *
US-PATENT-CLASS-430-372	c 35	N82-11432 *	US-PATENT-CLASS-435-313	c 51	N92-34232 *	US-PATENT-CLASS-455-102	c 33	N81-15192 *
US-PATENT-CLASS-431-10	c 34	N78-27357 *	US-PATENT-CLASS-435-315	c 51	N91-21701 *	US-PATENT-CLASS-455-102	c 33	N91-31530 *
US-PATENT-CLASS-431-10	c 25	N79-11151 *	US-PATENT-CLASS-435-315	c 51	N92-34232 *	US-PATENT-CLASS-455-115	c 32	N89-14374 *
US-PATENT-CLASS-431-116	c 44	N77-10636 *	US-PATENT-CLASS-435-316	c 51	N80-27067 *	US-PATENT-CLASS-455-117	c 32	N89-14374 *
US-PATENT-CLASS-431-11	c 44	N77-10636 *	US-PATENT-CLASS-435-316	c 51	N91-14703 *	US-PATENT-CLASS-455-137	c 35	N82-15381 *
US-PATENT-CLASS-431-13	c 25	N88-29002 *	US-PATENT-CLASS-435-316	c 51	N91-21700 *	US-PATENT-CLASS-455-139	c 35	N82-15381 *
US-PATENT-CLASS-431-158	c 25	N78-10224 *	US-PATENT-CLASS-435-316	c 51	N91-21701 *	US-PATENT-CLASS-455-1	c 33	N91-31530 *
US-PATENT-CLASS-431-162	c 44	N77-10636 *	US-PATENT-CLASS-435-32	c 51	N80-27067 *	US-PATENT-CLASS-455-202	c 33	N82-29539 *
US-PATENT-CLASS-431-163	c 44	N76-29704 *	US-PATENT-CLASS-435-34	c 51	N80-16714 *	US-PATENT-CLASS-455-202	c 32	N84-27952 *
US-PATENT-CLASS-431-170	c 44	N77-10636 *	US-PATENT-CLASS-435-34	c 51	N80-27067 *	US-PATENT-CLASS-455-208	c 33	N82-29539 *
US-PATENT-CLASS-431-173	c 23	N73-30665 *	US-PATENT-CLASS-435-34	c 51	N81-28698 *	US-PATENT-CLASS-455-208	c 32	N84-27952 *
US-PATENT-CLASS-431-1	c 25	N84-16276 *	US-PATENT-CLASS-435-34	c 35	N82-28604 *	US-PATENT-CLASS-455-234	c 33	N82-29539 *
US-PATENT-CLASS-431-202	c 25	N74-33378 *	US-PATENT-CLASS-435-34	c 51	N83-27569 *	US-PATENT-CLASS-455-260	c 32	N84-27952 *
US-PATENT-CLASS-431-208	c 25	N79-11151 *	US-PATENT-CLASS-435-34	c 51	N83-28849 *	US-PATENT-CLASS-455-265	c 32	N84-27952 *
US-PATENT-CLASS-431-210	c 44	N76-29704 *	US-PATENT-CLASS-435-38	c 51	N80-27067 *	US-PATENT-CLASS-455-278	c 32	N81-29308 *
US-PATENT-CLASS-431-2	c 07	N81-29129 *	US-PATENT-CLASS-435-38	c 51	N83-27569 *	US-PATENT-CLASS-455-306	c 33	N82-29539 *
US-PATENT-CLASS-431-328	c 34	N78-27357 *	US-PATENT-CLASS-435-38	c 51	N83-28849 *	US-PATENT-CLASS-455-51	c 32	N81-14186 *
US-PATENT-CLASS-431-352	c 28	N71-28915 *	US-PATENT-CLASS-435-39	c 51	N80-27067 *	US-PATENT-CLASS-455-605	c 74	N91-27957 *
US-PATENT-CLASS-431-352	c 25	N78-10224 *	US-PATENT-CLASS-435-39	c 35	N82-28604 *	US-PATENT-CLASS-455-608	c 32	N87-21207 *
US-PATENT-CLASS-431-352	c 25	N90-11824 *	US-PATENT-CLASS-435-39	c 51	N83-27569 *	US-PATENT-CLASS-455-60	c 35	N82-15381 *
US-PATENT-CLASS-431-41	c 44	N77-10636 *	US-PATENT-CLASS-435-39	c 51	N83-28849 *	US-PATENT-CLASS-455-610	c 74	N82-19029 *
US-PATENT-CLASS-431-4	c 44	N76-29704 *	US-PATENT-CLASS-435-3	c 51	N80-27067 *	US-PATENT-CLASS-455-612	c 74	N82-19029 *
US-PATENT-CLASS-431-76	c 25	N88-29002 *	US-PATENT-CLASS-435-3	c 51	N83-27569 *	US-PATENT-CLASS-455-612	c 74	N83-29032 *
US-PATENT-CLASS-431-7	c 34	N78-27357 *	US-PATENT-CLASS-435-3	c 51	N83-28849 *	US-PATENT-CLASS-455-615	c 74	N82-19029 *
US-PATENT-CLASS-431-9	c 23	N73-30665 *	US-PATENT-CLASS-435-3	c 51	N92-34229 *	US-PATENT-CLASS-455-617	c 74	N82-19029 *
US-PATENT-CLASS-432-18	c 35	N86-20750 *	US-PATENT-CLASS-435-3	c 51	N92-34231 *	US-PATENT-CLASS-455-619	c 32	N81-14186 *
US-PATENT-CLASS-432-223	c 25	N79-11151 *	US-PATENT-CLASS-435-5	c 51	N81-28698 *	US-PATENT-CLASS-455-65	c 32	N87-25511 *
US-PATENT-CLASS-432-227	c 35	N83-24828 *	US-PATENT-CLASS-435-7.32	c 51	N93-25994 *	US-PATENT-CLASS-455-67	c 32	N89-14374 *
US-PATENT-CLASS-432-264	c 33	N81-19389 *	US-PATENT-CLASS-435-7.92	c 51	N93-25994 *	US-PATENT-CLASS-455-71	c 32	N81-14186 *
US-PATENT-CLASS-432-29	c 25	N79-11151 *	US-PATENT-CLASS-435-807	c 51	N83-28849 *	US-PATENT-CLASS-455-73	c 32	N85-29118 *
US-PATENT-CLASS-432-58	c 35	N83-24828 *	US-PATENT-CLASS-435-818	c 51	N91-30667 *	US-PATENT-CLASS-455-98	c 32	N89-14374 *
US-PATENT-CLASS-433-118	c 52	N82-29862 *	US-PATENT-CLASS-435-818	c 51	N93-10110 *	US-PATENT-CLASS-455-99	c 33	N91-31530 *
US-PATENT-CLASS-433-125	c 52	N82-29862 *	US-PATENT-CLASS-435-842	c 23	N85-35227 *	US-PATENT-CLASS-464-132	c 37	N91-17387 *
US-PATENT-CLASS-433-86	c 52	N82-29862 *	US-PATENT-CLASS-435-874	c 51	N93-25994 *	US-PATENT-CLASS-464-56	c 37	N91-17387 *
US-PATENT-CLASS-434-114	c 82	N87-29372 *	US-PATENT-CLASS-435-8	c 51	N83-27569 *	US-PATENT-CLASS-464-56	c 37	N91-17388 *
US-PATENT-CLASS-434-242	c 09	N85-19990 *	US-PATENT-CLASS-436-117	c 35	N93-17626 *	US-PATENT-CLASS-467-28	c 39	N80-10507 *
US-PATENT-CLASS-434-243	c 09	N85-19990 *	US-PATENT-CLASS-436-137	c 35	N90-22025 *	US-PATENT-CLASS-47-1.2	c 51	N75-25503 *



## REPORT NUMBER INDEX

## US-PATENT-CLASS-525-181

US-PATENT-CLASS-47-1.4	c 31	N73-32750 *	US-PATENT-CLASS-505-728	c 76	N92-10681 *	US-PATENT-CLASS-52-743	c 37	N81-14317 *
US-PATENT-CLASS-47-1.4	c 54	N91-31803 *	US-PATENT-CLASS-505-848	c 74	N92-28571 *	US-PATENT-CLASS-52-745	c 39	N76-31562 *
US-PATENT-CLASS-47-1.7	c 31	N73-32750 *	US-PATENT-CLASS-505-862	c 76	N92-22041 *	US-PATENT-CLASS-52-745	c 31	N81-27323 *
US-PATENT-CLASS-47-26	c 37	N83-26078 *	US-PATENT-CLASS-505-866	c 74	N92-28571 *	US-PATENT-CLASS-52-745	c 37	N85-30335 *
US-PATENT-CLASS-47-39	c 51	N75-25503 *	US-PATENT-CLASS-505-871	c 76	N92-22041 *	US-PATENT-CLASS-52-749	c 39	N76-31562 *
US-PATENT-CLASS-47-58	c 51	N75-25503 *	US-PATENT-CLASS-505-876	c 37	N92-29099 *	US-PATENT-CLASS-52-758F	c 37	N76-19437 *
US-PATENT-CLASS-47-58	c 51	N83-17045 *	US-PATENT-CLASS-51-170	c 15	N71-26134 *	US-PATENT-CLASS-52-806	c 24	N84-11214 *
US-PATENT-CLASS-47-58	c 45	N84-12654 *	US-PATENT-CLASS-51-216	c 15	N72-20444 *	US-PATENT-CLASS-52-808	c 24	N84-11214 *
US-PATENT-CLASS-47-62	c 54	N91-31803 *	US-PATENT-CLASS-51-225	c 37	N74-27905 *	US-PATENT-CLASS-52-80	c 18	N72-25540 *
US-PATENT-CLASS-474-205	c 37	N80-32717 *	US-PATENT-CLASS-51-234	c 37	N74-27905 *	US-PATENT-CLASS-52-80	c 18	N72-25541 *
US-PATENT-CLASS-474-220	c 37	N87-17034 *	US-PATENT-CLASS-51-235	c 37	N78-17383 *	US-PATENT-CLASS-52-80	c 31	N73-32749 *
US-PATENT-CLASS-48-DIG.8	c 28	N80-10374 *	US-PATENT-CLASS-51-235	c 76	N80-18951 *	US-PATENT-CLASS-52-814	c 18	N84-33450 *
US-PATENT-CLASS-48-10-3	c 28	N80-10374 *	US-PATENT-CLASS-51-277	c 74	N80-24149 *	US-PATENT-CLASS-52-814	c 31	N87-16918 *
US-PATENT-CLASS-48-102A	c 28	N80-10374 *	US-PATENT-CLASS-51-281-R	c 31	N87-25491 *	US-PATENT-CLASS-52-81	c 31	N89-12786 *
US-PATENT-CLASS-48-107	c 28	N80-10374 *	US-PATENT-CLASS-51-283R	c 74	N80-24149 *	US-PATENT-CLASS-52-81	c 37	N82-32732 *
US-PATENT-CLASS-48-116	c 44	N76-18642 *	US-PATENT-CLASS-51-283	c 46	N74-23069 *	US-PATENT-CLASS-52-821	c 31	N89-12786 *
US-PATENT-CLASS-48-116	c 44	N77-10636 *	US-PATENT-CLASS-51-320	c 15	N72-20444 *	US-PATENT-CLASS-521-109.1	c 27	N92-16123 *
US-PATENT-CLASS-48-117	c 44	N76-18642 *	US-PATENT-CLASS-51-323	c 15	N72-20444 *	US-PATENT-CLASS-521-124	c 25	N80-16116 *
US-PATENT-CLASS-48-117	c 44	N77-10636 *	US-PATENT-CLASS-51-57	c 15	N71-22705 *	US-PATENT-CLASS-521-125	c 25	N80-16116 *
US-PATENT-CLASS-48-117	c 28	N80-10374 *	US-PATENT-CLASS-51-73R	c 37	N85-21650 *	US-PATENT-CLASS-521-127	c 25	N80-16116 *
US-PATENT-CLASS-48-197-R	c 25	N86-25428 *	US-PATENT-CLASS-51-97R	c 37	N74-27905 *	US-PATENT-CLASS-521-135	c 27	N92-16123 *
US-PATENT-CLASS-48-197R	c 44	N76-29704 *	US-PATENT-CLASS-52-DIG.10	c 18	N72-25540 *	US-PATENT-CLASS-521-136	c 27	N92-16123 *
US-PATENT-CLASS-48-197R	c 44	N77-10636 *	US-PATENT-CLASS-52-DIG.10	c 18	N72-25541 *	US-PATENT-CLASS-521-141	c 51	N84-28361 *
US-PATENT-CLASS-48-197R	c 28	N91-14495 *	US-PATENT-CLASS-52-108	c 15	N72-18477 *	US-PATENT-CLASS-521-142	c 51	N84-28361 *
US-PATENT-CLASS-48-203	c 28	N91-14495 *	US-PATENT-CLASS-52-108	c 31	N81-27323 *	US-PATENT-CLASS-521-145	c 27	N90-16949 *
US-PATENT-CLASS-48-212	c 44	N77-10636 *	US-PATENT-CLASS-52-108	c 31	N87-25492 *	US-PATENT-CLASS-521-146	c 25	N80-23383 *
US-PATENT-CLASS-48-215	c 44	N76-29700 *	US-PATENT-CLASS-52-109	c 31	N73-32749 *	US-PATENT-CLASS-521-149	c 51	N84-28361 *
US-PATENT-CLASS-48-215	c 44	N77-10636 *	US-PATENT-CLASS-52-110	c 37	N86-25791 *	US-PATENT-CLASS-521-157	c 25	N80-16116 *
US-PATENT-CLASS-48-61	c 28	N80-10374 *	US-PATENT-CLASS-52-111	c 31	N81-27324 *	US-PATENT-CLASS-521-178	c 27	N90-16949 *
US-PATENT-CLASS-48-63	c 44	N76-18642 *	US-PATENT-CLASS-52-111	c 37	N86-25789 *	US-PATENT-CLASS-521-178	c 27	N92-16123 *
US-PATENT-CLASS-48-75	c 44	N76-18642 *	US-PATENT-CLASS-52-111	c 37	N86-32737 *	US-PATENT-CLASS-521-189	c 27	N90-16949 *
US-PATENT-CLASS-48-77	c 28	N91-14495 *	US-PATENT-CLASS-52-117	c 44	N77-32582 *	US-PATENT-CLASS-521-27	c 27	N81-14076 *
US-PATENT-CLASS-48-89	c 44	N82-16475 *	US-PATENT-CLASS-52-126.5	c 31	N87-16918 *	US-PATENT-CLASS-521-32	c 27	N81-14076 *
US-PATENT-CLASS-48-95	c 44	N76-18642 *	US-PATENT-CLASS-52-127.7	c 37	N85-30335 *	US-PATENT-CLASS-521-54	c 27	N92-16123 *
US-PATENT-CLASS-48-95	c 44	N76-29700 *	US-PATENT-CLASS-52-127	c 15	N71-21531 *	US-PATENT-CLASS-521-55	c 25	N80-23383 *
US-PATENT-CLASS-48-99	c 44	N82-16475 *	US-PATENT-CLASS-52-144	c 71	N91-27913 *	US-PATENT-CLASS-521-62	c 27	N81-14076 *
US-PATENT-CLASS-48-99	c 44	N93-14708 *	US-PATENT-CLASS-52-169	c 15	N72-25454 *	US-PATENT-CLASS-521-82	c 27	N90-16949 *
US-PATENT-CLASS-482-68	c 52	N93-14708 *	US-PATENT-CLASS-52-171	c 11	N73-12265 *	US-PATENT-CLASS-521-84.1	c 27	N92-16123 *
US-PATENT-CLASS-482-69	c 52	N93-29505 *	US-PATENT-CLASS-52-171	c 74	N85-29750 *	US-PATENT-CLASS-521-907	c 27	N92-16123 *
US-PATENT-CLASS-483-16	c 37	N93-29505 *	US-PATENT-CLASS-52-173R	c 44	N77-31601 *	US-PATENT-CLASS-521-918	c 25	N80-23383 *
US-PATENT-CLASS-483-901	c 37	N93-29505 *	US-PATENT-CLASS-52-173	c 15	N72-25454 *	US-PATENT-CLASS-521-97	c 27	N90-16949 *
US-PATENT-CLASS-49-DIG.1	c 34	N78-25350 *	US-PATENT-CLASS-52-1	c 15	N72-28496 *	US-PATENT-CLASS-521-98	c 27	N90-16949 *
US-PATENT-CLASS-49-171	c 31	N81-19343 *	US-PATENT-CLASS-52-232	c 37	N81-14317 *	US-PATENT-CLASS-522-162	c 27	N90-21198 *
US-PATENT-CLASS-49-253	c 18	N90-19278 *	US-PATENT-CLASS-52-236	c 39	N76-31562 *	US-PATENT-CLASS-522-165	c 27	N90-21198 *
US-PATENT-CLASS-49-479	c 34	N78-25350 *	US-PATENT-CLASS-52-249	c 33	N71-25351 *	US-PATENT-CLASS-523-135	c 27	N85-29044 *
US-PATENT-CLASS-49-485	c 34	N78-25350 *	US-PATENT-CLASS-52-272	c 31	N71-24035 *	US-PATENT-CLASS-523-205	c 27	N83-19900 *
US-PATENT-CLASS-49-68	c 18	N74-22136 *	US-PATENT-CLASS-52-284	c 32	N73-13921 *	US-PATENT-CLASS-523-433	c 24	N86-19380 *
US-PATENT-CLASS-5-345	c 05	N70-33285 *	US-PATENT-CLASS-52-2	c 32	N71-21045 *	US-PATENT-CLASS-523-434	c 27	N86-27451 *
US-PATENT-CLASS-5-459	c 03	N84-33394 *	US-PATENT-CLASS-52-2	c 44	N77-32583 *	US-PATENT-CLASS-523-435	c 24	N84-11213 *
US-PATENT-CLASS-5-69	c 05	N72-11085 *	US-PATENT-CLASS-52-309.15	c 31	N87-16918 *	US-PATENT-CLASS-523-440	c 27	N83-34043 *
US-PATENT-CLASS-5-81-R	c 85	N87-21755 *	US-PATENT-CLASS-52-309.1	c 31	N81-25258 *	US-PATENT-CLASS-523-443	c 27	N83-34043 *
US-PATENT-CLASS-5-82	c 05	N71-23159 *	US-PATENT-CLASS-52-391	c 31	N87-16918 *	US-PATENT-CLASS-523-445	c 24	N86-19380 *
US-PATENT-CLASS-501-123	c 27	N92-16122 *	US-PATENT-CLASS-52-3	c 31	N71-16080 *	US-PATENT-CLASS-523-445	c 27	N86-27451 *
US-PATENT-CLASS-501-127	c 27	N92-16122 *	US-PATENT-CLASS-52-404	c 33	N71-25351 *	US-PATENT-CLASS-523-454	c 24	N84-34571 *
US-PATENT-CLASS-501-32	c 24	N93-26100 *	US-PATENT-CLASS-52-404	c 16	N84-22601 *	US-PATENT-CLASS-523-454	c 27	N85-34282 *
US-PATENT-CLASS-501-39	c 24	N92-16026 *	US-PATENT-CLASS-52-465	c 37	N93-20117 *	US-PATENT-CLASS-523-456	c 24	N84-11213 *
US-PATENT-CLASS-501-54	c 24	N92-16026 *	US-PATENT-CLASS-52-506	c 16	N84-22601 *	US-PATENT-CLASS-523-458	c 24	N84-34571 *
US-PATENT-CLASS-501-88	c 27	N88-29040 *	US-PATENT-CLASS-52-506	c 37	N85-30335 *	US-PATENT-CLASS-523-458	c 27	N85-34282 *
US-PATENT-CLASS-501-88	c 27	N90-21177 *	US-PATENT-CLASS-52-511	c 31	N87-16918 *	US-PATENT-CLASS-523-461	c 27	N86-27451 *
US-PATENT-CLASS-501-89	c 24	N93-26100 *	US-PATENT-CLASS-52-51	c 44	N77-31601 *	US-PATENT-CLASS-523-66468	c 24	N86-19380 *
US-PATENT-CLASS-501-8	c 24	N93-26100 *	US-PATENT-CLASS-52-573	c 15	N72-28496 *	US-PATENT-CLASS-524-104	c 27	N83-28240 *
US-PATENT-CLASS-501-91	c 27	N88-29040 *	US-PATENT-CLASS-52-573	c 18	N89-28554 *	US-PATENT-CLASS-524-171	c 27	N84-22747 *
US-PATENT-CLASS-501-91	c 27	N90-21177 *	US-PATENT-CLASS-52-594	c 15	N72-25454 *	US-PATENT-CLASS-524-173	c 27	N83-28240 *
US-PATENT-CLASS-501-92	c 27	N88-29040 *	US-PATENT-CLASS-52-594	c 32	N73-13921 *	US-PATENT-CLASS-524-233	c 27	N83-28240 *
US-PATENT-CLASS-501-92	c 27	N92-34160 *	US-PATENT-CLASS-52-632	c 31	N81-27324 *	US-PATENT-CLASS-524-233	c 27	N90-16950 *
US-PATENT-CLASS-501-93	c 27	N88-29040 *	US-PATENT-CLASS-52-632	c 31	N86-19479 *	US-PATENT-CLASS-524-366	c 27	N90-16950 *
US-PATENT-CLASS-501-93	c 27	N92-34160 *	US-PATENT-CLASS-52-632	c 37	N86-32737 *	US-PATENT-CLASS-524-371	c 27	N84-14324 *
US-PATENT-CLASS-501-95	c 24	N93-26100 *	US-PATENT-CLASS-52-632	c 31	N87-25492 *	US-PATENT-CLASS-524-378	c 27	N90-16950 *
US-PATENT-CLASS-501-96	c 27	N92-34160 *	US-PATENT-CLASS-52-637	c 39	N76-31562 *	US-PATENT-CLASS-524-388	c 27	N85-29044 *
US-PATENT-CLASS-501-97	c 27	N92-34160 *	US-PATENT-CLASS-52-645	c 31	N86-19479 *	US-PATENT-CLASS-524-404	c 27	N87-22845 *
US-PATENT-CLASS-502-217	c 25	N90-23517 *	US-PATENT-CLASS-52-645	c 37	N81-25259 *	US-PATENT-CLASS-524-436	c 27	N83-19900 *
US-PATENT-CLASS-502-218	c 25	N90-23517 *	US-PATENT-CLASS-52-645	c 37	N86-25789 *	US-PATENT-CLASS-524-437	c 27	N83-19900 *
US-PATENT-CLASS-502-226	c 25	N90-23517 *	US-PATENT-CLASS-52-646	c 37	N86-32737 *	US-PATENT-CLASS-524-494	c 27	N84-14322 *
US-PATENT-CLASS-502-239	c 25	N90-23517 *	US-PATENT-CLASS-52-646	c 31	N73-32749 *	US-PATENT-CLASS-524-495	c 27	N92-21711 *
US-PATENT-CLASS-502-241	c 25	N90-23517 *	US-PATENT-CLASS-52-646	c 31	N86-19479 *	US-PATENT-CLASS-524-496	c 27	N84-14322 *
US-PATENT-CLASS-502-245	c 25	N90-23517 *	US-PATENT-CLASS-52-646	c 37	N86-32737 *	US-PATENT-CLASS-524-500	c 27	N84-14322 *
US-PATENT-CLASS-502-324	c 25	N90-23517 *	US-PATENT-CLASS-52-646	c 31	N75-25492 *	US-PATENT-CLASS-524-503	c 27	N83-19900 *
US-PATENT-CLASS-502-324	c 25	N91-21270 *	US-PATENT-CLASS-52-646	c 18	N88-28958 *	US-PATENT-CLASS-524-530	c 27	N84-14322 *
US-PATENT-CLASS-502-325	c 25	N90-20180 *	US-PATENT-CLASS-52-646	c 37	N88-29180 *	US-PATENT-CLASS-524-548	c 27	N86-20560 *
US-PATENT-CLASS-502-339	c 25	N90-20154 *	US-PATENT-CLASS-52-646	c 18	N91-21221 *	US-PATENT-CLASS-524-548	c 27	N87-22845 *
US-PATENT-CLASS-502-339	c 25	N90-20180 *	US-PATENT-CLASS-52-646	c 18	N91-27199 *	US-PATENT-CLASS-524-564	c 27	N83-19900 *
US-PATENT-CLASS-502-344	c 25	N90-20180 *	US-PATENT-CLASS-52-648	c 11	N72-25287 *	US-PATENT-CLASS-524-567	c 27	N85-29044 *
US-PATENT-CLASS-502-34	c 25	N91-21270 *	US-PATENT-CLASS-52-648	c 39	N76-31562 *	US-PATENT-CLASS-524-600	c 27	N90-16950 *
US-PATENT-CLASS-502-352	c 25	N90-20154 *	US-PATENT-CLASS-52-648	c 31	N81-25258 *	US-PATENT-CLASS-524-600	c 27	N91-15402 *
US-PATENT-CLASS-502-38	c 25	N90-20154 *	US-PATENT-CLASS-52-648	c 31	N86-19479 *	US-PATENT-CLASS-524-607	c 27	N90-16950 *
US-PATENT-CLASS-502-53	c 25	N90-20154 *	US-PATENT-CLASS-52-648	c 37	N86-25789 *	US-PATENT-CLASS-524-726	c 27	N83-28240 *
US-PATENT-CLASS-502-73	c 25	N92-10073 *	US-PATENT-CLASS-52-648	c 18	N88-28958 *	US-PATENT-CLASS-524-786	c 27	N83-19900 *
US-PATENT-CLASS-505-1	c 33	N91-31529 *	US-PATENT-CLASS-52-648	c 37	N88-29180 *	US-PATENT-CLASS-525-107	c 27	N85-34281 *
US-PATENT-CLASS-505-1	c 76	N92-10681 *	US-PATENT-CLASS-52-648	c 18	N89-28554 *	US-PATENT-CLASS-525-108	c 27	N86-27451 *
US-PATENT-CLASS-505-1	c 14	N92-15081 *	US-PATENT-CLASS-52-64	c 31	N73-32749 *	US-PATENT-CLASS-525-113	c 27	N85-34281 *
US-PATENT-CLASS-505-1	c 74	N92-28571 *	US-PATENT-CLASS-52-651	c 39	N76-31562 *	US-PATENT-CLASS-525-115	c 27	N86-27451 *
US-PATENT-CLASS-505-701	c 33	N91-31529 *	US-PATENT-CLASS-52-655	c 11	N72-25287 *	US-PATENT-CLASS-525-119	c 27	N85-34281 *
US-PATENT-CLASS-505-702	c 33	N91-31529 *	US-PATENT-CLASS-52-705	c 37	N76-19437 *	US-PATENT-CLASS-525-119	c 27	N86-27451 *
US-PATENT-CLASS-505-703	c 33	N91-31529 *	US-PATENT-CLASS-52-71	c 18	N75-27040 *	US-PATENT-CLASS-525-122	c 27	N86-27451 *
US-PATENT-CLASS-505-703	c 74	N92-28571 *	US-PATENT-CLASS-52-726	c 39	N76-31562 *	US-PATENT-CLASS-525-181	c 27	N83-28240 *
US-PATENT-CLASS-505-704	c 33	N91-31529 *	US-PATENT-CLASS-52-726	c 31	N81-25258 *	US-PATENT-CLASS-525-181	c 27	N85-21349 *



## US-PATENT-CLASS-525-182

## REPORT NUMBER INDEX

US-PATENT-CLASS-525-182	c 27	N85-21349 *	US-PATENT-CLASS-526-262	c 27	N85-21352 *	US-PATENT-CLASS-528-128	c 27	N93-14709 *
US-PATENT-CLASS-525-182	c 27	N87-22845 *	US-PATENT-CLASS-526-262	c 25	N85-28982 *	US-PATENT-CLASS-528-128	c 23	N93-18283 *
US-PATENT-CLASS-525-183	c 27	N83-28240 *	US-PATENT-CLASS-526-262	c 25	N85-30039 *	US-PATENT-CLASS-528-128	c 27	N93-25997 * #
US-PATENT-CLASS-525-183	c 27	N85-21349 *	US-PATENT-CLASS-526-262	c 27	N86-20560 *	US-PATENT-CLASS-528-128	c 27	N93-25999 *
US-PATENT-CLASS-525-184	c 27	N83-28240 *	US-PATENT-CLASS-526-262	c 24	N86-21590 *	US-PATENT-CLASS-528-128	c 27	N93-29083 *
US-PATENT-CLASS-525-184	c 27	N85-21349 *	US-PATENT-CLASS-526-262	c 27	N87-22845 *	US-PATENT-CLASS-528-128	c 27	N93-29085 *
US-PATENT-CLASS-525-186	c 27	N85-34281 *	US-PATENT-CLASS-526-262	c 23	N90-21118 *	US-PATENT-CLASS-528-128	c 27	N93-34040 *
US-PATENT-CLASS-525-186	c 27	N86-20560 *	US-PATENT-CLASS-526-262	c 23	N91-14418 *	US-PATENT-CLASS-528-166	c 27	N85-21348 *
US-PATENT-CLASS-525-229	c 27	N85-34281 *	US-PATENT-CLASS-526-262	c 27	N92-22044 *	US-PATENT-CLASS-528-167	c 27	N85-21347 *
US-PATENT-CLASS-525-26	c 27	N85-29043 *	US-PATENT-CLASS-526-262	c 27	N93-19327 *	US-PATENT-CLASS-528-168	c 27	N81-27271 *
US-PATENT-CLASS-525-275	c 27	N92-22044 *	US-PATENT-CLASS-526-262	c 27	N93-19388 *	US-PATENT-CLASS-528-168	c 27	N82-18389 *
US-PATENT-CLASS-525-282	c 27	N84-14322 *	US-PATENT-CLASS-526-262	c 27	N93-22033 *	US-PATENT-CLASS-528-168	c 27	N85-21347 *
US-PATENT-CLASS-525-282	c 27	N87-15304 *	US-PATENT-CLASS-526-265	c 27	N86-20560 *	US-PATENT-CLASS-528-168	c 27	N85-34280 *
US-PATENT-CLASS-525-287	c 27	N84-14322 *	US-PATENT-CLASS-526-265	c 24	N86-28131 *	US-PATENT-CLASS-528-168	c 27	N87-16909 *
US-PATENT-CLASS-525-326	c 27	N80-24438 *	US-PATENT-CLASS-526-274	c 27	N85-21347 *	US-PATENT-CLASS-528-168	c 27	N87-25469 *
US-PATENT-CLASS-525-336	c 27	N80-24438 *	US-PATENT-CLASS-526-275	c 27	N78-32256 *	US-PATENT-CLASS-528-168	c 23	N93-18283 *
US-PATENT-CLASS-525-340	c 27	N80-24438 *	US-PATENT-CLASS-526-275	c 27	N80-24438 *	US-PATENT-CLASS-528-169	c 23	N93-18283 *
US-PATENT-CLASS-525-36	c 27	N87-22848 *	US-PATENT-CLASS-526-276	c 27	N78-32256 *	US-PATENT-CLASS-528-170	c 27	N85-21347 *
US-PATENT-CLASS-525-374	c 27	N80-24438 *	US-PATENT-CLASS-526-276	c 27	N80-24438 *	US-PATENT-CLASS-528-170	c 24	N86-25416 *
US-PATENT-CLASS-525-375	c 27	N80-24438 *	US-PATENT-CLASS-526-278	c 27	N78-32256 *	US-PATENT-CLASS-528-170	c 27	N86-31726 * #
US-PATENT-CLASS-525-384	c 28	N81-15119 *	US-PATENT-CLASS-526-278	c 27	N80-24438 *	US-PATENT-CLASS-528-170	c 27	N93-14709 *
US-PATENT-CLASS-525-389	c 27	N84-22750 *	US-PATENT-CLASS-526-27	c 27	N78-32256 *	US-PATENT-CLASS-528-170	c 27	N93-22033 *
US-PATENT-CLASS-525-397	c 27	N88-18725 *	US-PATENT-CLASS-526-285	c 27	N83-34040 *	US-PATENT-CLASS-528-170	c 27	N93-25997 * #
US-PATENT-CLASS-525-417	c 27	N84-22745 *	US-PATENT-CLASS-526-285	c 27	N86-27450 *	US-PATENT-CLASS-528-170	c 27	N93-25999 *
US-PATENT-CLASS-525-420	c 27	N85-20123 *	US-PATENT-CLASS-526-285	c 27	N93-19327 *	US-PATENT-CLASS-528-170	c 27	N93-29083 *
US-PATENT-CLASS-525-420	c 27	N92-29157 *	US-PATENT-CLASS-526-285	c 27	N93-19388 *	US-PATENT-CLASS-528-171-175	c 27	N90-23545 *
US-PATENT-CLASS-525-420	c 27	N92-31792 *	US-PATENT-CLASS-526-328	c 27	N85-29043 *	US-PATENT-CLASS-528-171	c 27	N86-27450 *
US-PATENT-CLASS-525-421	c 27	N92-22044 *	US-PATENT-CLASS-526-329.2	c 27	N85-29043 *	US-PATENT-CLASS-528-172	c 27	N82-11206 *
US-PATENT-CLASS-525-421	c 24	N93-13416 *	US-PATENT-CLASS-526-49	c 27	N78-32256 *	US-PATENT-CLASS-528-172	c 27	N84-22749 *
US-PATENT-CLASS-525-422	c 27	N91-31307 *	US-PATENT-CLASS-526-50	c 27	N78-32256 *	US-PATENT-CLASS-528-172	c 27	N90-23546 *
US-PATENT-CLASS-525-422	c 27	N92-21711 *	US-PATENT-CLASS-526-60	c 27	N90-23544 *	US-PATENT-CLASS-528-172	c 27	N91-15403 *
US-PATENT-CLASS-525-422	c 27	N92-22044 *	US-PATENT-CLASS-526-7	c 44	N79-25481 *	US-PATENT-CLASS-528-172	c 25	N92-16043 *
US-PATENT-CLASS-525-422	c 27	N93-11059 *	US-PATENT-CLASS-526-88	c 25	N81-19242 *	US-PATENT-CLASS-528-172	c 27	N92-33008 *
US-PATENT-CLASS-525-423	c 24	N86-19380 *	US-PATENT-CLASS-526-914	c 28	N81-15119 *	US-PATENT-CLASS-528-172	c 27	N92-33015 *
US-PATENT-CLASS-525-425	c 33	N88-23941 *	US-PATENT-CLASS-526-9	c 44	N79-25481 *	US-PATENT-CLASS-528-172	c 27	N93-14709 *
US-PATENT-CLASS-525-426	c 27	N80-26446 *	US-PATENT-CLASS-528-102	c 24	N86-19380 *	US-PATENT-CLASS-528-172	c 23	N93-18283 *
US-PATENT-CLASS-525-426	c 27	N84-22746 *	US-PATENT-CLASS-528-103	c 24	N86-19380 *	US-PATENT-CLASS-528-172	c 27	N93-25997 * #
US-PATENT-CLASS-525-426	c 27	N87-28657 *	US-PATENT-CLASS-528-106	c 27	N85-34282 *	US-PATENT-CLASS-528-172	c 27	N93-25999 *
US-PATENT-CLASS-525-426	c 24	N93-13416 *	US-PATENT-CLASS-528-108	c 23	N86-32525 *	US-PATENT-CLASS-528-172	c 27	N93-29083 *
US-PATENT-CLASS-525-432	c 27	N86-19456 *	US-PATENT-CLASS-528-108	c 27	N87-25469 *	US-PATENT-CLASS-528-172	c 27	N93-29085 *
US-PATENT-CLASS-525-432	c 27	N87-28657 *	US-PATENT-CLASS-528-10	c 27	N88-29040 *	US-PATENT-CLASS-528-173	c 27	N82-11206 *
US-PATENT-CLASS-525-432	c 24	N91-25200 *	US-PATENT-CLASS-528-10	c 27	N90-21177 *	US-PATENT-CLASS-528-173	c 27	N91-15403 *
US-PATENT-CLASS-525-432	c 27	N92-21711 *	US-PATENT-CLASS-528-110	c 24	N84-11213 *	US-PATENT-CLASS-528-173	c 25	N92-16043 *
US-PATENT-CLASS-525-432	c 27	N92-29157 *	US-PATENT-CLASS-528-113	c 27	N85-34281 *	US-PATENT-CLASS-528-173	c 27	N92-33014 *
US-PATENT-CLASS-525-432	c 27	N93-11059 *	US-PATENT-CLASS-528-117	c 27	N85-34281 *	US-PATENT-CLASS-528-173	c 27	N93-14709 *
US-PATENT-CLASS-525-432	c 24	N93-13416 *	US-PATENT-CLASS-528-118	c 27	N81-17260 *	US-PATENT-CLASS-528-173	c 27	N93-25997 * #
US-PATENT-CLASS-525-434	c 27	N92-31792 *	US-PATENT-CLASS-528-124	c 23	N86-32525 *	US-PATENT-CLASS-528-173	c 27	N93-25999 *
US-PATENT-CLASS-525-436	c 27	N86-19456 *	US-PATENT-CLASS-528-125	c 27	N83-34040 *	US-PATENT-CLASS-528-173	c 27	N93-29085 *
US-PATENT-CLASS-525-436	c 27	N87-28657 *	US-PATENT-CLASS-528-125	c 27	N84-22749 *	US-PATENT-CLASS-528-174	c 27	N86-27450 *
US-PATENT-CLASS-525-436	c 27	N91-15402 *	US-PATENT-CLASS-528-125	c 27	N85-21348 *	US-PATENT-CLASS-528-174	c 23	N93-18283 *
US-PATENT-CLASS-525-436	c 27	N92-31792 *	US-PATENT-CLASS-528-125	c 27	N89-14337 *	US-PATENT-CLASS-528-176	c 27	N86-27450 *
US-PATENT-CLASS-525-436	c 24	N93-13416 *	US-PATENT-CLASS-528-125	c 27	N90-16950 *	US-PATENT-CLASS-528-176	c 27	N87-22848 *
US-PATENT-CLASS-525-471	c 27	N91-31307 *	US-PATENT-CLASS-528-125	c 27	N90-23545 *	US-PATENT-CLASS-528-176	c 27	N90-21198 *
US-PATENT-CLASS-525-474	c 27	N83-28240 *	US-PATENT-CLASS-528-125	c 27	N90-23546 *	US-PATENT-CLASS-528-176	c 27	N91-15403 *
US-PATENT-CLASS-525-474	c 27	N85-21349 *	US-PATENT-CLASS-528-125	c 27	N91-15403 *	US-PATENT-CLASS-528-176	c 27	N93-25997 * #
US-PATENT-CLASS-525-47	c 27	N85-29043 *	US-PATENT-CLASS-528-125	c 23	N91-27220 *	US-PATENT-CLASS-528-176	c 27	N93-25999 *
US-PATENT-CLASS-525-484	c 24	N84-34571 *	US-PATENT-CLASS-528-125	c 25	N92-16043 *	US-PATENT-CLASS-528-179	c 27	N86-19456 *
US-PATENT-CLASS-525-4	c 25	N80-23383 *	US-PATENT-CLASS-528-125	c 27	N92-28751 *	US-PATENT-CLASS-528-179	c 25	N92-16043 *
US-PATENT-CLASS-525-527	c 24	N86-19380 *	US-PATENT-CLASS-528-125	c 27	N92-33008 *	US-PATENT-CLASS-528-179	c 27	N92-29157 *
US-PATENT-CLASS-525-532	c 23	N85-28973 *	US-PATENT-CLASS-528-125	c 27	N92-33014 *	US-PATENT-CLASS-528-179	c 27	N92-33014 *
US-PATENT-CLASS-525-534	c 27	N84-22747 *	US-PATENT-CLASS-528-125	c 27	N92-33015 *	US-PATENT-CLASS-528-179	c 27	N93-29085 *
US-PATENT-CLASS-525-534	c 23	N85-28973 *	US-PATENT-CLASS-528-125	c 27	N93-14709 *	US-PATENT-CLASS-528-180	c 27	N82-11206 *
US-PATENT-CLASS-525-534	c 27	N86-27450 *	US-PATENT-CLASS-528-125	c 23	N93-18283 *	US-PATENT-CLASS-528-182	c 27	N86-19456 *
US-PATENT-CLASS-525-535	c 27	N84-22747 *	US-PATENT-CLASS-528-125	c 27	N93-25997 * #	US-PATENT-CLASS-528-182	c 27	N92-33014 *
US-PATENT-CLASS-525-535	c 27	N86-27450 *	US-PATENT-CLASS-528-125	c 27	N93-25999 *	US-PATENT-CLASS-528-183	c 27	N84-22746 *
US-PATENT-CLASS-525-536	c 27	N84-22747 *	US-PATENT-CLASS-528-125	c 27	N93-29083 *	US-PATENT-CLASS-528-183	c 27	N85-20123 *
US-PATENT-CLASS-525-56	c 23	N81-29160 *	US-PATENT-CLASS-528-125	c 27	N93-29085 *	US-PATENT-CLASS-528-183	c 27	N86-29039 *
US-PATENT-CLASS-525-61	c 27	N81-24257 *	US-PATENT-CLASS-528-126	c 27	N79-28307 *	US-PATENT-CLASS-528-183	c 27	N93-25997 * #
US-PATENT-CLASS-525-61	c 23	N81-29160 *	US-PATENT-CLASS-528-126	c 27	N82-11206 *	US-PATENT-CLASS-528-184	c 27	N87-22848 *
US-PATENT-CLASS-525-61	c 25	N83-13188 *	US-PATENT-CLASS-528-126	c 27	N83-34040 *	US-PATENT-CLASS-528-185	c 27	N84-22749 *
US-PATENT-CLASS-525-903	c 27	N87-28657 *	US-PATENT-CLASS-528-126	c 27	N85-21348 *	US-PATENT-CLASS-528-185	c 27	N85-21348 *
US-PATENT-CLASS-525-903	c 27	N92-21711 *	US-PATENT-CLASS-528-126	c 27	N90-23545 *	US-PATENT-CLASS-528-185	c 27	N86-19456 *
US-PATENT-CLASS-525-903	c 27	N93-11059 *	US-PATENT-CLASS-528-126	c 27	N90-23546 *	US-PATENT-CLASS-528-185	c 27	N90-23546 *
US-PATENT-CLASS-525-903	c 24	N93-13416 *	US-PATENT-CLASS-528-126	c 27	N91-15403 *	US-PATENT-CLASS-528-185	c 23	N92-29141 *
US-PATENT-CLASS-525-905	c 27	N88-18725 *	US-PATENT-CLASS-528-126	c 23	N91-27220 *	US-PATENT-CLASS-528-185	c 27	N92-29157 *
US-PATENT-CLASS-526-13	c 27	N78-32256 *	US-PATENT-CLASS-528-126	c 25	N92-16043 *	US-PATENT-CLASS-528-185	c 27	N92-33008 *
US-PATENT-CLASS-526-193	c 27	N78-15276 *	US-PATENT-CLASS-528-126	c 27	N92-28751 *	US-PATENT-CLASS-528-185	c 27	N92-33015 *
US-PATENT-CLASS-526-1	c 27	N76-24405 *	US-PATENT-CLASS-528-126	c 27	N92-33014 *	US-PATENT-CLASS-528-186	c 27	N85-21348 *
US-PATENT-CLASS-526-201	c 25	N81-19242 *	US-PATENT-CLASS-528-126	c 27	N93-14709 *	US-PATENT-CLASS-528-187	c 27	N85-21348 *
US-PATENT-CLASS-526-204	c 25	N85-30039 *	US-PATENT-CLASS-528-126	c 23	N93-18283 *	US-PATENT-CLASS-528-188	c 23	N90-19300 *
US-PATENT-CLASS-526-217	c 27	N85-21350 *	US-PATENT-CLASS-528-126	c 27	N93-29085 *	US-PATENT-CLASS-528-188	c 27	N90-23546 *
US-PATENT-CLASS-526-217	c 25	N85-30039 *	US-PATENT-CLASS-528-127	c 27	N79-28307 *	US-PATENT-CLASS-528-188	c 27	N92-33014 *
US-PATENT-CLASS-526-225	c 27	N78-15276 *	US-PATENT-CLASS-528-127	c 27	N92-28751 *	US-PATENT-CLASS-528-188	c 27	N93-14709 *
US-PATENT-CLASS-526-23	c 27	N78-32256 *	US-PATENT-CLASS-528-128	c 27	N79-28307 *	US-PATENT-CLASS-528-188	c 27	N93-29085 *
US-PATENT-CLASS-526-248	c 27	N92-22044 *	US-PATENT-CLASS-528-128	c 27	N83-34040 *	US-PATENT-CLASS-528-192	c 27	N85-20123 *
US-PATENT-CLASS-526-249	c 27	N92-22044 *	US-PATENT-CLASS-528-128	c 27	N84-22749 *	US-PATENT-CLASS-528-192	c 27	N87-22848 *
US-PATENT-CLASS-526-255	c 27	N76-24405 *	US-PATENT-CLASS-528-128	c 27	N85-21348 *	US-PATENT-CLASS-528-193	c 27	N87-22848 *
US-PATENT-CLASS-526-258	c 27	N92-16121 *	US-PATENT-CLASS-528-128	c 27	N89-14337 *	US-PATENT-CLASS-528-207	c 27	N80-16158 *
US-PATENT-CLASS-526-259	c 27	N83-34040 *	US-PATENT-CLASS-528-128	c 27	N90-23545 *	US-PATENT-CLASS-528-207	c 27	N82-11206 *
US-PATENT-CLASS-526-261	c 27	N80-24438 *	US-PATENT-CLASS-528-128	c 27	N90-23546 *	US-PATENT-CLASS-528-208	c 27	N80-16158 *
US-PATENT-CLASS-526-262	c 27	N81-27272 *	US-PATENT-CLASS-528-128	c 23	N91-27220 *	US-PATENT-CLASS-528-208	c 27	N82-11206 *
US-PATENT-CLASS-526-262	c 27	N84-22745 *	US-PATENT-CLASS-528-128	c 25	N92-16043 *	US-PATENT-CLASS-528-210	c 27	N82-11206 *
US-PATENT-CLASS-526-262	c 27	N84-27885 *	US-PATENT-CLASS-528-128	c 27	N92-28751 *	US-PATENT-CLASS-528-211	c 27	N82-11206 *
US-PATENT-CLASS-526-262	c 27	N85-21347 *	US-PATENT-CLASS-528-128	c 27	N92-33008 *	US-PATENT-CLASS-528-212	c 27	N90-23545 *
US-PATENT-CLASS-526-262	c 27	N85-21350 *	US-PATENT-CLASS-528-128	c 27	N92-33014 *	US-PATENT-CLASS-528-219	c 23	N91-27220 *
US-PATENT-CLASS-526-262	c 27	N85-21351 *	US-PATENT-CLASS-528-128	c 27	N92-33015 *	US-PATENT-CLASS-528-220	c 27	N83-34040 *

## REPORT NUMBER INDEX

## US-PATENT-CLASS-55-194

US-PATENT-CLASS-528-220	c 27	N84-22746 *	US-PATENT-CLASS-528-322	c 27	N93-19327 *	US-PATENT-CLASS-528-481	c 27	N80-24438 *
US-PATENT-CLASS-528-220	c 27	N85-20123 *	US-PATENT-CLASS-528-322	c 27	N93-19388 *	US-PATENT-CLASS-528-4	c 27	N81-27271 *
US-PATENT-CLASS-528-220	c 24	N86-25416 *	US-PATENT-CLASS-528-322	c 27	N93-22033 *	US-PATENT-CLASS-528-4	c 27	N82-18389 *
US-PATENT-CLASS-528-220	c 27	N86-31726 *	US-PATENT-CLASS-528-327	c 27	N84-27884 *	US-PATENT-CLASS-528-4	c 27	N88-29040 *
US-PATENT-CLASS-528-220	c 27	N87-21112 *	US-PATENT-CLASS-528-327	c 27	N86-19455 *	US-PATENT-CLASS-528-4	c 27	N90-21177 *
US-PATENT-CLASS-528-220	c 27	N89-16042 *	US-PATENT-CLASS-528-327	c 27	N87-21112 *	US-PATENT-CLASS-528-6	c 27	N81-27271 *
US-PATENT-CLASS-528-220	c 23	N91-27220 *	US-PATENT-CLASS-528-328	c 27	N82-24338 *	US-PATENT-CLASS-528-6	c 27	N82-18389 *
US-PATENT-CLASS-528-220	c 27	N91-27372 *	US-PATENT-CLASS-528-331	c 27	N79-28307 *	US-PATENT-CLASS-528-6	c 27	N84-22750 *
US-PATENT-CLASS-528-220	c 27	N92-28751 *	US-PATENT-CLASS-528-331	c 27	N84-27884 *	US-PATENT-CLASS-528-72	c 27	N89-16042 *
US-PATENT-CLASS-528-221	c 27	N79-28307 *	US-PATENT-CLASS-528-331	c 27	N87-21112 *	US-PATENT-CLASS-528-73	c 25	N80-16116 *
US-PATENT-CLASS-528-222	c 27	N81-29229 *	US-PATENT-CLASS-528-336	c 27	N79-28307 *	US-PATENT-CLASS-528-73	c 27	N89-16042 *
US-PATENT-CLASS-528-222	c 27	N83-34040 *	US-PATENT-CLASS-528-336	c 27	N85-20123 *	US-PATENT-CLASS-528-7	c 27	N82-18389 *
US-PATENT-CLASS-528-222	c 27	N83-34041 *	US-PATENT-CLASS-528-336	c 27	N85-21350 *	US-PATENT-CLASS-528-7	c 27	N84-22750 *
US-PATENT-CLASS-528-222	c 27	N86-29039 *	US-PATENT-CLASS-528-336	c 27	N86-32568 *	US-PATENT-CLASS-528-86	c 23	N85-28973 *
US-PATENT-CLASS-528-222	c 27	N91-27372 *	US-PATENT-CLASS-528-337	c 27	N79-28307 *	US-PATENT-CLASS-528-92	c 24	N84-34571 *
US-PATENT-CLASS-528-223	c 27	N79-28307 *	US-PATENT-CLASS-528-337	c 23	N86-32525 *	US-PATENT-CLASS-528-92	c 27	N85-34282 *
US-PATENT-CLASS-528-223	c 27	N92-28751 *	US-PATENT-CLASS-528-337	c 23	N86-32568 *	US-PATENT-CLASS-528-94	c 27	N85-34281 *
US-PATENT-CLASS-528-225	c 27	N79-28307 *	US-PATENT-CLASS-528-338	c 27	N79-28307 *	US-PATENT-CLASS-53-102	c 15	N71-21528 *
US-PATENT-CLASS-528-225	c 27	N82-11206 *	US-PATENT-CLASS-528-340	c 27	N86-32568 *	US-PATENT-CLASS-53-112A	c 15	N73-27405 *
US-PATENT-CLASS-528-225	c 27	N91-27372 *	US-PATENT-CLASS-528-341	c 27	N86-29039 *	US-PATENT-CLASS-53-22A	c 15	N73-27405 *
US-PATENT-CLASS-528-226	c 27	N83-34041 *	US-PATENT-CLASS-528-342	c 27	N79-28307 *	US-PATENT-CLASS-53-22	c 15	N71-23256 *
US-PATENT-CLASS-528-226	c 27	N85-20124 *	US-PATENT-CLASS-528-342	c 27	N84-27885 *	US-PATENT-CLASS-53-429	c 09	N82-29330 *
US-PATENT-CLASS-528-226	c 27	N85-21348 *	US-PATENT-CLASS-528-342	c 27	N85-21350 *	US-PATENT-CLASS-53-9	c 37	N77-23482 *
US-PATENT-CLASS-528-227	c 27	N79-28307 *	US-PATENT-CLASS-528-342	c 27	N85-21351 *	US-PATENT-CLASS-530-362	c 52	N90-20616 *
US-PATENT-CLASS-528-227	c 27	N91-27372 *	US-PATENT-CLASS-528-342	c 27	N85-21352 *	US-PATENT-CLASS-530-363	c 52	N90-20616 *
US-PATENT-CLASS-528-228	c 27	N81-27272 *	US-PATENT-CLASS-528-342	c 25	N85-28982 *	US-PATENT-CLASS-530-364	c 52	N90-20616 *
US-PATENT-CLASS-528-228	c 27	N82-11206 *	US-PATENT-CLASS-528-342	c 27	N86-19457 *	US-PATENT-CLASS-530-387	c 52	N90-20616 *
US-PATENT-CLASS-528-228	c 27	N83-34040 *	US-PATENT-CLASS-528-345	c 27	N84-22746 *	US-PATENT-CLASS-530-413	c 25	N92-33009 *
US-PATENT-CLASS-528-228	c 27	N84-22745 *	US-PATENT-CLASS-528-345	c 27	N85-20123 *	US-PATENT-CLASS-530-422	c 52	N90-20616 *
US-PATENT-CLASS-528-228	c 27	N89-16042 *	US-PATENT-CLASS-528-345	c 27	N86-19457 *	US-PATENT-CLASS-536-105	c 27	N77-30236 *
US-PATENT-CLASS-528-228	c 27	N91-27372 *	US-PATENT-CLASS-528-347	c 27	N86-32568 *	US-PATENT-CLASS-536-536-85	c 27	N77-30236 *
US-PATENT-CLASS-528-229	c 27	N79-28307 *	US-PATENT-CLASS-528-348	c 27	N84-22746 *	US-PATENT-CLASS-536-56	c 27	N77-30236 *
US-PATENT-CLASS-528-229	c 27	N79-33316 *	US-PATENT-CLASS-528-350	c 24	N91-25200 *	US-PATENT-CLASS-536-58	c 27	N77-30236 *
US-PATENT-CLASS-528-229	c 27	N81-29229 *	US-PATENT-CLASS-528-351	c 27	N82-11206 *	US-PATENT-CLASS-536-84	c 27	N77-30236 *
US-PATENT-CLASS-528-229	c 27	N83-34040 *	US-PATENT-CLASS-528-352	c 27	N85-21348 *	US-PATENT-CLASS-538-117	c 27	N81-17260 *
US-PATENT-CLASS-528-229	c 27	N85-21348 *	US-PATENT-CLASS-528-352	c 27	N85-34280 *	US-PATENT-CLASS-544-193	c 27	N78-15276 *
US-PATENT-CLASS-528-229	c 27	N85-21350 *	US-PATENT-CLASS-528-352	c 27	N86-19456 *	US-PATENT-CLASS-544-193	c 27	N79-28307 *
US-PATENT-CLASS-528-229	c 27	N85-21351 *	US-PATENT-CLASS-528-352	c 23	N86-32525 *	US-PATENT-CLASS-544-195	c 27	N78-32256 *
US-PATENT-CLASS-528-229	c 27	N85-21352 *	US-PATENT-CLASS-528-352	c 23	N90-19300 *	US-PATENT-CLASS-544-215	c 27	N84-22744 *
US-PATENT-CLASS-528-229	c 27	N85-34280 *	US-PATENT-CLASS-528-352	c 24	N91-25200 *	US-PATENT-CLASS-546-262	c 27	N87-22847 *
US-PATENT-CLASS-528-229	c 27	N85-34282 *	US-PATENT-CLASS-528-352	c 27	N92-29157 *	US-PATENT-CLASS-546-264	c 27	N87-22847 *
US-PATENT-CLASS-528-229	c 27	N86-19457 *	US-PATENT-CLASS-528-352	c 27	N92-33008 *	US-PATENT-CLASS-546-339	c 27	N87-16908 *
US-PATENT-CLASS-528-229	c 27	N87-21112 *	US-PATENT-CLASS-528-352	c 27	N92-33015 *	US-PATENT-CLASS-546-346	c 27	N87-16908 *
US-PATENT-CLASS-528-229	c 27	N87-22847 *	US-PATENT-CLASS-528-353	c 27	N81-19296 *	US-PATENT-CLASS-546-350	c 27	N87-16908 *
US-PATENT-CLASS-528-229	c 23	N90-19300 *	US-PATENT-CLASS-528-353	c 27	N82-11206 *	US-PATENT-CLASS-547-131	c 23	N82-28353 *
US-PATENT-CLASS-528-229	c 27	N92-33008 *	US-PATENT-CLASS-528-353	c 27	N85-21348 *	US-PATENT-CLASS-548-143	c 23	N92-29141 *
US-PATENT-CLASS-528-229	c 27	N92-16121 *	US-PATENT-CLASS-528-353	c 27	N85-34280 *	US-PATENT-CLASS-548-400	c 23	N90-21118 *
US-PATENT-CLASS-528-230	c 27	N91-27372 *	US-PATENT-CLASS-528-353	c 27	N86-19456 *	US-PATENT-CLASS-548-413	c 23	N83-31854 *
US-PATENT-CLASS-528-233	c 27	N91-27372 *	US-PATENT-CLASS-528-353	c 27	N89-16042 *	US-PATENT-CLASS-548-413	c 23	N86-19376 *
US-PATENT-CLASS-528-239	c 27	N85-20124 *	US-PATENT-CLASS-528-353	c 27	N90-16950 *	US-PATENT-CLASS-548-413	c 27	N87-23751 *
US-PATENT-CLASS-528-241	c 27	N85-20124 *	US-PATENT-CLASS-528-353	c 23	N90-19300 *	US-PATENT-CLASS-548-415	c 27	N83-31854 *
US-PATENT-CLASS-528-258	c 27	N85-20124 *	US-PATENT-CLASS-528-353	c 27	N90-23546 *	US-PATENT-CLASS-548-415	c 27	N84-22745 *
US-PATENT-CLASS-528-258	c 27	N84-22747 *	US-PATENT-CLASS-528-353	c 27	N91-15402 *	US-PATENT-CLASS-548-520	c 27	N90-23545 *
US-PATENT-CLASS-528-26	c 27	N84-22747 *	US-PATENT-CLASS-528-353	c 27	N91-15403 *	US-PATENT-CLASS-548-524	c 23	N90-21118 *
US-PATENT-CLASS-528-26	c 27	N87-14516 *	US-PATENT-CLASS-528-353	c 27	N92-29157 *	US-PATENT-CLASS-548-549	c 23	N91-14419 *
US-PATENT-CLASS-528-26	c 27	N93-29083 *	US-PATENT-CLASS-528-353	c 27	N92-33008 *	US-PATENT-CLASS-549-241	c 23	N88-26404 *
US-PATENT-CLASS-528-271	c 27	N84-27884 *	US-PATENT-CLASS-528-353	c 27	N92-33015 *	US-PATENT-CLASS-549-241	c 25	N90-23497 *
US-PATENT-CLASS-528-279	c 27	N85-20124 *	US-PATENT-CLASS-528-353	c 27	N93-25999 *	US-PATENT-CLASS-549-335	c 23	N85-33187 *
US-PATENT-CLASS-528-288	c 27	N85-29043 *	US-PATENT-CLASS-528-353	c 27	N93-29083 *	US-PATENT-CLASS-55-DIG.25	c 35	N84-17555 *
US-PATENT-CLASS-528-289	c 27	N85-29043 *	US-PATENT-CLASS-528-361	c 24	N84-11213 *	US-PATENT-CLASS-55-DIG.30	c 35	N84-17555 *
US-PATENT-CLASS-528-288	c 27	N93-29083 *	US-PATENT-CLASS-528-362	c 25	N81-14016 *	US-PATENT-CLASS-55-DIG.35	c 54	N75-27761 *
US-PATENT-CLASS-528-303	c 27	N85-29043 *	US-PATENT-CLASS-528-362	c 27	N81-17259 *	US-PATENT-CLASS-55-DIG.42	c 37	N85-29283 *
US-PATENT-CLASS-528-304	c 27	N85-29043 *	US-PATENT-CLASS-528-362	c 27	N81-17262 *	US-PATENT-CLASS-55-100	c 35	N78-12390 *
US-PATENT-CLASS-528-308	c 27	N90-21198 *	US-PATENT-CLASS-528-362	c 27	N82-24338 *	US-PATENT-CLASS-55-100	c 25	N78-25148 *
US-PATENT-CLASS-528-30	c 27	N88-29040 *	US-PATENT-CLASS-528-362	c 27	N84-22744 *	US-PATENT-CLASS-55-101	c 25	N78-25148 *
US-PATENT-CLASS-528-30	c 27	N90-21177 *	US-PATENT-CLASS-528-362	c 27	N84-27884 *	US-PATENT-CLASS-55-105	c 35	N84-17555 *
US-PATENT-CLASS-528-310	c 27	N81-17262 *	US-PATENT-CLASS-528-362	c 27	N87-21112 *	US-PATENT-CLASS-55-105	c 33	N90-20320 *
US-PATENT-CLASS-528-310	c 27	N81-24256 *	US-PATENT-CLASS-528-38	c 27	N83-34040 *	US-PATENT-CLASS-55-118	c 35	N79-17192 *
US-PATENT-CLASS-528-310	c 27	N82-24338 *	US-PATENT-CLASS-528-394	c 27	N84-22750 *	US-PATENT-CLASS-55-122	c 35	N79-17192 *
US-PATENT-CLASS-528-310	c 27	N84-27884 *	US-PATENT-CLASS-528-399	c 27	N81-27271 *	US-PATENT-CLASS-55-126	c 35	N84-17555 *
US-PATENT-CLASS-528-310	c 23	N86-19376 *	US-PATENT-CLASS-528-399	c 27	N82-18389 *	US-PATENT-CLASS-55-127	c 35	N79-17192 *
US-PATENT-CLASS-528-314	c 25	N85-30039 *	US-PATENT-CLASS-528-399	c 27	N84-22750 *	US-PATENT-CLASS-55-12	c 35	N84-17555 *
US-PATENT-CLASS-528-315	c 27	N85-21350 *	US-PATENT-CLASS-528-399	c 23	N86-32525 *	US-PATENT-CLASS-55-131	c 35	N84-17555 *
US-PATENT-CLASS-528-321	c 27	N85-21347 *	US-PATENT-CLASS-528-401	c 27	N79-22300 *	US-PATENT-CLASS-55-138	c 35	N84-17555 *
US-PATENT-CLASS-528-321	c 24	N86-25416 *	US-PATENT-CLASS-528-401	c 25	N81-14016 *	US-PATENT-CLASS-55-139	c 35	N84-17555 *
US-PATENT-CLASS-528-321	c 27	N86-31726 *	US-PATENT-CLASS-528-401	c 27	N81-17259 *	US-PATENT-CLASS-55-139	c 33	N90-20320 *
US-PATENT-CLASS-528-321	c 27	N87-16909 *	US-PATENT-CLASS-528-401	c 27	N81-17262 *	US-PATENT-CLASS-55-145	c 35	N84-17555 *
US-PATENT-CLASS-528-321	c 27	N89-16042 *	US-PATENT-CLASS-528-401	c 27	N82-24338 *	US-PATENT-CLASS-55-15-8	c 52	N79-14749 *
US-PATENT-CLASS-528-321	c 27	N93-22033 *	US-PATENT-CLASS-528-401	c 23	N82-28353 *	US-PATENT-CLASS-55-155	c 35	N79-17192 *
US-PATENT-CLASS-528-322	c 27	N81-17260 *	US-PATENT-CLASS-528-402	c 27	N84-22744 *	US-PATENT-CLASS-55-158	c 18	N71-20742 *
US-PATENT-CLASS-528-322	c 27	N84-22745 *	US-PATENT-CLASS-528-402	c 25	N82-24312 *	US-PATENT-CLASS-55-158	c 44	N77-22607 *
US-PATENT-CLASS-528-322	c 27	N84-27885 *	US-PATENT-CLASS-528-406	c 23	N86-32525 *	US-PATENT-CLASS-55-158	c 25	N82-21269 *
US-PATENT-CLASS-528-322	c 27	N85-21347 *	US-PATENT-CLASS-528-407	c 24	N84-34571 *	US-PATENT-CLASS-55-159	c 34	N74-30608 *
US-PATENT-CLASS-528-322	c 27	N85-21350 *	US-PATENT-CLASS-528-407	c 27	N85-34281 *	US-PATENT-CLASS-55-159	c 37	N79-21345 *
US-PATENT-CLASS-528-322	c 27	N85-21351 *	US-PATENT-CLASS-528-407	c 27	N85-34282 *	US-PATENT-CLASS-55-159	c 31	N90-20254 *
US-PATENT-CLASS-528-322	c 27	N85-21352 *	US-PATENT-CLASS-528-407	c 23	N86-32525 *	US-PATENT-CLASS-55-15	c 71	N83-35781 *
US-PATENT-CLASS-528-322	c 25	N85-28982 *	US-PATENT-CLASS-528-413	c 27	N87-24564 *	US-PATENT-CLASS-55-15	c 71	N85-22104 *
US-PATENT-CLASS-528-322	c 25	N85-30039 *	US-PATENT-CLASS-528-422	c 27	N79-22300 *	US-PATENT-CLASS-55-15	c 25	N92-33611 *
US-PATENT-CLASS-528-322	c 25	N86-19457 *	US-PATENT-CLASS-528-422	c 25	N81-14016 *	US-PATENT-CLASS-55-160	c 15	N71-15968 *
US-PATENT-CLASS-528-322	c 24	N86-25416 *	US-PATENT-CLASS-528-422	c 27	N81-17259 *	US-PATENT-CLASS-55-160	c 29	N90-20236 *
US-PATENT-CLASS-528-322	c 27	N86-31726 *	US-PATENT-CLASS-528-422	c 27	N81-17262 *	US-PATENT-CLASS-55-160	c 35	N90-22024 *
US-PATENT-CLASS-528-322	c 27	N87-16909 *	US-PATENT-CLASS-528-422	c 27	N82-24338 *	US-PATENT-CLASS-55-16	c 06	N72-31140 *
US-PATENT-CLASS-528-322	c 27	N87-21112 *	US-PATENT-CLASS-528-422	c 23	N82-28353 *	US-PATENT-CLASS-55-179	c 14	N71-17588 *
US-PATENT-CLASS-528-322	c 27	N89-16042 *	US-PATENT-CLASS-528-422	c 27	N84-22744 *	US-PATENT-CLASS-55-179	c 54	N77-32722 *
US-PATENT-CLASS-528-322	c 23	N90-21118 *	US-PATENT-CLASS-528-423	c 27	N81-17259 *	US-PATENT-CLASS-55-182	c 29	N90-20236 *
US-PATENT-CLASS-528-322	c 23	N91-14418 *	US-PATENT-CLASS-528-423	c 27	N84-22744 *	US-PATENT-CLASS-55-194	c 35	N83-29652 *

# US-PATENT-CLASS-55-197

# REPORT NUMBER INDEX

US-PATENT-CLASS-55-197 ..... c 23 N77-17161 \*  
 US-PATENT-CLASS-55-199 ..... c 34 N74-30608 \*  
 US-PATENT-CLASS-55-202 ..... c 35 N83-29652 \*  
 US-PATENT-CLASS-55-203 ..... c 35 N90-22024 \*  
 US-PATENT-CLASS-55-204 ..... c 15 N71-23023 \*  
 US-PATENT-CLASS-55-204 ..... c 44 N83-10501 \*  
 US-PATENT-CLASS-55-204 ..... c 35 N90-22024 \*  
 US-PATENT-CLASS-55-205 ..... c 29 N90-20236 \*  
 US-PATENT-CLASS-55-208 ..... c 14 N71-18483 \*  
 US-PATENT-CLASS-55-228 ..... c 45 N91-14662 \*  
 US-PATENT-CLASS-55-241 ..... c 35 N79-17192 \*  
 US-PATENT-CLASS-55-242 ..... c 35 N79-17192 \*  
 US-PATENT-CLASS-55-242 ..... c 45 N91-14662 \*  
 US-PATENT-CLASS-55-255 ..... c 35 N86-29174 \*  
 US-PATENT-CLASS-55-259 ..... c 35 N86-29174 \*  
 US-PATENT-CLASS-55-26-9 ..... c 35 N78-12390 \*  
 US-PATENT-CLASS-55-261 ..... c 35 N76-18401 \*  
 US-PATENT-CLASS-55-269 ..... c 54 N77-32722 \*  
 US-PATENT-CLASS-55-270 ..... c 35 N84-17555 \*  
 US-PATENT-CLASS-55-277 ..... c 71 N83-35781 \*  
 US-PATENT-CLASS-55-277 ..... c 71 N85-22104 \*  
 US-PATENT-CLASS-55-277 ..... c 25 N92-33611 \*  
 US-PATENT-CLASS-55-277 ..... c 25 N93-20570 \*  
 US-PATENT-CLASS-55-283 ..... c 35 N84-17555 \*  
 US-PATENT-CLASS-55-291 ..... c 35 N84-17555 \*  
 US-PATENT-CLASS-55-2 ..... c 25 N78-25148 \*  
 US-PATENT-CLASS-55-2 ..... c 28 N81-14103 \*  
 US-PATENT-CLASS-55-2 ..... c 35 N84-17555 \*  
 US-PATENT-CLASS-55-306 ..... c 28 N70-34788 \*  
 US-PATENT-CLASS-55-35 ..... c 05 N70-41297 \*  
 US-PATENT-CLASS-55-360 ..... c 35 N79-17192 \*  
 US-PATENT-CLASS-55-386 ..... c 35 N75-26334 \*  
 US-PATENT-CLASS-55-38 ..... c 71 N83-35781 \*  
 US-PATENT-CLASS-55-3 ..... c 35 N78-12390 \*  
 US-PATENT-CLASS-55-400 ..... c 11 N71-10777 \*  
 US-PATENT-CLASS-55-407 ..... c 35 N79-17192 \*  
 US-PATENT-CLASS-55-408 ..... c 15 N70-40062 \*  
 US-PATENT-CLASS-55-418 ..... c 15 N71-22721 \*  
 US-PATENT-CLASS-55-43 ..... c 34 N74-30608 \*  
 US-PATENT-CLASS-55-446 ..... c 15 N72-22489 \*  
 US-PATENT-CLASS-55-464 ..... c 15 N72-22489 \*  
 US-PATENT-CLASS-55-466 ..... c 35 N84-17555 \*  
 US-PATENT-CLASS-55-46 ..... c 31 N90-20254 \*  
 US-PATENT-CLASS-55-493 ..... c 14 N72-23457 \*  
 US-PATENT-CLASS-55-498 ..... c 14 N72-23457 \*  
 US-PATENT-CLASS-55-502 ..... c 14 N72-23457 \*  
 US-PATENT-CLASS-55-510 ..... c 25 N74-12813 \*  
 US-PATENT-CLASS-55-518 ..... c 25 N74-12813 \*  
 US-PATENT-CLASS-55-521 ..... c 14 N72-23457 \*  
 US-PATENT-CLASS-55-521 ..... c 35 N86-29174 \*  
 US-PATENT-CLASS-55-523 ..... c 34 N76-27515 \*  
 US-PATENT-CLASS-55-526 ..... c 34 N76-27515 \*  
 US-PATENT-CLASS-55-528 ..... c 35 N86-29174 \*  
 US-PATENT-CLASS-55-52 ..... c 71 N83-35781 \*  
 US-PATENT-CLASS-55-55 ..... c 06 N72-31140 \*  
 US-PATENT-CLASS-55-66 ..... c 25 N80-23383 \*  
 US-PATENT-CLASS-55-67 ..... c 23 N77-17161 \*  
 US-PATENT-CLASS-55-67 ..... c 25 N80-23383 \*  
 US-PATENT-CLASS-55-68 ..... c 25 N80-23383 \*  
 US-PATENT-CLASS-55-68 ..... c 45 N91-14662 \*  
 US-PATENT-CLASS-55-6 ..... c 35 N84-17555 \*  
 US-PATENT-CLASS-55-72 ..... c 25 N80-23383 \*  
 US-PATENT-CLASS-55-73 ..... c 45 N79-12584 \*  
 US-PATENT-CLASS-55-74 ..... c 23 N77-17161 \*  
 US-PATENT-CLASS-55-74 ..... c 45 N91-14662 \*  
 US-PATENT-CLASS-55-75 ..... c 15 N71-26185 \*  
 US-PATENT-CLASS-55-75 ..... c 54 N91-31803 \* #  
 US-PATENT-CLASS-55-84 ..... c 45 N91-14662 \*  
 US-PATENT-CLASS-55-89 ..... c 45 N91-14662 \*  
 US-PATENT-CLASS-55-96 ..... c 35 N84-17555 \*  
 US-PATENT-CLASS-552-101 ..... c 23 N91-17141 \*  
 US-PATENT-CLASS-552-101 ..... c 23 N91-25185 \*  
 US-PATENT-CLASS-552-108 ..... c 23 N91-25185 \*  
 US-PATENT-CLASS-552-110 ..... c 23 N91-25185 \*  
 US-PATENT-CLASS-552-113 ..... c 23 N91-25185 \*  
 US-PATENT-CLASS-552-115 ..... c 23 N91-25185 \*  
 US-PATENT-CLASS-552-402 ..... c 27 N90-21177 \*  
 US-PATENT-CLASS-556-410 ..... c 25 N85-21280 \*  
 US-PATENT-CLASS-556-436 ..... c 27 N86-21675 \*  
 US-PATENT-CLASS-558-145 ..... c 23 N87-28605 \*  
 US-PATENT-CLASS-558-190 ..... c 23 N87-28605 \*  
 US-PATENT-CLASS-558-190 ..... c 23 N90-20133 \*  
 US-PATENT-CLASS-558-193 ..... c 23 N87-28605 \*  
 US-PATENT-CLASS-558-193 ..... c 23 N90-23475 \*  
 US-PATENT-CLASS-558-80 ..... c 23 N88-24692 \*  
 US-PATENT-CLASS-56-73 ..... c 74 N86-26190 \*  
 US-PATENT-CLASS-560-104 ..... c 27 N87-16907 \*  
 US-PATENT-CLASS-562-413 ..... c 25 N90-23497 \*  
 US-PATENT-CLASS-562-415 ..... c 25 N90-23497 \*  
 US-PATENT-CLASS-562-417 ..... c 25 N90-23497 \*  
 US-PATENT-CLASS-562-827 ..... c 25 N93-29506 \*  
 US-PATENT-CLASS-564-113 ..... c 23 N86-19376 \*  
 US-PATENT-CLASS-564-13 ..... c 23 N88-24692 \*  
 US-PATENT-CLASS-564-15 ..... c 27 N86-32568 \* #  
 US-PATENT-CLASS-564-229 ..... c 27 N81-24256 \*  
 US-PATENT-CLASS-564-229 ..... c 23 N82-28353 \*

US-PATENT-CLASS-564-243 ..... c 27 N84-22744 \*  
 US-PATENT-CLASS-564-243 ..... c 23 N86-21582 \*  
 US-PATENT-CLASS-564-315 ..... c 23 N89-12667 \*  
 US-PATENT-CLASS-564-315 ..... c 27 N92-33015 \*  
 US-PATENT-CLASS-564-323 ..... c 23 N89-12667 \*  
 US-PATENT-CLASS-564-330 ..... c 27 N87-22847 \*  
 US-PATENT-CLASS-564-330 ..... c 23 N89-12667 \*  
 US-PATENT-CLASS-564-342 ..... c 23 N89-12667 \*  
 US-PATENT-CLASS-564-344 ..... c 23 N89-12667 \*  
 US-PATENT-CLASS-564-396 ..... c 27 N87-22847 \*  
 US-PATENT-CLASS-564-396 ..... c 23 N89-12667 \*  
 US-PATENT-CLASS-564-417 ..... c 25 N93-29506 \*  
 US-PATENT-CLASS-564-430 ..... c 27 N87-22847 \*  
 US-PATENT-CLASS-564-430 ..... c 23 N89-12667 \*  
 US-PATENT-CLASS-564-440 ..... c 25 N93-29506 \*  
 US-PATENT-CLASS-564-440 ..... c 27 N86-32568 \* #  
 US-PATENT-CLASS-568-2 ..... c 27 N82-18389 \*  
 US-PATENT-CLASS-568-445 ..... c 23 N82-16174 \*  
 US-PATENT-CLASS-568-497 ..... c 23 N82-16174 \*  
 US-PATENT-CLASS-568-4 ..... c 27 N82-18389 \*  
 US-PATENT-CLASS-568-4 ..... c 27 N84-22750 \*  
 US-PATENT-CLASS-568-5 ..... c 27 N82-18389 \*  
 US-PATENT-CLASS-568-5 ..... c 27 N84-22750 \*  
 US-PATENT-CLASS-568-852 ..... c 27 N80-32514 \*  
 US-PATENT-CLASS-568-861 ..... c 27 N80-32514 \*  
 US-PATENT-CLASS-57-906 ..... c 37 N82-18601 \*  
 US-PATENT-CLASS-570-123 ..... c 25 N82-24312 \*  
 US-PATENT-CLASS-570-129 ..... c 25 N82-24312 \*  
 US-PATENT-CLASS-58-24 ..... c 10 N71-26326 \*  
 US-PATENT-CLASS-58-24 ..... c 27 N86-21675 \*  
 US-PATENT-CLASS-60-39.08 ..... c 37 N79-11403 \*  
 US-PATENT-CLASS-60-108 ..... c 33 N71-16104 \*  
 US-PATENT-CLASS-60-1 ..... c 15 N72-33477 \*  
 US-PATENT-CLASS-60-1 ..... c 15 N73-13467 \*  
 US-PATENT-CLASS-60-200A ..... c 33 N72-25911 \*  
 US-PATENT-CLASS-60-200A ..... c 33 N73-25952 \*  
 US-PATENT-CLASS-60-200A ..... c 27 N78-17206 \*  
 US-PATENT-CLASS-60-200R ..... c 20 N82-18314 \*  
 US-PATENT-CLASS-60-200 ..... c 28 N71-14044 \*  
 US-PATENT-CLASS-60-202 ..... c 28 N70-41922 \*  
 US-PATENT-CLASS-60-202 ..... c 28 N71-10574 \*  
 US-PATENT-CLASS-60-202 ..... c 25 N71-21694 \*  
 US-PATENT-CLASS-60-202 ..... c 28 N71-21822 \*  
 US-PATENT-CLASS-60-202 ..... c 28 N71-23081 \*  
 US-PATENT-CLASS-60-202 ..... c 28 N71-23293 \*  
 US-PATENT-CLASS-60-202 ..... c 28 N71-25213 \*  
 US-PATENT-CLASS-60-202 ..... c 28 N71-26173 \*  
 US-PATENT-CLASS-60-202 ..... c 28 N71-26642 \*  
 US-PATENT-CLASS-60-202 ..... c 28 N71-26781 \*  
 US-PATENT-CLASS-60-202 ..... c 28 N72-11709 \*  
 US-PATENT-CLASS-60-202 ..... c 28 N72-22770 \*  
 US-PATENT-CLASS-60-202 ..... c 28 N72-22771 \*  
 US-PATENT-CLASS-60-202 ..... c 28 N73-24783 \*  
 US-PATENT-CLASS-60-202 ..... c 25 N73-25760 \*  
 US-PATENT-CLASS-60-202 ..... c 28 N73-27699 \*  
 US-PATENT-CLASS-60-202 ..... c 20 N77-10148 \*  
 US-PATENT-CLASS-60-202 ..... c 20 N77-20162 \*  
 US-PATENT-CLASS-60-202 ..... c 20 N85-21256 \*  
 US-PATENT-CLASS-60-202 ..... c 20 N89-25279 \*  
 US-PATENT-CLASS-60-203.1 ..... c 20 N86-26368 \*  
 US-PATENT-CLASS-60-203.1 ..... c 20 N87-16875 \*  
 US-PATENT-CLASS-60-203.1 ..... c 09 N88-28939 \*  
 US-PATENT-CLASS-60-203.1 ..... c 20 N80-14188 \*  
 US-PATENT-CLASS-60-204 ..... c 07 N78-17055 \*  
 US-PATENT-CLASS-60-204 ..... c 07 N78-18067 \*  
 US-PATENT-CLASS-60-204 ..... c 44 N81-24519 \*  
 US-PATENT-CLASS-60-204 ..... c 20 N90-19298 \*  
 US-PATENT-CLASS-60-204 ..... c 20 N92-15122 \*  
 US-PATENT-CLASS-60-211 ..... c 28 N73-13773 \*  
 US-PATENT-CLASS-60-214 ..... c 15 N74-27360 \*  
 US-PATENT-CLASS-60-215 ..... c 06 N73-30097 \*  
 US-PATENT-CLASS-60-215 ..... c 15 N74-27360 \*  
 US-PATENT-CLASS-60-217 ..... c 12 N71-17631 \*  
 US-PATENT-CLASS-60-223 ..... c 37 N93-14702 \*  
 US-PATENT-CLASS-60-223 ..... c 20 N93-18856 \*  
 US-PATENT-CLASS-60-225 ..... c 28 N71-10780 \*  
 US-PATENT-CLASS-60-226.1 ..... c 07 N93-22034 \*  
 US-PATENT-CLASS-60-226A ..... c 07 N77-17059 \*  
 US-PATENT-CLASS-60-226A ..... c 07 N79-14096 \*  
 US-PATENT-CLASS-60-226A ..... c 07 N79-14097 \*  
 US-PATENT-CLASS-60-226A ..... c 07 N82-26293 \*  
 US-PATENT-CLASS-60-226R ..... c 07 N78-18066 \*  
 US-PATENT-CLASS-60-226R ..... c 07 N77-14025 \*  
 US-PATENT-CLASS-60-226R ..... c 07 N77-28118 \*  
 US-PATENT-CLASS-60-226R ..... c 07 N78-17055 \*  
 US-PATENT-CLASS-60-226R ..... c 07 N78-17056 \*  
 US-PATENT-CLASS-60-226R ..... c 07 N78-25089 \*  
 US-PATENT-CLASS-60-226R ..... c 07 N79-14096 \*  
 US-PATENT-CLASS-60-226R ..... c 07 N81-19116 \*  
 US-PATENT-CLASS-60-228 ..... c 07 N77-17059 \*  
 US-PATENT-CLASS-60-230 ..... c 07 N78-27121 \*  
 US-PATENT-CLASS-60-236 ..... c 07 N81-19116 \*  
 US-PATENT-CLASS-60-238 ..... c 07 N81-19116 \*  
 US-PATENT-CLASS-60-239 ..... c 07 N81-19116 \*  
 US-PATENT-CLASS-60-23 ..... c 09 N71-26182 \*  
 US-PATENT-CLASS-60-23 ..... c 15 N72-12409 \*

US-PATENT-CLASS-60-23 ..... c 21 N72-31637 \*  
 US-PATENT-CLASS-60-23 ..... c 15 N73-13467 \*  
 US-PATENT-CLASS-60-240 ..... c 28 N71-24736 \*  
 US-PATENT-CLASS-60-240 ..... c 28 N73-13773 \*  
 US-PATENT-CLASS-60-240 ..... c 07 N80-18039 \*  
 US-PATENT-CLASS-60-240 ..... c 20 N92-10054 \*  
 US-PATENT-CLASS-60-240 ..... c 20 N92-15122 \*  
 US-PATENT-CLASS-60-243 ..... c 33 N71-21507 \*  
 US-PATENT-CLASS-60-243 ..... c 15 N71-27432 \*  
 US-PATENT-CLASS-60-243 ..... c 28 N73-13773 \*  
 US-PATENT-CLASS-60-243 ..... c 20 N79-21124 \*  
 US-PATENT-CLASS-60-243 ..... c 20 N92-15122 \*  
 US-PATENT-CLASS-60-251 ..... c 28 N70-41311 \*  
 US-PATENT-CLASS-60-251 ..... c 27 N71-21819 \*  
 US-PATENT-CLASS-60-254 ..... c 28 N72-20758 \*  
 US-PATENT-CLASS-60-254 ..... c 28 N73-24784 \*  
 US-PATENT-CLASS-60-256 ..... c 28 N73-24784 \*  
 US-PATENT-CLASS-60-257 ..... c 31 N70-41948 \*  
 US-PATENT-CLASS-60-258 ..... c 15 N70-22192 \* #  
 US-PATENT-CLASS-60-258 ..... c 28 N71-22983 \*  
 US-PATENT-CLASS-60-258 ..... c 28 N71-28849 \*  
 US-PATENT-CLASS-60-258 ..... c 28 N72-17843 \*  
 US-PATENT-CLASS-60-258 ..... c 15 N72-25455 \*  
 US-PATENT-CLASS-60-258 ..... c 20 N74-13502 \*  
 US-PATENT-CLASS-60-258 ..... c 20 N87-14420 \*  
 US-PATENT-CLASS-60-258 ..... c 20 N92-10054 \*  
 US-PATENT-CLASS-60-259 ..... c 28 N70-41275 \*  
 US-PATENT-CLASS-60-259 ..... c 20 N74-13502 \*  
 US-PATENT-CLASS-60-259 ..... c 34 N77-30399 \*  
 US-PATENT-CLASS-60-259 ..... c 20 N80-14188 \*  
 US-PATENT-CLASS-60-259 ..... c 05 N81-26114 \*  
 US-PATENT-CLASS-60-259 ..... c 20 N90-19298 \*  
 US-PATENT-CLASS-60-259 ..... c 20 N92-15122 \*  
 US-PATENT-CLASS-60-259 ..... c 37 N93-14702 \*  
 US-PATENT-CLASS-60-25 ..... c 15 N73-25911 \*  
 US-PATENT-CLASS-60-25 ..... c 37 N74-21060 \*  
 US-PATENT-CLASS-60-260 ..... c 28 N70-41992 \*  
 US-PATENT-CLASS-60-260 ..... c 28 N72-18766 \*  
 US-PATENT-CLASS-60-260 ..... c 20 N90-19298 \*  
 US-PATENT-CLASS-60-261 ..... c 37 N78-17384 \*  
 US-PATENT-CLASS-60-262 ..... c 37 N78-17384 \*  
 US-PATENT-CLASS-60-262 ..... c 07 N78-18067 \*  
 US-PATENT-CLASS-60-262 ..... c 07 N83-33884 \*  
 US-PATENT-CLASS-60-263 ..... c 28 N71-24321 \*  
 US-PATENT-CLASS-60-263 ..... c 07 N77-28118 \*  
 US-PATENT-CLASS-60-264 ..... c 07 N80-32392 \*  
 US-PATENT-CLASS-60-264 ..... c 20 N89-25279 \*  
 US-PATENT-CLASS-60-265 ..... c 28 N71-20942 \*  
 US-PATENT-CLASS-60-265 ..... c 33 N72-25911 \*  
 US-PATENT-CLASS-60-265 ..... c 33 N73-25952 \*  
 US-PATENT-CLASS-60-265 ..... c 20 N76-14191 \*  
 US-PATENT-CLASS-60-266 ..... c 33 N71-28852 \*  
 US-PATENT-CLASS-60-266 ..... c 28 N72-23810 \*  
 US-PATENT-CLASS-60-267 ..... c 33 N71-29053 \*  
 US-PATENT-CLASS-60-267 ..... c 33 N72-25911 \*  
 US-PATENT-CLASS-60-267 ..... c 33 N73-25952 \*  
 US-PATENT-CLASS-60-267 ..... c 28 N73-32606 \*  
 US-PATENT-CLASS-60-267 ..... c 20 N76-14191 \*  
 US-PATENT-CLASS-60-267 ..... c 34 N79-13288 \*  
 US-PATENT-CLASS-60-267 ..... c 34 N79-13289 \*  
 US-PATENT-CLASS-60-267 ..... c 34 N80-24573 \*  
 US-PATENT-CLASS-60-267 ..... c 44 N81-24519 \*  
 US-PATENT-CLASS-60-267 ..... c 05 N81-26114 \*  
 US-PATENT-CLASS-60-269 ..... c 07 N83-33884 \*  
 US-PATENT-CLASS-60-26 ..... c 21 N72-31637 \*  
 US-PATENT-CLASS-60-26 ..... c 03 N73-20040 \*  
 US-PATENT-CLASS-60-271 ..... c 28 N72-11708 \*  
 US-PATENT-CLASS-60-271 ..... c 28 N72-23810 \*  
 US-PATENT-CLASS-60-271 ..... c 07 N78-17055 \*  
 US-PATENT-CLASS-60-271 ..... c 37 N78-17384 \*  
 US-PATENT-CLASS-60-271 ..... c 07 N83-33884 \*  
 US-PATENT-CLASS-60-271 ..... c 37 N93-14702 \*  
 US-PATENT-CLASS-60-275 ..... c 35 N84-17555 \*  
 US-PATENT-CLASS-60-291 ..... c 31 N73-13898 \*  
 US-PATENT-CLASS-60-300 ..... c 28 N80-10374 \*  
 US-PATENT-CLASS-60-303 ..... c 35 N84-17555 \*  
 US-PATENT-CLASS-60-303 ..... c 37 N84-33808 \*  
 US-PATENT-CLASS-60-311 ..... c 35 N84-17555 \*  
 US-PATENT-CLASS-60-316 ..... c 34 N76-18364 \*  
 US-PATENT-CLASS-60-35.3 ..... c 28 N70-33265 \*  
 US-PATENT-CLASS-60-35.3 ..... c 28 N70-40367 \*  
 US-PATENT-CLASS-60-35.54 ..... c 28 N70-34294 \*  
 US-PATENT-CLASS-60-35.54 ..... c 28 N70-38645 \*  
 US-PATENT-CLASS-60-35.54 ..... c 28 N71-29153 \*  
 US-PATENT-CLASS-60-35.55 ..... c 28 N70-34162 \*  
 US-PATENT-CLASS-60-35.55 ..... c 28 N70-38711 \*  
 US-PATENT-CLASS-60-35.55 ..... c 21 N71-15582 \*  
 US-PATENT-CLASS-60-35.55 ..... c 15 N71-28951 \*  
 US-PATENT-CLASS-60-35.5 ..... c 28 N70-33356 \*  
 US-PATENT-CLASS-60-35.5 ..... c 28 N70-34175 \*  
 US-PATENT-CLASS-60-35.5 ..... c 28 N70-36802 \*  
 US-PATENT-CLASS-60-35.5 ..... c 21 N70-36938 \*  
 US-PATENT-CLASS-60-35.5 ..... c 25 N70-36946 \*  
 US-PATENT-CLASS-60-35.5 ..... c 28 N70-37245 \*  
 US-PATENT-CLASS-60-35.5 ..... c 28 N70-37980 \*  
 US-PATENT-CLASS-60-35.5 ..... c 28 N71-14043 \*

## REPORT NUMBER INDEX

## US-PATENT-CLASS-62-90

US-PATENT-CLASS-60-35.5	c 28	N71-15661 *	US-PATENT-CLASS-60-51	c 15	N71-27754 *	US-PATENT-CLASS-62-269	c 34	N77-19353 *
US-PATENT-CLASS-60-35.60	c 28	N71-15659 *	US-PATENT-CLASS-60-520	c 37	N80-31790 *	US-PATENT-CLASS-62-285	c 77	N75-20139 *
US-PATENT-CLASS-60-35.6	c 28	N70-33284 *	US-PATENT-CLASS-60-524	c 44	N81-17518 *	US-PATENT-CLASS-62-288	c 77	N75-20139 *
US-PATENT-CLASS-60-35.6	c 28	N70-33331 *	US-PATENT-CLASS-60-525	c 37	N81-25370 *	US-PATENT-CLASS-62-289	c 77	N75-20139 *
US-PATENT-CLASS-60-35.6	c 28	N70-33374 *	US-PATENT-CLASS-60-527	c 44	N74-33379 *	US-PATENT-CLASS-62-290	c 77	N75-20139 *
US-PATENT-CLASS-60-35.6	c 28	N70-33375 *	US-PATENT-CLASS-60-527	c 37	N77-12402 *	US-PATENT-CLASS-62-295	c 35	N83-32026 *
US-PATENT-CLASS-60-35.6	c 28	N70-34860 *	US-PATENT-CLASS-60-527	c 37	N77-19458 *	US-PATENT-CLASS-62-2	c 15	N71-15906 *
US-PATENT-CLASS-60-35.6	c 28	N70-35381 *	US-PATENT-CLASS-60-527	c 37	N78-31426 *	US-PATENT-CLASS-62-315	c 34	N77-19353 *
US-PATENT-CLASS-60-35.6	c 27	N70-35534 *	US-PATENT-CLASS-60-527	c 37	N86-19604 *	US-PATENT-CLASS-62-317	c 77	N75-20139 *
US-PATENT-CLASS-60-35.6	c 15	N70-36535 *	US-PATENT-CLASS-60-527	c 35	N88-29151 *	US-PATENT-CLASS-62-333	c 34	N91-21473 *
US-PATENT-CLASS-60-35.6	c 28	N70-36806 *	US-PATENT-CLASS-60-528	c 37	N86-19604 *	US-PATENT-CLASS-62-335	c 31	N93-13422 *
US-PATENT-CLASS-60-35.6	c 28	N70-36910 *	US-PATENT-CLASS-60-530	c 20	N75-24837 *	US-PATENT-CLASS-62-376	c 31	N78-17237 *
US-PATENT-CLASS-60-35.6	c 28	N70-38249 *	US-PATENT-CLASS-60-53	c 37	N77-22479 *	US-PATENT-CLASS-62-376	c 34	N79-20336 *
US-PATENT-CLASS-60-35.6	c 28	N70-38504 *	US-PATENT-CLASS-60-54.5	c 15	N71-10658 *	US-PATENT-CLASS-62-383	c 33	N82-24419 *
US-PATENT-CLASS-60-35.6	c 28	N70-38505 *	US-PATENT-CLASS-60-560	c 35	N78-10428 *	US-PATENT-CLASS-62-384	c 23	N71-24725 *
US-PATENT-CLASS-60-35.6	c 28	N70-38710 *	US-PATENT-CLASS-60-572	c 44	N79-18443 *	US-PATENT-CLASS-62-384	c 31	N87-21159 *
US-PATENT-CLASS-60-35.6	c 28	N70-39899 *	US-PATENT-CLASS-60-574	c 35	N78-10428 *	US-PATENT-CLASS-62-384	c 34	N91-21473 *
US-PATENT-CLASS-60-35.6	c 33	N71-15623 *	US-PATENT-CLASS-60-606	c 28	N80-10374 *	US-PATENT-CLASS-62-3	c 20	N75-24837 *
US-PATENT-CLASS-60-35.6	c 27	N71-15634 *	US-PATENT-CLASS-60-606	c 37	N84-33808 *	US-PATENT-CLASS-62-3	c 34	N78-17335 *
US-PATENT-CLASS-60-35.6	c 31	N71-15637 *	US-PATENT-CLASS-60-632	c 20	N80-18097 *	US-PATENT-CLASS-62-3	c 34	N83-29625 *
US-PATENT-CLASS-60-35.6	c 31	N71-15647 *	US-PATENT-CLASS-60-634	c 37	N87-23983 *	US-PATENT-CLASS-62-3	c 31	N85-29082 *
US-PATENT-CLASS-60-35.6	c 28	N71-15660 *	US-PATENT-CLASS-60-638	c 37	N87-23983 *	US-PATENT-CLASS-62-40	c 15	N71-24044 *
US-PATENT-CLASS-60-35.6	c 14	N71-27186 *	US-PATENT-CLASS-60-641.12	c 44	N84-23018 *	US-PATENT-CLASS-62-40	c 28	N81-14103 *
US-PATENT-CLASS-60-36	c 15	N72-33477 *	US-PATENT-CLASS-60-641.14	c 44	N82-24640 *	US-PATENT-CLASS-62-434	c 31	N93-13422 *
US-PATENT-CLASS-60-37	c 15	N73-13467 *	US-PATENT-CLASS-60-641.8	c 44	N92-29143 *	US-PATENT-CLASS-62-45	c 15	N70-33323 *
US-PATENT-CLASS-60-39.02	c 07	N86-20389 *	US-PATENT-CLASS-60-641	c 44	N75-32581 *	US-PATENT-CLASS-62-45	c 31	N70-41871 *
US-PATENT-CLASS-60-39.03	c 07	N77-23106 *	US-PATENT-CLASS-60-641	c 44	N77-32582 *	US-PATENT-CLASS-62-45	c 33	N71-25351 *
US-PATENT-CLASS-60-39.03	c 07	N80-18039 *	US-PATENT-CLASS-60-641	c 44	N78-17460 *	US-PATENT-CLASS-62-45	c 33	N71-28892 *
US-PATENT-CLASS-60-39.06	c 07	N80-26298 *	US-PATENT-CLASS-60-641	c 44	N78-32542 *	US-PATENT-CLASS-62-45	c 15	N73-12486 *
US-PATENT-CLASS-60-39.06	c 07	N81-29129 *	US-PATENT-CLASS-60-641	c 44	N79-18443 *	US-PATENT-CLASS-62-45	c 35	N74-15093 *
US-PATENT-CLASS-60-39.07	c 44	N78-32539 *	US-PATENT-CLASS-60-641	c 44	N81-17518 *	US-PATENT-CLASS-62-45	c 31	N89-29578 *
US-PATENT-CLASS-60-39.07	c 07	N82-32366 *	US-PATENT-CLASS-60-645	c 34	N79-20335 *	US-PATENT-CLASS-62-461	c 31	N92-15203 *
US-PATENT-CLASS-60-39.07	c 07	N83-36029 *	US-PATENT-CLASS-60-649	c 34	N79-20335 *	US-PATENT-CLASS-62-467R	c 34	N84-22903 *
US-PATENT-CLASS-60-39.07	c 07	N86-20389 *	US-PATENT-CLASS-60-659	c 44	N75-32581 *	US-PATENT-CLASS-62-467	c 33	N70-37979 *
US-PATENT-CLASS-60-39.091	c 37	N93-14702 *	US-PATENT-CLASS-60-659	c 44	N76-31667 *	US-PATENT-CLASS-62-467	c 33	N71-17897 *
US-PATENT-CLASS-60-39.12	c 28	N91-14495 *	US-PATENT-CLASS-60-671	c 44	N92-29143 *	US-PATENT-CLASS-62-467	c 05	N72-11084 *
US-PATENT-CLASS-60-39.14	c 44	N78-32539 *	US-PATENT-CLASS-60-671	c 44	N78-32542 *	US-PATENT-CLASS-62-467	c 33	N72-25911 *
US-PATENT-CLASS-60-39.14	c 07	N79-10057 *	US-PATENT-CLASS-60-698	c 44	N84-23018 *	US-PATENT-CLASS-62-467	c 33	N73-25952 *
US-PATENT-CLASS-60-39.17	c 07	N93-22034 *	US-PATENT-CLASS-60-716	c 44	N84-23018 *	US-PATENT-CLASS-62-467	c 20	N75-24837 *
US-PATENT-CLASS-60-39.182	c 28	N91-14495 *	US-PATENT-CLASS-60-721	c 71	N79-20827 *	US-PATENT-CLASS-62-467	c 31	N88-14223 *
US-PATENT-CLASS-60-39.23	c 20	N76-14190 *	US-PATENT-CLASS-60-721	c 71	N83-32515 *	US-PATENT-CLASS-62-467	c 31	N89-12785 *
US-PATENT-CLASS-60-39.23	c 07	N85-35195 *	US-PATENT-CLASS-60-721	c 71	N83-32515 *	US-PATENT-CLASS-62-467	c 31	N89-14351 *
US-PATENT-CLASS-60-39.24	c 07	N81-19115 *	US-PATENT-CLASS-60-721	c 71	N84-23233 *	US-PATENT-CLASS-62-467	c 31	N90-21215 *
US-PATENT-CLASS-60-39.27	c 07	N80-18039 *	US-PATENT-CLASS-60-726	c 07	N81-29129 *	US-PATENT-CLASS-62-467	c 31	N93-13422 *
US-PATENT-CLASS-60-39.28R	c 28	N73-19793 *	US-PATENT-CLASS-60-726	c 07	N82-32366 *	US-PATENT-CLASS-62-475	c 23	N72-25619 *
US-PATENT-CLASS-60-39.28R	c 07	N77-23106 *	US-PATENT-CLASS-60-730	c 05	N81-26114 *	US-PATENT-CLASS-62-476	c 44	N82-26776 *
US-PATENT-CLASS-60-39.28R	c 37	N78-10467 *	US-PATENT-CLASS-60-730	c 37	N84-22958 *	US-PATENT-CLASS-62-47	c 28	N81-14103 *
US-PATENT-CLASS-60-39.28R	c 37	N78-24545 *	US-PATENT-CLASS-60-730	c 25	N90-11824 *	US-PATENT-CLASS-62-48	c 28	N78-24365 *
US-PATENT-CLASS-60-39.28R	c 37	N79-11403 *	US-PATENT-CLASS-60-732	c 25	N90-11824 *	US-PATENT-CLASS-62-48	c 31	N83-31897 *
US-PATENT-CLASS-60-39.281	c 20	N92-10054 *	US-PATENT-CLASS-60-733	c 07	N80-26298 *	US-PATENT-CLASS-62-48	c 31	N87-21159 *
US-PATENT-CLASS-60-39.29	c 20	N76-14190 *	US-PATENT-CLASS-60-736	c 37	N84-22958 *	US-PATENT-CLASS-62-48	c 31	N88-14223 *
US-PATENT-CLASS-60-39.29	c 35	N76-14431 *	US-PATENT-CLASS-60-736	c 07	N86-20389 *	US-PATENT-CLASS-62-48	c 31	N89-29578 *
US-PATENT-CLASS-60-39.29	c 07	N82-32366 *	US-PATENT-CLASS-60-737	c 07	N81-29129 *	US-PATENT-CLASS-62-49	c 31	N76-14284 *
US-PATENT-CLASS-60-39.29	c 07	N84-33410 *	US-PATENT-CLASS-60-746	c 07	N80-26298 *	US-PATENT-CLASS-62-4	c 44	N77-32581 *
US-PATENT-CLASS-60-39.31	c 07	N78-18066 *	US-PATENT-CLASS-60-746	c 20	N87-14420 *	US-PATENT-CLASS-62-4	c 44	N78-17460 *
US-PATENT-CLASS-60-39.31	c 07	N79-14096 *	US-PATENT-CLASS-60-748	c 07	N85-35195 *	US-PATENT-CLASS-62-50	c 15	N70-34247 *
US-PATENT-CLASS-60-39.33	c 44	N78-32539 *	US-PATENT-CLASS-60-757	c 07	N84-24577 *	US-PATENT-CLASS-62-50	c 35	N78-12390 *
US-PATENT-CLASS-60-39.36	c 28	N71-20330 *	US-PATENT-CLASS-60-836	c 24	N78-14096 *	US-PATENT-CLASS-62-51.2	c 35	N92-29156 *
US-PATENT-CLASS-60-39.36	c 28	N71-28915 *	US-PATENT-CLASS-60-97	c 03	N71-12260 *	US-PATENT-CLASS-62-514 R	c 35	N83-32026 *
US-PATENT-CLASS-60-39.46M	c 20	N82-18314 *	US-PATENT-CLASS-60-114	c 52	N83-27577 *	US-PATENT-CLASS-62-514-JT	c 31	N89-14351 *
US-PATENT-CLASS-60-39.465	c 20	N86-26368 *	US-PATENT-CLASS-60-151	c 52	N83-27577 *	US-PATENT-CLASS-62-514-R	c 31	N87-21159 *
US-PATENT-CLASS-60-39.46	c 15	N71-15635 *	US-PATENT-CLASS-60-280	c 52	N83-21785 *	US-PATENT-CLASS-62-514-R	c 37	N87-23982 *
US-PATENT-CLASS-60-39.46	c 27	N74-27360 *	US-PATENT-CLASS-60-368	c 54	N84-11758 *	US-PATENT-CLASS-62-514-R	c 31	N89-12785 *
US-PATENT-CLASS-60-39.47	c 27	N71-16392 *	US-PATENT-CLASS-60-378	c 54	N84-11758 *	US-PATENT-CLASS-62-514JT	c 31	N77-10229 *
US-PATENT-CLASS-60-39.48	c 28	N70-38199 *	US-PATENT-CLASS-60-396	c 54	N84-11758 *	US-PATENT-CLASS-62-514R	c 35	N78-12390 *
US-PATENT-CLASS-60-39.48	c 28	N70-39931 *	US-PATENT-CLASS-60-4	c 52	N83-21785 *	US-PATENT-CLASS-62-514R	c 31	N78-17237 *
US-PATENT-CLASS-60-39.48	c 27	N71-28929 *	US-PATENT-CLASS-606-106	c 52	N92-33032 *	US-PATENT-CLASS-62-514R	c 31	N78-25256 *
US-PATENT-CLASS-60-39.51R	c 25	N78-10224 *	US-PATENT-CLASS-606-127	c 52	N92-33032 *	US-PATENT-CLASS-62-514R	c 51	N79-10694 *
US-PATENT-CLASS-60-39.52	c 07	N78-25089 *	US-PATENT-CLASS-606-78	c 52	N92-33032 *	US-PATENT-CLASS-62-514R	c 31	N79-17029 *
US-PATENT-CLASS-60-39.65	c 28	N71-28915 *	US-PATENT-CLASS-61-83	c 18	N74-22136 *	US-PATENT-CLASS-62-514R	c 34	N79-20336 *
US-PATENT-CLASS-60-39.65	c 23	N73-30665 *	US-PATENT-CLASS-62-224	c 35	N92-29156 *	US-PATENT-CLASS-62-514R	c 35	N81-14287 *
US-PATENT-CLASS-60-39.65	c 34	N78-27357 *	US-PATENT-CLASS-62-DIG.1	c 34	N84-22903 *	US-PATENT-CLASS-62-514R	c 31	N83-31897 *
US-PATENT-CLASS-60-39.66	c 15	N70-36411 *	US-PATENT-CLASS-62-DIG.5	c 05	N81-26114 *	US-PATENT-CLASS-62-514R	c 34	N83-34221 *
US-PATENT-CLASS-60-39.66	c 23	N73-30665 *	US-PATENT-CLASS-62-100	c 34	N77-19353 *	US-PATENT-CLASS-62-514R	c 31	N88-14223 *
US-PATENT-CLASS-60-39.66	c 07	N77-23106 *	US-PATENT-CLASS-62-100	c 28	N78-24365 *	US-PATENT-CLASS-62-514	c 23	N71-26654 *
US-PATENT-CLASS-60-39.66	c 37	N78-10467 *	US-PATENT-CLASS-62-121	c 34	N77-19353 *	US-PATENT-CLASS-62-51	c 15	N72-17453 *
US-PATENT-CLASS-60-39.66	c 37	N79-11403 *	US-PATENT-CLASS-62-128	c 35	N84-28018 *	US-PATENT-CLASS-62-55.5	c 11	N71-24964 *
US-PATENT-CLASS-60-39.69R	c 34	N78-27357 *	US-PATENT-CLASS-62-129	c 31	N78-14284 *	US-PATENT-CLASS-62-55.5	c 15	N72-22484 *
US-PATENT-CLASS-60-39.72	c 23	N73-30665 *	US-PATENT-CLASS-62-12	c 28	N81-14103 *	US-PATENT-CLASS-62-55	c 15	N70-38020 *
US-PATENT-CLASS-60-39.74A	c 15	N72-25455 *	US-PATENT-CLASS-62-148	c 44	N82-26776 *	US-PATENT-CLASS-62-55	c 34	N77-30399 *
US-PATENT-CLASS-60-39.74R	c 23	N73-30665 *	US-PATENT-CLASS-62-15	c 06	N70-34946 *	US-PATENT-CLASS-62-56	c 05	N72-11084 *
US-PATENT-CLASS-60-39.74R	c 20	N76-14190 *	US-PATENT-CLASS-62-176	c 05	N73-26071 *	US-PATENT-CLASS-62-62	c 34	N83-34221 *
US-PATENT-CLASS-60-39.74	c 28	N70-33241 *	US-PATENT-CLASS-62-18	c 28	N81-14103 *	US-PATENT-CLASS-62-6	c 15	N69-23190 #
US-PATENT-CLASS-60-39.74	c 28	N72-17843 *	US-PATENT-CLASS-62-207	c 05	N73-26071 *	US-PATENT-CLASS-62-6	c 23	N71-15467 *
US-PATENT-CLASS-60-39.74	c 20	N79-21125 *	US-PATENT-CLASS-62-209	c 05	N73-26071 *	US-PATENT-CLASS-62-6	c 15	N71-23025 *
US-PATENT-CLASS-60-39.82E	c 20	N78-24275 *	US-PATENT-CLASS-62-217	c 31	N77-10229 *	US-PATENT-CLASS-62-6	c 23	N72-25619 *
US-PATENT-CLASS-60-39.83	c 07	N84-33410 *	US-PATENT-CLASS-62-235.1	c 44	N82-26776 *	US-PATENT-CLASS-62-6	c 37	N76-29590 *
US-PATENT-CLASS-60-39.48	c 28	N72-11709 *	US-PATENT-CLASS-62-238.3	c 44	N82-26776 *	US-PATENT-CLASS-62-6	c 44	N76-29701 *
US-PATENT-CLASS-60-415	c 85	N87-21755 *	US-PATENT-CLASS-62-239	c 44	N82-26776 *	US-PATENT-CLASS-62-6	c 44	N83-28574 *
US-PATENT-CLASS-60-508	c 44	N79-18443 *	US-PATENT-CLASS-62-244	c 44	N82-26776 *	US-PATENT-CLASS-62-6	c 31	N85-21404 *
US-PATENT-CLASS-60-516	c 20	N75-24837 *	US-PATENT-CLASS-62-259	c 05	N73-20137 *	US-PATENT-CLASS-62-78	c 51	N79-10694 *
US-PATENT-CLASS-60-516	c 44	N82-24640 *	US-PATENT-CLASS-62-259	c 05	N73-26071 *	US-PATENT-CLASS-62-7	c 15	N73-12486 *
US-PATENT-CLASS-60-517	c 44	N76-29701 *	US-PATENT-CLASS-62-259	c 54	N78-32721 *	US-PATENT-CLASS-62-80	c 23	N72-25619 *
US-PATENT-CLASS-60-517	c 37	N81-25370 *	US-PATENT-CLASS-62-264	c 34	N84-22903 *	US-PATENT-CLASS-62-85	c 23	N72-25619 *
US-PATENT-CLASS-60-518	c 37	N81-14318 *	US-PATENT-CLASS-62-268	c 14	N71-20427 *	US-PATENT-CLASS-62-89	c 05	N73-26071 *
US-PATENT-CLASS-60-518	c 37	N81-17432 *	US-PATENT-CLASS-62-268	c 34	N79-20336 *	US-PATENT-CLASS-62-90	c 34	N91-21473 *

## US-PATENT-CLASS-62-93

## REPORT NUMBER INDEX

US-PATENT-CLASS-62-93	c 15	N69-21465 *	US-PATENT-CLASS-73-DIG.11	c 35	N78-18390 *	US-PATENT-CLASS-73-147	c 34	N76-27517 *
US-PATENT-CLASS-62-93	c 03	N72-28025 *	US-PATENT-CLASS-73-1-DV	c 71	N86-21276 *	US-PATENT-CLASS-73-147	c 09	N77-10071 *
US-PATENT-CLASS-62-93	c 77	N75-20139 *	US-PATENT-CLASS-73-1-DV	c 71	N87-21653 *	US-PATENT-CLASS-73-147	c 09	N78-31129 *
US-PATENT-CLASS-623-57	c 54	N93-14870 *	US-PATENT-CLASS-73-1B	c 35	N76-24523 *	US-PATENT-CLASS-73-147	c 35	N79-14347 *
US-PATENT-CLASS-623-62	c 54	N91-32795 *	US-PATENT-CLASS-73-1B	c 35	N84-28019 *	US-PATENT-CLASS-73-147	c 09	N79-21083 *
US-PATENT-CLASS-623-63	c 54	N91-32795 *	US-PATENT-CLASS-73-1DV	c 14	N73-27379 *	US-PATENT-CLASS-73-147	c 02	N80-20224 *
US-PATENT-CLASS-623-65	c 54	N93-14870 *	US-PATENT-CLASS-73-1F	c 35	N74-21019 *	US-PATENT-CLASS-73-147	c 06	N81-17057 *
US-PATENT-CLASS-624-3.2	c 31	N92-15203 *	US-PATENT-CLASS-73-1H	c 33	N92-33021 *	US-PATENT-CLASS-73-147	c 09	N82-11088 *
US-PATENT-CLASS-624-467	c 31	N92-15203 *	US-PATENT-CLASS-73-1R	c 14	N71-29134 *	US-PATENT-CLASS-73-147	c 09	N82-23254 *
US-PATENT-CLASS-624-500	c 31	N92-15203 *	US-PATENT-CLASS-73-1R	c 35	N75-15932 *	US-PATENT-CLASS-73-147	c 71	N83-17235 *
US-PATENT-CLASS-624-51.2	c 31	N92-15203 *	US-PATENT-CLASS-73-1R	c 35	N76-15432 *	US-PATENT-CLASS-73-147	c 44	N83-21503 *
US-PATENT-CLASS-64-18	c 15	N71-28467 *	US-PATENT-CLASS-73-100	c 15	N70-41993 *	US-PATENT-CLASS-73-147	c 44	N83-21504 *
US-PATENT-CLASS-64-27	c 15	N71-28959 *	US-PATENT-CLASS-73-100	c 32	N72-25877 *	US-PATENT-CLASS-73-147	c 74	N83-21949 *
US-PATENT-CLASS-64-28	c 15	N69-27505 *	US-PATENT-CLASS-73-103	c 15	N71-17696 *	US-PATENT-CLASS-73-147	c 35	N84-22934 *
US-PATENT-CLASS-65-DIG.11	c 37	N74-21063 *	US-PATENT-CLASS-73-103	c 14	N72-27412 *	US-PATENT-CLASS-73-147	c 09	N84-34448 *
US-PATENT-CLASS-65-DIG.4	c 71	N78-10837 *	US-PATENT-CLASS-73-103	c 14	N73-32323 *	US-PATENT-CLASS-73-147	c 09	N85-21178 *
US-PATENT-CLASS-65-DIG.7	c 71	N78-10837 *	US-PATENT-CLASS-73-103	c 35	N76-18400 *	US-PATENT-CLASS-73-147	c 35	N86-32696 *
US-PATENT-CLASS-65-102	c 71	N78-10837 *	US-PATENT-CLASS-73-104	c 35	N74-32879 *	US-PATENT-CLASS-73-147	c 34	N87-21255 *
US-PATENT-CLASS-65-108	c 35	N77-24455 *	US-PATENT-CLASS-73-105	c 14	N70-34161 *	US-PATENT-CLASS-73-147	c 09	N87-25334 *
US-PATENT-CLASS-65-11.1	c 31	N86-21718 *	US-PATENT-CLASS-73-105	c 14	N71-17586 *	US-PATENT-CLASS-73-147	c 35	N87-28884 *
US-PATENT-CLASS-65-12	c 31	N86-21718 *	US-PATENT-CLASS-73-115	c 35	N79-14345 *	US-PATENT-CLASS-73-147	c 02	N88-23759 *
US-PATENT-CLASS-65-134	c 71	N83-35781 *	US-PATENT-CLASS-73-115	c 07	N84-22559 *	US-PATENT-CLASS-73-147	c 02	N89-12551 *
US-PATENT-CLASS-65-134	c 27	N87-21111 *	US-PATENT-CLASS-73-116	c 11	N70-33278 *	US-PATENT-CLASS-73-147	c 35	N89-12841 *
US-PATENT-CLASS-65-136	c 27	N87-21111 *	US-PATENT-CLASS-73-116	c 11	N70-34844 *	US-PATENT-CLASS-73-147	c 35	N89-14423 *
US-PATENT-CLASS-65-13	c 27	N87-21111 *	US-PATENT-CLASS-73-116	c 14	N70-40203 *	US-PATENT-CLASS-73-147	c 35	N90-17117 *
US-PATENT-CLASS-65-142	c 31	N81-33319 *	US-PATENT-CLASS-73-116	c 11	N70-41677 *	US-PATENT-CLASS-73-147	c 35	N90-23707 *
US-PATENT-CLASS-65-142	c 27	N82-28442 *	US-PATENT-CLASS-73-116	c 11	N71-10604 *	US-PATENT-CLASS-73-147	c 09	N91-14356 *
US-PATENT-CLASS-65-142	c 31	N83-31896 *	US-PATENT-CLASS-73-116	c 31	N71-15643 *	US-PATENT-CLASS-73-147	c 09	N91-14357 *
US-PATENT-CLASS-65-142	c 31	N83-35176 *	US-PATENT-CLASS-73-117.1	c 11	N72-27262 *	US-PATENT-CLASS-73-147	c 35	N92-10185 *
US-PATENT-CLASS-65-142	c 71	N84-28568 *	US-PATENT-CLASS-73-117.1	c 09	N84-27749 *	US-PATENT-CLASS-73-147	c 35	N92-21586 *
US-PATENT-CLASS-65-142	c 26	N86-32551 *	US-PATENT-CLASS-73-117.4	c 14	N71-20429 *	US-PATENT-CLASS-73-147	c 02	N92-21588 *
US-PATENT-CLASS-65-160	c 71	N84-28568 *	US-PATENT-CLASS-73-117.4	c 28	N71-27094 *	US-PATENT-CLASS-73-147	c 35	N92-21710 *
US-PATENT-CLASS-65-1	c 31	N86-21718 *	US-PATENT-CLASS-73-117.4	c 35	N75-29382 *	US-PATENT-CLASS-73-147	c 09	N93-11057 *
US-PATENT-CLASS-65-21.2	c 26	N86-32551 *	US-PATENT-CLASS-73-117	c 14	N71-22965 *	US-PATENT-CLASS-73-147	c 02	N93-18275 *
US-PATENT-CLASS-65-21.3	c 31	N83-35176 *	US-PATENT-CLASS-73-12	c 14	N71-23225 *	US-PATENT-CLASS-73-147	c 74	N93-22037 *
US-PATENT-CLASS-65-21.3	c 71	N84-28568 *	US-PATENT-CLASS-73-12	c 14	N71-26161 *	US-PATENT-CLASS-73-147	c 09	N93-25996 *
US-PATENT-CLASS-65-21.4	c 31	N81-33319 *	US-PATENT-CLASS-73-12	c 14	N72-16282 *	US-PATENT-CLASS-73-147	c 34	N93-26000 *
US-PATENT-CLASS-65-21.4	c 27	N82-28442 *	US-PATENT-CLASS-73-12	c 14	N72-25411 *	US-PATENT-CLASS-73-149	c 14	N72-11363 *
US-PATENT-CLASS-65-21.4	c 31	N83-35176 *	US-PATENT-CLASS-73-12	c 14	N73-32327 *	US-PATENT-CLASS-73-149	c 52	N74-10975 *
US-PATENT-CLASS-65-21.4	c 71	N84-28568 *	US-PATENT-CLASS-73-12	c 35	N74-21062 *	US-PATENT-CLASS-73-149	c 35	N91-15511 *
US-PATENT-CLASS-65-21.4	c 31	N91-32240 *	US-PATENT-CLASS-73-12	c 35	N75-33367 *	US-PATENT-CLASS-73-149	c 35	N91-21493 *
US-PATENT-CLASS-65-213	c 71	N84-16940 *	US-PATENT-CLASS-73-12	c 75	N76-14931 *	US-PATENT-CLASS-73-149	c 35	N91-21495 *
US-PATENT-CLASS-65-214	c 31	N83-31896 *	US-PATENT-CLASS-73-12	c 35	N77-18417 *	US-PATENT-CLASS-73-15.4	c 14	N71-17659 *
US-PATENT-CLASS-65-22	c 31	N81-33319 *	US-PATENT-CLASS-73-12	c 43	N79-25443 *	US-PATENT-CLASS-73-15.4	c 35	N74-32879 *
US-PATENT-CLASS-65-22	c 27	N82-28442 *	US-PATENT-CLASS-73-12	c 43	N80-14423 *	US-PATENT-CLASS-73-15.6	c 14	N70-35368 *
US-PATENT-CLASS-65-22	c 31	N83-31896 *	US-PATENT-CLASS-73-12	c 43	N80-23711 *	US-PATENT-CLASS-73-15.6	c 14	N71-24234 *
US-PATENT-CLASS-65-22	c 31	N83-35176 *	US-PATENT-CLASS-73-12	c 37	N84-33807 *	US-PATENT-CLASS-73-15.6	c 14	N71-26136 *
US-PATENT-CLASS-65-2	c 71	N78-10837 *	US-PATENT-CLASS-73-133R	c 35	N77-14407 *	US-PATENT-CLASS-73-15.6	c 32	N72-25877 *
US-PATENT-CLASS-65-2	c 31	N86-21718 *	US-PATENT-CLASS-73-133	c 14	N71-23725 *	US-PATENT-CLASS-73-15.6	c 09	N74-19528 *
US-PATENT-CLASS-65-2	c 27	N87-21111 *	US-PATENT-CLASS-73-133	c 15	N72-22482 *	US-PATENT-CLASS-73-15.6	c 35	N76-24523 *
US-PATENT-CLASS-65-30R	c 27	N78-32260 *	US-PATENT-CLASS-73-134	c 14	N70-40201 *	US-PATENT-CLASS-73-15.6	c 35	N77-22450 *
US-PATENT-CLASS-65-32	c 71	N78-10837 *	US-PATENT-CLASS-73-136R	c 15	N72-26371 *	US-PATENT-CLASS-73-15.6	c 39	N78-10493 *
US-PATENT-CLASS-65-3	c 37	N75-26371 *	US-PATENT-CLASS-73-136	c 14	N70-34818 *	US-PATENT-CLASS-73-15R	c 33	N72-25913 *
US-PATENT-CLASS-65-4B	c 71	N78-10837 *	US-PATENT-CLASS-73-140	c 11	N72-25288 *	US-PATENT-CLASS-73-15R	c 14	N73-28486 *
US-PATENT-CLASS-65-43	c 37	N75-15992 *	US-PATENT-CLASS-73-141AB	c 14	N72-33377 *	US-PATENT-CLASS-73-15R	c 25	N74-18551 *
US-PATENT-CLASS-65-43	c 24	N79-25143 *	US-PATENT-CLASS-73-141A	c 14	N72-21405 *	US-PATENT-CLASS-73-15R	c 31	N74-27900 *
US-PATENT-CLASS-65-59A	c 35	N77-24455 *	US-PATENT-CLASS-73-141A	c 14	N72-22437 *	US-PATENT-CLASS-73-15R	c 09	N77-27131 *
US-PATENT-CLASS-65-60D	c 27	N78-32260 *	US-PATENT-CLASS-73-141A	c 35	N74-26945 *	US-PATENT-CLASS-73-15R	c 74	N81-17887 *
US-PATENT-CLASS-65-61	c 74	N80-24149 *	US-PATENT-CLASS-73-141A	c 35	N74-27865 *	US-PATENT-CLASS-73-150-A	c 39	N86-20841 *
US-PATENT-CLASS-65-7	c 18	N71-23088 *	US-PATENT-CLASS-73-141A	c 35	N75-33369 *	US-PATENT-CLASS-73-150R	c 35	N84-28018 *
US-PATENT-CLASS-65-87	c 71	N78-10837 *	US-PATENT-CLASS-73-141A	c 52	N81-20703 *	US-PATENT-CLASS-73-155	c 46	N80-10709 *
US-PATENT-CLASS-6554	c 35	N77-24455 *	US-PATENT-CLASS-73-141	c 14	N70-41957 *	US-PATENT-CLASS-73-155	c 46	N80-24906 *
US-PATENT-CLASS-6564	c 35	N77-24455 *	US-PATENT-CLASS-73-141	c 15	N71-20441 *	US-PATENT-CLASS-73-159	c 31	N79-11246 *
US-PATENT-CLASS-70-58	c 33	N81-25299 *	US-PATENT-CLASS-73-141	c 14	N71-23790 *	US-PATENT-CLASS-73-15	c 14	N70-34156 *
US-PATENT-CLASS-71-98	c 51	N83-17045 *	US-PATENT-CLASS-73-141	c 26	N71-25490 *	US-PATENT-CLASS-73-15	c 14	N71-15992 *
US-PATENT-CLASS-72-253	c 15	N71-22797 *	US-PATENT-CLASS-73-142	c 15	N70-40180 *	US-PATENT-CLASS-73-15	c 14	N71-22964 *
US-PATENT-CLASS-72-258	c 15	N73-13464 *	US-PATENT-CLASS-73-142	c 14	N71-20439 *	US-PATENT-CLASS-73-15	c 11	N71-24985 *
US-PATENT-CLASS-72-307	c 15	N72-12408 *	US-PATENT-CLASS-73-143	c 35	N75-19615 *	US-PATENT-CLASS-73-15	c 11	N71-28629 *
US-PATENT-CLASS-72-324	c 71	N86-21276 *	US-PATENT-CLASS-73-143	c 14	N75-24794 *	US-PATENT-CLASS-73-161	c 11	N72-25288 *
US-PATENT-CLASS-72-341	c 71	N86-21276 *	US-PATENT-CLASS-73-144	c 15	N71-22878 *	US-PATENT-CLASS-73-167	c 15	N84-16231 *
US-PATENT-CLASS-72-34	c 15	N71-21536 *	US-PATENT-CLASS-73-147	c 11	N70-33287 *	US-PATENT-CLASS-73-167	c 25	N91-32196 *
US-PATENT-CLASS-72-354	c 15	N71-23811 *	US-PATENT-CLASS-73-147	c 14	N70-33386 *	US-PATENT-CLASS-73-170A	c 35	N78-32784 *
US-PATENT-CLASS-72-363	c 37	N76-14461 *	US-PATENT-CLASS-73-147	c 14	N70-34813 *	US-PATENT-CLASS-73-170A	c 48	N80-18667 *
US-PATENT-CLASS-72-364	c 15	N71-18579 *	US-PATENT-CLASS-73-147	c 11	N70-36913 *	US-PATENT-CLASS-73-170R	c 07	N73-20175 *
US-PATENT-CLASS-72-369	c 15	N71-24679 *	US-PATENT-CLASS-73-147	c 14	N70-40400 *	US-PATENT-CLASS-73-170R	c 14	N73-28487 *
US-PATENT-CLASS-72-436	c 37	N79-28550 *	US-PATENT-CLASS-73-147	c 14	N70-41366 *	US-PATENT-CLASS-73-170R	c 14	N73-32327 *
US-PATENT-CLASS-72-447	c 15	N73-13463 *	US-PATENT-CLASS-73-147	c 11	N71-15926 *	US-PATENT-CLASS-73-170R	c 33	N74-27862 *
US-PATENT-CLASS-72-451	c 37	N79-28550 *	US-PATENT-CLASS-73-147	c 09	N71-16086 *	US-PATENT-CLASS-73-170R	c 35	N75-33367 *
US-PATENT-CLASS-72-453	c 37	N76-18454 *	US-PATENT-CLASS-73-147	c 12	N71-20436 *	US-PATENT-CLASS-73-170R	c 91	N76-30131 *
US-PATENT-CLASS-72-467	c 15	N71-23817 *	US-PATENT-CLASS-73-147	c 09	N71-20816 *	US-PATENT-CLASS-73-170R	c 06	N83-10040 *
US-PATENT-CLASS-72-46	c 24	N75-33181 *	US-PATENT-CLASS-73-147	c 11	N71-21481 *	US-PATENT-CLASS-73-170R	c 35	N84-28018 *
US-PATENT-CLASS-72-470	c 37	N79-28550 *	US-PATENT-CLASS-73-147	c 11	N71-23030 *	US-PATENT-CLASS-73-170R	c 19	N91-14412 *
US-PATENT-CLASS-72-476	c 15	N73-13463 *	US-PATENT-CLASS-73-147	c 15	N71-27006 *	US-PATENT-CLASS-73-170	c 14	N71-14996 *
US-PATENT-CLASS-72-53	c 15	N71-18616 *	US-PATENT-CLASS-73-147	c 15	N71-28740 *	US-PATENT-CLASS-73-170	c 17	N73-32415 *
US-PATENT-CLASS-72-53	c 15	N73-32360 *	US-PATENT-CLASS-73-147	c 11	N71-33612 *	US-PATENT-CLASS-73-178-R	c 06	N84-34443 *
US-PATENT-CLASS-72-54	c 37	N76-14461 *	US-PATENT-CLASS-73-147	c 11	N72-17183 *	US-PATENT-CLASS-73-178-R	c 06	N87-22678 *
US-PATENT-CLASS-72-56	c 15	N70-34249 *	US-PATENT-CLASS-73-147	c 14	N72-21407 *	US-PATENT-CLASS-73-178-R	c 02	N88-23759 *
US-PATENT-CLASS-72-56	c 15	N71-24833 *	US-PATENT-CLASS-73-147	c 11	N72-22246 *	US-PATENT-CLASS-73-178-T	c 09	N90-20096 *
US-PATENT-CLASS-72-56	c 15	N71-24865 *	US-PATENT-CLASS-73-147	c 11	N73-12264 *	US-PATENT-CLASS-73-178R	c 35	N75-29381 *
US-PATENT-CLASS-72-56	c 15	N71-26148 *	US-PATENT-CLASS-73-147	c 14	N73-13415 *	US-PATENT-CLASS-73-178R	c 04	N77-19056 *
US-PATENT-CLASS-72-60	c 15	N71-24836 *	US-PATENT-CLASS-73-147	c 12	N73-25262 *	US-PATENT-CLASS-73-178R	c 37	N78-27424 *
US-PATENT-CLASS-72-61	c 15	N71-26346 *	US-PATENT-CLASS-73-147	c 12	N73-28144 *	US-PATENT-CLASS-73-178R	c 35	N79-26372 *
US-PATENT-CLASS-72-63	c 20	N75-18310 *	US-PATENT-CLASS-73-147	c 09	N74-17955 *	US-PATENT-CLASS-73-178R	c 06	N81-17057 *
US-PATENT-CLASS-72-63	c 37	N76-14461 *	US-PATENT-CLASS-73-147	c 34	N74-27730 *	US-PATENT-CLASS-73-178R	c 04	N81-21047 *
US-PATENT-CLASS-72-750	c 35	N88-24927 *	US-PATENT-CLASS-73-147	c 09	N75-12969 *	US-PATENT-CLASS-73-178R	c 18	N81-21952 *
US-PATENT-CLASS-72-83	c 15	N71-22723 *	US-PATENT-CLASS-73-147	c 09	N76-23273 *	US-PATENT-CLASS-73-178R	c 06	N82-16075 *



## REPORT NUMBER INDEX

US-PATENT-CLASS-73-178R ..... c 06 N83-10040 \*  
 US-PATENT-CLASS-73-178R ..... c 06 N84-27733 \*  
 US-PATENT-CLASS-73-178R ..... c 47 N92-29148 \*  
 US-PATENT-CLASS-73-178R ..... c 34 N93-26000 \*  
 US-PATENT-CLASS-73-178T ..... c 06 N86-27280 \*  
 US-PATENT-CLASS-73-178T ..... c 04 N91-31120 \*  
 US-PATENT-CLASS-73-178 ..... c 14 N70-36807 \*  
 US-PATENT-CLASS-73-178 ..... c 14 N70-40157 \*  
 US-PATENT-CLASS-73-179 ..... c 34 N85-21568 \*  
 US-PATENT-CLASS-73-179 ..... c 06 N71-24607 \*  
 US-PATENT-CLASS-73-180 ..... c 35 N78-14364 \*  
 US-PATENT-CLASS-73-180 ..... c 02 N80-28300 \*  
 US-PATENT-CLASS-73-180 ..... c 35 N89-12841 \*  
 US-PATENT-CLASS-73-182 ..... c 14 N73-13415 \*  
 US-PATENT-CLASS-73-182 ..... c 35 N74-32878 \*  
 US-PATENT-CLASS-73-182 ..... c 35 N76-14429 \*  
 US-PATENT-CLASS-73-182 ..... c 02 N80-28300 \*  
 US-PATENT-CLASS-73-182 ..... c 35 N92-21586 \*  
 US-PATENT-CLASS-73-187 ..... c 35 N85-20295 \*  
 US-PATENT-CLASS-73-188 ..... c 06 N80-18036 \*  
 US-PATENT-CLASS-73-189 ..... c 20 N71-16281 \*  
 US-PATENT-CLASS-73-189 ..... c 02 N71-23007 \*  
 US-PATENT-CLASS-73-189 ..... c 14 N71-23726 \*  
 US-PATENT-CLASS-73-189 ..... c 14 N73-13415 \*  
 US-PATENT-CLASS-73-189 ..... c 14 N73-25460 \*  
 US-PATENT-CLASS-73-189 ..... c 35 N76-24524 \*  
 US-PATENT-CLASS-73-189 ..... c 34 N76-27517 \*  
 US-PATENT-CLASS-73-189 ..... c 34 N77-27345 \*  
 US-PATENT-CLASS-73-189 ..... c 34 N79-12359 \*  
 US-PATENT-CLASS-73-189 ..... c 06 N80-18036 \*  
 US-PATENT-CLASS-73-189 ..... c 47 N84-28292 \*  
 US-PATENT-CLASS-73-190H ..... c 35 N74-22095 \*  
 US-PATENT-CLASS-73-190R ..... c 34 N74-27859 \*  
 US-PATENT-CLASS-73-190R ..... c 35 N81-19426 \*  
 US-PATENT-CLASS-73-190R ..... c 33 N71-15641 \*  
 US-PATENT-CLASS-73-190 ..... c 14 N71-22989 \*  
 US-PATENT-CLASS-73-190 ..... c 33 N71-23085 \*  
 US-PATENT-CLASS-73-190 ..... c 33 N71-29051 \*  
 US-PATENT-CLASS-73-194A ..... c 14 N72-17329 \*  
 US-PATENT-CLASS-73-194EM ..... c 14 N73-32326 \*  
 US-PATENT-CLASS-73-194EM ..... c 35 N74-21018 \*  
 US-PATENT-CLASS-73-194E ..... c 14 N73-20478 \*  
 US-PATENT-CLASS-73-194E ..... c 05 N73-32015 \*  
 US-PATENT-CLASS-73-194F ..... c 14 N72-11365 \*  
 US-PATENT-CLASS-73-194M ..... c 05 N73-32015 \*  
 US-PATENT-CLASS-73-194M ..... c 35 N75-30503 \*  
 US-PATENT-CLASS-73-194M ..... c 34 N76-27517 \*  
 US-PATENT-CLASS-73-194VS ..... c 34 N79-12359 \*  
 US-PATENT-CLASS-73-194 ..... c 14 N70-41994 \*  
 US-PATENT-CLASS-73-194 ..... c 14 N71-23226 \*  
 US-PATENT-CLASS-73-194 ..... c 12 N71-26546 \*  
 US-PATENT-CLASS-73-195 ..... c 35 N75-30503 \*  
 US-PATENT-CLASS-73-198 ..... c 14 N69-24257 \* #  
 US-PATENT-CLASS-73-198 ..... c 14 N72-17327 \*  
 US-PATENT-CLASS-73-1 ..... c 10 N71-13545 \*  
 US-PATENT-CLASS-73-1 ..... c 09 N71-22988 \*  
 US-PATENT-CLASS-73-204.11 ..... c 35 N92-21710 \*  
 US-PATENT-CLASS-73-204.11 ..... c 34 N93-26000 \*  
 US-PATENT-CLASS-73-204 ..... c 12 N71-17569 \*  
 US-PATENT-CLASS-73-204 ..... c 35 N76-24524 \*  
 US-PATENT-CLASS-73-204 ..... c 35 N77-20400 \*  
 US-PATENT-CLASS-73-204 ..... c 52 N83-27577 \*  
 US-PATENT-CLASS-73-205L ..... c 02 N80-20224 \*  
 US-PATENT-CLASS-73-212 ..... c 14 N70-36824 \*  
 US-PATENT-CLASS-73-212 ..... c 14 N73-13415 \*  
 US-PATENT-CLASS-73-212 ..... c 35 N76-14429 \*  
 US-PATENT-CLASS-73-212 ..... c 06 N80-18036 \*  
 US-PATENT-CLASS-73-221 ..... c 35 N75-19611 \*  
 US-PATENT-CLASS-73-228 ..... c 34 N77-27345 \*  
 US-PATENT-CLASS-73-23.1 ..... c 06 N69-39936 \* #  
 US-PATENT-CLASS-73-23.1 ..... c 06 N72-17094 \*  
 US-PATENT-CLASS-73-23.1 ..... c 06 N72-25146 \*  
 US-PATENT-CLASS-73-23.1 ..... c 25 N76-18245 \*  
 US-PATENT-CLASS-73-23.1 ..... c 23 N77-17161 \*  
 US-PATENT-CLASS-73-23 ..... c 14 N71-10774 \*  
 US-PATENT-CLASS-73-23 ..... c 05 N71-11202 \*  
 US-PATENT-CLASS-73-23 ..... c 52 N74-20728 \*  
 US-PATENT-CLASS-73-23 ..... c 35 N75-29380 \*  
 US-PATENT-CLASS-73-23 ..... c 25 N78-15210 \*  
 US-PATENT-CLASS-73-23 ..... c 35 N78-19465 \*  
 US-PATENT-CLASS-73-24.01 ..... c 71 N93-13421 \*  
 US-PATENT-CLASS-73-24.05 ..... c 71 N93-13421 \*  
 US-PATENT-CLASS-73-24.05 ..... c 35 N93-29084 \*  
 US-PATENT-CLASS-73-24.06 ..... c 71 N93-13421 \*  
 US-PATENT-CLASS-73-24 ..... c 06 N69-39733 \* #  
 US-PATENT-CLASS-73-28 ..... c 14 N73-30395 \* #  
 US-PATENT-CLASS-73-28 ..... c 35 N76-18401 \*  
 US-PATENT-CLASS-73-28 ..... c 35 N78-18390 \*  
 US-PATENT-CLASS-73-290-R ..... c 35 N88-29150 \*  
 US-PATENT-CLASS-73-290-V ..... c 35 N89-14407 \*  
 US-PATENT-CLASS-73-290B ..... c 14 N72-11363 \*  
 US-PATENT-CLASS-73-290 ..... c 14 N71-10500 \*  
 US-PATENT-CLASS-73-290 ..... c 14 N71-21007 \*  
 US-PATENT-CLASS-73-295 ..... c 23 N71-17802 \*  
 US-PATENT-CLASS-73-295 ..... c 31 N76-14284 \*

US-PATENT-CLASS-73-29 ..... c 14 N71-17701 \*  
 US-PATENT-CLASS-73-29 ..... c 14 N71-20741 \*  
 US-PATENT-CLASS-73-301 ..... c 12 N71-26387 \*  
 US-PATENT-CLASS-73-304R ..... c 35 N88-29150 \*  
 US-PATENT-CLASS-73-304C ..... c 14 N71-29134 \*  
 US-PATENT-CLASS-73-304 ..... c 14 N72-22442 \*  
 US-PATENT-CLASS-73-30 ..... c 14 N70-41681 \*  
 US-PATENT-CLASS-73-32A ..... c 35 N93-29084 \*  
 US-PATENT-CLASS-73-32R ..... c 76 N75-12810 \*  
 US-PATENT-CLASS-73-32R ..... c 35 N84-28018 \*  
 US-PATENT-CLASS-73-32 ..... c 14 N70-41330 \*  
 US-PATENT-CLASS-73-336.5 ..... c 35 N78-25391 \*  
 US-PATENT-CLASS-73-336.5 ..... c 35 N85-29212 \*  
 US-PATENT-CLASS-73-336.5 ..... c 35 N87-22953 \*  
 US-PATENT-CLASS-73-339 ..... c 33 N73-27796 \*  
 US-PATENT-CLASS-73-341 ..... c 14 N71-15598 \*  
 US-PATENT-CLASS-73-341 ..... c 44 N82-16474 \*  
 US-PATENT-CLASS-73-343R ..... c 52 N77-10780 \*  
 US-PATENT-CLASS-73-343R ..... c 35 N80-18357 \*  
 US-PATENT-CLASS-73-343 ..... c 33 N71-16356 \*  
 US-PATENT-CLASS-73-343 ..... c 11 N71-21475 \*  
 US-PATENT-CLASS-73-355R ..... c 14 N72-24477 \*  
 US-PATENT-CLASS-73-355R ..... c 35 N80-18359 \*  
 US-PATENT-CLASS-73-355 ..... c 14 N71-27323 \*  
 US-PATENT-CLASS-73-355 ..... c 14 N72-28437 \*  
 US-PATENT-CLASS-73-356 ..... c 35 N75-25122 \*  
 US-PATENT-CLASS-73-35 ..... c 33 N72-27959 \*  
 US-PATENT-CLASS-73-361 ..... c 35 N81-26431 \*  
 US-PATENT-CLASS-73-362AR ..... c 35 N77-27368 \*  
 US-PATENT-CLASS-73-37.5 ..... c 35 N86-32698 \*  
 US-PATENT-CLASS-73-379 ..... c 05 N73-27941 \*  
 US-PATENT-CLASS-73-379 ..... c 05 N73-30078 \*  
 US-PATENT-CLASS-73-379 ..... c 35 N75-15932 \*  
 US-PATENT-CLASS-73-379 ..... c 39 N83-20280 \*  
 US-PATENT-CLASS-73-382 ..... c 10 N71-13537 \*  
 US-PATENT-CLASS-73-382 ..... c 14 N71-17587 \*  
 US-PATENT-CLASS-73-384 ..... c 15 N70-37925 \*  
 US-PATENT-CLASS-73-388 ..... c 35 N74-32878 \*  
 US-PATENT-CLASS-73-389 ..... c 12 N71-24692 \*  
 US-PATENT-CLASS-73-38 ..... c 18 N71-24934 \*  
 US-PATENT-CLASS-73-398AR ..... c 52 N74-27566 \*  
 US-PATENT-CLASS-73-398AR ..... c 52 N76-28986 \*  
 US-PATENT-CLASS-73-398C ..... c 14 N72-22438 \*  
 US-PATENT-CLASS-73-398C ..... c 33 N76-21390 \*  
 US-PATENT-CLASS-73-398 ..... c 14 N70-34816 \*  
 US-PATENT-CLASS-73-398 ..... c 14 N71-21072 \*  
 US-PATENT-CLASS-73-398 ..... c 09 N71-24597 \*  
 US-PATENT-CLASS-73-398 ..... c 14 N73-30394 \*  
 US-PATENT-CLASS-73-399 ..... c 37 N76-18454 \*  
 US-PATENT-CLASS-73-3 ..... c 34 N74-27730 \*  
 US-PATENT-CLASS-73-3 ..... c 34 N86-12547 \*  
 US-PATENT-CLASS-73-4R ..... c 35 N74-13132 \*  
 US-PATENT-CLASS-73-4R ..... c 35 N79-14347 \*  
 US-PATENT-CLASS-73-4R ..... c 35 N80-18358 \*  
 US-PATENT-CLASS-73-4V ..... c 35 N74-15092 \*  
 US-PATENT-CLASS-73-40.5A ..... c 35 N85-21597 \*  
 US-PATENT-CLASS-73-40.5 ..... c 14 N71-10779 \*  
 US-PATENT-CLASS-73-40.7 ..... c 15 N71-24910 \*  
 US-PATENT-CLASS-73-40.7 ..... c 14 N71-28992 \*  
 US-PATENT-CLASS-73-40.7 ..... c 35 N74-32879 \*  
 US-PATENT-CLASS-73-40.7 ..... c 35 N85-29213 \*  
 US-PATENT-CLASS-73-400 ..... c 14 N71-23093 \*  
 US-PATENT-CLASS-73-400 ..... c 14 N71-24232 \*  
 US-PATENT-CLASS-73-400 ..... c 35 N79-33450 \*  
 US-PATENT-CLASS-73-401 ..... c 14 N70-34820 \*  
 US-PATENT-CLASS-73-40 ..... c 35 N75-15931 \*  
 US-PATENT-CLASS-73-40 ..... c 35 N80-18358 \*  
 US-PATENT-CLASS-73-419 ..... c 14 N71-22752 \*  
 US-PATENT-CLASS-73-420 ..... c 35 N74-13132 \*  
 US-PATENT-CLASS-73-421.5R ..... c 13 N72-25323 \*  
 US-PATENT-CLASS-73-421.5R ..... c 14 N73-30395 \*  
 US-PATENT-CLASS-73-421.5R ..... c 52 N74-20728 \*  
 US-PATENT-CLASS-73-421.5R ..... c 35 N76-18401 \*  
 US-PATENT-CLASS-73-421.5R ..... c 35 N77-32456 \*  
 US-PATENT-CLASS-73-421.5 ..... c 14 N73-12444 \*  
 US-PATENT-CLASS-73-421R ..... c 54 N76-14804 \*  
 US-PATENT-CLASS-73-422GC ..... c 13 N72-25323 \*  
 US-PATENT-CLASS-73-422TC ..... c 13 N72-25323 \*  
 US-PATENT-CLASS-73-422 ..... c 14 N71-20435 \*  
 US-PATENT-CLASS-73-425.2 ..... c 91 N76-30131 \*  
 US-PATENT-CLASS-73-425.4R ..... c 35 N78-27384 \*  
 US-PATENT-CLASS-73-425.6 ..... c 15 N72-21465 \*  
 US-PATENT-CLASS-73-432.1 ..... c 34 N90-19534 \*  
 US-PATENT-CLASS-73-432.1 ..... c 34 N91-31596 \*  
 US-PATENT-CLASS-73-432PS ..... c 76 N75-12810 \*  
 US-PATENT-CLASS-73-432PS ..... c 35 N75-33367 \*  
 US-PATENT-CLASS-73-432PS ..... c 35 N78-18390 \*  
 US-PATENT-CLASS-73-432R ..... c 33 N73-27796 \*  
 US-PATENT-CLASS-73-432R ..... c 14 N73-28487 \*  
 US-PATENT-CLASS-73-432R ..... c 91 N76-30131 \*  
 US-PATENT-CLASS-73-432R ..... c 35 N77-19385 \*  
 US-PATENT-CLASS-73-432R ..... c 35 N78-18390 \*  
 US-PATENT-CLASS-73-432R ..... c 15 N84-16231 \*  
 US-PATENT-CLASS-73-432SD ..... c 11 N72-27262 \*  
 US-PATENT-CLASS-73-432SD ..... c 11 N73-20267 \*  
 US-PATENT-CLASS-73-432SD ..... c 35 N77-18417 \*

## US-PATENT-CLASS-73-60

US-PATENT-CLASS-73-432T ..... c 74 N84-11921 \*  
 US-PATENT-CLASS-73-432 ..... c 11 N70-34786 \*  
 US-PATENT-CLASS-73-432 ..... c 11 N70-38675 \*  
 US-PATENT-CLASS-73-432 ..... c 05 N70-42000 \*  
 US-PATENT-CLASS-73-432 ..... c 31 N71-16221 \*  
 US-PATENT-CLASS-73-432 ..... c 27 N71-16223 \*  
 US-PATENT-CLASS-73-432 ..... c 30 N71-17788 \*  
 US-PATENT-CLASS-73-432 ..... c 14 N71-23227 \*  
 US-PATENT-CLASS-73-432 ..... c 10 N71-26339 \*  
 US-PATENT-CLASS-73-432 ..... c 11 N71-28629 \*  
 US-PATENT-CLASS-73-432 ..... c 14 N71-30026 \*  
 US-PATENT-CLASS-73-432 ..... c 35 N74-21062 \*  
 US-PATENT-CLASS-73-45.5 ..... c 12 N71-17573 \*  
 US-PATENT-CLASS-73-456 ..... c 35 N78-24515 \*  
 US-PATENT-CLASS-73-462 ..... c 35 N87-14670 \*  
 US-PATENT-CLASS-73-468 ..... c 37 N84-28082 \*  
 US-PATENT-CLASS-73-46 ..... c 35 N75-19612 \*  
 US-PATENT-CLASS-73-473 ..... c 35 N87-14670 \*  
 US-PATENT-CLASS-73-477 ..... c 35 N87-14670 \*  
 US-PATENT-CLASS-73-49.2 ..... c 32 N71-24285 \*  
 US-PATENT-CLASS-73-49.2 ..... c 35 N75-15931 \*  
 US-PATENT-CLASS-73-49.2 ..... c 35 N75-19612 \*  
 US-PATENT-CLASS-73-49.3 ..... c 14 N71-26672 \*  
 US-PATENT-CLASS-73-49.8 ..... c 14 N69-27503 \* #  
 US-PATENT-CLASS-73-49.8 ..... c 15 N71-29132 \*  
 US-PATENT-CLASS-73-49.8 ..... c 14 N91-21175 \*  
 US-PATENT-CLASS-73-490 ..... c 04 N81-21047 \*  
 US-PATENT-CLASS-73-492 ..... c 14 N72-25411 \*  
 US-PATENT-CLASS-73-493 ..... c 17 N76-29347 \*  
 US-PATENT-CLASS-73-497 ..... c 14 N71-30265 \*  
 US-PATENT-CLASS-73-497 ..... c 35 N74-15094 \*  
 US-PATENT-CLASS-73-4 ..... c 14 N71-18481 \*  
 US-PATENT-CLASS-73-4 ..... c 14 N71-23036 \*  
 US-PATENT-CLASS-73-4 ..... c 14 N71-23755 \*  
 US-PATENT-CLASS-73-4 ..... c 14 N73-30390 \*  
 US-PATENT-CLASS-73-507 ..... c 35 N93-29084 \*  
 US-PATENT-CLASS-73-502 ..... c 35 N86-32695 \* #  
 US-PATENT-CLASS-73-504 ..... c 04 N81-21047 \*  
 US-PATENT-CLASS-73-505 ..... c 23 N71-16098 \*  
 US-PATENT-CLASS-73-505 ..... c 12 N75-24774 \*  
 US-PATENT-CLASS-73-505 ..... c 71 N78-10837 \*  
 US-PATENT-CLASS-73-505 ..... c 71 N79-20827 \*  
 US-PATENT-CLASS-73-505 ..... c 71 N81-15767 \*  
 US-PATENT-CLASS-73-505 ..... c 71 N83-32515 \*  
 US-PATENT-CLASS-73-505 ..... c 71 N83-32516 \*  
 US-PATENT-CLASS-73-505 ..... c 71 N83-36846 \*  
 US-PATENT-CLASS-73-505 ..... c 71 N84-23233 \*  
 US-PATENT-CLASS-73-505 ..... c 71 N85-22105 \*  
 US-PATENT-CLASS-73-505 ..... c 71 N85-29693 \*  
 US-PATENT-CLASS-73-505 ..... c 35 N86-20752 \*  
 US-PATENT-CLASS-73-505 ..... c 26 N86-32551 \*  
 US-PATENT-CLASS-73-505 ..... c 71 N88-24241 \*  
 US-PATENT-CLASS-73-505 ..... c 71 N89-13236 \*  
 US-PATENT-CLASS-73-505 ..... c 35 N89-14422 \*  
 US-PATENT-CLASS-73-505 ..... c 71 N90-12289 \*  
 US-PATENT-CLASS-73-505 ..... c 71 N91-14807 \*  
 US-PATENT-CLASS-73-505 ..... c 09 N93-24601 \*  
 US-PATENT-CLASS-73-510 ..... c 18 N81-29152 \*  
 US-PATENT-CLASS-73-515 ..... c 14 N72-25410 \*  
 US-PATENT-CLASS-73-517B ..... c 35 N74-15094 \*  
 US-PATENT-CLASS-73-517R ..... c 17 N76-29347 \*  
 US-PATENT-CLASS-73-517 ..... c 11 N70-38196 \*  
 US-PATENT-CLASS-73-517 ..... c 14 N70-41682 \*  
 US-PATENT-CLASS-73-517 ..... c 14 N71-15969 \*  
 US-PATENT-CLASS-73-521 ..... c 14 N72-25410 \*  
 US-PATENT-CLASS-73-521 ..... c 35 N86-32695 \* #  
 US-PATENT-CLASS-73-557 ..... c 35 N75-19614 \*  
 US-PATENT-CLASS-73-557 ..... c 07 N76-27232 \*  
 US-PATENT-CLASS-73-56 ..... c 35 N80-18357 \*  
 US-PATENT-CLASS-73-571 ..... c 71 N90-12289 \*  
 US-PATENT-CLASS-73-571 ..... c 33 N92-33021 \*  
 US-PATENT-CLASS-73-579 ..... c 39 N78-15512 \*  
 US-PATENT-CLASS-73-579 ..... c 35 N79-10390 \*  
 US-PATENT-CLASS-73-579 ..... c 33 N83-16626 \*  
 US-PATENT-CLASS-73-579 ..... c 27 N85-20126 \*  
 US-PATENT-CLASS-73-579 ..... c 39 N93-13420 \*  
 US-PATENT-CLASS-73-57 ..... c 14 N71-17584 \*  
 US-PATENT-CLASS-73-57 ..... c 14 N73-14429 \*  
 US-PATENT-CLASS-73-582 ..... c 27 N85-20126 \*  
 US-PATENT-CLASS-73-583 ..... c 71 N87-21052 \*  
 US-PATENT-CLASS-73-587 ..... c 35 N88-23966 \*  
 US-PATENT-CLASS-73-588 ..... c 37 N84-33807 \*  
 US-PATENT-CLASS-73-588 ..... c 27 N85-20126 \*  
 US-PATENT-CLASS-73-589 ..... c 35 N79-10390 \*  
 US-PATENT-CLASS-73-589 ..... c 35 N84-22933 \*  
 US-PATENT-CLASS-73-589 ..... c 71 N87-21652 \*  
 US-PATENT-CLASS-73-594 ..... c 35 N84-22933 \*  
 US-PATENT-CLASS-73-597 ..... c 33 N83-16626 \*  
 US-PATENT-CLASS-73-597 ..... c 52 N83-27578 \*  
 US-PATENT-CLASS-73-597 ..... c 32 N87-14559 \*  
 US-PATENT-CLASS-73-598 ..... c 26 N93-14705 \*  
 US-PATENT-CLASS-73-599 ..... c 71 N87-21652 \*  
 US-PATENT-CLASS-73-599 ..... c 71 N87-21653 \*  
 US-PATENT-CLASS-73-601 ..... c 39 N92-28757 \*  
 US-PATENT-CLASS-73-603 ..... c 38 N78-32447 \*  
 US-PATENT-CLASS-73-60 ..... c 14 N73-14429 \*



## US-PATENT-CLASS-73-61.1C

## REPORT NUMBER INDEX

US-PATENT-CLASS-73-61.1C	c 23	N77-17161 *	US-PATENT-CLASS-73-809	c 39	N87-25601 *	US-PATENT-CLASS-73-88R	c 35	N74-13129 *
US-PATENT-CLASS-73-61.75	c 35	N93-29084 *	US-PATENT-CLASS-73-810	c 39	N79-22537 *	US-PATENT-CLASS-73-88R	c 35	N77-22449 *
US-PATENT-CLASS-73-61.79	c 35	N93-29084 *	US-PATENT-CLASS-73-810	c 39	N87-25601 *	US-PATENT-CLASS-73-88R	c 39	N77-28511 *
US-PATENT-CLASS-73-61R	c 35	N78-27384 *	US-PATENT-CLASS-73-810	c 35	N88-23967 *	US-PATENT-CLASS-73-88	c 32	N71-17645 *
US-PATENT-CLASS-73-615	c 32	N87-14559 *	US-PATENT-CLASS-73-818	c 35	N83-21312 *	US-PATENT-CLASS-73-90	c 32	N70-42003 *
US-PATENT-CLASS-73-61	c 14	N71-26199 *	US-PATENT-CLASS-73-818	c 39	N83-32081 *	US-PATENT-CLASS-73-90	c 32	N71-25360 *
US-PATENT-CLASS-73-620	c 35	N84-22928 *	US-PATENT-CLASS-73-81	c 14	N73-23231 *	US-PATENT-CLASS-73-90	c 14	N73-20476 *
US-PATENT-CLASS-73-626	c 52	N79-26771 *	US-PATENT-CLASS-73-822	c 39	N83-32081 *	US-PATENT-CLASS-73-91	c 14	N73-20476 *
US-PATENT-CLASS-73-629	c 33	N83-16626 *	US-PATENT-CLASS-73-826	c 14	N91-27175 *	US-PATENT-CLASS-73-91	c 32	N73-26910 *
US-PATENT-CLASS-73-630	c 39	N78-15512 *	US-PATENT-CLASS-73-827	c 39	N86-20841 *	US-PATENT-CLASS-73-91	c 09	N74-19528 *
US-PATENT-CLASS-73-631	c 71	N91-27914 *	US-PATENT-CLASS-73-82	c 43	N79-25443 *	US-PATENT-CLASS-73-91	c 39	N78-10493 *
US-PATENT-CLASS-73-632	c 38	N79-14398 *	US-PATENT-CLASS-73-82	c 43	N80-14423 *	US-PATENT-CLASS-73-94	c 14	N73-32323 *
US-PATENT-CLASS-73-633	c 52	N79-14751 *	US-PATENT-CLASS-73-82	c 43	N80-23711 *	US-PATENT-CLASS-73-95	c 15	N71-24834 *
US-PATENT-CLASS-73-633	c 35	N84-22928 *	US-PATENT-CLASS-73-831	c 35	N85-34375 *	US-PATENT-CLASS-73-95	c 14	N72-11364 *
US-PATENT-CLASS-73-64.4	c 34	N83-31993 *	US-PATENT-CLASS-73-831	c 37	N90-20409 *	US-PATENT-CLASS-73-95	c 35	N76-18400 *
US-PATENT-CLASS-73-64.53	c 35	N93-29084 *	US-PATENT-CLASS-73-833	c 24	N84-27829 *	US-PATENT-CLASS-73-95	c 35	N77-22450 *
US-PATENT-CLASS-73-641	c 38	N79-14398 *	US-PATENT-CLASS-73-834	c 37	N88-14361 *	US-PATENT-CLASS-73-95	c 31	N79-11246 *
US-PATENT-CLASS-73-641	c 39	N93-26102 *	US-PATENT-CLASS-73-845	c 35	N90-23712 *	US-PATENT-CLASS-73-97	c 14	N71-15600 *
US-PATENT-CLASS-73-644	c 38	N79-14398 *	US-PATENT-CLASS-73-84	c 14	N71-22765 *	US-PATENT-CLASS-73-99	c 14	N71-10781 *
US-PATENT-CLASS-73-644	c 52	N79-14751 *	US-PATENT-CLASS-73-84	c 14	N73-19420 *	US-PATENT-CLASS-73-9	c 14	N71-22895 *
US-PATENT-CLASS-73-646	c 71	N78-14867 *	US-PATENT-CLASS-73-84	c 35	N77-27367 *	US-PATENT-CLASS-73-9	c 35	N76-31499 *
US-PATENT-CLASS-73-646	c 35	N84-12445 *	US-PATENT-CLASS-73-852	c 37	N91-21540 *	US-PATENT-CLASS-73-9	c 15	N84-16231 *
US-PATENT-CLASS-73-647	c 32	N79-24203 *	US-PATENT-CLASS-73-856	c 39	N83-32081 *	US-PATENT-CLASS-73-9	c 02	N93-18275 *
US-PATENT-CLASS-73-655	c 35	N80-14371 *	US-PATENT-CLASS-73-856	c 24	N84-27829 *	US-PATENT-CLASS-73-9	c 37	N93-29618 *
US-PATENT-CLASS-73-657	c 35	N85-30282 *	US-PATENT-CLASS-73-856	c 35	N85-34375 *	US-PATENT-CLASS-74-100R	c 37	N78-31426 *
US-PATENT-CLASS-73-658	c 35	N84-12445 *	US-PATENT-CLASS-73-856	c 09	N87-25334 *	US-PATENT-CLASS-74-100	c 15	N71-24045 *
US-PATENT-CLASS-73-658	c 37	N91-14607 *	US-PATENT-CLASS-73-85	c 14	N72-33377 *	US-PATENT-CLASS-74-105	c 09	N72-22195 *
US-PATENT-CLASS-73-65	c 14	N71-22992 *	US-PATENT-CLASS-73-860	c 39	N83-32081 *	US-PATENT-CLASS-74-110	c 44	N83-14693 *
US-PATENT-CLASS-73-661	c 35	N80-14371 *	US-PATENT-CLASS-73-860	c 37	N90-20409 *	US-PATENT-CLASS-74-126	c 15	N71-21529 *
US-PATENT-CLASS-73-663	c 14	N91-21176 *	US-PATENT-CLASS-73-861.05	c 33	N83-31954 *	US-PATENT-CLASS-74-18.1	c 37	N82-24493 *
US-PATENT-CLASS-73-668	c 39	N93-13420 *	US-PATENT-CLASS-73-861.05	c 02	N92-34172 *	US-PATENT-CLASS-74-18.2	c 11	N71-27036 *
US-PATENT-CLASS-73-67.1	c 35	N75-12271 *	US-PATENT-CLASS-73-861.07	c 34	N86-12547 *	US-PATENT-CLASS-74-18.2	c 37	N82-24493 *
US-PATENT-CLASS-73-67.2	c 11	N69-21540 *	US-PATENT-CLASS-73-861.58	c 35	N86-25752 *	US-PATENT-CLASS-74-217R	c 37	N74-23070 *
US-PATENT-CLASS-73-67.2	c 15	N71-18132 *	US-PATENT-CLASS-73-861.65	c 02	N80-28300 *	US-PATENT-CLASS-74-25	c 37	N92-33031 *
US-PATENT-CLASS-73-67.2	c 14	N72-22440 *	US-PATENT-CLASS-73-861.65	c 35	N89-14423 *	US-PATENT-CLASS-74-2	c 15	N71-24600 *
US-PATENT-CLASS-73-67.2	c 35	N78-17358 *	US-PATENT-CLASS-73-861.66	c 02	N80-28300 *	US-PATENT-CLASS-74-2	c 31	N73-14855 *
US-PATENT-CLASS-73-67.2	c 32	N73-26910 *	US-PATENT-CLASS-73-861.71	c 47	N84-28292 *	US-PATENT-CLASS-74-384	c 37	N76-15457 *
US-PATENT-CLASS-73-67.5R	c 38	N74-15395 *	US-PATENT-CLASS-73-861	c 34	N81-26402 *	US-PATENT-CLASS-74-385	c 07	N78-17056 *
US-PATENT-CLASS-73-67.7	c 39	N77-28511 *	US-PATENT-CLASS-73-862.01	c 35	N86-19581 *	US-PATENT-CLASS-74-409	c 15	N71-21744 *
US-PATENT-CLASS-73-67.8S	c 35	N74-10415 *	US-PATENT-CLASS-73-862.04	c 35	N86-32696 *	US-PATENT-CLASS-74-417	c 07	N78-17056 *
US-PATENT-CLASS-73-67.8S	c 38	N74-15130 *	US-PATENT-CLASS-73-862.04	c 35	N92-10185 *	US-PATENT-CLASS-74-417	c 37	N81-14318 *
US-PATENT-CLASS-73-67.9	c 52	N74-20726 *	US-PATENT-CLASS-73-862.08	c 54	N82-26987 *	US-PATENT-CLASS-74-417	c 37	N81-17432 *
US-PATENT-CLASS-73-683.31	c 35	N81-29407 *	US-PATENT-CLASS-73-862.33	c 35	N91-17350 *	US-PATENT-CLASS-74-424.8-R	c 35	N87-21304 *
US-PATENT-CLASS-73-684.52	c 35	N81-29407 *	US-PATENT-CLASS-73-862.36	c 35	N91-17350 *	US-PATENT-CLASS-74-424.8-R	c 37	N85-20338 *
US-PATENT-CLASS-73-69	c 71	N74-31148 *	US-PATENT-CLASS-73-862.54	c 37	N83-36482 *	US-PATENT-CLASS-74-424.8VA	c 37	N75-15050 *
US-PATENT-CLASS-73-70.2	c 14	N71-10616 *	US-PATENT-CLASS-73-862.54	c 35	N85-20294 *	US-PATENT-CLASS-74-424.8VA	c 37	N85-20338 *
US-PATENT-CLASS-73-705	c 36	N85-21639 *	US-PATENT-CLASS-73-862.54	c 35	N86-19581 *	US-PATENT-CLASS-74-424.8	c 15	N71-26635 *
US-PATENT-CLASS-73-705	c 74	N92-33017 *	US-PATENT-CLASS-73-862.59	c 39	N92-34174 *	US-PATENT-CLASS-74-425	c 37	N80-32716 *
US-PATENT-CLASS-73-708	c 34	N85-21568 *	US-PATENT-CLASS-73-862.61	c 35	N86-32696 *	US-PATENT-CLASS-74-436	c 37	N75-13266 *
US-PATENT-CLASS-73-708	c 35	N92-21568 *	US-PATENT-CLASS-73-862.61	c 35	N90-17117 *	US-PATENT-CLASS-74-437	c 37	N92-33031 *
US-PATENT-CLASS-73-708	c 35	N92-29097 *	US-PATENT-CLASS-73-862.65	c 35	N84-28015 *	US-PATENT-CLASS-74-441	c 35	N87-21304 *
US-PATENT-CLASS-73-71.2	c 14	N70-34794 *	US-PATENT-CLASS-73-862.65	c 35	N92-10185 *	US-PATENT-CLASS-74-458	c 35	N87-21304 *
US-PATENT-CLASS-73-71.3	c 35	N74-15146 *	US-PATENT-CLASS-73-863.11	c 35	N83-29650 *	US-PATENT-CLASS-74-468	c 15	N71-24984 *
US-PATENT-CLASS-73-71.4	c 32	N71-16428 *	US-PATENT-CLASS-73-863.11	c 37	N85-29286 *	US-PATENT-CLASS-74-468	c 35	N87-21304 *
US-PATENT-CLASS-73-71.4	c 32	N71-26681 *	US-PATENT-CLASS-73-863.21	c 35	N86-26595 *	US-PATENT-CLASS-74-469	c 15	N72-21463 *
US-PATENT-CLASS-73-71.5R	c 71	N74-31148 *	US-PATENT-CLASS-73-863.22	c 51	N91-31755 *	US-PATENT-CLASS-74-469	c 15	N72-28495 *
US-PATENT-CLASS-73-71.5U	c 38	N74-15395 *	US-PATENT-CLASS-73-863.23	c 34	N92-16241 *	US-PATENT-CLASS-74-471XY	c 54	N75-27760 *
US-PATENT-CLASS-73-71.6	c 14	N71-27185 *	US-PATENT-CLASS-73-863.31	c 45	N83-25217 *	US-PATENT-CLASS-74-471XY	c 33	N92-29153 *
US-PATENT-CLASS-73-71.6	c 14	N72-27412 *	US-PATENT-CLASS-73-863.31	c 35	N86-26595 *	US-PATENT-CLASS-74-471	c 05	N70-41581 *
US-PATENT-CLASS-73-71.6	c 14	N73-13416 *	US-PATENT-CLASS-73-863.41	c 51	N91-31755 *	US-PATENT-CLASS-74-471	c 03	N70-42073 *
US-PATENT-CLASS-73-71.6	c 14	N73-19421 *	US-PATENT-CLASS-73-863.72	c 35	N86-26595 *	US-PATENT-CLASS-74-471	c 15	N71-20740 *
US-PATENT-CLASS-73-71.6	c 35	N77-18417 *	US-PATENT-CLASS-73-863.83	c 45	N83-25217 *	US-PATENT-CLASS-74-479	c 08	N82-24205 *
US-PATENT-CLASS-73-71.4	c 35	N79-14347 *	US-PATENT-CLASS-73-863.85	c 51	N91-31755 *	US-PATENT-CLASS-74-479	c 37	N91-14616 *
US-PATENT-CLASS-73-714	c 34	N79-24285 *	US-PATENT-CLASS-73-863.86	c 35	N85-29213 *	US-PATENT-CLASS-74-479	c 37	N92-33634 *
US-PATENT-CLASS-73-714	c 35	N84-14491 *	US-PATENT-CLASS-73-863.86	c 51	N91-31755 *	US-PATENT-CLASS-74-480R	c 05	N75-12930 *
US-PATENT-CLASS-73-721	c 35	N79-14347 *	US-PATENT-CLASS-73-864.34	c 35	N86-26595 *	US-PATENT-CLASS-74-480R	c 08	N82-24205 *
US-PATENT-CLASS-73-721	c 35	N84-22934 *	US-PATENT-CLASS-73-864.41	c 35	N84-28018 *	US-PATENT-CLASS-74-5.12	c 31	N71-26537 *
US-PATENT-CLASS-73-721	c 35	N92-29097 *	US-PATENT-CLASS-73-864.52	c 35	N85-29213 *	US-PATENT-CLASS-74-5.22	c 21	N73-13644 *
US-PATENT-CLASS-73-724	c 32	N79-24203 *	US-PATENT-CLASS-73-864.63	c 45	N83-25217 *	US-PATENT-CLASS-74-5.34	c 04	N76-26175 *
US-PATENT-CLASS-73-724	c 52	N80-18691 *	US-PATENT-CLASS-73-864.81	c 37	N85-29286 *	US-PATENT-CLASS-74-5.34	c 06	N83-33882 *
US-PATENT-CLASS-73-724	c 33	N82-26572 *	US-PATENT-CLASS-73-865.6	c 09	N91-21157 *	US-PATENT-CLASS-74-5.47	c 21	N71-23289 *
US-PATENT-CLASS-73-727	c 35	N92-29097 *	US-PATENT-CLASS-73-865.6	c 14	N91-21176 *	US-PATENT-CLASS-74-5.5	c 35	N74-28097 *
US-PATENT-CLASS-73-753	c 35	N85-21597 *	US-PATENT-CLASS-73-865.6	c 14	N93-24598 *	US-PATENT-CLASS-74-5.5	c 37	N84-28082 *
US-PATENT-CLASS-73-756	c 35	N78-24515 *	US-PATENT-CLASS-73-866.4	c 14	N91-21176 *	US-PATENT-CLASS-74-5.6D	c 33	N85-29142 *
US-PATENT-CLASS-73-756	c 35	N79-14347 *	US-PATENT-CLASS-73-866.4	c 14	N93-24598 *	US-PATENT-CLASS-74-5.6	c 35	N74-15094 *
US-PATENT-CLASS-73-756	c 35	N84-22934 *	US-PATENT-CLASS-73-86	c 14	N69-39975 *	US-PATENT-CLASS-74-5.7	c 35	N74-18323 *
US-PATENT-CLASS-73-756	c 35	N87-28884 *	US-PATENT-CLASS-73-86	c 33	N71-21586 *	US-PATENT-CLASS-74-5.7	c 15	N76-14158 *
US-PATENT-CLASS-73-756	c 35	N92-29097 *	US-PATENT-CLASS-73-86	c 33	N73-27796 *	US-PATENT-CLASS-74-5F	c 15	N73-12488 *
US-PATENT-CLASS-73-75	c 35	N85-34373 *	US-PATENT-CLASS-73-86	c 34	N74-15652 *	US-PATENT-CLASS-74-501R	c 15	N72-22485 *
US-PATENT-CLASS-73-761	c 33	N83-16626 *	US-PATENT-CLASS-73-86	c 20	N93-18856 *	US-PATENT-CLASS-74-515E	c 54	N78-17676 *
US-PATENT-CLASS-73-761	c 39	N92-34174 *	US-PATENT-CLASS-73-88.5R	c 15	N72-17452 *	US-PATENT-CLASS-74-519	c 03	N70-41954 *
US-PATENT-CLASS-73-76	c 06	N72-17095 *	US-PATENT-CLASS-73-88.5R	c 32	N73-26910 *	US-PATENT-CLASS-74-519	c 05	N81-19087 *
US-PATENT-CLASS-73-770	c 39	N79-22537 *	US-PATENT-CLASS-73-88.5R	c 52	N74-27864 *	US-PATENT-CLASS-74-572	c 07	N78-33101 *
US-PATENT-CLASS-73-779	c 39	N93-20118 *	US-PATENT-CLASS-73-88.5R	c 35	N76-14430 *	US-PATENT-CLASS-74-572	c 37	N79-10422 *
US-PATENT-CLASS-73-781	c 52	N80-27072 *	US-PATENT-CLASS-73-88.5SD	c 33	N76-19338 *	US-PATENT-CLASS-74-572	c 44	N79-14527 *
US-PATENT-CLASS-73-788	c 39	N93-26102 *	US-PATENT-CLASS-73-88.5	c 14	N70-34705 *	US-PATENT-CLASS-74-572	c 24	N81-29163 *
US-PATENT-CLASS-73-794	c 35	N88-23967 *	US-PATENT-CLASS-73-88.5	c 14	N70-34799 *	US-PATENT-CLASS-74-572	c 35	N89-15379 *
US-PATENT-CLASS-73-794	c 24	N91-14430 *	US-PATENT-CLASS-73-88.5	c 14	N71-17656 *	US-PATENT-CLASS-74-573R	c 37	N84-28082 *
US-PATENT-CLASS-73-797	c 39	N93-20118 *	US-PATENT-CLASS-73-88.5	c 14	N71-21091 *	US-PATENT-CLASS-74-586	c 37	N79-14382 *
US-PATENT-CLASS-73-799	c 35	N90-23712 *	US-PATENT-CLASS-73-88.5	c 14	N71-23087 *	US-PATENT-CLASS-74-58	c 35	N84-22928 *
US-PATENT-CLASS-73-799	c 39	N93-29612 *	US-PATENT-CLASS-73-88.5	c 14	N71-24233 *	US-PATENT-CLASS-74-594.6	c 37	N74-18127 *
US-PATENT-CLASS-73-79	c 14	N71-26161 *	US-PATENT-CLASS-73-88.5	c 09	N72-22200 *	US-PATENT-CLASS-74-594.7	c 37	N74-18127 *
US-PATENT-CLASS-73-7	c 25	N86-19413 *	US-PATENT-CLASS-73-88.5	c 33	N75-31329 *	US-PATENT-CLASS-74-61	c 35	N92-33012 *
US-PATENT-CLASS-73-801	c 35	N88-23966 *	US-PATENT-CLASS-73-88.5	c 38	N76-28563 *	US-PATENT-CLASS-74-63	c 15	N71-17692 *
US-PATENT-CLASS-73-801	c 39	N92-29155 *	US-PATENT-CLASS-73-88A	c 32	N73-20740 *	US-PATENT-CLASS-74-661	c 37	N80-32716 *
US-PATENT-CLASS-73-801	c 26	N93-14705 *	US-PATENT-CLASS-73-88F	c 39	N78-15512 *	US-PATENT-CLASS-74-665B	c 37	N76-15457 *

# REPORT NUMBER INDEX

US-PATENT-CLASS-74-665C ..... c 37 N80-32716 \*  
 US-PATENT-CLASS-74-665G ..... c 37 N91-14616 \*  
 US-PATENT-CLASS-74-674 ..... c 37 N79-20377 \*  
 US-PATENT-CLASS-74-675 ..... c 37 N74-27901 \*  
 US-PATENT-CLASS-74-705 ..... c 37 N79-20377 \*  
 US-PATENT-CLASS-74-710 ..... c 37 N74-27901 \*  
 US-PATENT-CLASS-74-753 ..... c 37 N84-28084 \*  
 US-PATENT-CLASS-74-758 ..... c 37 N84-28084 \*  
 US-PATENT-CLASS-74-764 ..... c 37 N79-20377 \*  
 US-PATENT-CLASS-74-800 ..... c 37 N78-17385 \*  
 US-PATENT-CLASS-74-812 ..... c 37 N84-28084 \*  
 US-PATENT-CLASS-74-81 ..... c 37 N78-16369 \*  
 US-PATENT-CLASS-74-820 ..... c 37 N75-13266 \*  
 US-PATENT-CLASS-74-83 ..... c 37 N78-16369 \*  
 US-PATENT-CLASS-74-87 ..... c 35 N92-33010 \*  
 US-PATENT-CLASS-74-89.15 ..... c 15 N71-26635 \*  
 US-PATENT-CLASS-74-89.15 ..... c 15 N72-21462 \*  
 US-PATENT-CLASS-74-89.15 ..... c 35 N87-21304 \*  
 US-PATENT-CLASS-74-89.18 ..... c 15 N71-23809 \*  
 US-PATENT-CLASS-74-89 ..... c 37 N81-33483 \*  
 US-PATENT-CLASS-74-96 ..... c 37 N77-22482 \*  
 US-PATENT-CLASS-75-58 ..... c 17 N72-22530 \*  
 US-PATENT-CLASS-75-DIG.1 ..... c 18 N72-25539 \*  
 US-PATENT-CLASS-75-DIG.1 ..... c 37 N75-26371 \*  
 US-PATENT-CLASS-75-DIG.1 ..... c 15 N72-25448 \*  
 US-PATENT-CLASS-75-0.5BB ..... c 37 N77-19458 \*  
 US-PATENT-CLASS-75-122.7 ..... c 26 N78-18182 \*  
 US-PATENT-CLASS-75-124 ..... c 26 N80-32484 \*  
 US-PATENT-CLASS-75-126D ..... c 26 N78-18182 \*  
 US-PATENT-CLASS-75-126F ..... c 26 N78-18182 \*  
 US-PATENT-CLASS-75-126G ..... c 26 N78-18182 \*  
 US-PATENT-CLASS-75-128T ..... c 26 N79-16678 \*  
 US-PATENT-CLASS-75-134D ..... c 18 N73-32437 \*  
 US-PATENT-CLASS-75-135 ..... c 24 N77-27187 \*  
 US-PATENT-CLASS-75-135 ..... c 26 N80-23419 \*  
 US-PATENT-CLASS-75-135 ..... c 26 N80-23419 \*  
 US-PATENT-CLASS-75-138 ..... c 24 N77-27187 \*  
 US-PATENT-CLASS-75-139 ..... c 17 N71-20743 \*  
 US-PATENT-CLASS-75-142 ..... c 17 N71-15644 \*  
 US-PATENT-CLASS-75-170 ..... c 17 N71-16025 \*  
 US-PATENT-CLASS-75-170 ..... c 17 N71-23248 \*  
 US-PATENT-CLASS-75-170 ..... c 17 N72-22535 \*  
 US-PATENT-CLASS-75-170 ..... c 37 N77-19458 \*  
 US-PATENT-CLASS-75-170 ..... c 26 N77-20201 \*  
 US-PATENT-CLASS-75-170 ..... c 26 N77-32279 \*  
 US-PATENT-CLASS-75-170 ..... c 26 N77-32280 \*  
 US-PATENT-CLASS-75-170 ..... c 26 N78-18183 \*  
 US-PATENT-CLASS-75-171 ..... c 17 N70-33283 \*  
 US-PATENT-CLASS-75-171 ..... c 17 N70-36616 \*  
 US-PATENT-CLASS-75-171 ..... c 17 N71-16026 \*  
 US-PATENT-CLASS-75-171 ..... c 17 N73-32415 \*  
 US-PATENT-CLASS-75-172 ..... c 17 N71-23365 \*  
 US-PATENT-CLASS-75-173 ..... c 26 N75-27126 \*  
 US-PATENT-CLASS-75-173 ..... c 26 N75-27127 \*  
 US-PATENT-CLASS-75-178R ..... c 04 N76-20114 \*  
 US-PATENT-CLASS-75-178R ..... c 26 N80-23419 \*  
 US-PATENT-CLASS-75-20F ..... c 15 N72-11387 \*  
 US-PATENT-CLASS-75-200 ..... c 26 N74-10521 \*  
 US-PATENT-CLASS-75-200 ..... c 37 N74-13179 \*  
 US-PATENT-CLASS-75-200 ..... c 24 N75-13032 \*  
 US-PATENT-CLASS-75-200 ..... c 37 N75-26371 \*  
 US-PATENT-CLASS-75-200 ..... c 24 N80-33482 \*  
 US-PATENT-CLASS-75-202 ..... c 17 N71-15468 \*  
 US-PATENT-CLASS-75-203 ..... c 27 N79-14213 \*  
 US-PATENT-CLASS-75-204 ..... c 18 N71-22894 \*  
 US-PATENT-CLASS-75-205 ..... c 27 N79-14213 \*  
 US-PATENT-CLASS-75-206 ..... c 15 N72-25448 \*  
 US-PATENT-CLASS-75-206 ..... c 27 N79-14213 \*  
 US-PATENT-CLASS-75-206R ..... c 37 N75-26371 \*  
 US-PATENT-CLASS-75-208 ..... c 18 N72-25539 \*  
 US-PATENT-CLASS-75-211 ..... c 18 N72-25539 \*  
 US-PATENT-CLASS-75-212 ..... c 37 N75-26371 \*  
 US-PATENT-CLASS-75-212 ..... c 27 N79-14213 \*  
 US-PATENT-CLASS-75-213 ..... c 15 N72-25448 \*  
 US-PATENT-CLASS-75-213 ..... c 37 N74-13179 \*  
 US-PATENT-CLASS-75-214 ..... c 37 N74-13179 \*  
 US-PATENT-CLASS-75-214 ..... c 37 N75-26371 \*  
 US-PATENT-CLASS-75-222 ..... c 28 N70-38197 \*  
 US-PATENT-CLASS-75-222 ..... c 37 N75-26371 \*  
 US-PATENT-CLASS-75-222 ..... c 24 N80-33482 \*  
 US-PATENT-CLASS-75-225 ..... c 34 N76-27515 \*  
 US-PATENT-CLASS-75-226 ..... c 18 N72-25539 \*  
 US-PATENT-CLASS-75-226 ..... c 26 N74-10521 \*  
 US-PATENT-CLASS-75-226 ..... c 37 N74-13179 \*  
 US-PATENT-CLASS-75-226 ..... c 27 N79-14213 \*  
 US-PATENT-CLASS-75-228 ..... c 24 N90-23493 \*  
 US-PATENT-CLASS-75-229 ..... c 27 N78-17206 \*  
 US-PATENT-CLASS-75-229 ..... c 27 N78-17206 \*  
 US-PATENT-CLASS-75-241 ..... c 27 N78-17206 \*  
 US-PATENT-CLASS-75-25 ..... c 28 N81-15119 \*  
 US-PATENT-CLASS-75-331 ..... c 31 N91-32240 \*  
 US-PATENT-CLASS-75-338 ..... c 31 N91-32240 \*  
 US-PATENT-CLASS-75-340 ..... c 31 N91-32240 \*  
 US-PATENT-CLASS-75-342 ..... c 31 N91-32240 \*  
 US-PATENT-CLASS-75-63 ..... c 15 N71-27184 \*

US-PATENT-CLASS-75-65R ..... c 24 N77-27187 \*  
 US-PATENT-CLASS-75-66 ..... c 17 N71-26773 \*  
 US-PATENT-CLASS-75-66 ..... c 06 N73-13129 \*  
 US-PATENT-CLASS-75-66 ..... c 17 N73-28573 \*  
 US-PATENT-CLASS-77.5AQ ..... c 27 N81-15104 \*  
 US-PATENT-CLASS-77.5CH ..... c 27 N81-15104 \*  
 US-PATENT-CLASS-78-1 ..... c 15 N70-33330 \*  
 US-PATENT-CLASS-788-704 ..... c 36 N79-18307 \*  
 US-PATENT-CLASS-8-DIG.12 ..... c 27 N80-26446 \*  
 US-PATENT-CLASS-8-DIG.18 ..... c 27 N80-26446 \*  
 US-PATENT-CLASS-8-DIG.9 ..... c 25 N86-25428 \*  
 US-PATENT-CLASS-8-115.5 ..... c 27 N80-26446 \*  
 US-PATENT-CLASS-8-150 ..... c 09 N82-29330 \*  
 US-PATENT-CLASS-8-3 ..... c 51 N77-27677 \*  
 US-PATENT-CLASS-8-94.11 ..... c 51 N77-27677 \*  
 US-PATENT-CLASS-8-94.12 ..... c 18 N71-15545 \*  
 US-PATENT-CLASS-8-119 ..... c 27 N79-14383 \*  
 US-PATENT-CLASS-8-1177G ..... c 37 N85-21649 \*  
 US-PATENT-CLASS-8-180B ..... c 37 N79-14383 \*  
 US-PATENT-CLASS-8-13R ..... c 15 N71-29133 \*  
 US-PATENT-CLASS-8-155 ..... c 37 N83-36482 \*  
 US-PATENT-CLASS-8-156 ..... c 37 N76-20480 \*  
 US-PATENT-CLASS-8-157.31 ..... c 37 N76-20480 \*  
 US-PATENT-CLASS-8-157.38 ..... c 15 N73-30457 \*  
 US-PATENT-CLASS-8-157.38 ..... c 37 N83-36482 \*  
 US-PATENT-CLASS-8-163.1 ..... c 15 N71-17805 \*  
 US-PATENT-CLASS-8-19.5R ..... c 37 N79-10419 \*  
 US-PATENT-CLASS-8-190B ..... c 37 N79-14383 \*  
 US-PATENT-CLASS-8-2.1C ..... c 37 N81-14319 \*  
 US-PATENT-CLASS-8-2.1C ..... c 37 N81-14319 \*  
 US-PATENT-CLASS-8-2.14 ..... c 15 N71-22722 \*  
 US-PATENT-CLASS-8-24R ..... c 14 N72-16283 \*  
 US-PATENT-CLASS-8-236R ..... c 37 N81-14319 \*  
 US-PATENT-CLASS-8-290 ..... c 37 N85-21650 \*  
 US-PATENT-CLASS-8-152 ..... c 76 N80-18951 \*  
 US-PATENT-CLASS-8-203 ..... c 54 N91-26747 \*  
 US-PATENT-CLASS-8-206 ..... c 54 N91-26747 \*  
 US-PATENT-CLASS-8-277 ..... c 54 N91-26747 \*  
 US-PATENT-CLASS-8-282 ..... c 54 N91-26747 \*  
 US-PATENT-CLASS-8-451 ..... c 37 N77-14478 \*  
 US-PATENT-CLASS-8-452 ..... c 39 N74-13131 \*  
 US-PATENT-CLASS-8-467R ..... c 37 N77-14478 \*  
 US-PATENT-CLASS-8-467 ..... c 15 N71-22798 \*  
 US-PATENT-CLASS-8-522 ..... c 15 N72-27485 \*  
 US-PATENT-CLASS-8-562 ..... c 15 N72-27485 \*  
 US-PATENT-CLASS-8-563 ..... c 15 N72-27485 \*  
 US-PATENT-CLASS-8-588 ..... c 15 N72-27485 \*  
 US-PATENT-CLASS-8-602 ..... c 39 N74-13131 \*  
 US-PATENT-CLASS-8-614 ..... c 54 N91-26747 \*  
 US-PATENT-CLASS-8-649 ..... c 54 N91-26747 \*  
 US-PATENT-CLASS-8-664 ..... c 37 N85-21650 \*  
 US-PATENT-CLASS-8-676 ..... c 37 N85-21650 \*  
 US-PATENT-CLASS-8-820 ..... c 37 N80-29703 \*  
 US-PATENT-CLASS-8-870 ..... c 76 N80-18951 \*  
 US-PATENT-CLASS-8-8 ..... c 15 N72-27485 \*  
 US-PATENT-CLASS-8-917 ..... c 39 N74-13131 \*  
 US-PATENT-CLASS-8-5-1 ..... c 15 N72-22488 \*  
 US-PATENT-CLASS-8-5-33 ..... c 15 N71-15922 \*  
 US-PATENT-CLASS-8-5-33 ..... c 15 N71-21489 \*  
 US-PATENT-CLASS-8-5-3 ..... c 15 N71-17653 \*  
 US-PATENT-CLASS-8-5-5B ..... c 15 N72-11385 \*  
 US-PATENT-CLASS-8-5-7 ..... c 15 N71-23254 \*  
 US-PATENT-CLASS-859R ..... c 27 N81-15104 \*  
 US-PATENT-CLASS-86-1R ..... c 28 N77-10213 \*  
 US-PATENT-CLASS-86-1R ..... c 20 N77-17143 \*  
 US-PATENT-CLASS-86-1 ..... c 28 N71-26779 \*  
 US-PATENT-CLASS-86-20.2 ..... c 28 N71-26779 \*  
 US-PATENT-CLASS-86-20R ..... c 20 N77-17143 \*  
 US-PATENT-CLASS-88-14 ..... c 14 N70-34298 \*  
 US-PATENT-CLASS-88-14 ..... c 14 N70-40003 \*  
 US-PATENT-CLASS-88-14 ..... c 14 N70-41946 \*  
 US-PATENT-CLASS-88-14 ..... c 14 N70-41955 \*  
 US-PATENT-CLASS-88-14 ..... c 09 N71-22999 \*  
 US-PATENT-CLASS-88-16 ..... c 14 N70-33254 \*  
 US-PATENT-CLASS-88-1 ..... c 21 N70-35427 \*  
 US-PATENT-CLASS-88-1 ..... c 21 N71-22880 \*  
 US-PATENT-CLASS-88-24 ..... c 23 N71-21882 \*  
 US-PATENT-CLASS-89-1.14 ..... c 37 N87-23983 \*  
 US-PATENT-CLASS-89-1.14 ..... c 37 N90-21390 \*  
 US-PATENT-CLASS-89-1.14 ..... c 37 N91-32498 \*  
 US-PATENT-CLASS-89-1.34 ..... c 03 N91-15142 \*  
 US-PATENT-CLASS-89-1.5G ..... c 08 N82-32373 \*  
 US-PATENT-CLASS-89-1.54 ..... c 05 N87-14314 \*  
 US-PATENT-CLASS-89-1.57 ..... c 37 N85-30334 \*  
 US-PATENT-CLASS-89-1.57 ..... c 37 N90-21390 \*  
 US-PATENT-CLASS-89-1.57 ..... c 37 N91-32498 \*  
 US-PATENT-CLASS-89-1.5 ..... c 31 N71-15675 \*  
 US-PATENT-CLASS-89-1.5 ..... c 15 N71-24600 \*  
 US-PATENT-CLASS-89-1.7 ..... c 11 N70-38202 \*  
 US-PATENT-CLASS-89-1.7 ..... c 30 N70-40353 \*  
 US-PATENT-CLASS-89-1.7 ..... c 03 N71-12258 \*  
 US-PATENT-CLASS-89-1.7 ..... c 03 N71-12259 \*  
 US-PATENT-CLASS-89-1.801 ..... c 20 N76-22296 \*  
 US-PATENT-CLASS-89-1.806 ..... c 15 N71-24043 \*  
 US-PATENT-CLASS-89-1.811 ..... c 15 N72-17455 \*  
 US-PATENT-CLASS-89-1B ..... c 01 N83-35992 \*

# US-PATENT-CLASS-95-11

US-PATENT-CLASS-89-1 ..... c 03 N70-34667 \*  
 US-PATENT-CLASS-89-1 ..... c 15 N71-16078 \*  
 US-PATENT-CLASS-89-36.02 ..... c 24 N90-21822 \*  
 US-PATENT-CLASS-89-36.02 ..... c 18 N92-15114 \*  
 US-PATENT-CLASS-89-36.02 ..... c 27 N93-29088 \*  
 US-PATENT-CLASS-89-36.11 ..... c 18 N92-15114 \*  
 US-PATENT-CLASS-89-8 ..... c 11 N71-18578 \*  
 US-PATENT-CLASS-89-8 ..... c 11 N73-32152 \*  
 US-PATENT-CLASS-89-8 ..... c 75 N76-14931 \*  
 US-PATENT-CLASS-89-8 ..... c 75 N76-17951 \*  
 US-PATENT-CLASS-89-8 ..... c 09 N79-21084 \*  
 US-PATENT-CLASS-89-8 ..... c 14 N92-15081 \*  
 US-PATENT-CLASS-9-11A ..... c 02 N73-26006 \*  
 US-PATENT-CLASS-9-11A ..... c 54 N74-14845 \*  
 US-PATENT-CLASS-9-11 ..... c 05 N70-34857 \*  
 US-PATENT-CLASS-9-2A ..... c 02 N73-26006 \*  
 US-PATENT-CLASS-9-312 ..... c 05 N71-22748 \*  
 US-PATENT-CLASS-9-316 ..... c 05 N70-36493 \*  
 US-PATENT-CLASS-9-3 ..... c 02 N73-26006 \*  
 US-PATENT-CLASS-9-8 ..... c 03 N70-36778 \*  
 US-PATENT-CLASS-9-9 ..... c 15 N71-24600 \*  
 US-PATENT-CLASS-90-11 ..... c 15 N71-33518 \*  
 US-PATENT-CLASS-90-12.5 ..... c 37 N74-25968 \*  
 US-PATENT-CLASS-90-12 ..... c 15 N71-22799 \*  
 US-PATENT-CLASS-90-119 ..... c 33 N91-31528 \*  
 US-PATENT-CLASS-90-1 ..... c 18 N88-23828 \*  
 US-PATENT-CLASS-90-1 ..... c 54 N92-29129 \*  
 US-PATENT-CLASS-90-1-23 ..... c 37 N92-33634 \*  
 US-PATENT-CLASS-90-1-25 ..... c 37 N86-20789 \*  
 US-PATENT-CLASS-90-1-28 ..... c 37 N91-17388 \*  
 US-PATENT-CLASS-90-1-28 ..... c 37 N92-33634 \*  
 US-PATENT-CLASS-90-1-30 ..... c 37 N91-31656 \*  
 US-PATENT-CLASS-90-1-30 ..... c 37 N92-28727 \*  
 US-PATENT-CLASS-90-1-30 ..... c 37 N93-29505 \*  
 US-PATENT-CLASS-90-1-31 ..... c 37 N86-19603 \*  
 US-PATENT-CLASS-90-1-31 ..... c 37 N86-20789 \*  
 US-PATENT-CLASS-90-1-33 ..... c 18 N88-23828 \*  
 US-PATENT-CLASS-90-1-33 ..... c 37 N91-21542 \*  
 US-PATENT-CLASS-90-1-37 ..... c 37 N91-21542 \*  
 US-PATENT-CLASS-90-1-38 ..... c 37 N90-24048 \*  
 US-PATENT-CLASS-90-1-38 ..... c 37 N91-14615 \*  
 US-PATENT-CLASS-90-1-39 ..... c 37 N90-24048 \*  
 US-PATENT-CLASS-90-1-39 ..... c 37 N91-14615 \*  
 US-PATENT-CLASS-90-1-39 ..... c 37 N92-29138 \*  
 US-PATENT-CLASS-90-1-39 ..... c 37 N93-17625 \*  
 US-PATENT-CLASS-90-1-40 ..... c 37 N92-33018 \*  
 US-PATENT-CLASS-90-1-41 ..... c 37 N93-14710 \*  
 US-PATENT-CLASS-90-1-41 ..... c 37 N93-18286 \*  
 US-PATENT-CLASS-90-1-41 ..... c 37 N93-18288 \*  
 US-PATENT-CLASS-90-1-41 ..... c 37 N93-29505 \*  
 US-PATENT-CLASS-90-1-42 ..... c 37 N86-21850 \*  
 US-PATENT-CLASS-90-1-46 ..... c 37 N92-28727 \*  
 US-PATENT-CLASS-90-1-47 ..... c 37 N86-21850 \*  
 US-PATENT-CLASS-90-1-47 ..... c 37 N91-21542 \*  
 US-PATENT-CLASS-90-1-47 ..... c 63 N92-33019 \*  
 US-PATENT-CLASS-90-1-50 ..... c 37 N86-19603 \*  
 US-PATENT-CLASS-90-1-6 ..... c 37 N92-22036 \*  
 US-PATENT-CLASS-90-1-9 ..... c 37 N91-21544 \*  
 US-PATENT-CLASS-90-1-9 ..... c 37 N92-33634 \*  
 US-PATENT-CLASS-91-186 ..... c 05 N73-32014 \*  
 US-PATENT-CLASS-91-325 ..... c 37 N81-32510 \*  
 US-PATENT-CLASS-91-341R ..... c 37 N81-32510 \*  
 US-PATENT-CLASS-91-361 ..... c 15 N71-27754 \*  
 US-PATENT-CLASS-91-363A ..... c 15 N73-13466 \*  
 US-PATENT-CLASS-91-390 ..... c 15 N71-27147 \*  
 US-PATENT-CLASS-91-390 ..... c 15 N71-27754 \*  
 US-PATENT-CLASS-91-410 ..... c 37 N81-32510 \*  
 US-PATENT-CLASS-91-448 ..... c 15 N71-27754 \*  
 US-PATENT-CLASS-91-448 ..... c 15 N73-13466 \*  
 US-PATENT-CLASS-91-461 ..... c 15 N71-27147 \*  
 US-PATENT-CLASS-92-103F ..... c 35 N91-21494 \*  
 US-PATENT-CLASS-92-103SD ..... c 35 N91-21494 \*  
 US-PATENT-CLASS-92-130R ..... c 37 N81-33483 \*  
 US-PATENT-CLASS-92-176 ..... c 37 N88-23981 \*  
 US-PATENT-CLASS-92-208 ..... c 24 N87-27742 \*  
 US-PATENT-CLASS-92-212 ..... c 37 N88-23981 \*  
 US-PATENT-CLASS-92-212 ..... c 37 N90-22042 \*  
 US-PATENT-CLASS-92-213 ..... c 37 N90-22042 \*  
 US-PATENT-CLASS-92-214 ..... c 37 N88-23981 \*  
 US-PATENT-CLASS-92-222 ..... c 37 N88-23981 \*  
 US-PATENT-CLASS-92-222 ..... c 37 N90-22042 \*  
 US-PATENT-CLASS-92-224 ..... c 37 N88-23981 \*  
 US-PATENT-CLASS-92-248 ..... c 37 N90-22042 \*  
 US-PATENT-CLASS-92-37 ..... c 37 N82-24493 \*  
 US-PATENT-CLASS-92-49 ..... c 14 N73-13418 \*  
 US-PATENT-CLASS-92-94 ..... c 32 N70-41370 \*  
 US-PATENT-CLASS-92-98R ..... c 31 N85-21404 \*  
 US-PATENT-CLASS-93-1 ..... c 15 N70-33180 \*  
 US-PATENT-CLASS-94.9N ..... c 27 N81-15104 \*  
 US-PATENT-CLASS-95-1.1 ..... c 14 N72-18411 \*  
 US-PATENT-CLASS-95-1.1 ..... c 14 N73-26431 \*  
 US-PATENT-CLASS-95-11.5R ..... c 14 N73-19419 \*  
 US-PATENT-CLASS-95-11.5 ..... c 14 N73-32319 \*  
 US-PATENT-CLASS-95-11R ..... c 14 N73-19419 \*  
 US-PATENT-CLASS-95-11 ..... c 14 N71-18465 \*  
 US-PATENT-CLASS-95-11 ..... c 16 N71-33410 \*

## US-PATENT-CLASS-95-11

## REPORT NUMBER INDEX

US-PATENT-CLASS-95-11	c 14	N73-32319 *	US-PATENT-3,090,580	c 31	N70-37924 *	US-PATENT-3,175,789	c 31	N70-36654 *
US-PATENT-CLASS-95-12.5	c 31	N72-25842 *	US-PATENT-3,093,000	c 15	N70-37925 *	US-PATENT-3,176,222	c 14	N70-36618 *
US-PATENT-CLASS-95-12.5	c 14	N73-14427 *	US-PATENT-3,093,346	c 31	N70-37938 *	US-PATENT-3,176,499	c 14	N70-35368 *
US-PATENT-CLASS-95-12	c 14	N73-33361 *	US-PATENT-3,098,630	c 02	N70-37939 *	US-PATENT-3,176,933	c 33	N70-36617 *
US-PATENT-CLASS-95-18	c 14	N72-20380 *	US-PATENT-3,100,294	c 09	N70-38998 *	US-PATENT-3,177,933	c 33	N70-36647 *
US-PATENT-CLASS-95-42	c 14	N73-32322 *	US-PATENT-3,100,990	c 14	N70-34813 *	US-PATENT-3,178,883	c 21	N70-36938 *
US-PATENT-CLASS-95-44	c 14	N71-26474 *	US-PATENT-3,102,948	c 15	N70-34814 *	US-PATENT-3,180,264	c 33	N70-36846 *
US-PATENT-CLASS-95-53EA	c 33	N74-20861 *	US-PATENT-3,104,079	c 31	N70-37986 *	US-PATENT-3,180,587	c 21	N70-36943 *
US-PATENT-CLASS-95-53	c 15	N71-21060 *	US-PATENT-3,104,082	c 02	N70-38011 *	US-PATENT-3,181,821	c 31	N70-36845 *
US-PATENT-CLASS-95-58	c 14	N70-40273 *	US-PATENT-3,105,515	c 15	N70-38603 *	US-PATENT-3,182,496	c 11	N70-36913 *
US-PATENT-CLASS-95-59	c 14	N73-14427 *	US-PATENT-3,106,603	c 09	N70-38201 *	US-PATENT-3,183,506	c 07	N70-36911 *
US-PATENT-CLASS-95-89R	c 35	N74-15831 *	US-PATENT-3,108,171	c 33	N70-34812 *	US-PATENT-3,185,023	c 14	N70-34298 *
US-PATENT-CLASS-96-27R	c 35	N79-10389 *	US-PATENT-3,110,318	c 12	N70-38997 *	US-PATENT-3,187,583	c 11	N70-38675 *
US-PATENT-CLASS-96-36.2	c 06	N72-21094 *	US-PATENT-3,112,672	c 11	N70-38202 *	US-PATENT-3,188,472	c 21	N70-34297 *
US-PATENT-CLASS-96-36.2	c 15	N72-25452 *	US-PATENT-3,115,630	c 31	N70-37981 *	US-PATENT-3,188,844	c 15	N70-34249 *
US-PATENT-CLASS-96-38.3	c 35	N74-26946 *	US-PATENT-3,118,100	c 03	N71-29129 *	US-PATENT-3,189,299	c 21	N70-34295 *
US-PATENT-CLASS-96-49	c 14	N71-17574 *	US-PATENT-3,119,086	c 35	N79-33449 *	US-PATENT-3,189,535	c 15	N70-34967 *
US-PATENT-CLASS-96-60R	c 35	N79-10389 *	US-PATENT-3,119,232	c 28	N70-37980 *	US-PATENT-3,189,726	c 33	N70-34545 *
US-PATENT-CLASS-96-79	c 35	N74-26946 *	US-PATENT-3,120,101	c 28	N70-34860 *	US-PATENT-3,189,784	c 33	N75-27250 *
US-PATENT-CLASS-96-87A	c 27	N78-14164 *	US-PATENT-3,120,361	c 31	N70-38010 *	US-PATENT-3,189,794	c 09	N70-34502 *
US-PATENT-CLASS-96-90PC	c 14	N72-22443 *	US-PATENT-3,120,738	c 28	N70-38249 *	US-PATENT-3,189,864	c 09	N70-34596 *
US-PATENT-CLASS-98-1.5	c 44	N78-32539 *	US-PATENT-3,121,309	c 28	N70-35381 *	US-PATENT-3,190,124	c 35	N79-33450 *
US-PATENT-CLASS-98-1	c 54	N78-17679 *	US-PATENT-3,122,000	c 15	N70-38020 *	US-PATENT-3,191,316	c 31	N70-34966 *
US-PATENT-CLASS-98-39	c 31	N74-27902 *	US-PATENT-3,122,098	c 28	N70-38181 *	US-PATENT-3,191,379	c 27	N70-35534 *
US-PATENT-CLASS-98-80PS	c 05	N72-33096 *	US-PATENT-3,122,885	c 28	N70-38710 *	US-PATENT-3,191,907	c 15	N70-34859 *
			US-PATENT-3,123,248	c 11	N70-38182 *	US-PATENT-3,192,730	c 06	N70-34946 *
US-PATENT-DES-228,688	c 05	N74-10907 *	US-PATENT-3,123,418	c 37	N79-33467 *	US-PATENT-3,193,883	c 27	N70-34783 *
			US-PATENT-3,123,692	c 33	N79-33393 *	US-PATENT-3,194,060	c 14	N70-34794 *
US-PATENT-RE-26,548	c 07	N71-12389 *	US-PATENT-3,127,157	c 15	N70-38225 *	US-PATENT-3,194,525	c 11	N70-35383 *
US-PATENT-RE-28,921	c 52	N76-30793 *	US-PATENT-3,128,389	c 09	N70-38604 *	US-PATENT-3,194,951	c 08	N70-34778 *
			US-PATENT-3,128,845	c 15	N70-38601 *	US-PATENT-3,196,261	c 08	N70-34787 *
US-PATENT-2,837,706	c 15	N71-28952 *	US-PATENT-3,130,940	c 33	N70-33344 *	US-PATENT-3,196,362	c 09	N70-35440 *
US-PATENT-2,898,889	c 02	N71-29128 *	US-PATENT-3,131,040	c 37	N79-21345 *	US-PATENT-3,196,557	c 11	N70-34815 *
US-PATENT-2,903,307	c 15	N71-29136 *	US-PATENT-3,132,342	c 07	N70-38200 *	US-PATENT-3,196,558	c 14	N70-35394 *
US-PATENT-2,926,123	c 33	N71-29151 *	US-PATENT-3,132,476	c 28	N70-34294 *	US-PATENT-3,196,598	c 28	N70-34788 *
US-PATENT-2,934,331	c 15	N70-33382 *	US-PATENT-3,132,479	c 15	N71-28951 *	US-PATENT-3,196,675	c 14	N70-34818 *
US-PATENT-2,940,259	c 28	N70-33241 *	US-PATENT-3,132,903	c 15	N70-38620 *	US-PATENT-3,196,690	c 11	N70-34786 *
US-PATENT-2,944,316	c 15	N71-16076 *	US-PATENT-3,134,389	c 37	N79-33468 *	US-PATENT-3,197,616	c 14	N71-28958 *
US-PATENT-2,945,667	c 15	N70-33376 *	US-PATENT-3,135,089	c 28	N70-38504 *	US-PATENT-3,198,955	c 08	N70-34743 *
US-PATENT-2,956,772	c 33	N71-29152 *	US-PATENT-3,135,090	c 28	N70-38505 *	US-PATENT-3,198,994	c 26	N73-28710 *
US-PATENT-2,960,002	c 14	N70-41946 *	US-PATENT-3,136,123	c 28	N70-38199 *	US-PATENT-3,199,340	c 14	N70-34799 *
US-PATENT-2,971,837	c 17	N70-33283 *	US-PATENT-3,138,837	c 17	N70-38198 *	US-PATENT-3,199,343	c 11	N70-34844 *
US-PATENT-2,974,925	c 28	N70-33372 *	US-PATENT-3,139,725	c 28	N70-38645 *	US-PATENT-3,199,931	c 15	N70-34664 *
US-PATENT-2,984,735	c 11	N70-33329 *	US-PATENT-3,140,728	c 15	N70-36908 *	US-PATENT-3,200,706	c 03	N70-34667 *
US-PATENT-2,991,671	c 15	N70-33330 *	US-PATENT-3,141,340	c 11	N70-38196 *	US-PATENT-3,201,560	c 33	N70-34540 *
US-PATENT-2,991,961	c 02	N70-33332 *	US-PATENT-3,141,769	c 28	N70-38197 *	US-PATENT-3,201,635	c 25	N70-34661 *
US-PATENT-2,996,212	c 31	N71-17680 *	US-PATENT-3,141,932	c 03	N70-38713 *	US-PATENT-3,201,980	c 14	N70-40203 *
US-PATENT-2,997,274	c 28	N71-29154 *	US-PATENT-3,143,321	c 15	N70-34850 *	US-PATENT-3,202,381	c 31	N70-34176 *
US-PATENT-3,001,363	c 28	N70-33331 *	US-PATENT-3,143,651	c 14	N70-40240 *	US-PATENT-3,202,398	c 28	N71-28928 *
US-PATENT-3,001,395	c 14	N70-33386 *	US-PATENT-3,144,219	c 31	N70-38676 *	US-PATENT-3,202,844	c 03	N70-34134 *
US-PATENT-3,001,739	c 03	N70-33343 *	US-PATENT-3,144,999	c 02	N70-34856 *	US-PATENT-3,202,915	c 14	N70-38602 *
US-PATENT-3,004,189	c 37	N75-29426 *	US-PATENT-3,145,874	c 11	N71-15960 *	US-PATENT-3,202,998	c 31	N70-34135 *
US-PATENT-3,004,735	c 14	N70-33322 *	US-PATENT-3,147,422	c 09	N70-38712 *	US-PATENT-3,204,447	c 14	N70-34156 *
US-PATENT-3,005,081	c 09	N70-33312 *	US-PATENT-3,149,897	c 09	N70-36494 *	US-PATENT-3,204,889	c 03	N70-34157 *
US-PATENT-3,005,339	c 11	N70-33287 *	US-PATENT-3,150,329	c 09	N70-38995 *	US-PATENT-3,205,361	c 14	N70-34158 *
US-PATENT-3,008,229	c 15	N70-33311 *	US-PATENT-3,150,387	c 03	N70-36778 *	US-PATENT-3,205,362	c 21	N70-35089 *
US-PATENT-3,010,372	c 15	N70-33180 *	US-PATENT-3,152,344	c 05	N70-36493 *	US-PATENT-3,205,381	c 03	N70-35408 *
US-PATENT-3,011,760	c 15	N70-33226 *	US-PATENT-3,155,992	c 05	N70-34857 *	US-PATENT-3,205,141	c 21	N70-35395 *
US-PATENT-3,012,400	c 28	N70-33374 *	US-PATENT-3,156,090	c 28	N70-37245 *	US-PATENT-3,206,897	c 18	N75-27040 *
US-PATENT-3,012,407	c 15	N70-33323 *	US-PATENT-3,157,529	c 18	N70-36400 *	US-PATENT-3,208,215	c 28	N70-34162 *
US-PATENT-3,016,693	c 28	N70-33356 *	US-PATENT-3,158,172	c 15	N70-34817 *	US-PATENT-3,208,272	c 14	N70-34161 *
US-PATENT-3,016,863	c 12	N70-33305 *	US-PATENT-3,158,336	c 31	N70-36410 *	US-PATENT-3,208,694	c 02	N70-34160 *
US-PATENT-3,022,672	c 14	N70-34816 *	US-PATENT-3,158,764	c 03	N70-36803 *	US-PATENT-3,208,707	c 31	N70-34159 *
US-PATENT-3,024,659	c 14	N70-34820 *	US-PATENT-3,159,967	c 28	N70-36802 *	US-PATENT-3,209,360	c 09	N70-35219 *
US-PATENT-3,028,122	c 02	N70-33286 *	US-PATENT-3,160,825	c 14	N70-35220 *	US-PATENT-3,209,361	c 09	N70-35425 *
US-PATENT-3,028,126	c 21	N70-33279 *	US-PATENT-3,160,950	c 15	N70-36409 *	US-PATENT-3,210,927	c 28	N70-34175 *
US-PATENT-3,028,128	c 31	N70-33242 *	US-PATENT-3,162,012	c 15	N70-36411 *	US-PATENT-3,211,169	c 15	N70-35087 *
US-PATENT-3,035,333	c 28	N70-41818 *	US-PATENT-3,163,935	c 14	N70-36907 *	US-PATENT-3,211,414	c 15	N70-35407 *
US-PATENT-3,038,077	c 21	N70-33181 *	US-PATENT-3,164,222	c 15	N70-34861 *	US-PATENT-3,212,096	c 09	N70-35382 *
US-PATENT-3,038,175	c 05	N70-33285 *	US-PATENT-3,164,369	c 15	N70-36412 *	US-PATENT-3,212,259	c 28	N71-29153 *
US-PATENT-3,041,587	c 14	N70-33179 *	US-PATENT-3,165,356	c 05	N70-35152 *	US-PATENT-3,212,325	c 14	N70-34705 *
US-PATENT-3,041,924	c 14	N70-33254 *	US-PATENT-3,166,834	c 15	N70-36901 *	US-PATENT-3,212,564	c 33	N71-29052 *
US-PATENT-3,045,424	c 28	N70-40367 *	US-PATENT-3,167,426	c 17	N70-36616 *	US-PATENT-3,215,313	c 31	N79-21225 *
US-PATENT-3,049,876	c 28	N70-33284 *	US-PATENT-3,168,827	c 14	N70-36807 *	US-PATENT-3,215,572	c 12	N70-40124 *
US-PATENT-3,053,484	c 02	N70-33255 *	US-PATENT-3,169,001	c 02	N70-36825 *	US-PATENT-3,216,007	c 08	N70-40125 *
US-PATENT-3,057,597	c 15	N70-33264 *	US-PATENT-3,169,613	c 15	N70-36947 *	US-PATENT-3,217,624	c 14	N70-40273 *
US-PATENT-3,059,220	c 09	N70-33182 *	US-PATENT-3,169,725	c 31	N70-34296 *	US-PATENT-3,218,479	c 09	N70-40272 *
US-PATENT-3,063,291	c 11	N70-33278 *	US-PATENT-3,170,286	c 15	N70-36535 *	US-PATENT-3,218,547	c 09	N70-40123 *
US-PATENT-3,064,928	c 02	N70-33266 *	US-PATENT-3,170,290	c 28	N70-36910 *	US-PATENT-3,218,850	c 14	N70-40400 *
US-PATENT-3,067,573	c 28	N70-39899 *	US-PATENT-3,170,295	c 27	N71-28929 *	US-PATENT-3,219,250	c 15	N70-40204 *
US-PATENT-3,068,658	c 15	N70-34247 *	US-PATENT-3,170,324	c 14	N70-36824 *	US-PATENT-3,219,365	c 15	N71-28937 *
US-PATENT-3,069,123	c 14	N70-39898 *	US-PATENT-3,170,471	c 32	N70-36536 *	US-PATENT-3,219,997	c 08	N73-28045 *
US-PATENT-3,070,330	c 21	N70-34539 *	US-PATENT-3,170,486	c 15	N70-36492 *	US-PATENT-3,220,004	c 30	N70-40309 *
US-PATENT-3,070,349	c 28	N70-39895 *	US-PATENT-3,170,605	c 15	N70-38996 *	US-PATENT-3,221,547	c 14	N70-40201 *
US-PATENT-3,070,407	c 15	N70-39896 *	US-PATENT-3,170,657	c 02	N70-34858 *	US-PATENT-3,221,549	c 14	N70-40157 *
US-PATENT-3,072,574	c 18	N70-39897 *	US-PATENT-3,170,660	c 02	N70-36804 *	US-PATENT-3,223,374	c 15	N70-40156 *
US-PATENT-3,076,065	c 09	N70-39915 *	US-PATENT-3,170,773	c 17	N70-33288 *	US-PATENT-3,224,001	c 07	N70-40063 *
US-PATENT-3,077,599	c 07	N70-40202 *	US-PATENT-3,171,060	c 25	N70-33267 *	US-PATENT-3,224,173	c 15	N70-40062 *
US-PATENT-3,079,113	c 02	N70-38009 *	US-PATENT-3,171,081	c 14	N70-35666 *	US-PATENT-3,224,263	c 15	N70-40180 *
US-PATENT-3,080,711	c 28	N70-38711 *	US-PATENT-3,172,097	c 08	N70-35423 *	US-PATENT-3,224,336	c 30	N70-40353 *
US-PATENT-3,083,611	c 21	N70-35427 *	US-PATENT-3,173,246	c 28	N70-33265 *	US-PATENT-3,224,337	c 09	N79-21084 *
US-PATENT-3,084,421	c 17	N70-38490 *	US-PATENT-3,173,251	c 28	N70-33375 *	US-PATENT-3,228,492	c 15	N70-40354 *
US-PATENT-3,085,165	c 09	N70-34819 *	US-PATENT-3,173,801	c 32	N79-19186 *	US-PATENT-3,228,558	c 14	N70-40233 *
US-PATENT-3,087,692	c 02	N70-34178 *	US-PATENT-3,174,278	c 25	N70-36946 *	US-PATENT-3,229,099	c 14	N70-40238 *
US-PATENT-3,088,441	c 15	N70-35409 *	US-PATENT-3,174,279	c 28	N70-36806 *	US-PATENT-3,229,102	c 14	N70-40239 *
US-PATENT-3,090,212	c 33	N70-37979 *	US-PATENT-3,174,827	c 26	N70-36805 *	US-PATENT-3,229,139	c 28	N70-39925 *

## REPORT NUMBER INDEX

## US-PATENT-3,340,713

US-PATENT-3,229,155	c 25	N70-41628 *	US-PATENT-3,277,366	c 10	N71-16057 *	US-PATENT-3,310,138	c 12	N71-16894 *
US-PATENT-3,229,463	c 28	N70-39931 *	US-PATENT-3,277,373	c 07	N71-16088 *	US-PATENT-3,310,256	c 31	N71-17679 *
US-PATENT-3,229,568	c 14	N70-40003 *	US-PATENT-3,277,375	c 07	N71-11284 *	US-PATENT-3,310,258	c 31	N71-17691 *
US-PATENT-3,229,636	c 03	N70-39930 *	US-PATENT-3,277,458	c 10	N71-16058 *	US-PATENT-3,310,261	c 02	N71-11038 *
US-PATENT-3,229,682	c 09	N70-40234 *	US-PATENT-3,277,486	c 31	N71-10747 *	US-PATENT-3,310,262	c 02	N71-12243 *
US-PATENT-3,229,689	c 05	N70-39922 *	US-PATENT-3,279,193	c 33	N71-28852 *	US-PATENT-3,310,443	c 24	N71-10560 *
US-PATENT-3,229,884	c 15	N70-39924 *	US-PATENT-3,281,558	c 33	N75-27249 *	US-PATENT-3,310,699	c 14	N73-32324 *
US-PATENT-3,229,905	c 04	N78-17031 *	US-PATENT-3,281,963	c 11	N71-10746 *	US-PATENT-3,310,765	c 33	N79-21264 *
US-PATENT-3,229,930	c 30	N70-40016 *	US-PATENT-3,281,964	c 11	N71-10776 *	US-PATENT-3,310,978	c 14	N71-10616 *
US-PATENT-3,230,053	c 26	N70-40015 *	US-PATENT-3,281,965	c 11	N71-10777 *	US-PATENT-3,310,980	c 11	N71-10604 *
US-PATENT-3,233,862	c 37	N79-33469 *	US-PATENT-3,282,035	c 11	N71-10777 *	US-PATENT-3,311,315	c 07	N71-10609 *
US-PATENT-3,236,066	c 15	N71-28959 *	US-PATENT-3,282,091	c 14	N71-10781 *	US-PATENT-3,311,502	c 03	N71-10608 *
US-PATENT-3,237,253	c 15	N71-15966 *	US-PATENT-3,282,532	c 31	N71-17729 *	US-PATENT-3,311,510	c 26	N71-10607 *
US-PATENT-3,238,345	c 11	N71-15925 *	US-PATENT-3,282,541	c 31	N71-24750 *	US-PATENT-3,311,571	c 27	N79-21190 *
US-PATENT-3,238,413	c 25	N71-29184 *	US-PATENT-3,282,739	c 03	N71-11053 *	US-PATENT-3,311,748	c 21	N71-10618 *
US-PATENT-3,238,715	c 28	N71-14043 *	US-PATENT-3,282,740	c 03	N71-11051 *	US-PATENT-3,311,772	c 09	N71-10678 *
US-PATENT-3,238,730	c 03	N71-12260 *	US-PATENT-3,283,088	c 10	N71-15909 *	US-PATENT-3,311,832	c 07	N71-10775 *
US-PATENT-3,238,774	c 14	N71-14996 *	US-PATENT-3,283,175	c 10	N71-15910 *	US-PATENT-3,312,101	c 14	N71-10774 *
US-PATENT-3,238,777	c 14	N71-15598 *	US-PATENT-3,283,241	c 14	N71-16014 *	US-PATENT-3,313,204	c 28	N73-24783 *
US-PATENT-3,239,660	c 23	N71-30292 *	US-PATENT-3,286,274	c 05	N71-12335 *	US-PATENT-3,316,716	c 28	N71-10780 *
US-PATENT-3,242,716	c 14	N71-15992 *	US-PATENT-3,286,531	c 30	N71-17788 *	US-PATENT-3,316,752	c 14	N71-10779 *
US-PATENT-3,243,154	c 23	N71-15673 *	US-PATENT-3,286,629	c 31	N71-17730 *	US-PATENT-3,316,991	c 14	N71-10773 *
US-PATENT-3,243,791	c 07	N71-11298 *	US-PATENT-3,286,630	c 31	N71-10582 *	US-PATENT-3,317,180	c 15	N71-10778 *
US-PATENT-3,244,943	c 15	N73-28516 *	US-PATENT-3,286,882	c 27	N71-29155 *	US-PATENT-3,317,341	c 18	N71-10772 *
US-PATENT-3,249,012	c 03	N71-12258 *	US-PATENT-3,286,953	c 21	N70-41856 *	US-PATENT-3,317,352	c 03	N71-10728 *
US-PATENT-3,249,013	c 03	N71-12259 *	US-PATENT-3,286,957	c 02	N70-41863 *	US-PATENT-3,317,641	c 15	N71-10672 *
US-PATENT-3,251,053	c 08	N71-12501 *	US-PATENT-3,287,031	c 15	N70-41808 *	US-PATENT-3,317,731	c 21	N71-10771 *
US-PATENT-3,252,100	c 10	N71-28960 *	US-PATENT-3,287,174	c 03	N70-41864 *	US-PATENT-3,317,751	c 09	N71-10673 *
US-PATENT-3,254,395	c 28	N71-15658 *	US-PATENT-3,287,496	c 14	N70-41807 *	US-PATENT-3,317,797	c 10	N71-28783 *
US-PATENT-3,254,487	c 28	N71-15659 *	US-PATENT-3,287,582	c 28	N70-41576 *	US-PATENT-3,317,832	c 09	N71-10659 *
US-PATENT-3,257,780	c 15	N71-15968 *	US-PATENT-3,287,640	c 09	N70-41555 *	US-PATENT-3,318,093	c 15	N71-10658 *
US-PATENT-3,258,582	c 02	N71-13421 *	US-PATENT-3,287,660	c 16	N70-41578 *	US-PATENT-3,318,096	c 28	N71-28849 *
US-PATENT-3,258,687	c 14	N71-15962 *	US-PATENT-3,287,725	c 07	N70-41680 *	US-PATENT-3,318,343	c 15	N71-10809 *
US-PATENT-3,258,831	c 15	N71-15986 *	US-PATENT-3,289,205	c 07	N70-41678 *	US-PATENT-3,318,622	c 15	N71-10799 *
US-PATENT-3,258,912	c 27	N71-15634 *	US-PATENT-3,295,360	c 14	N70-41681 *	US-PATENT-3,319,175	c 09	N71-10798 *
US-PATENT-3,258,918	c 27	N71-15635 *	US-PATENT-3,295,366	c 11	N70-41677 *	US-PATENT-3,319,799	c 15	N71-10782 *
US-PATENT-3,260,055	c 23	N71-15467 *	US-PATENT-3,295,377	c 14	N70-41682 *	US-PATENT-3,320,669	c 15	N70-42017 *
US-PATENT-3,260,204	c 31	N71-15692 *	US-PATENT-3,295,386	c 05	N70-41581 *	US-PATENT-3,321,034	c 15	N70-42034 *
US-PATENT-3,260,326	c 11	N71-28779 *	US-PATENT-3,295,512	c 03	N70-41580 *	US-PATENT-3,321,154	c 31	N70-42075 *
US-PATENT-3,261,210	c 14	N71-15969 *	US-PATENT-3,295,545	c 15	N70-41646 *	US-PATENT-3,321,157	c 02	N70-42016 *
US-PATENT-3,262,025	c 15	N73-32361 *	US-PATENT-3,295,556	c 32	N70-41579 *	US-PATENT-3,321,159	c 31	N70-42015 *
US-PATENT-3,262,186	c 15	N71-16052 *	US-PATENT-3,295,594	c 54	N82-29002 *	US-PATENT-3,321,570	c 15	N70-41960 *
US-PATENT-3,262,262	c 28	N71-15661 *	US-PATENT-3,295,684	c 28	N70-41447 *	US-PATENT-3,321,628	c 10	N70-41991 *
US-PATENT-3,262,351	c 15	N71-15922 *	US-PATENT-3,295,699	c 32	N70-41367 *	US-PATENT-3,321,645	c 10	N70-42032 *
US-PATENT-3,262,365	c 31	N71-15675 *	US-PATENT-3,295,782	c 14	N70-41647 *	US-PATENT-3,321,922	c 28	N70-41992 *
US-PATENT-3,262,395	c 15	N71-30028 *	US-PATENT-3,295,790	c 31	N70-41588 *	US-PATENT-3,323,356	c 15	N70-41993 *
US-PATENT-3,262,518	c 05	N71-11199 *	US-PATENT-3,295,798	c 02	N70-41589 *	US-PATENT-3,323,362	c 14	N70-41994 *
US-PATENT-3,262,655	c 31	N71-15663 *	US-PATENT-3,295,808	c 15	N70-41310 *	US-PATENT-3,323,370	c 05	N70-42000 *
US-PATENT-3,262,694	c 44	N79-19447 *	US-PATENT-3,296,060	c 18	N70-41583 *	US-PATENT-3,323,386	c 03	N70-42073 *
US-PATENT-3,263,016	c 33	N71-15625 *	US-PATENT-3,296,526	c 14	N70-41332 *	US-PATENT-3,323,408	c 14	N70-41955 *
US-PATENT-3,263,171	c 09	N71-13530 *	US-PATENT-3,296,531	c 07	N70-41331 *	US-PATENT-3,323,484	c 14	N70-42074 *
US-PATENT-3,263,610	c 15	N71-13789 *	US-PATENT-3,298,175	c 33	N71-29053 *	US-PATENT-3,323,967	c 15	N70-42033 *
US-PATENT-3,264,135	c 15	N71-16075 *	US-PATENT-3,298,182	c 28	N70-41311 *	US-PATENT-3,324,370	c 09	N71-10677 *
US-PATENT-3,270,441	c 11	N71-16028 *	US-PATENT-3,298,221	c 14	N70-41330 *	US-PATENT-3,324,388	c 14	N71-10797 *
US-PATENT-3,270,499	c 28	N71-15660 *	US-PATENT-3,298,285	c 32	N70-41370 *	US-PATENT-3,324,423	c 07	N71-10676 *
US-PATENT-3,270,501	c 31	N71-15647 *	US-PATENT-3,298,362	c 05	N70-41329 *	US-PATENT-3,324,659	c 28	N71-10574 *
US-PATENT-3,270,503	c 33	N71-15623 *	US-PATENT-3,298,582	c 14	N71-28935 *	US-PATENT-3,325,229	c 15	N71-10617 *
US-PATENT-3,270,504	c 31	N71-15637 *	US-PATENT-3,299,364	c 16	N71-15550 *	US-PATENT-3,325,723	c 10	N71-10578 *
US-PATENT-3,270,505	c 21	N71-15582 *	US-PATENT-3,299,431	c 07	N71-28979 *	US-PATENT-3,325,749	c 09	N71-28810 *
US-PATENT-3,270,512	c 15	N71-15906 *	US-PATENT-3,299,913	c 15	N71-15918 *	US-PATENT-3,326,043	c 14	N71-10500 *
US-PATENT-3,270,565	c 14	N71-30265 *	US-PATENT-3,300,162	c 31	N70-41373 *	US-PATENT-3,326,407	c 15	N71-10577 *
US-PATENT-3,270,756	c 15	N71-15967 *	US-PATENT-3,300,731	c 07	N70-41372 *	US-PATENT-3,327,298	c 08	N71-21042 *
US-PATENT-3,270,802	c 33	N71-24876 *	US-PATENT-3,300,847	c 15	N70-41371 *	US-PATENT-3,327,991	c 15	N71-21234 *
US-PATENT-3,270,835	c 28	N70-41582 *	US-PATENT-3,300,949	c 05	N70-41297 *	US-PATENT-3,328,624	c 28	N71-28850 *
US-PATENT-3,270,908	c 31	N71-15664 *	US-PATENT-3,300,981	c 28	N70-41275 *	US-PATENT-3,329,375	c 21	N71-21788 *
US-PATENT-3,270,985	c 21	N71-15583 *	US-PATENT-3,301,046	c 14	N70-41366 *	US-PATENT-3,329,918	c 09	N71-21583 *
US-PATENT-3,270,986	c 05	N71-12336 *	US-PATENT-3,301,315	c 09	N70-41717 *	US-PATENT-3,330,052	c 11	N71-21474 *
US-PATENT-3,270,988	c 01	N71-13410 *	US-PATENT-3,301,507	c 31	N70-41631 *	US-PATENT-3,330,082	c 15	N71-21531 *
US-PATENT-3,270,989	c 02	N71-11041 *	US-PATENT-3,301,511	c 02	N70-41630 *	US-PATENT-3,330,510	c 31	N71-28851 *
US-PATENT-3,270,990	c 28	N71-15563 *	US-PATENT-3,301,578	c 15	N70-41629 *	US-PATENT-3,330,549	c 15	N71-21530 *
US-PATENT-3,271,140	c 17	N71-15644 *	US-PATENT-3,302,023	c 14	N70-41676 *	US-PATENT-3,331,071	c 07	N71-28900 *
US-PATENT-3,271,181	c 15	N71-16077 *	US-PATENT-3,302,040	c 09	N70-41675 *	US-PATENT-3,331,246	c 11	N71-21475 *
US-PATENT-3,271,532	c 09	N71-16089 *	US-PATENT-3,302,569	c 15	N70-41679 *	US-PATENT-3,331,255	c 15	N71-21529 *
US-PATENT-3,271,558	c 15	N71-15871 *	US-PATENT-3,302,633	c 05	N70-41819 *	US-PATENT-3,331,404	c 12	N71-21089 *
US-PATENT-3,271,594	c 10	N71-28739 *	US-PATENT-3,302,662	c 15	N70-41811 *	US-PATENT-3,331,951	c 21	N71-21688 *
US-PATENT-3,271,620	c 09	N71-12540 *	US-PATENT-3,302,960	c 15	N70-41829 *	US-PATENT-3,333,152	c 25	N71-21693 *
US-PATENT-3,271,637	c 26	N71-18064 *	US-PATENT-3,303,304	c 14	N70-41812 *	US-PATENT-3,333,788	c 31	N71-21881 *
US-PATENT-3,271,649	c 10	N71-16030 *	US-PATENT-3,304,028	c 31	N70-41855 *	US-PATENT-3,334,225	c 14	N73-32325 *
US-PATENT-3,273,094	c 23	N71-29049 *	US-PATENT-3,304,718	c 28	N70-41922 *	US-PATENT-3,336,725	c 15	N71-21528 *
US-PATENT-3,273,355	c 33	N71-17897 *	US-PATENT-3,304,724	c 31	N70-41948 *	US-PATENT-3,336,748	c 25	N71-21694 *
US-PATENT-3,273,381	c 32	N71-17645 *	US-PATENT-3,304,729	c 31	N70-41871 *	US-PATENT-3,336,754	c 28	N71-22983 *
US-PATENT-3,273,388	c 09	N71-16086 *	US-PATENT-3,304,768	c 32	N70-42003 *	US-PATENT-3,337,004	c 14	N71-23092 *
US-PATENT-3,273,392	c 23	N71-17802 *	US-PATENT-3,304,773	c 14	N70-41957 *	US-PATENT-3,337,279	c 05	N71-23080 *
US-PATENT-3,273,399	c 12	N71-24692 *	US-PATENT-3,304,799	c 03	N70-41954 *	US-PATENT-3,337,315	c 18	N71-23088 *
US-PATENT-3,274,304	c 26	N71-17818 *	US-PATENT-3,304,865	c 28	N70-41967 *	US-PATENT-3,337,373	c 18	N71-22894 *
US-PATENT-3,275,794	c 37	N75-27376 *	US-PATENT-3,305,415	c 27	N70-41897 *	US-PATENT-3,337,790	c 12	N71-20896 *
US-PATENT-3,276,251	c 11	N71-15926 *	US-PATENT-3,305,636	c 08	N70-41961 *	US-PATENT-3,337,812	c 09	N71-23097 *
US-PATENT-3,276,376	c 31	N71-17629 *	US-PATENT-3,305,801	c 10	N70-41964 *	US-PATENT-3,339,404	c 14	N71-22765 *
US-PATENT-3,276,602	c 32	N71-17609 *	US-PATENT-3,305,810	c 09	N70-41929 *	US-PATENT-3,339,863	c 14	N71-23040 *
US-PATENT-3,276,679	c 15	N71-16079 *	US-PATENT-3,305,861	c 21	N70-41930 *	US-PATENT-3,340,099	c 03	N71-23006 *
US-PATENT-3,276,722	c 02	N71-16087 *	US-PATENT-3,305,870	c 07	N71-15907 *	US-PATENT-3,340,395	c 14	N71-23041 *
US-PATENT-3,276,726	c 31	N71-16081 *	US-PATENT-3,306,134	c 37	N78-17385 *	US-PATENT-3,340,397	c 11	N71-23042 *
US-PATENT-3,276,726	c 02	N71-16025 *	US-PATENT-3,308,848	c 12	N71-16031 *	US-PATENT-3,340,430	c 09	N71-22796 *
US-PATENT-3,276,865	c 17	N71-16026 *	US-PATENT-3,309,012	c 33	N71-17610 *	US-PATENT-3,340,532	c 10	N71-21473 *
US-PATENT-3,276,866	c 17	N71-16025 *	US-PATENT-3,309,961	c 15	N71-16078 *	US-PATENT-3,340,599	c 09	N71-23027 *
US-PATENT-3,276,946	c 23	N71-15978 *	US-PATENT-3,310,054	c 08	N71-15908 *	US-PATENT-3,340,713	c 15	N71-22723 *
US-PATENT-3,277,314	c 10	N71-16042 *						

## US-PATENT-3,340,732

## REPORT NUMBER INDEX

US-PATENT-3,340,732	c 02	N71-23007 *	US-PATENT-3,369,222	c 08	N71-22707 *	US-PATENT-3,397,318	c 14	N71-22991 *
US-PATENT-3,341,151	c 31	N71-23009 *	US-PATENT-3,369,223	c 08	N71-22710 *	US-PATENT-3,397,512	c 15	N71-23023 *
US-PATENT-3,341,169	c 15	N71-23024 *	US-PATENT-3,369,564	c 15	N71-23051 *	US-PATENT-3,397,537	c 20	N79-21125 *
US-PATENT-3,341,708	c 16	N71-22895 *	US-PATENT-3,370,039	c 06	N71-22880 *	US-PATENT-3,397,932	c 15	N71-22982 *
US-PATENT-3,341,778	c 07	N71-23098 *	US-PATENT-3,372,588	c 33	N71-29051 *	US-PATENT-3,399,299	c 10	N71-23662 *
US-PATENT-3,341,977	c 15	N71-22705 *	US-PATENT-3,373,016	c 26	N75-27127 *	US-PATENT-3,399,574	c 32	N71-24285 *
US-PATENT-3,342,055	c 15	N71-22797 *	US-PATENT-3,373,069	c 15	N71-23052 *	US-PATENT-3,402,265	c 09	N73-28084 *
US-PATENT-3,342,066	c 11	N71-23030 *	US-PATENT-3,373,404	c 08	N71-22749 *	US-PATENT-3,404,289	c 09	N71-23545 *
US-PATENT-3,342,653	c 15	N71-22713 *	US-PATENT-3,373,430	c 09	N71-22888 *	US-PATENT-3,404,348	c 32	N74-22096 *
US-PATENT-3,343,180	c 05	N71-23159 *	US-PATENT-3,373,431	c 07	N71-22750 *	US-PATENT-3,405,406	c 05	N71-23161 *
US-PATENT-3,343,189	c 05	N71-22748 *	US-PATENT-3,373,640	c 15	N71-22722 *	US-PATENT-3,405,887	c 31	N71-24315 *
US-PATENT-3,343,340	c 09	N71-21449 *	US-PATENT-3,373,914	c 15	N71-23050 *	US-PATENT-3,406,336	c 10	N71-24863 *
US-PATENT-3,344,425	c 10	N71-21483 *	US-PATENT-3,374,339	c 08	N71-22897 *	US-PATENT-3,406,742	c 33	N71-24276 *
US-PATENT-3,345,820	c 28	N71-21822 *	US-PATENT-3,374,366	c 09	N71-23015 *	US-PATENT-3,407,304	c 14	N71-23240 *
US-PATENT-3,345,822	c 27	N71-21819 *	US-PATENT-3,374,830	c 33	N71-22890 *	US-PATENT-3,408,816	c 28	N71-24736 *
US-PATENT-3,345,840	c 15	N71-21536 *	US-PATENT-3,375,451	c 10	N71-22986 *	US-PATENT-3,408,870	c 14	N71-23227 *
US-PATENT-3,345,866	c 11	N71-21481 *	US-PATENT-3,375,479	c 15	N71-23049 *	US-PATENT-3,409,247	c 33	N71-28903 *
US-PATENT-3,346,419	c 03	N71-20895 *	US-PATENT-3,375,712	c 35	N75-29382 *	US-PATENT-3,409,252	c 15	N71-23255 *
US-PATENT-3,346,442	c 18	N71-21651 *	US-PATENT-3,375,885	c 15	N73-32362 *	US-PATENT-3,409,554	c 26	N71-23292 *
US-PATENT-3,346,515	c 06	N71-20905 *	US-PATENT-3,376,730	c 14	N71-22995 *	US-PATENT-3,409,730	c 33	N71-24145 *
US-PATENT-3,346,724	c 15	N71-21179 *	US-PATENT-3,377,208	c 14	N71-23039 *	US-PATENT-3,411,356	c 14	N71-23226 *
US-PATENT-3,346,806	c 14	N71-21090 *	US-PATENT-3,377,845	c 14	N71-22992 *	US-PATENT-3,411,900	c 26	N75-27126 *
US-PATENT-3,346,929	c 15	N71-21076 *	US-PATENT-3,378,315	c 15	N71-22997 *	US-PATENT-3,412,559	c 28	N71-23293 *
US-PATENT-3,347,046	c 33	N71-21507 *	US-PATENT-3,378,657	c 33	N79-33392 *	US-PATENT-3,412,598	c 14	N71-23225 *
US-PATENT-3,347,309	c 33	N71-29046 *	US-PATENT-3,378,851	c 05	N71-23096 *	US-PATENT-3,412,729	c 04	N71-23185 *
US-PATENT-3,347,465	c 18	N71-21068 *	US-PATENT-3,378,892	c 15	N71-22994 *	US-PATENT-3,412,961	c 32	N71-23971 *
US-PATENT-3,347,466	c 28	N71-21493 *	US-PATENT-3,379,052	c 14	N73-32321 *	US-PATENT-3,413,115	c 17	N71-23365 *
US-PATENT-3,347,531	c 15	N71-21177 *	US-PATENT-3,379,064	c 14	N71-23093 *	US-PATENT-3,413,393	c 17	N71-29137 *
US-PATENT-3,347,665	c 17	N71-20743 *	US-PATENT-3,379,330	c 23	N71-22881 *	US-PATENT-3,413,510	c 09	N71-23190 *
US-PATENT-3,348,048	c 14	N71-21088 *	US-PATENT-3,379,885	c 09	N71-22985 *	US-PATENT-3,413,536	c 03	N71-24605 *
US-PATENT-3,348,053	c 10	N71-20782 *	US-PATENT-3,379,974	c 14	N71-22990 *	US-PATENT-3,414,012	c 09	N71-23191 *
US-PATENT-3,348,152	c 10	N71-20841 *	US-PATENT-3,380,042	c 07	N71-23001 *	US-PATENT-3,414,358	c 14	N71-23175 *
US-PATENT-3,348,218	c 10	N71-29135 *	US-PATENT-3,380,049	c 10	N71-23099 *	US-PATENT-3,415,032	c 15	N71-23256 *
US-PATENT-3,349,814	c 33	N71-20834 *	US-PATENT-3,381,339	c 06	N71-22975 *	US-PATENT-3,415,069	c 15	N71-24044 *
US-PATENT-3,350,033	c 14	N71-21082 *	US-PATENT-3,381,517	c 09	N71-22988 *	US-PATENT-3,415,116	c 14	N71-23790 *
US-PATENT-3,350,034	c 31	N71-21064 *	US-PATENT-3,381,527	c 15	N71-22878 *	US-PATENT-3,415,126	c 21	N71-23289 *
US-PATENT-3,350,643	c 07	N71-20791 *	US-PATENT-3,381,569	c 21	N71-22880 *	US-PATENT-3,415,156	c 15	N71-24043 *
US-PATENT-3,350,671	c 09	N71-20842 *	US-PATENT-3,381,778	c 15	N71-22877 *	US-PATENT-3,415,643	c 17	N71-23248 *
US-PATENT-3,350,926	c 14	N71-21091 *	US-PATENT-3,382,082	c 18	N71-22998 *	US-PATENT-3,416,106	c 09	N71-24808 *
US-PATENT-3,352,157	c 14	N71-21072 *	US-PATENT-3,382,105	c 03	N71-29044 *	US-PATENT-3,416,274	c 31	N71-24035 *
US-PATENT-3,352,192	c 15	N71-21489 *	US-PATENT-3,382,107	c 03	N71-22974 *	US-PATENT-3,416,939	c 18	N71-24183 *
US-PATENT-3,352,774	c 37	N80-14395 *	US-PATENT-3,382,714	c 14	N71-22989 *	US-PATENT-3,416,975	c 17	N71-23828 *
US-PATENT-3,353,359	c 28	N71-20942 *	US-PATENT-3,383,461	c 07	N71-23026 *	US-PATENT-3,416,988	c 15	N71-24164 *
US-PATENT-3,354,098	c 06	N71-20717 *	US-PATENT-3,383,524	c 10	N71-23029 *	US-PATENT-3,417,247	c 14	N71-23797 *
US-PATENT-3,354,320	c 23	N71-21821 *	US-PATENT-3,383,903	c 14	N71-23036 *	US-PATENT-3,417,266	c 09	N71-23270 *
US-PATENT-3,354,462	c 14	N71-21006 *	US-PATENT-3,383,922	c 14	N71-22752 *	US-PATENT-3,417,298	c 10	N71-23271 *
US-PATENT-3,355,861	c 18	N71-20742 *	US-PATENT-3,384,016	c 31	N71-23008 *	US-PATENT-3,417,316	c 14	N71-23174 *
US-PATENT-3,355,948	c 14	N71-21007 *	US-PATENT-3,384,075	c 05	N71-22896 *	US-PATENT-3,417,321	c 09	N71-23316 *
US-PATENT-3,356,320	c 05	N71-20718 *	US-PATENT-3,384,111	c 15	N71-22706 *	US-PATENT-3,417,332	c 07	N71-23405 *
US-PATENT-3,356,549	c 15	N71-21404 *	US-PATENT-3,384,324	c 33	N71-22792 *	US-PATENT-3,417,399	c 30	N71-23723 *
US-PATENT-3,356,885	c 25	N71-20747 *	US-PATENT-3,384,820	c 09	N71-23021 *	US-PATENT-3,417,400	c 07	N71-28809 *
US-PATENT-3,356,917	c 33	N79-21265 *	US-PATENT-3,384,895	c 07	N71-22984 *	US-PATENT-3,419,329	c 14	N71-23268 *
US-PATENT-3,357,024	c 12	N71-20815 *	US-PATENT-3,385,036	c 15	N71-22721 *	US-PATENT-3,419,363	c 18	N71-23710 *
US-PATENT-3,357,093	c 15	N71-21078 *	US-PATENT-3,385,337	c 15	N71-22799 *	US-PATENT-3,419,384	c 17	N73-28573 *
US-PATENT-3,357,237	c 33	N71-21586 *	US-PATENT-3,386,685	c 31	N71-22968 *	US-PATENT-3,419,433	c 03	N71-23187 *
US-PATENT-3,357,862	c 03	N71-20904 *	US-PATENT-3,386,686	c 31	N71-22969 *	US-PATENT-3,419,531	c 27	N79-21191 *
US-PATENT-3,358,264	c 09	N71-20851 *	US-PATENT-3,387,149	c 14	N71-22993 *	US-PATENT-3,419,537	c 06	N71-23500 *
US-PATENT-3,359,046	c 15	N71-20739 *	US-PATENT-3,387,218	c 37	N78-17386 *	US-PATENT-3,419,827	c 09	N71-23548 *
US-PATENT-3,359,132	c 09	N71-20705 *	US-PATENT-3,388,258	c 14	N71-22996 *	US-PATENT-3,419,964	c 14	N69-21363 #
US-PATENT-3,359,409	c 07	N71-21476 *	US-PATENT-3,388,387	c 10	N71-23033 *	US-PATENT-3,419,992	c 14	N71-23401 *
US-PATENT-3,359,435	c 15	N71-21311 *	US-PATENT-3,388,590	c 14	N71-23087 *	US-PATENT-3,420,069	c 15	N69-21465 #
US-PATENT-3,359,555	c 09	N71-20864 *	US-PATENT-3,389,017	c 15	N71-23022 *	US-PATENT-3,420,223	c 05	N69-21925 #
US-PATENT-3,359,568	c 54	N78-17680 *	US-PATENT-3,389,260	c 14	N71-23269 *	US-PATENT-3,420,225	c 05	N69-21473 #
US-PATENT-3,359,819	c 15	N71-21744 *	US-PATENT-3,389,346	c 10	N71-28859 *	US-PATENT-3,420,253	c 12	N69-21466 #
US-PATENT-3,359,855	c 23	N71-21882 *	US-PATENT-3,389,877	c 15	N71-28936 *	US-PATENT-3,420,338	c 15	N71-26243 #
US-PATENT-3,360,798	c 09	N71-20658 *	US-PATENT-3,390,017	c 03	N71-23336 *	US-PATENT-3,420,471	c 05	N69-21380 #
US-PATENT-3,360,864	c 14	N71-24693 *	US-PATENT-3,390,020	c 26	N71-23654 *	US-PATENT-3,420,704	c 15	N69-21460 #
US-PATENT-3,360,972	c 15	N71-24833 *	US-PATENT-3,390,023	c 26	N75-29236 *	US-PATENT-3,420,945	c 09	N69-21542 #
US-PATENT-3,360,980	c 14	N71-20741 *	US-PATENT-3,390,282	c 09	N71-23311 *	US-PATENT-3,420,978	c 15	N69-21471 #
US-PATENT-3,360,988	c 09	N71-20816 *	US-PATENT-3,390,378	c 08	N71-23295 *	US-PATENT-3,421,004	c 14	N71-19568 *
US-PATENT-3,361,045	c 15	N71-21060 *	US-PATENT-3,390,528	c 20	N79-21124 *	US-PATENT-3,421,053	c 15	N69-21472 #
US-PATENT-3,361,067	c 26	N71-21824 *	US-PATENT-3,391,080	c 15	N71-24046 *	US-PATENT-3,421,056	c 14	N69-23191 #
US-PATENT-3,361,400	c 15	N71-20813 *	US-PATENT-3,392,403	c 23	N71-23976 *	US-PATENT-3,421,105	c 09	N69-21543 #
US-PATENT-3,361,666	c 15	N71-21403 *	US-PATENT-3,392,586	c 14	N71-24232 *	US-PATENT-3,421,134	c 09	N69-21470 #
US-PATENT-3,361,985	c 10	N71-20852 *	US-PATENT-3,392,864	c 18	N71-23658 *	US-PATENT-3,421,331	c 15	N69-23190 #
US-PATENT-3,364,311	c 07	N71-20814 *	US-PATENT-3,392,865	c 15	N71-23816 *	US-PATENT-3,421,363	c 11	N69-21540 #
US-PATENT-3,364,366	c 09	N71-28926 *	US-PATENT-3,392,936	c 01	N71-23497 *	US-PATENT-3,421,506	c 05	N69-23192 #
US-PATENT-3,364,578	c 14	N71-21079 *	US-PATENT-3,393,059	c 06	N71-23499 *	US-PATENT-3,421,541	c 15	N69-21924 #
US-PATENT-3,364,631	c 32	N71-21045 *	US-PATENT-3,393,330	c 22	N71-23599 *	US-PATENT-3,421,549	c 03	N69-21469 #
US-PATENT-3,364,777	c 15	N71-20740 *	US-PATENT-3,393,332	c 09	N71-23443 *	US-PATENT-3,421,591	c 14	N69-21923 #
US-PATENT-3,364,813	c 09	N71-22999 *	US-PATENT-3,393,347	c 10	N71-23543 *	US-PATENT-3,421,700	c 15	N69-23185 #
US-PATENT-3,365,657	c 10	N71-22961 *	US-PATENT-3,393,380	c 10	N71-23544 *	US-PATENT-3,421,768	c 15	N69-21362 #
US-PATENT-3,365,665	c 14	N71-23037 *	US-PATENT-3,393,384	c 09	N71-23573 *	US-PATENT-3,421,864	c 17	N71-23046 *
US-PATENT-3,365,897	c 33	N71-28892 *	US-PATENT-3,394,286	c 14	N73-30391 *	US-PATENT-3,421,948	c 03	N69-21337 #
US-PATENT-3,365,930	c 14	N71-22964 *	US-PATENT-3,394,359	c 08	N71-28925 *	US-PATENT-3,422,213	c 03	N69-21539 #
US-PATENT-3,365,941	c 14	N71-22965 *	US-PATENT-3,394,975	c 23	N71-30027 *	US-PATENT-3,422,278	c 09	N69-21468 #
US-PATENT-3,366,886	c 10	N71-22962 *	US-PATENT-3,395,053	c 18	N71-23047 *	US-PATENT-3,422,291	c 25	N69-21929 #
US-PATENT-3,366,894	c 10	N71-23084 *	US-PATENT-3,395,565	c 14	N73-30390 *	US-PATENT-3,422,324	c 14	N69-21541 #
US-PATENT-3,367,114	c 28	N71-23081 *	US-PATENT-3,396,057	c 26	N71-23043 *	US-PATENT-3,422,352	c 14	N71-19431 *
US-PATENT-3,367,121	c 15	N71-23025 *	US-PATENT-3,396,184	c 06	N71-28808 *	US-PATENT-3,422,354	c 09	N69-21926 #
US-PATENT-3,367,182	c 33	N71-23085 *	US-PATENT-3,396,303	c 09	N71-22987 *	US-PATENT-3,422,390	c 09	N69-21927 #
US-PATENT-3,367,224	c 15	N71-22798 *	US-PATENT-3,396,584	c 14	N71-30026 *	US-PATENT-3,422,403	c 08	N69-21928 #
US-PATENT-3,367,271	c 15	N71-24042 *	US-PATENT-3,396,719	c 52	N79-21750 *	US-PATENT-3,422,440	c 09	N69-21467 #
US-PATENT-3,367,308	c 11	N71-22875 *	US-PATENT-3,396,920	c 31	N71-29050 *	US-PATENT-3,423,179	c 15	N69-21922 #
US-PATENT-3,367,445	c 15	N71-23048 *	US-PATENT-3,397,094	c 26	N71-29156 *	US-PATENT-3,423,290	c 06	N71-17705 *
US-PATENT-3,368,486	c 15	N71-22874 *	US-PATENT-3,397,117	c 15	N71-23086 *	US-PATENT-3,423,579	c 09	N71-19480 *



## REPORT NUMBER INDEX

## US-PATENT-3,493,003

US-PATENT-3,423,608	c 09	N69-21313 *	US-PATENT-3,446,075	c 14	N73-30394 *	US-PATENT-3,469,143	c 33	N75-29318 *
US-PATENT-3,423,627	c 33	N78-17293 *	US-PATENT-3,446,387	c 15	N69-39935 *	US-PATENT-3,469,289	c 15	N71-25975 *
US-PATENT-3,424,966	c 10	N71-20448 *	US-PATENT-3,446,558	c 16	N71-24074 *	US-PATENT-3,469,375	c 14	N71-18483 *
US-PATENT-3,425,131	c 15	N71-19489 *	US-PATENT-3,446,642	c 18	N69-39895 *	US-PATENT-3,469,436	c 15	N71-23817 *
US-PATENT-3,425,268	c 14	N69-39975 *	US-PATENT-3,446,676	c 03	N71-11050 *	US-PATENT-3,469,437	c 14	N71-24234 *
US-PATENT-3,425,272	c 14	N71-20439 *	US-PATENT-3,446,960	c 14	N69-39982 *	US-PATENT-3,469,734	c 11	N71-17600 *
US-PATENT-3,425,276	c 14	N69-24257 *	US-PATENT-3,446,997	c 09	N69-39987 *	US-PATENT-3,470,043	c 15	N71-24047 *
US-PATENT-3,425,486	c 05	N71-24147 *	US-PATENT-3,446,997	c 03	N69-39988 *	US-PATENT-3,470,304	c 14	N71-23267 *
US-PATENT-3,425,487	c 05	N71-19439 *	US-PATENT-3,446,998	c 09	N69-39929 *	US-PATENT-3,470,313	c 07	N71-26579 *
US-PATENT-3,425,885	c 15	N69-24322 *	US-PATENT-3,447,003	c 09	N71-20446 *	US-PATENT-3,470,318	c 07	N71-24612 *
US-PATENT-3,426,219	c 09	N69-24317 *	US-PATENT-3,447,015	c 06	N69-39889 *	US-PATENT-3,470,342	c 09	N71-19610 *
US-PATENT-3,426,230	c 15	N69-24319 *	US-PATENT-3,447,071	c 25	N69-39884 *	US-PATENT-3,470,443	c 03	N71-23239 *
US-PATENT-3,426,263	c 03	N71-19438 *	US-PATENT-3,447,154	c 21	N71-11766 *	US-PATENT-3,470,446	c 09	N71-23188 *
US-PATENT-3,426,272	c 14	N69-39785 *	US-PATENT-3,447,155	c 09	N71-18598 *	US-PATENT-3,470,466	c 14	N71-23699 *
US-PATENT-3,426,746	c 05	N71-26293 *	US-PATENT-3,447,233	c 15	N69-39786 *	US-PATENT-3,470,475	c 10	N71-19467 *
US-PATENT-3,426,791	c 15	N71-19569 *	US-PATENT-3,447,774	c 15	N71-19485 *	US-PATENT-3,470,489	c 09	N71-23598 *
US-PATENT-3,427,047	c 15	N69-27490 *	US-PATENT-3,447,850	c 09	N71-18600 *	US-PATENT-3,470,495	c 10	N71-23669 *
US-PATENT-3,427,089	c 23	N69-24332 *	US-PATENT-3,448,273	c 07	N69-39736 *	US-PATENT-3,470,496	c 09	N71-19470 *
US-PATENT-3,427,093	c 09	N71-19479 *	US-PATENT-3,448,290	c 10	N71-23315 *	US-PATENT-3,471,856	c 30	N71-16090 *
US-PATENT-3,427,097	c 11	N69-24321 *	US-PATENT-3,448,341	c 09	N71-12526 *	US-PATENT-3,471,858	c 07	N71-12391 *
US-PATENT-3,427,205	c 15	N69-24320 *	US-PATENT-3,448,346	c 15	N71-18701 *	US-PATENT-3,472,019	c 10	N71-26326 *
US-PATENT-3,427,435	c 17	N69-25147 *	US-PATENT-3,450,842	c 07	N69-39978 *	US-PATENT-3,472,059	c 14	N71-23755 *
US-PATENT-3,427,454	c 05	N71-19440 *	US-PATENT-3,450,878	c 14	N71-20430 *	US-PATENT-3,472,060	c 14	N71-26136 *
US-PATENT-3,427,525	c 03	N69-21330 *	US-PATENT-3,450,946	c 09	N69-39897 *	US-PATENT-3,472,069	c 15	N71-20441 *
US-PATENT-3,428,761	c 09	N69-24329 *	US-PATENT-3,452,103	c 06	N73-30101 *	US-PATENT-3,472,080	c 10	N71-26339 *
US-PATENT-3,428,812	c 14	N69-27485 *	US-PATENT-3,452,423	c 26	N71-16037 *	US-PATENT-3,472,086	c 15	N71-23809 *
US-PATENT-3,428,847	c 15	N69-24266 *	US-PATENT-3,452,872	c 14	N69-39896 *	US-PATENT-3,472,140	c 14	N71-26474 *
US-PATENT-3,428,910	c 09	N69-24330 *	US-PATENT-3,453,172	c 15	N69-39735 *	US-PATENT-3,472,202	c 17	N71-24911 *
US-PATENT-3,428,919	c 07	N69-24334 *	US-PATENT-3,453,462	c 03	N69-39983 *	US-PATENT-3,472,372	c 15	N71-20440 *
US-PATENT-3,428,923	c 07	N69-27462 *	US-PATENT-3,453,546	c 05	N71-12342 *	US-PATENT-3,472,470	c 02	N71-20570 *
US-PATENT-3,429,058	c 12	N69-39988 *	US-PATENT-3,453,878	c 09	N79-21083 *	US-PATENT-3,472,577	c 23	N71-24857 *
US-PATENT-3,429,177	c 06	N69-39733 *	US-PATENT-3,454,410	c 18	N69-39979 *	US-PATENT-3,472,625	c 06	N71-23527 *
US-PATENT-3,429,477	c 15	N69-27502 *	US-PATENT-3,454,766	c 35	N75-27329 *	US-PATENT-3,472,629	c 14	N71-20442 *
US-PATENT-3,429,756	c 76	N79-21910 *	US-PATENT-3,455,121	c 14	N71-20427 *	US-PATENT-3,472,698	c 03	N71-23449 *
US-PATENT-3,430,063	c 09	N69-27500 *	US-PATENT-3,455,171	c 23	N71-16098 *	US-PATENT-3,472,709	c 18	N71-26153 *
US-PATENT-3,430,115	c 09	N69-24318 *	US-PATENT-3,456,112	c 14	N69-39937 *	US-PATENT-3,472,742	c 17	N71-24830 *
US-PATENT-3,430,131	c 24	N71-20518 *	US-PATENT-3,456,193	c 08	N71-19763 *	US-PATENT-3,472,998	c 16	N71-20400 *
US-PATENT-3,430,182	c 14	N69-27431 *	US-PATENT-3,456,201	c 09	N69-39885 *	US-PATENT-3,473,050	c 09	N71-20447 *
US-PATENT-3,430,227	c 08	N71-19687 *	US-PATENT-3,458,104	c 15	N71-20392 *	US-PATENT-3,473,116	c 25	N71-20563 *
US-PATENT-3,430,237	c 07	N69-39974 *	US-PATENT-3,458,313	c 14	N71-17574 *	US-PATENT-3,473,165	c 05	N71-26333 *
US-PATENT-3,430,460	c 15	N69-27505 *	US-PATENT-3,458,651	c 09	N71-19449 *	US-PATENT-3,473,216	c 15	N71-20443 *
US-PATENT-3,430,902	c 14	N69-27486 *	US-PATENT-3,458,726	c 14	N71-18699 *	US-PATENT-3,473,379	c 12	N71-26387 *
US-PATENT-3,430,909	c 11	N69-27466 *	US-PATENT-3,458,726	c 10	N69-39888 *	US-PATENT-3,473,758	c 03	N71-20773 *
US-PATENT-3,430,937	c 15	N69-27483 *	US-PATENT-3,458,833	c 10	N71-19418 *	US-PATENT-3,474,192	c 07	N71-26102 *
US-PATENT-3,430,942	c 15	N69-27459 *	US-PATENT-3,458,851	c 09	N69-39734 *	US-PATENT-3,474,220	c 15	N71-19486 *
US-PATENT-3,431,149	c 14	N69-27459 *	US-PATENT-3,459,391	c 03	N71-11058 *	US-PATENT-3,474,328	c 14	N71-26266 *
US-PATENT-3,431,397	c 15	N69-27871 *	US-PATENT-3,460,378	c 14	N71-24233 *	US-PATENT-3,474,357	c 09	N71-20445 *
US-PATENT-3,431,460	c 09	N71-23189 *	US-PATENT-3,460,379	c 15	N71-24834 *	US-PATENT-3,474,413	c 10	N71-26103 *
US-PATENT-3,431,559	c 09	N69-24333 *	US-PATENT-3,460,381	c 14	N71-23725 *	US-PATENT-3,474,441	c 08	N71-19544 *
US-PATENT-3,432,730	c 09	N69-27422 *	US-PATENT-3,460,397	c 15	N71-24045 *	US-PATENT-3,475,384	c 06	N73-30103 *
US-PATENT-3,433,015	c 28	N71-20330 *	US-PATENT-3,460,759	c 28	N71-23968 *	US-PATENT-3,475,442	c 26	N75-27125 *
US-PATENT-3,433,079	c 14	N69-27503 *	US-PATENT-3,460,781	c 14	N71-23698 *	US-PATENT-3,475,675	c 33	N78-17295 *
US-PATENT-3,433,662	c 14	N71-20461 *	US-PATENT-3,460,995	c 03	N71-20407 *	US-PATENT-3,478,514	c 37	N71-22479 *
US-PATENT-3,433,818	c 06	N71-23230 *	US-PATENT-3,461,290	c 14	N71-26475 *	US-PATENT-3,480,789	c 10	N71-26626 *
US-PATENT-3,433,909	c 10	N71-23663 *	US-PATENT-3,461,393	c 10	N71-26415 *	US-PATENT-3,481,638	c 15	N71-26312 *
US-PATENT-3,433,953	c 14	N69-27484 *	US-PATENT-3,461,437	c 10	N71-26434 *	US-PATENT-3,481,802	c 31	N79-21226 *
US-PATENT-3,433,953	c 16	N69-27491 *	US-PATENT-3,461,700	c 15	N71-26346 *	US-PATENT-3,481,887	c 18	N71-26155 *
US-PATENT-3,433,961	c 14	N69-27432 *	US-PATENT-3,461,721	c 12	N71-20436 *	US-PATENT-3,482,179	c 10	N71-26331 *
US-PATENT-3,434,033	c 09	N69-39984 *	US-PATENT-3,461,855	c 05	N71-20268 *	US-PATENT-3,483,535	c 10	N71-26418 *
US-PATENT-3,434,037	c 10	N71-26414 *	US-PATENT-3,463,001	c 14	N71-20429 *	US-PATENT-3,484,712	c 10	N71-26374 *
US-PATENT-3,434,050	c 09	N71-20569 *	US-PATENT-3,463,563	c 15	N71-23812 *	US-PATENT-3,485,290	c 20	N79-21123 *
US-PATENT-3,434,064	c 09	N69-39986 *	US-PATENT-3,463,673	c 03	N71-20491 *	US-PATENT-3,486,123	c 16	N71-24831 *
US-PATENT-3,434,855	c 18	N71-24184 *	US-PATENT-3,463,679	c 17	N71-24142 *	US-PATENT-3,487,216	c 14	N71-24809 *
US-PATENT-3,434,885	c 03	N71-20492 *	US-PATENT-3,463,761	c 06	N73-30099 *	US-PATENT-3,487,281	c 15	N71-24695 *
US-PATENT-3,435,246	c 14	N69-24331 *	US-PATENT-3,463,762	c 06	N73-30100 *	US-PATENT-3,487,288	c 10	N71-25139 *
US-PATENT-3,437,394	c 14	N69-27461 *	US-PATENT-3,463,939	c 10	N71-19471 *	US-PATENT-3,487,680	c 15	N71-17696 *
US-PATENT-3,437,527	c 03	N69-24267 *	US-PATENT-3,464,012	c 14	N71-26244 *	US-PATENT-3,487,765	c 54	N78-17679 *
US-PATENT-3,437,560	c 04	N69-27487 *	US-PATENT-3,464,016	c 10	N71-19472 *	US-PATENT-3,488,103	c 14	N71-15604 *
US-PATENT-3,437,818	c 03	N71-23354 *	US-PATENT-3,464,018	c 09	N71-23525 *	US-PATENT-3,488,123	c 14	N71-17627 *
US-PATENT-3,437,832	c 09	N69-27463 *	US-PATENT-3,464,049	c 32	N71-15974 *	US-PATENT-3,488,414	c 15	N71-17803 *
US-PATENT-3,437,874	c 08	N71-20571 *	US-PATENT-3,464,051	c 15	N71-17685 *	US-PATENT-3,488,461	c 09	N71-12518 *
US-PATENT-3,437,903	c 03	N69-25146 *	US-PATENT-3,465,482	c 31	N71-16080 *	US-PATENT-3,488,504	c 21	N71-15642 *
US-PATENT-3,437,919	c 14	N69-27423 *	US-PATENT-3,465,567	c 15	N71-18579 *	US-PATENT-3,488,771	c 54	N78-17678 *
US-PATENT-3,437,935	c 09	N69-24324 *	US-PATENT-3,465,569	c 14	N71-17659 *	US-PATENT-3,490,074	c 54	N78-17677 *
US-PATENT-3,437,959	c 07	N69-24323 *	US-PATENT-3,465,584	c 14	N71-23726 *	US-PATENT-3,490,130	c 05	N71-12345 *
US-PATENT-3,438,044	c 07	N69-27460 *	US-PATENT-3,465,638	c 11	N71-18578 *	US-PATENT-3,490,205	c 14	N71-17588 *
US-PATENT-3,438,263	c 14	N71-20435 *	US-PATENT-3,465,986	c 31	N71-20396 *	US-PATENT-3,490,235	c 28	N71-14044 *
US-PATENT-3,439,886	c 31	N69-27499 *	US-PATENT-3,466,052	c 15	N71-19570 *	US-PATENT-3,490,238	c 15	N70-22192 *
US-PATENT-3,440,419	c 14	N73-28491 *	US-PATENT-3,466,085	c 05	N71-12343 *	US-PATENT-3,490,405	c 15	N71-15597 *
US-PATENT-3,442,674	c 25	N82-29370 *	US-PATENT-3,466,198	c 03	N71-19545 *	US-PATENT-3,490,440	c 05	N71-12436 *
US-PATENT-3,443,128	c 03	N69-39890 *	US-PATENT-3,466,243	c 15	N71-23810 *	US-PATENT-3,490,718	c 33	N71-14035 *
US-PATENT-3,443,208	c 14	N71-20428 *	US-PATENT-3,466,418	c 15	N71-18613 *	US-PATENT-3,490,719	c 21	N71-14159 *
US-PATENT-3,443,384	c 28	N71-24321 *	US-PATENT-3,466,424	c 15	N71-20395 *	US-PATENT-3,490,721	c 02	N71-11039 *
US-PATENT-3,443,390	c 11	N71-24964 *	US-PATENT-3,466,459	c 09	N71-26000 *	US-PATENT-3,490,939	c 33	N71-14032 *
US-PATENT-3,443,412	c 15	N71-23811 *	US-PATENT-3,466,484	c 14	N71-18482 *	US-PATENT-3,490,965	c 09	N71-12513 *
US-PATENT-3,443,416	c 06	N69-39936 *	US-PATENT-3,466,560	c 09	N71-19466 *	US-PATENT-3,491,202	c 07	N71-12392 *
US-PATENT-3,443,472	c 15	N71-23254 *	US-PATENT-3,466,570	c 10	N71-25950 *	US-PATENT-3,491,255	c 09	N71-12514 *
US-PATENT-3,443,583	c 14	N71-18625 *	US-PATENT-3,467,837	c 05	N71-23317 *	US-PATENT-3,491,335	c 14	N71-15620 *
US-PATENT-3,443,584	c 32	N71-16106 *	US-PATENT-3,468,303	c 09	N71-26002 *	US-PATENT-3,491,857	c 14	N71-17626 *
US-PATENT-3,443,732	c 15	N71-15607 *	US-PATENT-3,468,548	c 15	N71-26294 *	US-PATENT-3,492,176	c 27	N71-14090 *
US-PATENT-3,443,773	c 31	N71-23912 *	US-PATENT-3,468,609	c 16	N71-24170 *	US-PATENT-3,492,672	c 05	N71-12344 *
US-PATENT-3,443,779	c 01	N69-39981 *	US-PATENT-3,468,727	c 14	N71-25892 *	US-PATENT-3,492,739	c 15	N71-15571 *
US-PATENT-3,444,051	c 05	N71-11207 *	US-PATENT-3,468,765	c 17	N71-25903 *	US-PATENT-3,492,858	c 35	N78-17358 *
US-PATENT-3,444,127	c 06	N71-11237 *	US-PATENT-3,469,068	c 15	N71-23815 *	US-PATENT-3,492,862	c 14	N71-15600 *
US-PATENT-3,444,375	c 14	N71-15599 *	US-PATENT-3,469,069	c 15	N71-23798 *	US-PATENT-3,492,947	c 28	N71-14058 *
US-PATENT-3,444,380	c 07	N69-39980 *	US-PATENT-3,469,087	c 16	N71-25914 *	US-PATENT-3,493,003	c 15	N71-15609 *



## US-PATENT-3,493,004

## REPORT NUMBER INDEX

US-PATENT-3,493,004	c 12	N71-17579 *	US-PATENT-3,516,165	c 12	N71-18603 *	US-PATENT-3,534,836	c 15	N71-17805 *
US-PATENT-3,493,012	c 15	N71-15608 *	US-PATENT-3,516,284	c 12	N71-17573 *	US-PATENT-3,534,909	c 15	N71-17654 *
US-PATENT-3,493,027	c 31	N71-18611 *	US-PATENT-3,516,404	c 05	N71-17599 *	US-PATENT-3,534,924	c 31	N71-15674 *
US-PATENT-3,493,153	c 05	N71-12351 *	US-PATENT-3,516,711	c 05	N71-12341 *	US-PATENT-3,534,925	c 31	N71-15676 *
US-PATENT-3,493,155	c 26	N71-14354 *	US-PATENT-3,516,879	c 23	N71-16212 *	US-PATENT-3,534,926	c 15	N71-19214 *
US-PATENT-3,493,194	c 21	N71-14132 *	US-PATENT-3,516,964	c 06	N71-11240 *	US-PATENT-3,534,930	c 02	N71-13422 *
US-PATENT-3,493,197	c 02	N71-11043 *	US-PATENT-3,516,970	c 06	N71-11239 *	US-PATENT-3,535,012	c 16	N71-15567 *
US-PATENT-3,493,291	c 14	N71-15622 *	US-PATENT-3,516,971	c 06	N71-24740 *	US-PATENT-3,535,013	c 16	N71-15551 *
US-PATENT-3,493,294	c 14	N71-15605 *	US-PATENT-3,517,109	c 07	N71-19436 *	US-PATENT-3,535,014	c 16	N71-15555 *
US-PATENT-3,493,401	c 18	N71-14014 *	US-PATENT-3,517,162	c 33	N71-16278 *	US-PATENT-3,535,024	c 14	N71-17662 *
US-PATENT-3,493,415	c 15	N71-15610 *	US-PATENT-3,517,171	c 08	N71-24633 *	US-PATENT-3,535,041	c 14	N71-17655 *
US-PATENT-3,493,437	c 03	N71-11056 *	US-PATENT-3,517,221	c 10	N71-19547 *	US-PATENT-3,535,110	c 17	N71-15468 *
US-PATENT-3,493,522	c 06	N71-11243 *	US-PATENT-3,517,268	c 10	N71-19469 *	US-PATENT-3,535,130	c 18	N71-15469 *
US-PATENT-3,493,524	c 06	N71-11242 *	US-PATENT-3,517,302	c 25	N71-16073 *	US-PATENT-3,535,165	c 33	N71-15568 *
US-PATENT-3,493,665	c 14	N71-15621 *	US-PATENT-3,517,318	c 08	N71-19432 *	US-PATENT-3,535,179	c 15	N71-17651 *
US-PATENT-3,493,677	c 07	N71-11300 *	US-PATENT-3,517,328	c 16	N71-18614 *	US-PATENT-3,535,352	c 18	N71-15588 *
US-PATENT-3,493,711	c 15	N71-14932 *	US-PATENT-3,518,232	c 06	N71-11235 *	US-PATENT-3,535,446	c 09	N71-12539 *
US-PATENT-3,493,746	c 15	N71-15606 *	US-PATENT-3,519,483	c 44	N82-24644 *	US-PATENT-3,535,451	c 07	N71-11281 *
US-PATENT-3,493,797	c 15	N71-17652 *	US-PATENT-3,519,484	c 44	N82-24643 *	US-PATENT-3,535,497	c 08	N71-24890 *
US-PATENT-3,493,805	c 09	N71-12521 *	US-PATENT-3,520,190	c 10	N71-13537 *	US-PATENT-3,535,543	c 09	N71-13486 *
US-PATENT-3,493,901	c 09	N71-12517 *	US-PATENT-3,520,238	c 14	N71-18465 *	US-PATENT-3,535,547	c 09	N71-12520 *
US-PATENT-3,493,929	c 08	N71-12505 *	US-PATENT-3,520,317	c 12	N71-17578 *	US-PATENT-3,535,554	c 09	N71-12516 *
US-PATENT-3,493,942	c 08	N71-12504 *	US-PATENT-3,520,496	c 31	N71-16345 *	US-PATENT-3,535,560	c 08	N71-12494 *
US-PATENT-3,495,260	c 21	N71-13958 *	US-PATENT-3,520,503	c 31	N71-16085 *	US-PATENT-3,535,562	c 33	N71-27862 *
US-PATENT-3,495,262	c 07	N71-12396 *	US-PATENT-3,520,617	c 23	N71-16101 *	US-PATENT-3,535,570	c 15	N71-24696 *
US-PATENT-3,498,840	c 44	N82-24642 *	US-PATENT-3,520,660	c 23	N71-16355 *	US-PATENT-3,535,586	c 25	N71-15562 *
US-PATENT-3,498,841	c 44	N82-24641 *	US-PATENT-3,521,054	c 06	N71-13461 *	US-PATENT-3,535,602	c 09	N71-13522 *
US-PATENT-3,500,020	c 01	N71-13411 *	US-PATENT-3,521,143	c 08	N71-18752 *	US-PATENT-3,535,642	c 08	N71-12503 *
US-PATENT-3,500,525	c 15	N71-17688 *	US-PATENT-3,521,290	c 31	N71-16102 *	US-PATENT-3,535,644	c 09	N71-12519 *
US-PATENT-3,500,677	c 14	N71-17584 *	US-PATENT-3,523,228	c 10	N71-24861 *	US-PATENT-3,535,657	c 07	N71-12390 *
US-PATENT-3,500,686	c 12	N71-17569 *	US-PATENT-3,526,030	c 15	N71-17686 *	US-PATENT-3,535,658	c 08	N71-12500 *
US-PATENT-3,500,688	c 14	N71-17587 *	US-PATENT-3,526,134	c 33	N71-16356 *	US-PATENT-3,535,683	c 31	N71-15566 *
US-PATENT-3,500,747	c 09	N71-18599 *	US-PATENT-3,526,139	c 31	N71-16221 *	US-PATENT-3,535,696	c 08	N71-12506 *
US-PATENT-3,500,827	c 05	N71-11203 *	US-PATENT-3,526,140	c 27	N71-16223 *	US-PATENT-3,535,702	c 09	N71-12515 *
US-PATENT-3,501,112	c 15	N71-17693 *	US-PATENT-3,526,359	c 33	N71-16357 *	US-PATENT-3,536,103	c 15	N71-19213 *
US-PATENT-3,501,632	c 27	N71-16348 *	US-PATENT-3,526,365	c 28	N71-16224 *	US-PATENT-3,537,096	c 08	N71-12507 *
US-PATENT-3,501,641	c 20	N71-16340 *	US-PATENT-3,526,372	c 31	N71-16348 *	US-PATENT-3,537,103	c 08	N71-24650 *
US-PATENT-3,501,648	c 10	N71-24799 *	US-PATENT-3,526,382	c 15	N71-17649 *	US-PATENT-3,537,107	c 05	N71-24730 *
US-PATENT-3,501,649	c 10	N71-18723 *	US-PATENT-3,526,460	c 23	N71-16365 *	US-PATENT-3,537,305	c 26	N71-25490 *
US-PATENT-3,501,664	c 14	N71-17585 *	US-PATENT-3,526,473	c 18	N71-15545 *	US-PATENT-3,537,515	c 09	N71-24807 *
US-PATENT-3,501,683	c 15	N71-17694 *	US-PATENT-3,526,580	c 18	N71-16210 *	US-PATENT-3,537,668	c 05	N71-24728 *
US-PATENT-3,501,684	c 09	N71-26092 *	US-PATENT-3,526,611	c 06	N71-11236 *	US-PATENT-3,537,672	c 15	N71-24694 *
US-PATENT-3,501,701	c 08	N71-18692 *	US-PATENT-3,526,845	c 09	N71-13531 *	US-PATENT-3,538,053	c 27	N78-17214 *
US-PATENT-3,501,704	c 07	N71-11282 *	US-PATENT-3,526,897	c 09	N71-13521 *	US-PATENT-3,539,905	c 09	N71-24800 *
US-PATENT-3,501,712	c 09	N71-19516 *	US-PATENT-3,527,724	c 27	N78-33228 *	US-PATENT-3,540,045	c 09	N71-24595 *
US-PATENT-3,501,743	c 09	N71-18843 *	US-PATENT-3,529,480	c 15	N71-17692 *	US-PATENT-3,540,048	c 31	N71-24813 *
US-PATENT-3,501,750	c 08	N71-19288 *	US-PATENT-3,529,928	c 17	N71-16393 *	US-PATENT-3,540,050	c 09	N71-24804 *
US-PATENT-3,501,752	c 08	N71-18595 *	US-PATENT-3,530,336	c 09	N71-13518 *	US-PATENT-3,540,054	c 07	N71-24625 *
US-PATENT-3,501,764	c 10	N71-18722 *	US-PATENT-3,531,964	c 15	N71-18616 *	US-PATENT-3,540,056	c 07	N71-24614 *
US-PATENT-3,502,051	c 15	N71-17647 *	US-PATENT-3,531,978	c 14	N71-18481 *	US-PATENT-3,540,250	c 15	N71-24865 *
US-PATENT-3,502,074	c 05	N71-11190 *	US-PATENT-3,531,982	c 15	N71-18132 *	US-PATENT-3,540,449	c 15	N71-24835 *
US-PATENT-3,502,141	c 33	N71-16277 *	US-PATENT-3,531,989	c 33	N71-15641 *	US-PATENT-3,540,615	c 33	N71-25351 *
US-PATENT-3,503,251	c 32	N71-16428 *	US-PATENT-3,532,118	c 12	N71-18615 *	US-PATENT-3,540,676	c 15	N71-24600 *
US-PATENT-3,504,258	c 10	N71-18724 *	US-PATENT-3,532,128	c 15	N71-18580 *	US-PATENT-3,540,790	c 16	N71-26154 *
US-PATENT-3,504,983	c 23	N71-16341 *	US-PATENT-3,532,427	c 21	N71-19212 *	US-PATENT-3,540,802	c 23	N71-24868 *
US-PATENT-3,506,496	c 44	N82-24645 *	US-PATENT-3,532,428	c 30	N71-15990 *	US-PATENT-3,540,942	c 15	N71-24875 *
US-PATENT-3,507,034	c 15	N71-17650 *	US-PATENT-3,532,538	c 18	N71-16046 *	US-PATENT-3,540,989	c 24	N71-25555 *
US-PATENT-3,507,114	c 27	N71-16392 *	US-PATENT-3,532,551	c 03	N71-11049 *	US-PATENT-3,541,250	c 07	N71-24742 *
US-PATENT-3,507,146	c 05	N71-11202 *	US-PATENT-3,532,568	c 17	N71-16044 *	US-PATENT-3,541,312	c 08	N71-24891 *
US-PATENT-3,507,150	c 20	N71-16281 *	US-PATENT-3,532,673	c 06	N71-11238 *	US-PATENT-3,541,314	c 07	N71-24741 *
US-PATENT-3,507,425	c 15	N71-17628 *	US-PATENT-3,532,807	c 07	N71-19433 *	US-PATENT-3,541,346	c 09	N71-24803 *
US-PATENT-3,507,436	c 08	N71-19420 *	US-PATENT-3,532,819	c 10	N71-19468 *	US-PATENT-3,541,361	c 09	N71-24904 *
US-PATENT-3,507,704	c 03	N71-11052 *	US-PATENT-3,532,866	c 08	N71-18602 *	US-PATENT-3,541,422	c 03	N71-24719 *
US-PATENT-3,507,706	c 03	N71-18698 *	US-PATENT-3,532,880	c 24	N71-16095 *	US-PATENT-3,541,428	c 09	N71-24893 *
US-PATENT-3,508,036	c 08	N71-18693 *	US-PATENT-3,532,894	c 23	N71-16100 *	US-PATENT-3,541,439	c 09	N71-24843 *
US-PATENT-3,508,039	c 08	N71-19437 *	US-PATENT-3,532,948	c 10	N71-18772 *	US-PATENT-3,541,450	c 07	N71-24840 *
US-PATENT-3,508,053	c 09	N71-18830 *	US-PATENT-3,532,960	c 03	N71-12255 *	US-PATENT-3,541,459	c 10	N71-24844 *
US-PATENT-3,508,070	c 03	N71-11057 *	US-PATENT-3,532,973	c 15	N71-17822 *	US-PATENT-3,541,479	c 09	N71-24841 *
US-PATENT-3,508,152	c 07	N71-11266 *	US-PATENT-3,532,975	c 10	N71-19421 *	US-PATENT-3,541,486	c 16	N71-28554 *
US-PATENT-3,508,156	c 07	N71-11267 *	US-PATENT-3,532,979	c 10	N71-12554 *	US-PATENT-3,541,679	c 03	N71-24681 *
US-PATENT-3,508,347	c 05	N71-24606 *	US-PATENT-3,532,985	c 07	N71-19773 *	US-PATENT-3,541,825	c 15	N71-24836 *
US-PATENT-3,508,402	c 33	N71-16104 *	US-PATENT-3,533,001	c 07	N71-24583 *	US-PATENT-3,541,875	c 15	N71-24984 *
US-PATENT-3,508,541	c 05	N71-11193 *	US-PATENT-3,533,006	c 10	N72-28241 *	US-PATENT-3,543,050	c 10	N71-24862 *
US-PATENT-3,508,578	c 32	N71-16103 *	US-PATENT-3,533,074	c 08	N71-12502 *	US-PATENT-3,543,159	c 09	N71-24717 *
US-PATENT-3,508,723	c 31	N71-16222 *	US-PATENT-3,533,093	c 10	N71-19417 *	US-PATENT-3,543,839	c 34	N78-17337 *
US-PATENT-3,508,724	c 02	N71-11037 *	US-PATENT-3,533,098	c 08	N71-18594 *	US-PATENT-3,545,208	c 28	N71-25213 *
US-PATENT-3,508,739	c 15	N71-17648 *	US-PATENT-3,534,365	c 07	N71-19854 *	US-PATENT-3,545,226	c 23	N71-24725 *
US-PATENT-3,508,779	c 15	N71-24897 *	US-PATENT-3,534,367	c 02	N71-19287 *	US-PATENT-3,545,252	c 11	N71-24985 *
US-PATENT-3,508,940	c 18	N71-16124 *	US-PATENT-3,534,375	c 07	N71-11285 *	US-PATENT-3,545,262	c 38	N76-28563 *
US-PATENT-3,508,955	c 18	N71-16105 *	US-PATENT-3,534,376	c 07	N71-26101 *	US-PATENT-3,545,275	c 09	N71-24597 *
US-PATENT-3,508,999	c 15	N71-17687 *	US-PATENT-3,534,406	c 05	N71-11195 *	US-PATENT-3,545,725	c 15	N71-24599 *
US-PATENT-3,509,034	c 14	N71-17575 *	US-PATENT-3,534,407	c 05	N71-11194 *	US-PATENT-3,545,792	c 15	N71-24903 *
US-PATENT-3,509,386	c 03	N71-11055 *	US-PATENT-3,534,479	c 14	N71-17657 *	US-PATENT-3,546,386	c 07	N71-24621 *
US-PATENT-3,509,419	c 24	N71-16213 *	US-PATENT-3,534,480	c 14	N71-17658 *	US-PATENT-3,546,471	c 14	N71-24864 *
US-PATENT-3,509,469	c 23	N71-16099 *	US-PATENT-3,534,485	c 11	N71-18773 *	US-PATENT-3,546,552	c 15	N71-24895 *
US-PATENT-3,509,475	c 09	N71-24596 *	US-PATENT-3,534,555	c 12	N71-17631 *	US-PATENT-3,546,553	c 09	N71-24805 *
US-PATENT-3,509,491	c 09	N71-18721 *	US-PATENT-3,534,584	c 10	N71-13545 *	US-PATENT-3,546,684	c 07	N71-24624 *
US-PATENT-3,509,551	c 08	N71-18694 *	US-PATENT-3,534,585	c 14	N71-17701 *	US-PATENT-3,546,694	c 10	N71-24798 *
US-PATENT-3,509,558	c 08	N71-19435 *	US-PATENT-3,534,592	c 14	N71-17656 *	US-PATENT-3,546,705	c 09	N71-24842 *
US-PATENT-3,509,570	c 09	N71-18720 *	US-PATENT-3,534,596	c 14	N71-17586 *	US-PATENT-3,546,917	c 15	N71-24679 *
US-PATENT-3,509,578	c 07	N71-19493 *	US-PATENT-3,534,597	c 31	N71-15643 *	US-PATENT-3,546,920	c 06	N71-24607 *
US-PATENT-3,511,680	c 31	N79-21227 *	US-PATENT-3,534,650	c 15	N71-17653 *	US-PATENT-3,546,931	c 32	N71-25360 *
US-PATENT-3,512,009	c 08	N71-18751 *	US-PATENT-3,534,686	c 31	N71-15687 *	US-PATENT-3,547,105	c 09	N71-24618 *
US-PATENT-3,514,785	c 54	N78-18761 *	US-PATENT-3,534,727	c 05	N71-11189 *	US-PATENT-3,547,376	c 31	N71-25434 *
US-PATENT-3,516,091	c 05	N71-24623 *	US-PATENT-3,534,765	c 12	N71-17661 *	US-PATENT-3,547,540	c 16	N71-24828 *
US-PATENT-3,516,179	c 11	N71-19494 *	US-PATENT-3,534,826	c 31	N71-15689 *	US-PATENT-3,547,801	c 03	N71-24718 *

## REPORT NUMBER INDEX

## US-PATENT-3,611,798

US-PATENT-3,548,107	c 07	N71-24622 *	US-PATENT-3,569,804	c 09	N71-25999 *	US-PATENT-3,588,331	c 07	N72-12081 *
US-PATENT-3,548,633	c 18	N71-24934 *	US-PATENT-3,569,827	c 18	N71-27397 *	US-PATENT-3,588,359	c 07	N71-33108 *
US-PATENT-3,548,636	c 15	N71-24910 *	US-PATENT-3,569,828	c 14	N71-27186 *	US-PATENT-3,588,483	c 08	N71-33110 *
US-PATENT-3,548,812	c 05	N71-24729 *	US-PATENT-3,569,866	c 10	N71-27271 *	US-PATENT-3,588,648	c 07	N71-33613 *
US-PATENT-3,548,930	c 33	N71-25353 *	US-PATENT-3,569,875	c 07	N71-27191 *	US-PATENT-3,588,671	c 09	N71-33109 *
US-PATENT-3,549,435	c 14	N72-28438 *	US-PATENT-3,569,956	c 10	N71-25917 *	US-PATENT-3,588,705	c 07	N71-33696 *
US-PATENT-3,549,564	c 06	N71-24739 *	US-PATENT-3,569,976	c 07	N71-27233 *	US-PATENT-3,588,751	c 07	N71-33606 *
US-PATENT-3,549,799	c 09	N71-25866 *	US-PATENT-3,570,143	c 10	N71-27365 *	US-PATENT-3,588,874	c 09	N71-33519 *
US-PATENT-3,549,882	c 15	N71-24896 *	US-PATENT-3,570,364	c 28	N71-26779 *	US-PATENT-3,588,883	c 10	N71-33407 *
US-PATENT-3,549,955	c 09	N71-24892 *	US-PATENT-3,570,513	c 12	N71-27332 *	US-PATENT-3,591,420	c 03	N71-33409 *
US-PATENT-3,550,023	c 09	N71-24806 *	US-PATENT-3,570,785	c 28	N71-27585 *	US-PATENT-3,591,426	c 17	N71-33408 *
US-PATENT-3,550,034	c 16	N71-24832 *	US-PATENT-3,570,789	c 02	N71-27088 *	US-PATENT-3,591,885	c 15	N72-11390 *
US-PATENT-3,550,129	c 21	N71-24948 *	US-PATENT-3,571,555	c 15	N71-27135 *	US-PATENT-3,591,960	c 15	N72-12409 *
US-PATENT-3,550,585	c 05	N71-24738 *	US-PATENT-3,571,662	c 09	N71-27001 *	US-PATENT-3,591,967	c 28	N72-11709 *
US-PATENT-3,551,266	c 33	N71-24858 *	US-PATENT-3,571,693	c 10	N71-27366 *	US-PATENT-3,592,422	c 15	N72-11391 *
US-PATENT-3,551,816	c 07	N71-24613 *	US-PATENT-3,571,699	c 09	N71-27364 *	US-PATENT-3,592,478	c 09	N72-11224 *
US-PATENT-3,551,831	c 33	N75-27251 *	US-PATENT-3,571,700	c 09	N71-27053 *	US-PATENT-3,592,505	c 05	N72-11085 *
US-PATENT-3,552,124	c 28	N71-26642 *	US-PATENT-3,571,707	c 14	N71-27325 *	US-PATENT-3,592,545	c 14	N72-11364 *
US-PATENT-3,552,125	c 28	N71-26173 *	US-PATENT-3,571,800	c 10	N71-27338 *	US-PATENT-3,592,559	c 02	N72-11018 *
US-PATENT-3,553,002	c 18	N71-26100 *	US-PATENT-3,571,801	c 10	N71-27272 *	US-PATENT-3,592,628	c 15	N72-11387 *
US-PATENT-3,553,586	c 07	N71-26292 *	US-PATENT-3,572,089	c 08	N71-27255 *	US-PATENT-3,592,768	c 15	N72-11389 *
US-PATENT-3,553,704	c 10	N71-26142 *	US-PATENT-3,572,104	c 14	N71-27185 *	US-PATENT-3,593,001	c 15	N72-11392 *
US-PATENT-3,553,904	c 15	N71-26134 *	US-PATENT-3,572,112	c 28	N71-27094 *	US-PATENT-3,593,024	c 24	N72-11595 *
US-PATENT-3,554,466	c 31	N71-26537 *	US-PATENT-3,572,610	c 15	N71-27006 *	US-PATENT-3,593,132	c 09	N72-11225 *
US-PATENT-3,554,647	c 23	N71-26206 *	US-PATENT-3,572,935	c 28	N71-27095 *	US-PATENT-3,593,138	c 07	N72-11149 *
US-PATENT-3,554,806	c 03	N71-26084 *	US-PATENT-3,572,938	c 14	N71-27215 *	US-PATENT-3,593,175	c 10	N72-11256 *
US-PATENT-3,555,192	c 07	N71-26181 *	US-PATENT-3,573,078	c 27	N82-29451 *	US-PATENT-3,593,180	c 07	N72-11150 *
US-PATENT-3,555,361	c 10	N71-26531 *	US-PATENT-3,573,470	c 74	N78-33913 *	US-PATENT-3,593,194	c 16	N72-12440 *
US-PATENT-3,555,455	c 23	N71-26722 *	US-PATENT-3,573,504	c 33	N78-17294 *	US-PATENT-3,594,790	c 07	N72-12080 *
US-PATENT-3,555,483	c 35	N77-21393 *	US-PATENT-3,573,583	c 09	N71-28886 *	US-PATENT-3,594,803	c 09	N72-12136 *
US-PATENT-3,555,867	c 15	N71-26148 *	US-PATENT-3,573,797	c 08	N71-27057 *	US-PATENT-3,596,465	c 28	N72-11708 *
US-PATENT-3,555,898	c 12	N71-26546 *	US-PATENT-3,573,977	c 15	N71-28582 *	US-PATENT-3,596,510	c 14	N72-11363 *
US-PATENT-3,556,048	c 09	N71-26701 *	US-PATENT-3,573,986	c 03	N71-28579 *	US-PATENT-3,596,554	c 15	N72-11385 *
US-PATENT-3,556,634	c 07	N71-26291 *	US-PATENT-3,573,996	c 18	N71-29040 *	US-PATENT-3,596,863	c 15	N72-11386 *
US-PATENT-3,557,027	c 06	N71-25929 *	US-PATENT-3,574,057	c 22	N71-28759 *	US-PATENT-3,597,281	c 03	N72-11062 *
US-PATENT-3,557,534	c 15	N71-26185 *	US-PATENT-3,574,084	c 14	N71-28933 *	US-PATENT-3,598,921	c 08	N72-11171 *
US-PATENT-3,559,031	c 10	N71-26085 *	US-PATENT-3,574,277	c 15	N71-28467 *	US-PATENT-3,599,216	c 07	N72-11148 *
US-PATENT-3,559,096	c 10	N71-25882 *	US-PATENT-3,574,286	c 11	N71-27036 *	US-PATENT-3,599,335	c 08	N72-11172 *
US-PATENT-3,559,460	c 14	N71-26672 *	US-PATENT-3,574,438	c 07	N71-29065 *	US-PATENT-3,599,443	c 05	N72-11084 *
US-PATENT-3,559,937	c 14	N71-26627 *	US-PATENT-3,574,448	c 23	N71-29123 *	US-PATENT-3,599,489	c 14	N72-11365 *
US-PATENT-3,560,081	c 19	N71-26674 *	US-PATENT-3,574,462	c 14	N71-29041 *	US-PATENT-3,600,046	c 15	N72-11388 *
US-PATENT-3,560,161	c 06	N71-26754 *	US-PATENT-3,574,467	c 23	N71-29125 *	US-PATENT-3,600,599	c 33	N78-17296 *
US-PATENT-3,561,828	c 15	N71-26189 *	US-PATENT-3,574,470	c 14	N71-28993 *	US-PATENT-3,602,920	c 11	N72-17183 *
US-PATENT-3,562,575	c 09	N71-26182 *	US-PATENT-3,574,770	c 06	N71-27254 *	US-PATENT-3,602,923	c 05	N72-22093 *
US-PATENT-3,562,631	c 14	N71-26137 *	US-PATENT-3,575,336	c 15	N71-27214 *	US-PATENT-3,602,979	c 15	N72-22492 *
US-PATENT-3,562,857	c 15	N71-26721 *	US-PATENT-3,575,585	c 14	N71-27058 *	US-PATENT-3,602,984	c 26	N72-17820 *
US-PATENT-3,562,881	c 09	N71-26678 *	US-PATENT-3,575,597	c 14	N71-27090 *	US-PATENT-3,603,092	c 28	N72-18743 *
US-PATENT-3,562,919	c 15	N71-26145 *	US-PATENT-3,575,602	c 16	N71-27183 *	US-PATENT-3,603,093	c 28	N72-17866 *
US-PATENT-3,563,135	c 15	N71-27147 *	US-PATENT-3,575,638	c 09	N71-26133 *	US-PATENT-3,603,260	c 33	N72-17947 *
US-PATENT-3,563,198	c 18	N71-26285 *	US-PATENT-3,575,641	c 10	N71-26334 *	US-PATENT-3,603,285	c 25	N75-29192 *
US-PATENT-3,563,232	c 05	N71-27234 *	US-PATENT-3,576,107	c 28	N71-26781 *	US-PATENT-3,603,382	c 33	N72-17948 *
US-PATENT-3,563,307	c 15	N71-26611 *	US-PATENT-3,576,127	c 14	N71-26161 *	US-PATENT-3,603,433	c 15	N72-17450 *
US-PATENT-3,563,668	c 14	N71-26788 *	US-PATENT-3,576,135	c 15	N71-26635 *	US-PATENT-3,603,532	c 30	N72-17873 *
US-PATENT-3,563,727	c 15	N71-27184 *	US-PATENT-3,576,301	c 02	N71-26110 *	US-PATENT-3,603,683	c 14	N72-17326 *
US-PATENT-3,563,918	c 06	N71-27363 *	US-PATENT-3,576,656	c 18	N71-26772 *	US-PATENT-3,603,686	c 16	N72-13437 *
US-PATENT-3,564,234	c 09	N71-26787 *	US-PATENT-3,576,669	c 15	N71-29032 *	US-PATENT-3,603,690	c 14	N72-17323 *
US-PATENT-3,564,401	c 14	N71-26135 *	US-PATENT-3,576,723	c 09	N71-28691 *	US-PATENT-3,603,722	c 07	N72-17109 *
US-PATENT-3,564,420	c 14	N71-26774 *	US-PATENT-3,576,786	c 06	N71-28620 *	US-PATENT-3,603,772	c 08	N72-22166 *
US-PATENT-3,564,564	c 15	N71-26162 *	US-PATENT-3,577,014	c 10	N71-28860 *	US-PATENT-3,603,798	c 09	N72-17152 *
US-PATENT-3,564,866	c 23	N71-26654 *	US-PATENT-3,577,092	c 07	N71-28430 *	US-PATENT-3,603,864	c 09	N72-17154 *
US-PATENT-3,564,906	c 32	N71-26681 *	US-PATENT-3,577,356	c 06	N73-30102 *	US-PATENT-3,603,892	c 09	N72-17155 *
US-PATENT-3,565,530	c 15	N71-26673 *	US-PATENT-3,578,755	c 14	N71-29134 *	US-PATENT-3,603,896	c 09	N72-17153 *
US-PATENT-3,565,584	c 15	N71-27372 *	US-PATENT-3,578,756	c 11	N71-28629 *	US-PATENT-3,603,974	c 14	N72-18411 *
US-PATENT-3,565,607	c 17	N71-26773 *	US-PATENT-3,578,758	c 14	N71-28992 *	US-PATENT-3,603,976	c 08	N72-18184 *
US-PATENT-3,565,719	c 03	N71-26726 *	US-PATENT-3,578,838	c 16	N71-29131 *	US-PATENT-3,605,032	c 10	N72-17172 *
US-PATENT-3,566,027	c 07	N71-27341 *	US-PATENT-3,578,867	c 14	N71-28994 *	US-PATENT-3,605,424	c 15	N72-17453 *
US-PATENT-3,566,045	c 08	N71-27210 *	US-PATENT-3,578,957	c 08	N71-29033 *	US-PATENT-3,605,482	c 14	N72-16282 *
US-PATENT-3,566,122	c 14	N71-27323 *	US-PATENT-3,578,988	c 09	N71-29139 *	US-PATENT-3,605,495	c 14	N72-17327 *
US-PATENT-3,566,143	c 14	N71-27407 *	US-PATENT-3,578,992	c 09	N71-28421 *	US-PATENT-3,605,519	c 14	N72-17324 *
US-PATENT-3,566,158	c 10	N71-27126 *	US-PATENT-3,579,041	c 09	N71-29008 *	US-PATENT-3,606,212	c 31	N72-18859 *
US-PATENT-3,566,268	c 10	N71-26577 *	US-PATENT-3,579,103	c 14	N71-29091 *	US-PATENT-3,606,470	c 46	N74-23068 *
US-PATENT-3,566,396	c 10	N71-26544 *	US-PATENT-3,579,122	c 08	N71-29034 *	US-PATENT-3,606,522	c 23	N72-23695 *
US-PATENT-3,566,459	c 14	N71-27334 *	US-PATENT-3,579,146	c 08	N71-29138 *	US-PATENT-3,606,979	c 15	N72-17454 *
US-PATENT-3,566,676	c 14	N71-26199 *	US-PATENT-3,579,147	c 07	N71-28429 *	US-PATENT-3,607,015	c 06	N72-17093 *
US-PATENT-3,566,993	c 15	N71-27169 *	US-PATENT-3,579,168	c 09	N71-29035 *	US-PATENT-3,607,076	c 06	N72-17094 *
US-PATENT-3,567,155	c 21	N71-27324 *	US-PATENT-3,579,242	c 07	N71-28980 *	US-PATENT-3,607,080	c 06	N72-17095 *
US-PATENT-3,567,339	c 15	N71-27084 *	US-PATENT-3,579,390	c 18	N71-28729 *	US-PATENT-3,607,338	c 18	N72-17532 *
US-PATENT-3,567,651	c 18	N71-27170 *	US-PATENT-3,579,412	c 17	N71-28747 *	US-PATENT-3,607,401	c 03	N72-15986 *
US-PATENT-3,567,677	c 18	N71-25881 *	US-PATENT-3,581,492	c 28	N71-28915 *	US-PATENT-3,607,495	c 15	N72-16330 *
US-PATENT-3,567,861	c 10	N71-25865 *	US-PATENT-3,582,828	c 33	N77-21314 *	US-PATENT-3,608,046	c 15	N72-16329 *
US-PATENT-3,567,913	c 10	N71-27137 *	US-PATENT-3,582,960	c 09	N71-28618 *	US-PATENT-3,608,365	c 15	N72-17452 *
US-PATENT-3,567,927	c 14	N71-28863 *	US-PATENT-3,583,058	c 15	N71-29018 *	US-PATENT-3,608,409	c 14	N72-16283 *
US-PATENT-3,568,010	c 09	N71-27232 *	US-PATENT-3,583,239	c 15	N71-29132 *	US-PATENT-3,608,844	c 15	N72-18477 *
US-PATENT-3,568,028	c 10	N71-27136 *	US-PATENT-3,583,322	c 05	N71-28619 *	US-PATENT-3,609,230	c 09	N72-17156 *
US-PATENT-3,568,103	c 10	N71-25900 *	US-PATENT-3,583,419	c 12	N71-28741 *	US-PATENT-3,609,271	c 09	N72-22204 *
US-PATENT-3,568,197	c 07	N71-27056 *	US-PATENT-3,583,744	c 15	N71-29133 *	US-PATENT-3,609,327	c 08	N72-22167 *
US-PATENT-3,568,447	c 15	N71-27432 *	US-PATENT-3,583,777	c 15	N71-28465 *	US-PATENT-3,609,353	c 14	N72-17328 *
US-PATENT-3,568,472	c 15	N71-27754 *	US-PATENT-3,583,815	c 15	N71-28740 *	US-PATENT-3,609,364	c 10	N72-17173 *
US-PATENT-3,568,572	c 10	N71-25899 *	US-PATENT-3,584,311	c 09	N71-28468 *	US-PATENT-3,609,387	c 09	N72-17157 *
US-PATENT-3,568,748	c 15	N71-27091 *	US-PATENT-3,584,660	c 15	N72-12408 *	US-PATENT-3,609,535	c 14	N72-17325 *
US-PATENT-3,568,795	c 15	N71-27067 *	US-PATENT-3,585,514	c 10	N71-33129 *	US-PATENT-3,609,567	c 10	N72-17171 *
US-PATENT-3,568,805	c 15	N71-27146 *	US-PATENT-3,585,882	c 15	N71-33518 *	US-PATENT-3,609,740	c 05	N72-16015 *
US-PATENT-3,568,874	c 15	N71-27068 *	US-PATENT-3,586,261	c 31	N71-33160 *	US-PATENT-3,610,365	c 15	N72-17451 *
US-PATENT-3,568,885	c 14	N71-27005 *	US-PATENT-3,587,306	c 11	N71-33612 *	US-PATENT-3,611,274	c 15	N72-17455 *
US-PATENT-3,569,710	c 14	N71-25901 *	US-PATENT-3,587,424	c 16	N71-33410 *	US-PATENT-3,611,330	c 23	N72-17747 *
US-PATENT-3,569,744	c 09	N71-27016 *	US-PATENT-3,588,220	c 23	N71-33229 *	US-PATENT-3,611,798	c 14	N72-22437 *

## US-PATENT-3,611,801

## REPORT NUMBER INDEX

US-PATENT-3,611,801	c 14	N72-17329 *	US-PATENT-3,632,242	c 15	N72-20446 *	US-PATENT-3,663,938	c 03	N72-25020 *
US-PATENT-3,612,030	c 46	N74-23069 *	US-PATENT-3,632,923	c 09	N72-20199 *	US-PATENT-3,663,940	c 09	N72-25252 *
US-PATENT-3,612,391	c 11	N72-22245 *	US-PATENT-3,632,996	c 08	N72-20176 *	US-PATENT-3,663,941	c 09	N72-25253 *
US-PATENT-3,612,442	c 28	N72-22769 *	US-PATENT-3,633,048	c 10	N72-20221 *	US-PATENT-3,663,944	c 09	N72-25254 *
US-PATENT-3,612,645	c 14	N72-22441 *	US-PATENT-3,633,110	c 07	N72-20141 *	US-PATENT-3,664,185	c 15	N72-26371 *
US-PATENT-3,612,743	c 09	N72-22198 *	US-PATENT-3,634,383	c 27	N72-22710 *	US-PATENT-3,664,874	c 09	N72-25259 *
US-PATENT-3,612,895	c 09	N72-22197 *	US-PATENT-3,635,216	c 05	N72-20096 *	US-PATENT-3,665,064	c 05	N72-25120 *
US-PATENT-3,613,110	c 08	N72-21199 *	US-PATENT-3,635,537	c 33	N80-14330 *	US-PATENT-3,665,307	c 15	N72-25457 *
US-PATENT-3,613,111	c 08	N72-21200 *	US-PATENT-3,635,765	c 03	N72-20034 *	US-PATENT-3,665,313	c 07	N72-25173 *
US-PATENT-3,613,370	c 28	N72-22770 *	US-PATENT-3,636,539	c 03	N72-20031 *	US-PATENT-3,665,417	c 07	N72-25172 *
US-PATENT-3,613,454	c 35	N77-27368 *	US-PATENT-3,636,564	c 05	N72-22092 *	US-PATENT-3,665,467	c 14	N72-28437 *
US-PATENT-3,613,457	c 15	N72-22482 *	US-PATENT-3,636,623	c 15	N72-20444 *	US-PATENT-3,665,481	c 07	N72-25174 *
US-PATENT-3,613,794	c 12	N72-21310 *	US-PATENT-3,636,711	c 28	N72-20758 *	US-PATENT-3,665,589	c 09	N72-25261 *
US-PATENT-3,614,228	c 14	N72-21409 *	US-PATENT-3,636,966	c 05	N72-20097 *	US-PATENT-3,665,669	c 15	N72-25454 *
US-PATENT-3,614,327	c 08	N72-22162 *	US-PATENT-3,637,051	c 15	N72-20443 *	US-PATENT-3,665,670	c 11	N72-25287 *
US-PATENT-3,614,343	c 07	N72-21119 *	US-PATENT-3,637,170	c 21	N72-21624 *	US-PATENT-3,665,750	c 33	N72-25913 *
US-PATENT-3,614,431	c 14	N72-21408 *	US-PATENT-3,637,312	c 14	N72-20379 *	US-PATENT-3,665,751	c 32	N72-25877 *
US-PATENT-3,614,475	c 10	N72-16172 *	US-PATENT-3,637,842	c 06	N72-20121 *	US-PATENT-3,665,758	c 11	N72-25288 *
US-PATENT-3,614,557	c 26	N72-21701 *	US-PATENT-3,638,002	c 08	N72-21197 *	US-PATENT-3,666,051	c 15	N72-25453 *
US-PATENT-3,614,587	c 09	N72-22196 *	US-PATENT-3,638,066	c 10	N72-20225 *	US-PATENT-3,666,120	c 03	N72-25021 *
US-PATENT-3,614,648	c 09	N72-21247 *	US-PATENT-3,638,103	c 09	N72-21243 *	US-PATENT-3,666,566	c 03	N72-26031 *
US-PATENT-3,614,772	c 08	N72-22163 *	US-PATENT-3,638,114	c 10	N72-20222 *	US-PATENT-3,666,631	c 14	N72-25413 *
US-PATENT-3,614,898	c 15	N72-21462 *	US-PATENT-3,638,224	c 09	N72-21244 *	US-PATENT-3,666,718	c 06	N72-25151 *
US-PATENT-3,614,899	c 09	N72-22195 *	US-PATENT-3,639,250	c 14	N72-22443 *	US-PATENT-3,666,741	c 06	N72-25150 *
US-PATENT-3,615,021	c 15	N72-22483 *	US-PATENT-3,639,510	c 06	N72-22107 *	US-PATENT-3,666,942	c 06	N72-25146 *
US-PATENT-3,615,241	c 15	N72-21465 *	US-PATENT-3,639,809	c 15	N72-22486 *	US-PATENT-3,667,010	c 26	N72-25679 *
US-PATENT-3,615,465	c 06	N72-21094 *	US-PATENT-3,639,835	c 14	N72-22442 *	US-PATENT-3,667,039	c 26	N72-25680 *
US-PATENT-3,615,853	c 03	N72-22042 *	US-PATENT-3,640,256	c 28	N72-22772 *	US-PATENT-3,667,044	c 07	N72-25171 *
US-PATENT-3,616,338	c 15	N72-21466 *	US-PATENT-3,641,470	c 35	N78-17359 *	US-PATENT-3,668,956	c 15	N72-27485 *
US-PATENT-3,616,528	c 03	N72-22041 *	US-PATENT-3,647,276	c 14	N72-22444 *	US-PATENT-3,669,110	c 05	N72-27103 *
US-PATENT-3,617,804	c 25	N72-24753 *	US-PATENT-3,647,529	c 27	N74-23125 *	US-PATENT-3,669,393	c 15	N72-27484 *
US-PATENT-3,619,896	c 15	N72-22487 *	US-PATENT-3,647,924	c 11	N72-23215 *	US-PATENT-3,670,937	c 23	N72-27728 *
US-PATENT-3,619,924	c 11	N72-22247 *	US-PATENT-3,648,043	c 09	N72-23173 *	US-PATENT-3,670,168	c 14	N72-27409 *
US-PATENT-3,620,018	c 28	N72-22771 *	US-PATENT-3,648,083	c 12	N72-25292 *	US-PATENT-3,670,202	c 14	N72-27411 *
US-PATENT-3,620,069	c 14	N72-22440 *	US-PATENT-3,648,152	c 03	N72-23048 *	US-PATENT-3,670,241	c 14	N72-27408 *
US-PATENT-3,620,076	c 11	N72-22246 *	US-PATENT-3,648,209	c 09	N72-27226 *	US-PATENT-3,670,290	c 09	N72-28225 *
US-PATENT-3,620,083	c 14	N72-22438 *	US-PATENT-3,648,250	c 09	N72-25248 *	US-PATENT-3,670,559	c 33	N72-27959 *
US-PATENT-3,620,095	c 15	N72-21463 *	US-PATENT-3,648,256	c 08	N72-25207 *	US-PATENT-3,670,563	c 14	N72-27412 *
US-PATENT-3,620,585	c 15	N72-22490 *	US-PATENT-3,648,275	c 08	N72-25206 *	US-PATENT-3,670,564	c 11	N72-27262 *
US-PATENT-3,620,595	c 14	N72-22445 *	US-PATENT-3,648,461	c 28	N72-23810 *	US-PATENT-3,670,890	c 05	N72-27102 *
US-PATENT-3,620,606	c 23	N72-22673 *	US-PATENT-3,648,516	c 35	N74-22095 *	US-PATENT-3,671,105	c 26	N72-27784 *
US-PATENT-3,620,718	c 17	N72-22535 *	US-PATENT-3,649,242	c 15	N72-25448 *	US-PATENT-3,671,329	c 14	N72-27410 *
US-PATENT-3,620,784	c 18	N72-23581 *	US-PATENT-3,649,353	c 26	N72-28762 *	US-PATENT-3,671,497	c 06	N72-27144 *
US-PATENT-3,620,791	c 18	N72-22566 *	US-PATENT-3,649,356	c 15	N72-25447 *	US-PATENT-3,671,798	c 10	N72-27246 *
US-PATENT-3,620,846	c 31	N72-22874 *	US-PATENT-3,649,462	c 11	N72-25284 *	US-PATENT-3,672,999	c 03	N72-27053 *
US-PATENT-3,621,130	c 08	N72-22164 *	US-PATENT-3,649,907	c 09	N72-23172 *	US-PATENT-3,673,424	c 09	N72-27227 *
US-PATENT-3,621,193	c 15	N72-23497 *	US-PATENT-3,649,921	c 05	N72-23085 *	US-PATENT-3,673,440	c 09	N72-27228 *
US-PATENT-3,621,194	c 15	N72-22491 *	US-PATENT-3,649,935	c 07	N72-25170 *	US-PATENT-3,675,332	c 14	N72-28436 *
US-PATENT-3,621,228	c 08	N72-22165 *	US-PATENT-3,650,095	c 14	N72-23457 *	US-PATENT-3,675,376	c 15	N72-28496 *
US-PATENT-3,621,277	c 10	N72-22236 *	US-PATENT-3,650,474	c 28	N72-23809 *	US-PATENT-3,675,712	c 03	N72-28025 *
US-PATENT-3,621,285	c 09	N72-22200 *	US-PATENT-3,651,008	c 27	N81-24258 *	US-PATENT-3,675,910	c 17	N72-28535 *
US-PATENT-3,621,287	c 09	N72-22201 *	US-PATENT-3,653,052	c 09	N72-25247 *	US-PATENT-3,675,935	c 15	N72-29488 *
US-PATENT-3,621,290	c 09	N72-22202 *	US-PATENT-3,653,882	c 18	N72-25539 *	US-PATENT-3,676,084	c 17	N72-28536 *
US-PATENT-3,621,294	c 09	N72-23171 *	US-PATENT-3,653,970	c 03	N72-24037 *	US-PATENT-3,676,754	c 14	N72-29464 *
US-PATENT-3,621,330	c 33	N77-21316 *	US-PATENT-3,654,036	c 03	N72-25019 *	US-PATENT-3,676,754	c 26	N72-28761 *
US-PATENT-3,621,362	c 09	N72-22203 *	US-PATENT-3,655,814	c 27	N81-15104 *	US-PATENT-3,676,772	c 10	N72-28240 *
US-PATENT-3,621,372	c 09	N72-25249 *	US-PATENT-3,656,313	c 23	N72-25619 *	US-PATENT-3,676,787	c 16	N72-28521 *
US-PATENT-3,621,406	c 09	N72-33204 *	US-PATENT-3,656,317	c 33	N72-25911 *	US-PATENT-3,676,809	c 09	N72-29172 *
US-PATENT-3,621,407	c 09	N72-21245 *	US-PATENT-3,656,352	c 14	N72-25411 *	US-PATENT-3,678,191	c 10	N72-31273 *
US-PATENT-3,621,565	c 09	N72-22199 *	US-PATENT-3,656,781	c 15	N72-25450 *	US-PATENT-3,678,654	c 06	N72-31140 *
US-PATENT-3,623,030	c 08	N72-21198 *	US-PATENT-3,657,190	c 23	N82-29358 *	US-PATENT-3,678,685	c 21	N72-31637 *
US-PATENT-3,623,094	c 10	N72-22235 *	US-PATENT-3,657,549	c 14	N72-25409 *	US-PATENT-3,678,771	c 37	N74-23070 *
US-PATENT-3,623,107	c 07	N72-21117 *	US-PATENT-3,657,644	c 14	N72-24477 *	US-PATENT-3,679,360	c 04	N72-33072 *
US-PATENT-3,623,114	c 07	N72-22127 *	US-PATENT-3,657,928	c 14	N72-25410 *	US-PATENT-3,679,899	c 06	N72-31141 *
US-PATENT-3,623,359	c 35	N77-27367 *	US-PATENT-3,658,295	c 15	N72-25451 *	US-PATENT-3,680,142	c 09	N72-31235 *
US-PATENT-3,623,360	c 14	N72-21405 *	US-PATENT-3,658,569	c 15	N72-25452 *	US-PATENT-3,680,144	c 07	N72-32169 *
US-PATENT-3,623,361	c 14	N72-21407 *	US-PATENT-3,658,608	c 27	N72-25699 *	US-PATENT-3,680,830	c 15	N72-31483 *
US-PATENT-3,623,394	c 15	N72-22488 *	US-PATENT-3,658,974	c 15	N72-24522 *	US-PATENT-3,681,581	c 08	N72-31226 *
US-PATENT-3,623,828	c 15	N72-22489 *	US-PATENT-3,659,043	c 14	N72-25412 *	US-PATENT-3,686,542	c 14	N72-31446 *
US-PATENT-3,623,861	c 17	N72-22530 *	US-PATENT-3,659,053	c 08	N72-25208 *	US-PATENT-3,690,291	c 15	N72-32487 *
US-PATENT-3,624,496	c 15	N72-21464 *	US-PATENT-3,659,148	c 09	N72-25250 *	US-PATENT-3,692,533	c 05	N72-33096 *
US-PATENT-3,624,598	c 21	N72-22619 *	US-PATENT-3,659,184	c 09	N72-25251 *	US-PATENT-3,693,002	c 25	N72-32688 *
US-PATENT-3,624,650	c 07	N72-21118 *	US-PATENT-3,659,225	c 16	N72-25485 *	US-PATENT-3,693,105	c 10	N72-33230 *
US-PATENT-3,624,659	c 09	N72-21246 *	US-PATENT-3,659,292	c 08	N72-25209 *	US-PATENT-3,693,346	c 15	N72-33477 *
US-PATENT-3,624,839	c 05	N72-20098 *	US-PATENT-3,660,240	c 06	N72-25149 *	US-PATENT-3,693,418	c 14	N72-33377 *
US-PATENT-3,625,018	c 15	N72-22484 *	US-PATENT-3,660,434	c 06	N72-25148 *	US-PATENT-3,694,041	c 15	N72-33476 *
US-PATENT-3,625,084	c 15	N72-22485 *	US-PATENT-3,660,704	c 15	N72-25456 *	US-PATENT-3,694,094	c 14	N72-32452 *
US-PATENT-3,625,766	c 03	N72-20032 *	US-PATENT-3,660,851	c 05	N72-25119 *	US-PATENT-3,694,313	c 24	N72-33681 *
US-PATENT-3,626,114	c 35	N79-16246 *	US-PATENT-3,662,337	c 08	N72-25210 *	US-PATENT-3,694,581	c 08	N72-33172 *
US-PATENT-3,626,189	c 14	N72-20381 *	US-PATENT-3,662,441	c 05	N72-25121 *	US-PATENT-3,694,655	c 25	N72-33696 *
US-PATENT-3,626,218	c 14	N72-22439 *	US-PATENT-3,662,547	c 15	N72-25455 *	US-PATENT-3,694,700	c 09	N72-33205 *
US-PATENT-3,626,298	c 07	N72-20140 *	US-PATENT-3,662,604	c 13	N72-25323 *	US-PATENT-3,694,753	c 07	N72-33146 *
US-PATENT-3,626,308	c 10	N72-20223 *	US-PATENT-3,662,661	c 31	N72-25842 *	US-PATENT-3,694,771	c 09	N73-15235 *
US-PATENT-3,626,828	c 14	N72-20380 *	US-PATENT-3,662,744	c 05	N72-25122 *	US-PATENT-3,695,101	c 11	N73-12264 *
US-PATENT-3,628,113	c 37	N77-27400 *	US-PATENT-3,662,973	c 21	N72-25595 *	US-PATENT-3,696,418	c 09	N73-12211 *
US-PATENT-3,629,068	c 22	N72-20597 *	US-PATENT-3,663,346	c 18	N72-25541 *	US-PATENT-3,696,833	c 11	N73-12265 *
US-PATENT-3,629,161	c 18	N72-22567 *	US-PATENT-3,663,347	c 18	N72-25540 *	US-PATENT-3,697,021	c 15	N73-12486 *
US-PATENT-3,630,276	c 33	N72-20915 *	US-PATENT-3,663,464	c 06	N72-25147 *	US-PATENT-3,697,630	c 15	N73-12489 *
US-PATENT-3,630,304	c 11	N72-20244 *	US-PATENT-3,663,521	c 06	N72-25152 *	US-PATENT-3,697,705	c 35	N77-21392 *
US-PATENT-3,630,627	c 03	N72-20033 *	US-PATENT-3,663,753	c 14	N72-25414 *	US-PATENT-3,697,733	c 08	N73-12176 *
US-PATENT-3,631,339	c 08	N72-20177 *	US-PATENT-3,663,828	c 09	N72-25262 *	US-PATENT-3,697,950	c 08	N73-12177 *
US-PATENT-3,631,351	c 10	N72-20224 *	US-PATENT-3,663,839	c 09	N72-25260 *	US-PATENT-3,697,968	c 21	N73-13644 *
US-PATENT-3,631,382	c 09	N72-20200 *	US-PATENT-3,663,843	c 09	N72-25255 *	US-PATENT-3,698,385	c 05	N73-13114 *
US-PATENT-3,631,737	c 15	N72-28495 *	US-PATENT-3,663,885	c 09	N72-25257 *	US-PATENT-3,698,412	c 14	N73-13418 *
US-PATENT-3,632,081	c 15	N72-20442 *	US-PATENT-3,663,886	c 09	N72-25258 *	US-PATENT-3,698,659	c 11	N73-13257 *
US-PATENT-3,632,140	c 15	N72-20445 *	US-PATENT-3,663,929	c 09	N72-25256 *	US-PATENT-3,698,667	c 02	N73-13008 *

## REPORT NUMBER INDEX

## US-PATENT-3,780,151

US-PATENT-3,698,848	c 15	N73-13464 *	US-PATENT-3,729,260	c 14	N73-25463 *	US-PATENT-3,751,733	c 05	N73-32013 *
US-PATENT-3,699,511	c 21	N73-13643 *	US-PATENT-3,729,343	c 14	N73-24472 *	US-PATENT-3,751,913	c 06	N73-30097 *
US-PATENT-3,699,645	c 14	N73-13417 *	US-PATENT-3,729,676	c 14	N73-24473 *	US-PATENT-3,751,980	c 14	N73-32326 *
US-PATENT-3,699,799	c 15	N73-13463 *	US-PATENT-3,729,736	c 07	N73-25161 *	US-PATENT-3,752,556	c 35	N74-17153 *
US-PATENT-3,699,807	c 14	N73-13416 *	US-PATENT-3,729,743	c 07	N73-24176 *	US-PATENT-3,752,559	c 14	N73-30393 *
US-PATENT-3,699,811	c 14	N73-13415 *	US-PATENT-3,729,935	c 28	N73-24784 *	US-PATENT-3,752,564	c 23	N73-30666 *
US-PATENT-3,700,005	c 15	N73-13462 *	US-PATENT-3,730,287	c 11	N73-26238 *	US-PATENT-3,752,665	c 18	N73-32437 *
US-PATENT-3,700,192	c 31	N73-13898 *	US-PATENT-3,730,891	c 18	N73-26572 *	US-PATENT-3,752,847	c 06	N73-30098 *
US-PATENT-3,700,193	c 30	N73-12884 *	US-PATENT-3,731,528	c 12	N73-25262 *	US-PATENT-3,752,986	c 14	N73-30392 *
US-PATENT-3,700,291	c 15	N73-12488 *	US-PATENT-3,731,531	c 14	N73-25460 *	US-PATENT-3,752,993	c 21	N73-30640 *
US-PATENT-3,700,334	c 14	N73-12446 *	US-PATENT-3,732,040	c 15	N73-24513 *	US-PATENT-3,752,996	c 91	N74-13130 *
US-PATENT-3,700,503	c 14	N73-12447 *	US-PATENT-3,732,158	c 17	N73-24569 *	US-PATENT-3,753,148	c 09	N73-32111 *
US-PATENT-3,700,538	c 18	N73-12604 *	US-PATENT-3,732,397	c 33	N74-14935 *	US-PATENT-3,754,236	c 08	N73-32081 *
US-PATENT-3,700,575	c 15	N73-12487 *	US-PATENT-3,732,405	c 10	N73-25240 *	US-PATENT-3,754,263	c 09	N73-32110 *
US-PATENT-3,700,603	c 14	N73-14428 *	US-PATENT-3,732,567	c 08	N73-26175 *	US-PATENT-3,754,978	c 15	N73-32360 *
US-PATENT-3,700,812	c 10	N73-12244 *	US-PATENT-3,733,550	c 14	N73-25461 *	US-PATENT-3,755,265	c 06	N73-33076 *
US-PATENT-3,700,868	c 09	N73-13209 *	US-PATENT-3,733,424	c 06	N73-26100 *	US-PATENT-3,755,283	c 06	N73-32023 *
US-PATENT-3,700,869	c 08	N73-12175 *	US-PATENT-3,733,463	c 32	N73-26910 *	US-PATENT-3,755,686	c 03	N73-31888 *
US-PATENT-3,700,893	c 14	N73-12444 *	US-PATENT-3,734,432	c 14	N73-26430 *	US-PATENT-3,756,920	c 05	N73-32011 *
US-PATENT-3,700,897	c 14	N73-12445 *	US-PATENT-3,735,206	c 02	N73-26004 *	US-PATENT-3,757,183	c 09	N73-32107 *
US-PATENT-3,700,961	c 23	N73-13660 *	US-PATENT-3,735,591	c 10	N73-25243 *	US-PATENT-3,757,476	c 31	N73-32749 *
US-PATENT-3,701,631	c 17	N73-12547 *	US-PATENT-3,736,453	c 25	N73-25760 *	US-PATENT-3,757,568	c 14	N73-32323 *
US-PATENT-3,701,894	c 07	N73-13149 *	US-PATENT-3,736,607	c 33	N77-22386 *	US-PATENT-3,758,112	c 14	N73-32322 *
US-PATENT-3,702,463	c 08	N73-13187 *	US-PATENT-3,736,764	c 02	N73-26006 *	US-PATENT-3,758,718	c 05	N73-32014 *
US-PATENT-3,702,520	c 32	N73-13921 *	US-PATENT-3,736,849	c 05	N73-26071 *	US-PATENT-3,758,718	c 10	N73-32143 *
US-PATENT-3,702,532	c 15	N73-13467 *	US-PATENT-3,736,938	c 14	N73-26431 *	US-PATENT-3,758,718	c 15	N73-32358 *
US-PATENT-3,702,536	c 28	N73-13773 *	US-PATENT-3,736,956	c 05	N73-27082 *	US-PATENT-3,758,718	c 14	N73-32317 *
US-PATENT-3,702,575	c 15	N73-13466 *	US-PATENT-3,737,117	c 15	N73-26472 *	US-PATENT-3,758,877	c 16	N73-32391 *
US-PATENT-3,702,688	c 31	N73-14854 *	US-PATENT-3,737,118	c 31	N73-26876 *	US-PATENT-3,759,152	c 14	N73-32319 *
US-PATENT-3,702,735	c 23	N73-13661 *	US-PATENT-3,737,121	c 15	N73-25513 *	US-PATENT-3,759,249	c 05	N73-32015 *
US-PATENT-3,702,762	c 06	N73-13129 *	US-PATENT-3,737,181	c 02	N73-26005 *	US-PATENT-3,759,443	c 28	N73-32606 *
US-PATENT-3,702,775	c 06	N73-13128 *	US-PATENT-3,737,217	c 33	N73-26958 *	US-PATENT-3,759,588	c 15	N73-32359 *
US-PATENT-3,702,791	c 15	N73-13465 *	US-PATENT-3,737,231	c 05	N73-26072 *	US-PATENT-3,759,672	c 14	N73-32320 *
US-PATENT-3,702,841	c 18	N73-13562 *	US-PATENT-3,737,237	c 07	N73-26119 *	US-PATENT-3,759,746	c 09	N73-32108 *
US-PATENT-3,702,898	c 10	N73-13235 *	US-PATENT-3,737,639	c 26	N73-26751 *	US-PATENT-3,759,747	c 44	N74-19692 *
US-PATENT-3,702,933	c 23	N73-13662 *	US-PATENT-3,737,676	c 10	N73-26230 *	US-PATENT-3,759,767	c 22	N73-32528 *
US-PATENT-3,702,951	c 09	N73-13208 *	US-PATENT-3,737,757	c 10	N73-26229 *	US-PATENT-3,760,239	c 09	N73-32112 *
US-PATENT-3,702,972	c 16	N73-13489 *	US-PATENT-3,737,762	c 10	N73-26228 *	US-PATENT-3,760,248	c 10	N73-32145 *
US-PATENT-3,702,979	c 14	N73-13420 *	US-PATENT-3,737,776	c 14	N73-26986 *	US-PATENT-3,760,257	c 09	N73-32109 *
US-PATENT-3,704,284	c 74	N81-19898 *	US-PATENT-3,737,781	c 07	N73-26118 *	US-PATENT-3,760,268	c 14	N73-32318 *
US-PATENT-3,704,659	c 14	N73-14427 *	US-PATENT-3,737,815	c 10	N73-25241 *	US-PATENT-3,760,394	c 10	N73-32144 *
US-PATENT-3,705,255	c 15	N73-14469 *	US-PATENT-3,737,824	c 09	N73-26195 *	US-PATENT-3,762,884	c 17	N73-32414 *
US-PATENT-3,705,258	c 15	N73-14468 *	US-PATENT-3,737,905	c 26	N73-26752 *	US-PATENT-3,762,918	c 17	N73-32415 *
US-PATENT-3,705,316	c 09	N73-14214 *	US-PATENT-3,737,912	c 14	N73-26432 *	US-PATENT-3,763,204	c 06	N73-32030 *
US-PATENT-3,705,406	c 07	N73-14130 *	US-PATENT-3,737,912	c 07	N73-26117 *	US-PATENT-3,763,552	c 26	N73-32571 *
US-PATENT-3,706,221	c 14	N73-14429 *	US-PATENT-3,739,646	c 04	N76-26175 *	US-PATENT-3,763,691	c 14	N73-32327 *
US-PATENT-3,706,230	c 31	N73-14855 *	US-PATENT-3,740,671	c 10	N73-27171 *	US-PATENT-3,763,708	c 35	N74-18323 *
US-PATENT-3,706,281	c 31	N73-14853 *	US-PATENT-3,740,725	c 08	N73-26176 *	US-PATENT-3,763,740	c 11	N73-32152 *
US-PATENT-3,706,583	c 18	N73-14584 *	US-PATENT-3,741,001	c 14	N73-27376 *	US-PATENT-3,763,928	c 33	N73-32818 *
US-PATENT-3,706,970	c 21	N73-14692 *	US-PATENT-3,742,316	c 09	N73-27150 *	US-PATENT-3,764,097	c 02	N74-10034 *
US-PATENT-3,708,359	c 27	N73-16764 *	US-PATENT-3,744,128	c 09	N73-28083 *	US-PATENT-3,764,209	c 14	N73-33361 *
US-PATENT-3,708,419	c 33	N73-16918 *	US-PATENT-3,744,148	c 14	N73-28489 *	US-PATENT-3,764,220	c 16	N73-33397 *
US-PATENT-3,708,671	c 14	N73-16483 *	US-PATENT-3,744,247	c 28	N73-27699 *	US-PATENT-3,764,790	c 33	N74-10223 *
US-PATENT-3,708,674	c 14	N73-16484 *	US-PATENT-3,744,294	c 14	N73-27379 *	US-PATENT-3,764,850	c 33	N74-10195 *
US-PATENT-3,709,663	c 06	N73-16106 *	US-PATENT-3,744,305	c 12	N73-28144 *	US-PATENT-3,764,933	c 33	N74-10194 *
US-PATENT-3,710,122	c 16	N73-16536 *	US-PATENT-3,744,320	c 14	N73-28487 *	US-PATENT-3,765,229	c 35	N74-10415 *
US-PATENT-3,710,257	c 07	N73-16121 *	US-PATENT-3,744,480	c 05	N73-27941 *	US-PATENT-3,765,958	c 26	N74-10521 *
US-PATENT-3,710,261	c 10	N73-16205 *	US-PATENT-3,744,510	c 15	N73-27406 *	US-PATENT-3,766,315	c 32	N74-10132 *
US-PATENT-3,710,329	c 10	N73-16206 *	US-PATENT-3,744,738	c 14	N73-27378 *	US-PATENT-3,766,380	c 35	N74-11284 *
US-PATENT-3,711,042	c 02	N73-19004 *	US-PATENT-3,744,739	c 15	N77-10112 *	US-PATENT-3,767,212	c 37	N74-10474 *
US-PATENT-3,711,701	c 74	N77-21941 *	US-PATENT-3,744,794	c 14	N73-27377 *	US-PATENT-3,769,544	c 31	N78-17238 *
US-PATENT-3,712,120	c 14	N73-19421 *	US-PATENT-3,744,912	c 16	N73-30476 *	US-PATENT-3,769,623	c 32	N74-11000 *
US-PATENT-3,712,121	c 14	N73-19420 *	US-PATENT-3,744,913	c 14	N73-28490 *	US-PATENT-3,769,689	c 37	N74-11301 *
US-PATENT-3,712,132	c 14	N73-20478 *	US-PATENT-3,744,972	c 17	N73-27446 *	US-PATENT-3,769,834	c 52	N74-10975 *
US-PATENT-3,712,195	c 14	N73-19419 *	US-PATENT-3,745,082	c 18	N73-30532 *	US-PATENT-3,770,021	c 33	N74-11050 *
US-PATENT-3,712,591	c 15	N73-19458 *	US-PATENT-3,745,089	c 06	N73-27086 *	US-PATENT-3,770,903	c 35	N74-11283 *
US-PATENT-3,713,163	c 09	N73-19234 *	US-PATENT-3,745,090	c 04	N73-27052 *	US-PATENT-3,770,933	c 37	N74-11300 *
US-PATENT-3,713,290	c 28	N73-19793 *	US-PATENT-3,745,149	c 06	N73-27980 *	US-PATENT-3,771,037	c 08	N74-10942 *
US-PATENT-3,713,480	c 05	N73-20137 *	US-PATENT-3,745,255	c 07	N73-28012 *	US-PATENT-3,771,040	c 33	N74-11049 *
US-PATENT-3,713,987	c 15	N73-20514 *	US-PATENT-3,745,300	c 15	N73-28515 *	US-PATENT-3,771,074	c 36	N74-11313 *
US-PATENT-3,714,332	c 15	N73-19457 *	US-PATENT-3,745,352	c 08	N73-30135 *	US-PATENT-3,771,959	c 25	N74-12813 *
US-PATENT-3,714,405	c 10	N73-20253 *	US-PATENT-3,745,357	c 14	N73-28488 *	US-PATENT-3,772,174	c 27	N74-12812 *
US-PATENT-3,714,432	c 14	N73-20475 *	US-PATENT-3,745,410	c 09	N73-30181 *	US-PATENT-3,772,216	c 27	N74-12812 *
US-PATENT-3,714,526	c 09	N73-19235 *	US-PATENT-3,745,475	c 14	N73-30386 *	US-PATENT-3,772,220	c 27	N74-12814 *
US-PATENT-3,714,588	c 09	N73-20231 *	US-PATENT-3,745,739	c 15	N73-27405 *	US-PATENT-3,772,272	c 33	N74-12887 *
US-PATENT-3,714,645	c 14	N73-20474 *	US-PATENT-3,745,816	c 33	N73-27786 *	US-PATENT-3,772,418	c 31	N74-13177 *
US-PATENT-3,714,821	c 08	N73-20217 *	US-PATENT-3,746,998	c 07	N73-30113 *	US-PATENT-3,772,691	c 32	N74-12912 *
US-PATENT-3,714,833	c 14	N73-20476 *	US-PATENT-3,747,111	c 07	N73-28013 *	US-PATENT-3,773,038	c 52	N74-12778 *
US-PATENT-3,715,092	c 11	N73-20267 *	US-PATENT-3,748,722	c 15	N73-33383 *	US-PATENT-3,773,913	c 46	N74-13011 *
US-PATENT-3,715,092	c 03	N73-20039 *	US-PATENT-3,748,853	c 23	N73-30665 *	US-PATENT-3,775,101	c 37	N74-13179 *
US-PATENT-3,715,152	c 23	N73-20741 *	US-PATENT-3,748,905	c 14	N73-30395 *	US-PATENT-3,775,570	c 35	N78-29421 *
US-PATENT-3,715,590	c 14	N73-20477 *	US-PATENT-3,749,123	c 15	N73-30459 *	US-PATENT-3,776,028	c 35	N74-13129 *
US-PATENT-3,715,600	c 03	N73-20040 *	US-PATENT-3,749,156	c 31	N73-30829 *	US-PATENT-3,776,432	c 37	N74-13178 *
US-PATENT-3,715,660	c 07	N73-20175 *	US-PATENT-3,749,205	c 15	N73-30460 *	US-PATENT-3,776,455	c 04	N74-13420 *
US-PATENT-3,715,663	c 07	N73-20174 *	US-PATENT-3,749,332	c 31	N73-32750 *	US-PATENT-3,777,200	c 33	N74-12913 *
US-PATENT-3,715,693	c 09	N73-20232 *	US-PATENT-3,749,362	c 15	N73-30457 *	US-PATENT-3,777,490	c 20	N74-13502 *
US-PATENT-3,715,723	c 07	N73-20176 *	US-PATENT-3,749,831	c 07	N73-30115 *	US-PATENT-3,777,546	c 35	N74-13132 *
US-PATENT-3,715,915	c 32	N73-20740 *	US-PATENT-3,749,911	c 14	N73-30389 *	US-PATENT-3,777,552	c 38	N74-15130 *
US-PATENT-3,718,863	c 10	N73-20254 *	US-PATENT-3,750,016	c 14	N73-30388 *	US-PATENT-3,777,605	c 39	N74-13131 *
US-PATENT-3,719,891	c 07	N73-25160 *	US-PATENT-3,750,035	c 33	N77-13315 *	US-PATENT-3,777,811	c 34	N78-17336 *
US-PATENT-3,720,075	c 33	N73-25952 *	US-PATENT-3,750,067	c 09	N73-30185 *	US-PATENT-3,777,942	c 54	N74-12779 *
US-PATENT-3,720,208	c 05	N73-25125 *	US-PATENT-3,750,131	c 10	N73-30205 *	US-PATENT-3,778,685	c 33	N74-12951 *
US-PATENT-3,723,745	c 14	N73-25462 *	US-PATENT-3,750,168	c 21	N73-30641 *	US-PATENT-3,778,786	c 60	N74-12888 *
US-PATENT-3,728,861	c 28	N73-24783 *	US-PATENT-3,750,479	c 05	N73-30078 *	US-PATENT-3,778,791	c 36	N74-13205 *
US-PATENT-3,729,068	c 15	N73-25512 *	US-PATENT-3,751,123	c 15	N73-30458 *	US-PATENT-3,779,788	c 70	N74-13436 *
US-PATENT-3,729,129	c 08	N73-25206 *	US-PATENT-3,751,727	c 05	N73-32012 *	US-PATENT-3,780,151	c 31	N74-14133 *

## US-PATENT-3,780,424

## REPORT NUMBER INDEX

US-PATENT-3,780,424	c 44	N74-14784 *	US-PATENT-3,808,517	c 33	N74-22885 *	US-PATENT-3,847,208	c 34	N75-12222 *
US-PATENT-3,780,563	c 35	N74-15092 *	US-PATENT-3,809,481	c 35	N74-23040 *	US-PATENT-3,847,652	c 25	N75-12087 *
US-PATENT-3,780,827	c 07	N74-15453 *	US-PATENT-3,809,601	c 37	N74-23064 *	US-PATENT-3,847,689	c 74	N75-12732 *
US-PATENT-3,780,966	c 19	N74-15089 *	US-PATENT-3,809,800	c 33	N74-22885 *	US-PATENT-3,848,190	c 35	N75-12270 *
US-PATENT-3,781,111	c 36	N74-15145 *	US-PATENT-3,809,871	c 52	N74-22771 *	US-PATENT-3,849,554	c 52	N75-15270 *
US-PATENT-3,781,549	c 35	N74-15090 *	US-PATENT-3,810,829	c 31	N74-23065 *	US-PATENT-3,849,668	c 54	N75-12616 *
US-PATENT-3,781,562	c 35	N74-15091 *	US-PATENT-3,811,044	c 34	N74-23066 *	US-PATENT-3,849,720	c 33	N77-26387 *
US-PATENT-3,781,902	c 35	N74-15831 *	US-PATENT-3,811,094	c 33	N74-21851 *	US-PATENT-3,849,865	c 37	N75-13261 *
US-PATENT-3,781,933	c 54	N74-14845 *	US-PATENT-3,811,429	c 52	N74-27566 *	US-PATENT-3,849,875	c 35	N75-13213 *
US-PATENT-3,781,958	c 37	N74-15128 *	US-PATENT-3,811,901	c 27	N82-29454 *	US-PATENT-3,849,877	c 24	N75-13032 *
US-PATENT-3,782,177	c 38	N74-15395 *	US-PATENT-3,812,358	c 35	N74-26949 *	US-PATENT-3,850,169	c 54	N75-13531 *
US-PATENT-3,782,181	c 34	N74-15652 *	US-PATENT-3,812,783	c 28	N74-27425 *	US-PATENT-3,850,388	c 05	N75-12930 *
US-PATENT-3,782,205	c 35	N74-15094 *	US-PATENT-3,812,924	c 35	N74-26945 *	US-PATENT-3,850,567	c 31	N75-13111 *
US-PATENT-3,782,334	c 51	N74-15778 *	US-PATENT-3,812,936	c 37	N74-26976 *	US-PATENT-3,850,754	c 51	N75-13502 *
US-PATENT-3,782,698	c 35	N74-15093 *	US-PATENT-3,813,183	c 37	N74-25968 *	US-PATENT-3,851,162	c 60	N75-13539 *
US-PATENT-3,782,699	c 35	N74-15126 *	US-PATENT-3,813,875	c 15	N74-27360 *	US-PATENT-3,851,238	c 33	N75-13139 *
US-PATENT-3,782,737	c 37	N74-15125 *	US-PATENT-3,813,937	c 34	N74-27859 *	US-PATENT-3,851,250	c 15	N75-13007 *
US-PATENT-3,782,825	c 35	N74-15146 *	US-PATENT-3,814,083	c 52	N74-26626 *	US-PATENT-3,853,003	c 09	N75-12969 *
US-PATENT-3,782,835	c 74	N74-15095 *	US-PATENT-3,814,350	c 18	N74-27397 *	US-PATENT-3,853,075	c 09	N75-12968 *
US-PATENT-3,782,904	c 35	N74-15127 *	US-PATENT-3,814,645	c 24	N74-30001 *	US-PATENT-3,854,097	c 75	N75-13625 *
US-PATENT-3,783,250	c 62	N74-14920 *	US-PATENT-3,814,653	c 24	N74-27035 *	US-PATENT-3,854,113	c 37	N75-13265 *
US-PATENT-3,783,354	c 33	N74-14956 *	US-PATENT-3,814,678	c 25	N74-26948 *	US-PATENT-3,855,873	c 37	N75-13266 *
US-PATENT-3,783,399	c 33	N74-14939 *	US-PATENT-3,814,939	c 25	N74-26947 *	US-PATENT-3,856,042	c 37	N75-15050 *
US-PATENT-3,783,443	c 35	N74-16135 *	US-PATENT-3,815,048	c 33	N74-26732 *	US-PATENT-3,856,402	c 36	N75-15028 *
US-PATENT-3,784,499	c 27	N74-17283 *	US-PATENT-3,815,109	c 52	N74-26625 *	US-PATENT-3,856,471	c 25	N75-14844 *
US-PATENT-3,785,836	c 27	N82-29452 *	US-PATENT-3,815,205	c 33	N74-26977 *	US-PATENT-3,856,534	c 23	N75-14834 *
US-PATENT-3,787,959	c 37	N74-18128 *	US-PATENT-3,815,969	c 35	N74-26946 *	US-PATENT-3,857,031	c 35	N75-15014 *
US-PATENT-3,788,163	c 37	N74-18127 *	US-PATENT-3,816,657	c 32	N74-26654 *	US-PATENT-3,857,045	c 33	N75-14957 *
US-PATENT-3,789,654	c 25	N74-18551 *	US-PATENT-3,816,785	c 73	N74-26767 *	US-PATENT-3,859,119	c 36	N75-15029 *
US-PATENT-3,789,920	c 34	N74-18552 *	US-PATENT-3,817,082	c 34	N74-27730 *	US-PATENT-3,859,714	c 37	N75-15992 *
US-PATENT-3,789,947	c 37	N74-18125 *	US-PATENT-3,817,084	c 31	N74-27900 *	US-PATENT-3,859,714	c 24	N79-25143 *
US-PATENT-3,790,037	c 54	N74-17853 *	US-PATENT-3,817,622	c 75	N74-30156 *	US-PATENT-3,859,736	c 09	N75-15662 *
US-PATENT-3,790,347	c 37	N74-18123 *	US-PATENT-3,817,627	c 35	N74-27860 *	US-PATENT-3,859,840	c 35	N75-15932 *
US-PATENT-3,790,409	c 44	N74-19693 *	US-PATENT-3,818,325	c 44	N74-27519 *	US-PATENT-3,859,845	c 35	N75-15931 *
US-PATENT-3,790,432	c 37	N74-18126 *	US-PATENT-3,818,346	c 33	N74-27705 *	US-PATENT-3,860,342	c 35	N75-16783 *
US-PATENT-3,790,650	c 31	N74-18124 *	US-PATENT-3,818,767	c 35	N74-28097 *	US-PATENT-3,860,393	c 25	N76-18245 *
US-PATENT-3,790,795	c 35	N74-18088 *	US-PATENT-3,818,775	c 37	N74-27901 *	US-PATENT-3,860,858	c 33	N75-15874 *
US-PATENT-3,790,906	c 33	N74-17927 *	US-PATENT-3,818,814	c 31	N74-27902 *	US-PATENT-3,860,921	c 32	N75-15854 *
US-PATENT-3,791,207	c 09	N74-17955 *	US-PATENT-3,819,299	c 37	N74-27904 *	US-PATENT-3,860,946	c 33	N79-11314 *
US-PATENT-3,792,399	c 33	N74-17928 *	US-PATENT-3,819,419	c 34	N74-27861 *	US-PATENT-3,863,881	c 37	N75-18573 *
US-PATENT-3,793,109	c 31	N74-18089 *	US-PATENT-3,819,440	c 32	N74-27612 *	US-PATENT-3,864,060	c 35	N75-19611 *
US-PATENT-3,795,134	c 09	N74-19528 *	US-PATENT-3,819,550	c 27	N74-27037 *	US-PATENT-3,864,239	c 37	N75-19684 *
US-PATENT-3,795,448	c 72	N74-19310 *	US-PATENT-3,820,095	c 33	N74-27862 *	US-PATENT-3,864,542	c 37	N75-19683 *
US-PATENT-3,795,840	c 33	N74-17929 *	US-PATENT-3,820,286	c 37	N74-27905 *	US-PATENT-3,864,797	c 20	N75-18310 *
US-PATENT-3,795,858	c 35	N74-18090 *	US-PATENT-3,820,388	c 35	N74-27865 *	US-PATENT-3,864,953	c 35	N75-19615 *
US-PATENT-3,795,862	c 33	N74-17930 *	US-PATENT-3,820,529	c 52	N74-27864 *	US-PATENT-3,864,960	c 35	N75-19612 *
US-PATENT-3,795,900	c 35	N74-17685 *	US-PATENT-3,820,630	c 07	N74-27490 *	US-PATENT-3,865,442	c 37	N75-18574 *
US-PATENT-3,795,910	c 44	N74-19870 *	US-PATENT-3,820,741	c 37	N74-27903 *	US-PATENT-3,865,975	c 36	N75-19652 *
US-PATENT-3,796,473	c 37	N74-20063 *	US-PATENT-3,820,918	c 07	N74-28226 *	US-PATENT-3,866,022	c 33	N75-19519 *
US-PATENT-3,796,592	c 24	N74-19769 *	US-PATENT-3,821,102	c 34	N74-27744 *	US-PATENT-3,866,114	c 33	N75-18477 *
US-PATENT-3,797,098	c 37	N74-21057 *	US-PATENT-3,821,462	c 33	N74-27683 *	US-PATENT-3,866,128	c 33	N75-19515 *
US-PATENT-3,797,919	c 70	N74-21300 *	US-PATENT-3,821,546	c 33	N74-27682 *	US-PATENT-3,866,210	c 33	N75-19517 *
US-PATENT-3,798,741	c 31	N74-21059 *	US-PATENT-3,821,556	c 74	N74-27686 *	US-PATENT-3,866,233	c 33	N75-19516 *
US-PATENT-3,798,748	c 37	N74-21055 *	US-PATENT-3,824,767	c 09	N74-30597 *	US-PATENT-3,866,863	c 18	N75-19329 *
US-PATENT-3,798,778	c 19	N74-21015 *	US-PATENT-3,825,760	c 19	N74-29410 *	US-PATENT-3,867,677	c 33	N75-19524 *
US-PATENT-3,798,896	c 37	N74-21060 *	US-PATENT-3,826,448	c 08	N74-30421 *	US-PATENT-3,868,591	c 36	N75-19655 *
US-PATENT-3,799,149	c 52	N74-20728 *	US-PATENT-3,826,726	c 25	N74-30502 *	US-PATENT-3,868,830	c 77	N75-20139 *
US-PATENT-3,799,475	c 02	N74-20646 *	US-PATENT-3,826,729	c 20	N74-31269 *	US-PATENT-3,868,856	c 35	N75-19614 *
US-PATENT-3,799,793	c 74	N74-20008 *	US-PATENT-3,826,964	c 33	N74-29556 *	US-PATENT-3,869,151	c 37	N75-19686 *
US-PATENT-3,799,813	c 76	N74-20329 *	US-PATENT-3,827,288	c 71	N74-31148 *	US-PATENT-3,869,160	c 37	N75-19685 *
US-PATENT-3,800,074	c 36	N74-20009 *	US-PATENT-3,827,807	c 89	N74-30886 *	US-PATENT-3,869,210	c 36	N75-19653 *
US-PATENT-3,800,082	c 71	N74-21014 *	US-PATENT-3,828,137	c 32	N74-30524 *	US-PATENT-3,869,212	c 35	N75-19613 *
US-PATENT-3,800,224	c 32	N74-19790 *	US-PATENT-3,828,138	c 32	N74-30523 *	US-PATENT-3,869,597	c 77	N75-20140 *
US-PATENT-3,800,227	c 32	N74-20809 *	US-PATENT-3,828,524	c 34	N74-30608 *	US-PATENT-3,869,615	c 35	N75-19616 *
US-PATENT-3,800,237	c 32	N74-19788 *	US-PATENT-3,829,237	c 07	N74-31270 *	US-PATENT-3,869,624	c 33	N75-18479 *
US-PATENT-3,800,253	c 37	N74-21056 *	US-PATENT-3,829,839	c 60	N76-18800 *	US-PATENT-3,869,659	c 33	N75-19522 *
US-PATENT-3,801,617	c 37	N74-21058 *	US-PATENT-3,830,060	c 44	N74-33379 *	US-PATENT-3,869,667	c 33	N75-19517 *
US-PATENT-3,802,249	c 35	N74-21019 *	US-PATENT-3,830,094	c 35	N74-32879 *	US-PATENT-3,869,676	c 33	N75-19520 *
US-PATENT-3,802,253	c 52	N74-20726 *	US-PATENT-3,830,335	c 07	N74-32418 *	US-PATENT-3,869,680	c 36	N75-19654 *
US-PATENT-3,802,262	c 35	N74-21018 *	US-PATENT-3,830,431	c 07	N74-33218 *	US-PATENT-3,869,779	c 26	N75-19408 *
US-PATENT-3,802,660	c 37	N74-21065 *	US-PATENT-3,830,552	c 37	N74-32921 *	US-PATENT-3,872,395	c 33	N75-19518 *
US-PATENT-3,802,753	c 37	N74-21064 *	US-PATENT-3,830,609	c 31	N74-32920 *	US-PATENT-3,874,240	c 35	N75-25122 *
US-PATENT-3,802,779	c 74	N74-21304 *	US-PATENT-3,830,673	c 28	N74-33209 *	US-PATENT-3,874,635	c 37	N75-25185 *
US-PATENT-3,803,090	c 27	N74-21156 *	US-PATENT-3,831,098	c 33	N74-32711 *	US-PATENT-3,874,677	c 37	N75-21631 *
US-PATENT-3,803,393	c 60	N74-20836 *	US-PATENT-3,831,117	c 33	N74-32712 *	US-PATENT-3,875,332	c 32	N75-21486 *
US-PATENT-3,803,445	c 32	N74-20813 *	US-PATENT-3,831,142	c 32	N74-32598 *	US-PATENT-3,875,394	c 33	N75-26243 *
US-PATENT-3,803,617	c 32	N74-20863 *	US-PATENT-3,832,290	c 20	N74-32919 *	US-PATENT-3,875,404	c 35	N75-23910 *
US-PATENT-3,804,472	c 37	N74-21061 *	US-PATENT-3,832,735	c 54	N74-32546 *	US-PATENT-3,875,435	c 20	N75-24837 *
US-PATENT-3,804,506	c 33	N74-20861 *	US-PATENT-3,832,764	c 37	N74-32918 *	US-PATENT-3,875,500	c 35	N75-21582 *
US-PATENT-3,804,525	c 36	N74-21091 *	US-PATENT-3,832,781	c 35	N74-32877 *	US-PATENT-3,875,584	c 32	N75-21485 *
US-PATENT-3,804,703	c 37	N74-21063 *	US-PATENT-3,832,903	c 35	N74-32878 *	US-PATENT-3,877,833	c 37	N75-25186 *
US-PATENT-3,805,266	c 32	N74-20864 *	US-PATENT-3,833,322	c 31	N74-32917 *	US-PATENT-3,878,464	c 32	N75-24981 *
US-PATENT-3,805,303	c 54	N74-20725 *	US-PATENT-3,833,336	c 25	N74-33378 *	US-PATENT-3,881,132	c 33	N77-21315 *
US-PATENT-3,805,622	c 35	N74-21062 *	US-PATENT-3,833,857	c 33	N74-32660 *	US-PATENT-3,882,417	c 36	N78-17366 *
US-PATENT-3,806,756	c 33	N74-21850 *	US-PATENT-3,835,318	c 35	N74-34657 *	US-PATENT-3,882,530	c 76	N75-25730 *
US-PATENT-3,806,802	c 35	N74-21017 *	US-PATENT-3,837,285	c 85	N74-34672 *	US-PATENT-3,882,634	c 51	N75-25503 *
US-PATENT-3,806,815	c 32	N74-20811 *	US-PATENT-3,837,908	c 76	N79-16678 *	US-PATENT-3,882,719	c 14	N75-24794 *
US-PATENT-3,806,816	c 32	N74-20810 *	US-PATENT-3,840,829	c 33	N74-34638 *	US-PATENT-3,882,732	c 12	N75-24774 *
US-PATENT-3,806,831	c 33	N74-20862 *	US-PATENT-3,841,973	c 35	N75-12272 *	US-PATENT-3,882,846	c 05	N75-24716 *
US-PATENT-3,806,834	c 36	N76-18427 *	US-PATENT-3,842,485	c 37	N75-12326 *	US-PATENT-3,883,095	c 07	N75-24736 *
US-PATENT-3,806,835	c 33	N74-20859 *	US-PATENT-3,842,509	c 35	N75-12273 *	US-PATENT-3,883,215	c 35	N75-25124 *
US-PATENT-3,806,932	c 33	N74-20860 *	US-PATENT-3,842,656	c 76	N75-12810 *	US-PATENT-3,883,436	c 74	N75-25706 *
US-PATENT-3,807,384	c 34	N74-23039 *	US-PATENT-3,845,466	c 74	N81-19896 *	US-PATENT-3,883,689	c 35	N75-25123 *
US-PATENT-3,807,656	c 18	N74-22136 *	US-PATENT-3,846,243	c 25	N75-12086 *	US-PATENT-3,883,785	c 09	N75-24758 *
US-PATENT-3,808,464	c 33	N74-22814 *	US-PATENT-3,847,115	c 31	N75-12161 *	US-PATENT-3,883,812	c 33	N75-25041 *
US-PATENT-3,808,511	c 33	N74-22864 *	US-PATENT-3,847,141	c 35	N75-12271 *	US-PATENT-3,883,817	c 33	N75-25040 *



US-PATENT-3,883,872	c 32	N75-24982 *	US-PATENT-3,924,137	c 72	N76-15860 *	US-PATENT-3,958,238	c 60	N76-23850 *
US-PATENT-3,884,432	c 05	N75-25914 *	US-PATENT-3,924,164	c 33	N76-15373 *	US-PATENT-3,958,553	c 44	N76-24696 *
US-PATENT-3,884,765	c 35	N75-27330 *	US-PATENT-3,924,176	c 35	N76-16390 *	US-PATENT-3,961,997	c 44	N76-28635 *
US-PATENT-3,887,233	c 05	N75-25915 *	US-PATENT-3,924,183	c 33	N76-16331 *	US-PATENT-3,964,306	c 34	N76-27517 *
US-PATENT-3,887,345	c 35	N75-26334 *	US-PATENT-3,924,200	c 35	N76-15436 *	US-PATENT-3,964,319	c 07	N76-27232 *
US-PATENT-3,887,365	c 37	N75-26371 *	US-PATENT-3,924,237	c 32	N76-15330 *	US-PATENT-3,964,813	c 37	N76-27567 *
US-PATENT-3,888,362	c 34	N75-27758 *	US-PATENT-3,924,239	c 35	N76-15435 *	US-PATENT-3,964,902	c 34	N76-27515 *
US-PATENT-3,888,410	c 34	N75-26282 *	US-PATENT-3,924,267	c 35	N76-16391 *	US-PATENT-3,964,928	c 44	N76-27654 *
US-PATENT-3,888,561	c 35	N75-27328 *	US-PATENT-3,924,444	c 35	N76-15432 *	US-PATENT-3,965,096	c 27	N76-32315 *
US-PATENT-3,888,705	c 25	N75-26043 *	US-PATENT-3,925,104	c 35	N76-15434 *	US-PATENT-3,965,354	c 33	N76-27473 *
US-PATENT-3,889,064	c 32	N75-26195 *	US-PATENT-3,925,312	c 23	N76-15268 *	US-PATENT-3,965,475	c 33	N76-27472 *
US-PATENT-3,889,122	c 37	N75-26372 *	US-PATENT-3,926,482	c 37	N76-15461 *	US-PATENT-3,966,499	c 44	N76-31666 *
US-PATENT-3,889,155	c 33	N75-26244 *	US-PATENT-3,926,567	c 27	N76-15311 *	US-PATENT-3,966,547	c 25	N76-27383 *
US-PATENT-3,889,185	c 33	N75-26245 *	US-PATENT-3,927,227	c 12	N76-15189 *	US-PATENT-3,967,091	c 37	N76-27568 *
US-PATENT-3,889,182	c 33	N75-26246 *	US-PATENT-3,927,324	c 35	N76-15433 *	US-PATENT-3,971,230	c 37	N76-29590 *
US-PATENT-3,889,264	c 32	N75-26194 *	US-PATENT-3,927,408	c 32	N76-15329 *	US-PATENT-3,971,256	c 91	N76-30131 *
US-PATENT-3,891,311	c 54	N75-27759 *	US-PATENT-3,928,708	c 27	N76-16230 *	US-PATENT-3,971,362	c 52	N76-29894 *
US-PATENT-3,891,452	c 27	N75-27160 *	US-PATENT-3,929,119	c 75	N76-17951 *	US-PATENT-3,971,363	c 52	N76-29895 *
US-PATENT-3,891,533	c 33	N75-27252 *	US-PATENT-3,929,305	c 34	N76-17317 *	US-PATENT-3,971,364	c 52	N76-29896 *
US-PATENT-3,891,848	c 45	N75-27585 *	US-PATENT-3,929,306	c 18	N76-17185 *	US-PATENT-3,971,535	c 05	N76-29217 *
US-PATENT-3,891,851	c 35	N75-27331 *	US-PATENT-3,929,364	c 35	N76-16392 *	US-PATENT-3,971,602	c 37	N76-29588 *
US-PATENT-3,893,449	c 54	N75-27760 *	US-PATENT-3,930,628	c 02	N76-16014 *	US-PATENT-3,971,697	c 25	N76-29379 *
US-PATENT-3,893,458	c 54	N75-27761 *	US-PATENT-3,930,735	c 66	N76-19888 *	US-PATENT-3,971,703	c 51	N76-29891 *
US-PATENT-3,893,573	c 18	N75-27041 *	US-PATENT-3,931,132	c 27	N76-16228 *	US-PATENT-3,971,847	c 44	N76-29704 *
US-PATENT-3,894,289	c 36	N75-27364 *	US-PATENT-3,931,447	c 27	N76-16229 *	US-PATENT-3,971,915	c 35	N76-29552 *
US-PATENT-3,894,677	c 24	N75-28135 *	US-PATENT-3,931,456	c 33	N76-16332 *	US-PATENT-3,971,930	c 74	N76-30053 *
US-PATENT-3,894,887	c 44	N76-18641 *	US-PATENT-3,931,462	c 45	N76-17656 *	US-PATENT-3,971,940	c 35	N76-29551 *
US-PATENT-3,895,521	c 35	N75-29381 *	US-PATENT-3,931,516	c 35	N76-16393 *	US-PATENT-3,972,008	c 36	N76-29575 *
US-PATENT-3,895,912	c 35	N75-29380 *	US-PATENT-3,931,532	c 44	N76-16612 *	US-PATENT-3,972,038	c 17	N76-29347 *
US-PATENT-3,896,758	c 35	N75-33367 *	US-PATENT-3,932,262	c 25	N79-10163 *	US-PATENT-3,972,651	c 44	N76-29701 *
US-PATENT-3,896,955	c 37	N77-22480 *	US-PATENT-3,936,927	c 37	N76-19437 *	US-PATENT-3,972,727	c 44	N76-29699 *
US-PATENT-3,898,578	c 33	N75-30428 *	US-PATENT-3,937,055	c 37	N76-18454 *	US-PATENT-3,976,997	c 62	N76-31946 *
US-PATENT-3,898,730	c 24	N75-30260 *	US-PATENT-3,937,212	c 33	N76-19338 *	US-PATENT-3,977,147	c 39	N76-31562 *
US-PATENT-3,898,882	c 35	N75-30503 *	US-PATENT-3,937,215	c 52	N76-19785 *	US-PATENT-3,977,197	c 44	N76-31667 *
US-PATENT-3,899,224	c 37	N75-30562 *	US-PATENT-3,937,387	c 37	N76-18455 *	US-PATENT-3,977,231	c 35	N76-31489 *
US-PATENT-3,899,252	c 35	N75-30502 *	US-PATENT-3,937,533	c 37	N76-18459 *	US-PATENT-3,977,771	c 74	N76-31998 *
US-PATENT-3,899,517	c 23	N75-30256 *	US-PATENT-3,937,555	c 35	N76-18402 *	US-PATENT-3,977,787	c 35	N76-31490 *
US-PATENT-3,899,680	c 73	N75-30876 *	US-PATENT-3,937,661	c 37	N76-18456 *	US-PATENT-3,977,831	c 45	N76-31714 *
US-PATENT-3,899,696	c 36	N75-30524 *	US-PATENT-3,937,945	c 74	N76-18913 *	US-PATENT-3,978,187	c 37	N76-31524 *
US-PATENT-3,899,745	c 33	N75-30429 *	US-PATENT-3,938,035	c 33	N76-19339 *	US-PATENT-3,978,287	c 32	N76-31372 *
US-PATENT-3,900,705	c 33	N75-30431 *	US-PATENT-3,938,037	c 26	N76-18257 *	US-PATENT-3,978,360	c 33	N76-31409 *
US-PATENT-3,900,741	c 35	N75-30504 *	US-PATENT-3,938,162	c 32	N76-18295 *	US-PATENT-3,978,364	c 31	N76-31365 *
US-PATENT-3,900,847	c 03	N75-30132 *	US-PATENT-3,938,182	c 33	N76-18353 *	US-PATENT-3,978,410	c 03	N76-32140 *
US-PATENT-3,902,143	c 33	N75-30430 *	US-PATENT-3,938,188	c 33	N76-18345 *	US-PATENT-3,978,417	c 36	N76-31512 *
US-PATENT-3,903,699	c 44	N75-32581 *	US-PATENT-3,938,367	c 35	N76-18401 *	US-PATENT-3,978,490	c 33	N76-32457 *
US-PATENT-3,905,356	c 33	N75-31329 *	US-PATENT-3,938,373	c 35	N76-18400 *	US-PATENT-3,982,910	c 44	N77-10636 *
US-PATENT-3,905,660	c 37	N75-31446 *	US-PATENT-3,938,742	c 07	N76-18117 *	US-PATENT-3,983,695	c 20	N77-10148 *
US-PATENT-3,906,231	c 33	N75-31332 *	US-PATENT-3,938,892	c 74	N76-19935 *	US-PATENT-3,983,714	c 31	N77-10229 *
US-PATENT-3,906,296	c 33	N75-31331 *	US-PATENT-3,938,956	c 35	N76-18403 *	US-PATENT-3,983,749	c 09	N77-10071 *
US-PATENT-3,906,374	c 33	N75-31330 *	US-PATENT-3,939,048	c 37	N76-18458 *	US-PATENT-3,983,753	c 52	N77-10780 *
US-PATENT-3,906,393	c 36	N75-31427 *	US-PATENT-3,939,439	c 36	N76-18428 *	US-PATENT-3,983,780	c 28	N77-10213 *
US-PATENT-3,906,397	c 36	N75-31426 *	US-PATENT-3,940,097	c 34	N76-18364 *	US-PATENT-3,983,933	c 34	N77-10463 *
US-PATENT-3,906,398	c 36	N75-32441 *	US-PATENT-3,940,621	c 34	N76-18374 *	US-PATENT-3,984,070	c 02	N77-10001 *
US-PATENT-3,906,769	c 24	N75-33181 *	US-PATENT-3,941,355	c 37	N76-19436 *	US-PATENT-3,984,072	c 15	N77-10113 *
US-PATENT-3,906,788	c 35	N75-33369 *	US-PATENT-3,942,398	c 37	N76-20480 *	US-PATENT-3,984,256	c 44	N77-10635 *
US-PATENT-3,906,913	c 37	N76-18457 *	US-PATENT-3,943,368	c 74	N76-20958 *	US-PATENT-3,984,634	c 32	N77-10392 *
US-PATENT-3,906,954	c 52	N75-33640 *	US-PATENT-3,943,442	c 76	N76-20994 *	US-PATENT-3,984,671	c 43	N77-10584 *
US-PATENT-3,907,312	c 37	N75-33395 *	US-PATENT-3,943,763	c 04	N76-20114 *	US-PATENT-3,984,681	c 35	N77-10492 *
US-PATENT-3,907,646	c 35	N75-33368 *	US-PATENT-3,944,485	c 25	N81-19244 *	US-PATENT-3,984,685	c 47	N77-10753 *
US-PATENT-3,907,686	c 34	N75-33342 *	US-PATENT-3,945,801	c 45	N76-21742 *	US-PATENT-3,984,686	c 35	N77-10493 *
US-PATENT-3,908,118	c 38	N78-17395 *	US-PATENT-3,945,879	c 37	N76-21554 *	US-PATENT-3,984,730	c 33	N77-10429 *
US-PATENT-3,909,602	c 38	N78-17396 *	US-PATENT-3,947,281	c 27	N82-29455 *	US-PATENT-3,984,799	c 33	N77-10428 *
US-PATENT-3,910,035	c 20	N76-14190 *	US-PATENT-3,947,933	c 20	N76-21276 *	US-PATENT-3,985,454	c 74	N77-10899 *
US-PATENT-3,910,039	c 20	N76-14191 *	US-PATENT-3,948,102	c 33	N76-21390 *	US-PATENT-3,987,630	c 37	N77-12402 *
US-PATENT-3,910,257	c 52	N76-14757 *	US-PATENT-3,948,470	c 20	N76-21275 *	US-PATENT-3,988,561	c 37	N77-11397 *
US-PATENT-3,910,307	c 37	N76-14663 *	US-PATENT-3,949,206	c 32	N76-21366 *	US-PATENT-3,988,677	c 32	N77-12240 *
US-PATENT-3,910,533	c 18	N76-14186 *	US-PATENT-3,949,400	c 17	N76-21250 *	US-PATENT-3,988,716	c 60	N77-12721 *
US-PATENT-3,910,814	c 24	N76-14204 *	US-PATENT-3,949,404	c 32	N76-21365 *	US-PATENT-3,988,729	c 32	N77-12239 *
US-PATENT-3,911,260	c 35	N76-14431 *	US-PATENT-3,950,729	c 60	N76-21914 *	US-PATENT-3,988,933	c 35	N77-19385 *
US-PATENT-3,911,330	c 33	N76-14373 *	US-PATENT-3,951,129	c 44	N76-22657 *	US-PATENT-3,989,136	c 37	N77-19457 *
US-PATENT-3,912,540	c 44	N76-14600 *	US-PATENT-3,952,083	c 27	N76-22376 *	US-PATENT-3,989,206	c 09	N77-19076 *
US-PATENT-3,912,541	c 44	N76-14601 *	US-PATENT-3,952,590	c 09	N76-23273 *	US-PATENT-3,989,541	c 44	N77-19571 *
US-PATENT-3,912,999	c 44	N76-18643 *	US-PATENT-3,952,971	c 02	N76-22154 *	US-PATENT-3,989,602	c 24	N77-19171 *
US-PATENT-3,914,950	c 31	N76-14284 *	US-PATENT-3,952,976	c 37	N76-22540 *	US-PATENT-3,990,049	c 60	N77-19760 *
US-PATENT-3,914,969	c 37	N76-14461 *	US-PATENT-3,952,980	c 19	N76-22284 *	US-PATENT-3,990,860	c 27	N77-13217 *
US-PATENT-3,914,991	c 35	N76-14430 *	US-PATENT-3,952,998	c 20	N76-22296 *	US-PATENT-3,990,987	c 37	N77-13418 *
US-PATENT-3,914,997	c 35	N76-14429 *	US-PATENT-3,953,038	c 37	N76-22541 *	US-PATENT-3,994,128	c 07	N77-14025 *
US-PATENT-3,915,012	c 54	N76-14804 *	US-PATENT-3,953,343	c 24	N76-22309 *	US-PATENT-3,995,324	c 52	N77-14735 *
US-PATENT-3,915,148	c 44	N76-14602 *	US-PATENT-3,953,646	c 27	N76-22377 *	US-PATENT-3,995,476	c 35	N77-14407 *
US-PATENT-3,915,416	c 15	N76-14158 *	US-PATENT-3,953,674	c 17	N76-22245 *	US-PATENT-3,995,522	c 37	N77-14478 *
US-PATENT-3,915,482	c 37	N76-14460 *	US-PATENT-3,953,734	c 25	N76-22323 *	US-PATENT-3,995,621	c 52	N77-14736 *
US-PATENT-3,915,572	c 36	N76-14447 *	US-PATENT-3,953,792	c 35	N76-22509 *	US-PATENT-3,995,644	c 52	N77-14738 *
US-PATENT-3,916,060	c 27	N76-15310 *	US-PATENT-3,955,034	c 27	N76-23426 *	US-PATENT-3,995,789	c 37	N77-14479 *
US-PATENT-3,916,084	c 33	N76-14371 *	US-PATENT-3,955,941	c 44	N76-29700 *	US-PATENT-3,995,877	c 37	N77-14477 *
US-PATENT-3,916,187	c 35	N76-15431 *	US-PATENT-3,956,032	c 76	N76-25049 *	US-PATENT-3,995,960	c 35	N77-14411 *
US-PATENT-3,916,316	c 32	N76-14321 *	US-PATENT-3,956,050	c 37	N76-24575 *	US-PATENT-3,996,064	c 44	N77-14581 *
US-PATENT-3,916,380	c 60	N76-14818 *	US-PATENT-3,956,233	c 27	N76-24405 *	US-PATENT-3,996,067	c 44	N77-14580 *
US-PATENT-3,916,761	c 75	N76-14931 *	US-PATENT-3,956,833	c 09	N76-24280 *	US-PATENT-3,996,070	c 35	N77-14409 *
US-PATENT-3,919,014	c 24	N76-14203 *	US-PATENT-3,956,919	c 35	N76-24523 *	US-PATENT-3,996,455	c 60	N77-14751 *
US-PATENT-3,919,710	c 33	N76-14372 *	US-PATENT-3,956,932	c 35	N76-24524 *	US-PATENT-3,996,462	c 33	N77-14335 *
US-PATENT-3,920,339	c 27	N76-14264 *	US-PATENT-3,957,030	c 44	N76-23675 *	US-PATENT-3,996,464	c 35	N77-14406 *
US-PATENT-3,920,413	c 44	N76-14595 *	US-PATENT-3,957,037	c 35	N76-24525 *	US-PATENT-3,996,468	c 35	N77-14408 *
US-PATENT-3,920,416	c 44	N76-18642 *	US-PATENT-3,957,044	c 54	N76-24900 *	US-PATENT-3,996,471	c 52	N77-14737 *
US-PATENT-3,922,930	c 37	N76-15457 *	US-PATENT-3,957,104	c 37	N76-23570 *	US-PATENT-3,996,506	c 33	N77-14333 *
US-PATENT-3,923,166	c 37	N76-15460 *	US-PATENT-3,957,675	c 24	N76-24363 *	US-PATENT-3,996,532	c 32	N77-14292 *
US-PATENT-3,924,068	c 32	N76-16249 *	US-PATENT-3,958,188	c 36	N76-24553 *	US-PATENT-3,997,848	c 33	N77-14334 *



## US-PATENT-3,999,886

## REPORT NUMBER INDEX

US-PATENT-3,999,886	c 05	N77-17029 *	US-PATENT-4,040,940	c 37	N80-14397 *	US-PATENT-4,068,470	c 07	N78-17056 *
US-PATENT-4,049,930	c 33	N78-10375 *	US-PATENT-4,041,233	c 27	N77-30236 *	US-PATENT-4,068,495	c 31	N78-17237 *
US-PATENT-4,356,157	c 25	N83-33977 *	US-PATENT-4,041,391	c 32	N77-30308 *	US-PATENT-4,068,763	c 54	N78-17676 *
US-PATENT-4,359,503	c 24	N83-33950 *	US-PATENT-4,041,697	c 37	N78-10467 *	US-PATENT-4,069,028	c 34	N78-17335 *
US-PATENT-4,000,682	c 20	N77-17143 *	US-PATENT-4,041,910	c 37	N77-31497 *	US-PATENT-4,069,212	c 27	N78-17213 *
US-PATENT-4,000,929	c 37	N77-17464 *	US-PATENT-4,042,926	c 32	N77-31350 *	US-PATENT-4,069,478	c 60	N78-17691 *
US-PATENT-4,001,552	c 38	N77-17495 *	US-PATENT-4,043,668	c 35	N84-33766 *	US-PATENT-4,069,661	c 07	N78-18067 *
US-PATENT-4,001,602	c 33	N77-17354 *	US-PATENT-4,043,674	c 36	N77-32478 *	US-PATENT-4,070,574	c 74	N78-18905 *
US-PATENT-4,003,004	c 33	N77-17351 *	US-PATENT-4,044,753	c 44	N77-32582 *	US-PATENT-4,072,532	c 27	N78-19302 *
US-PATENT-4,003,084	c 35	N77-17426 *	US-PATENT-4,044,821	c 44	N77-32581 *	US-PATENT-4,075,057	c 73	N78-19920 *
US-PATENT-4,003,257	c 23	N77-17161 *	US-PATENT-4,045,063	c 37	N77-32499 *	US-PATENT-4,077,231	c 31	N78-25256 *
US-PATENT-4,004,292	c 74	N77-18893 *	US-PATENT-4,045,149	c 07	N77-32148 *	US-PATENT-4,077,678	c 44	N78-24608 *
US-PATENT-4,005,574	c 07	N77-17059 *	US-PATENT-4,045,247	c 35	N77-32454 *	US-PATENT-4,077,788	c 28	N78-24365 *
US-PATENT-4,006,631	c 04	N77-19056 *	US-PATENT-4,045,255	c 26	N77-32279 *	US-PATENT-4,077,788	c 28	N81-14103 *
US-PATENT-4,006,999	c 24	N77-19170 *	US-PATENT-4,045,315	c 44	N77-32580 *	US-PATENT-4,077,813	c 26	N78-24333 *
US-PATENT-4,007,430	c 36	N77-19416 *	US-PATENT-4,045,359	c 25	N77-32255 *	US-PATENT-4,077,818	c 44	N78-24609 *
US-PATENT-4,007,434	c 32	N77-18307 *	US-PATENT-4,045,728	c 35	N77-32455 *	US-PATENT-4,077,921	c 24	N78-24290 *
US-PATENT-4,007,601	c 34	N77-19353 *	US-PATENT-4,045,792	c 60	N77-32731 *	US-PATENT-4,078,110	c 34	N78-25350 *
US-PATENT-4,007,623	c 35	N77-18417 *	US-PATENT-4,045,795	c 32	N77-32342 *	US-PATENT-4,078,175	c 76	N78-24950 *
US-PATENT-4,007,891	c 07	N77-18154 *	US-PATENT-4,046,012	c 35	N77-32456 *	US-PATENT-4,078,290	c 37	N78-24544 *
US-PATENT-4,008,348	c 34	N77-18382 *	US-PATENT-4,046,190	c 34	N77-32413 *	US-PATENT-4,078,378	c 37	N78-24545 *
US-PATENT-4,008,407	c 73	N77-18891 *	US-PATENT-4,046,262	c 54	N77-32721 *	US-PATENT-4,079,268	c 32	N78-24391 *
US-PATENT-4,010,455	c 37	N77-19458 *	US-PATENT-4,046,434	c 37	N77-32500 *	US-PATENT-4,080,901	c 20	N78-24275 *
US-PATENT-4,010,455	c 37	N78-31426 *	US-PATENT-4,046,435	c 37	N77-32501 *	US-PATENT-4,081,250	c 44	N78-31527 *
US-PATENT-4,011,719	c 20	N77-20162 *	US-PATENT-4,046,462	c 44	N77-32583 *	US-PATENT-4,082,001	c 35	N78-24515 *
US-PATENT-4,011,756	c 35	N77-20400 *	US-PATENT-4,046,529	c 54	N77-32722 *	US-PATENT-4,082,569	c 44	N78-25527 *
US-PATENT-4,011,854	c 35	N77-20401 *	US-PATENT-4,046,560	c 26	N77-32280 *	US-PATENT-4,083,097	c 44	N78-25528 *
US-PATENT-4,012,018	c 35	N77-20399 *	US-PATENT-4,046,617	c 76	N77-32919 *	US-PATENT-4,083,181	c 07	N78-25089 *
US-PATENT-4,012,123	c 74	N77-20882 *	US-PATENT-4,046,619	c 27	N77-32308 *	US-PATENT-4,083,380	c 37	N78-25426 *
US-PATENT-4,012,237	c 26	N77-20201 *	US-PATENT-4,047,840	c 37	N78-10468 *	US-PATENT-4,083,520	c 15	N78-25119 *
US-PATENT-4,012,696	c 32	N77-20289 *	US-PATENT-4,051,558	c 52	N78-10686 *	US-PATENT-4,083,765	c 35	N78-25391 *
US-PATENT-4,014,745	c 51	N77-22794 *	US-PATENT-4,051,834	c 44	N78-10554 *	US-PATENT-4,084,124	c 44	N78-25531 *
US-PATENT-4,014,798	c 25	N81-17187 *	US-PATENT-4,051,877	c 35	N78-10428 *	US-PATENT-4,084,132	c 33	N78-25319 *
US-PATENT-4,017,959	c 37	N77-23482 *	US-PATENT-4,052,144	c 25	N78-10224 *	US-PATENT-4,084,612	c 34	N78-25351 *
US-PATENT-4,018,080	c 35	N77-22450 *	US-PATENT-4,052,181	c 71	N78-10837 *	US-PATENT-4,084,825	c 07	N78-25090 *
US-PATENT-4,018,085	c 35	N77-22449 *	US-PATENT-4,052,302	c 25	N78-10225 *	US-PATENT-4,084,985	c 44	N78-25529 *
US-PATENT-4,018,092	c 37	N77-22482 *	US-PATENT-4,052,523	c 24	N78-10214 *	US-PATENT-4,085,004	c 73	N78-28913 *
US-PATENT-4,018,409	c 37	N77-23483 *	US-PATENT-4,052,614	c 35	N78-10429 *	US-PATENT-4,085,241	c 44	N78-25530 *
US-PATENT-4,018,423	c 54	N77-21844 *	US-PATENT-4,052,648	c 33	N78-10376 *	US-PATENT-4,085,332	c 25	N78-25148 *
US-PATENT-4,018,532	c 74	N77-22951 *	US-PATENT-4,052,659	c 33	N78-10377 *	US-PATENT-4,087,902	c 33	N78-27326 *
US-PATENT-4,018,533	c 74	N77-22950 *	US-PATENT-4,052,666	c 43	N78-10529 *	US-PATENT-4,087,962	c 34	N78-27357 *
US-PATENT-4,018,649	c 51	N77-25769 *	US-PATENT-4,052,705	c 60	N78-10709 *	US-PATENT-4,087,975	c 44	N78-32542 *
US-PATENT-4,018,971	c 44	N77-22606 *	US-PATENT-4,053,229	c 74	N78-13874 *	US-PATENT-4,088,018	c 37	N78-27424 *
US-PATENT-4,019,179	c 32	N77-21267 *	US-PATENT-4,053,231	c 35	N78-18391 *	US-PATENT-4,088,094	c 51	N78-27733 *
US-PATENT-4,019,868	c 44	N77-22607 *	US-PATENT-4,053,918	c 44	N78-13526 *	US-PATENT-4,088,270	c 07	N78-27121 *
US-PATENT-4,020,632	c 07	N77-23106 *	US-PATENT-4,055,004	c 09	N78-18083 *	US-PATENT-4,088,291	c 37	N78-27425 *
US-PATENT-4,023,266	c 33	N77-26385 *	US-PATENT-4,055,041	c 07	N78-18066 *	US-PATENT-4,088,312	c 37	N78-27423 *
US-PATENT-4,025,327	c 35	N77-24455 *	US-PATENT-4,055,072	c 35	N78-19465 *	US-PATENT-4,088,408	c 74	N78-27904 *
US-PATENT-4,025,383	c 74	N77-26942 *	US-PATENT-4,055,089	c 35	N78-18390 *	US-PATENT-4,088,532	c 25	N78-27226 *
US-PATENT-4,025,783	c 33	N77-24375 *	US-PATENT-4,055,147	c 35	N78-19466 *	US-PATENT-4,088,806	c 24	N78-27180 *
US-PATENT-4,025,866	c 36	N77-25499 *	US-PATENT-4,055,416	c 26	N78-18182 *	US-PATENT-4,088,926	c 75	N78-27913 *
US-PATENT-4,025,875	c 71	N77-26919 *	US-PATENT-4,055,447	c 26	N78-18183 *	US-PATENT-4,088,951	c 35	N78-28411 *
US-PATENT-4,025,891	c 35	N77-24454 *	US-PATENT-4,055,686	c 37	N78-13436 *	US-PATENT-4,088,954	c 35	N78-32397 *
US-PATENT-4,025,950	c 32	N77-24328 *	US-PATENT-4,055,705	c 34	N78-18355 *	US-PATENT-4,088,965	c 36	N78-27402 *
US-PATENT-4,025,964	c 52	N77-25772 *	US-PATENT-4,055,707	c 44	N78-19599 *	US-PATENT-4,088,999	c 44	N78-28594 *
US-PATENT-4,026,527	c 34	N77-24423 *	US-PATENT-4,055,764	c 35	N78-13400 *	US-PATENT-4,089,004	c 32	N80-29539 *
US-PATENT-4,026,655	c 36	N77-25501 *	US-PATENT-4,055,777	c 33	N78-18308 *	US-PATENT-4,089,209	c 35	N78-27384 *
US-PATENT-4,027,212	c 33	N77-26386 *	US-PATENT-4,055,810	c 36	N78-18410 *	US-PATENT-4,089,705	c 44	N78-27515 *
US-PATENT-4,027,265	c 32	N77-24331 *	US-PATENT-4,055,847	c 33	N78-13320 *	US-PATENT-4,090,213	c 44	N80-29835 *
US-PATENT-4,027,273	c 36	N77-25502 *	US-PATENT-4,061,029	c 35	N78-14364 *	US-PATENT-4,091,166	c 27	N78-31233 *
US-PATENT-4,027,494	c 35	N78-12390 *	US-PATENT-4,061,041	c 71	N78-14867 *	US-PATENT-4,091,329	c 33	N78-32339 *
US-PATENT-4,027,524	c 09	N77-27131 *	US-PATENT-4,061,146	c 52	N78-14773 *	US-PATENT-4,091,464	c 54	N78-31735 *
US-PATENT-4,028,939	c 34	N77-27345 *	US-PATENT-4,061,190	c 43	N78-14452 *	US-PATENT-4,091,464	c 54	N79-24651 *
US-PATENT-4,029,470	c 51	N77-27677 *	US-PATENT-4,061,427	c 36	N78-14380 *	US-PATENT-4,091,465	c 54	N78-31736 *
US-PATENT-4,029,500	c 24	N77-27187 *	US-PATENT-4,061,561	c 25	N78-14104 *	US-PATENT-4,091,613	c 44	N78-32539 *
US-PATENT-4,029,838	c 24	N77-27188 *	US-PATENT-4,061,570	c 54	N78-14784 *	US-PATENT-4,091,665	c 09	N78-31129 *
US-PATENT-4,030,047	c 35	N77-27366 *	US-PATENT-4,061,577	c 74	N78-14889 *	US-PATENT-4,091,798	c 44	N78-31526 *
US-PATENT-4,030,348	c 39	N78-10493 *	US-PATENT-4,061,579	c 24	N78-14096 *	US-PATENT-4,091,800	c 44	N78-31525 *
US-PATENT-4,031,389	c 36	N77-26477 *	US-PATENT-4,061,812	c 24	N78-15180 *	US-PATENT-4,092,188	c 28	N78-31255 *
US-PATENT-4,032,089	c 24	N77-28225 *	US-PATENT-4,061,834	c 27	N78-14164 *	US-PATENT-4,092,274	c 27	N78-31232 *
US-PATENT-4,032,089	c 27	N81-14077 *	US-PATENT-4,061,856	c 27	N78-15276 *	US-PATENT-4,092,466	c 27	N78-32256 *
US-PATENT-4,033,119	c 07	N77-28118 *	US-PATENT-4,061,955	c 44	N78-14625 *	US-PATENT-4,092,466	c 27	N80-10358 *
US-PATENT-4,033,133	c 28	N80-10374 *	US-PATENT-4,061,974	c 32	N78-15323 *	US-PATENT-4,092,606	c 33	N78-32338 *
US-PATENT-4,033,182	c 39	N77-28511 *	US-PATENT-4,062,227	c 39	N78-15512 *	US-PATENT-4,092,617	c 33	N78-32340 *
US-PATENT-4,033,286	c 25	N79-28253 *	US-PATENT-4,062,245	c 37	N78-16369 *	US-PATENT-4,092,633	c 54	N78-32720 *
US-PATENT-4,033,316	c 33	N77-28385 *	US-PATENT-4,062,347	c 44	N78-15560 *	US-PATENT-4,092,648	c 32	N78-31321 *
US-PATENT-4,033,334	c 52	N77-28717 *	US-PATENT-4,062,650	c 25	N78-15210 *	US-PATENT-4,092,712	c 33	N78-32341 *
US-PATENT-4,033,349	c 52	N77-28716 *	US-PATENT-4,062,996	c 74	N78-15879 *	US-PATENT-4,092,874	c 37	N78-31426 *
US-PATENT-4,033,479	c 37	N77-28487 *	US-PATENT-4,063,088	c 74	N78-15880 *	US-PATENT-4,093,156	c 05	N78-32086 *
US-PATENT-4,033,503	c 26	N77-29260 *	US-PATENT-4,063,092	c 35	N78-15461 *	US-PATENT-4,093,354	c 73	N78-32848 *
US-PATENT-4,033,504	c 26	N77-28265 *	US-PATENT-4,063,282	c 39	N78-16387 *	US-PATENT-4,093,382	c 38	N78-32447 *
US-PATENT-4,033,705	c 07	N77-27116 *	US-PATENT-4,063,814	c 74	N78-17866 *	US-PATENT-4,093,771	c 27	N78-32260 *
US-PATENT-4,033,882	c 32	N77-28346 *	US-PATENT-4,063,981	c 24	N78-17149 *	US-PATENT-4,093,917	c 35	N78-32396 *
US-PATENT-4,035,037	c 37	N77-28486 *	US-PATENT-4,064,566	c 27	N78-17215 *	US-PATENT-4,094,073	c 35	N78-32395 *
US-PATENT-4,035,062	c 74	N77-28932 *	US-PATENT-4,064,642	c 54	N78-17675 *	US-PATENT-4,094,758	c 26	N78-32229 *
US-PATENT-4,035,065	c 74	N77-28933 *	US-PATENT-4,064,692	c 37	N78-17384 *	US-PATENT-4,094,775	c 52	N80-14687 *
US-PATENT-4,038,705	c 54	N77-30749 *	US-PATENT-4,065,053	c 44	N78-17460 *	US-PATENT-4,094,862	c 27	N78-32261 *
US-PATENT-4,039,489	c 27	N77-31308 *	US-PATENT-4,065,202	c 35	N78-17357 *	US-PATENT-4,094,943	c 27	N78-32262 *
US-PATENT-4,039,946	c 35	N77-30436 *	US-PATENT-4,065,340	c 24	N78-17150 *	US-PATENT-4,095,593	c 54	N78-32721 *
US-PATENT-4,039,000	c 34	N77-30399 *	US-PATENT-4,065,345	c 27	N78-17205 *	US-PATENT-4,096,315	c 74	N78-32854 *
US-PATENT-4,039,347	c 24	N77-30237 *	US-PATENT-4,066,039	c 37	N78-17383 *	US-PATENT-4,097,194	c 07	N78-33101 *
US-PATENT-4,039,754	c 32	N77-30309 *	US-PATENT-4,067,015	c 17	N78-17140 *	US-PATENT-4,098,142	c 37	N79-10422 *
US-PATENT-4,039,925	c 33	N77-30365 *	US-PATENT-4,067,043	c 74	N78-17865 *	US-PATENT-4,099,799	c 37	N79-10418 *
US-PATENT-4,040,041	c 33	N77-31404 *	US-PATENT-4,067,653	c 74	N78-17867 *	US-PATENT-4,100,331	c 44	N79-10513 *
US-PATENT-4,040,750	c 35	N77-31465 *	US-PATENT-4,067,742	c 27	N78-17206 *	US-PATENT-4,100,487	c 33	N79-10337 *
US-PATENT-4,040,867	c 44	N77-31601 *	US-PATENT-4,068,469	c 07	N78-17055 *	US-PATENT-4,100,531	c 32	N79-10263 *

## REPORT NUMBER INDEX

## US-PATENT-4,207,024

US-PATENT-4,101,195	c 89	N79-10969 *	US-PATENT-4,133,941	c 25	N82-21268 *	US-PATENT-4,168,718	c 20	N80-10278 *
US-PATENT-4,101,644	c 25	N79-10162 *	US-PATENT-4,134,447	c 31	N79-17029 *	US-PATENT-4,168,939	c 05	N80-14107 *
US-PATENT-4,101,780	c 35	N79-10389 *	US-PATENT-4,134,683	c 43	N79-17288 *	US-PATENT-4,169,129	c 37	N80-10494 *
US-PATENT-4,101,891	c 35	N79-10391 *	US-PATENT-4,134,744	c 35	N79-17192 *	US-PATENT-4,170,776	c 46	N80-14603 *
US-PATENT-4,101,961	c 52	N79-10724 *	US-PATENT-4,134,786	c 85	N79-17747 *	US-PATENT-4,170,987	c 52	N81-27783 *
US-PATENT-4,102,580	c 74	N79-11865 *	US-PATENT-4,135,019	c 24	N79-16915 *	US-PATENT-4,171,615	c 20	N80-14188 *
US-PATENT-4,103,550	c 31	N79-11246 *	US-PATENT-4,135,127	c 33	N79-17133 *	US-PATENT-4,171,645	c 35	N80-14371 *
US-PATENT-4,103,619	c 28	N79-11231 *	US-PATENT-4,135,290	c 44	N79-18444 *	US-PATENT-4,172,228	c 33	N80-14332 *
US-PATENT-4,103,712	c 37	N79-11402 *	US-PATENT-4,135,367	c 44	N79-18443 *	US-PATENT-4,172,786	c 45	N80-14579 *
US-PATENT-4,104,018	c 25	N79-11151 *	US-PATENT-4,135,817	c 35	N79-18296 *	US-PATENT-4,172,883	c 26	N80-14229 *
US-PATENT-4,104,084	c 44	N79-11467 *	US-PATENT-4,135,851	c 37	N79-18318 *	US-PATENT-4,173,001	c 36	N80-14384 *
US-PATENT-4,104,091	c 44	N79-11468 *	US-PATENT-4,135,851	c 37	N80-26658 *	US-PATENT-4,173,324	c 37	N80-14398 *
US-PATENT-4,104,134	c 44	N79-11469 *	US-PATENT-4,135,851	c 37	N82-19540 *	US-PATENT-4,173,397	c 44	N80-14473 *
US-PATENT-4,104,134	c 44	N80-16452 *	US-PATENT-4,136,211	c 24	N79-17916 *	US-PATENT-4,173,820	c 44	N80-14474 *
US-PATENT-4,104,873	c 37	N79-11403 *	US-PATENT-4,137,010	c 05	N79-17847 *	US-PATENT-4,175,249	c 44	N80-14472 *
US-PATENT-4,105,261	c 37	N79-11404 *	US-PATENT-4,137,365	c 27	N79-18052 *	US-PATENT-4,176,007	c 51	N80-16714 *
US-PATENT-4,105,517	c 44	N79-11470 *	US-PATENT-4,139,291	c 74	N79-20856 *	US-PATENT-4,176,360	c 18	N80-14183 *
US-PATENT-4,105,966	c 33	N79-11315 *	US-PATENT-4,139,806	c 71	N79-20827 *	US-PATENT-4,176,662	c 52	N80-16725 *
US-PATENT-4,106,218	c 74	N79-13855 *	US-PATENT-4,139,839	c 60	N79-20751 *	US-PATENT-4,176,950	c 36	N80-16321 *
US-PATENT-4,106,587	c 71	N79-14871 *	US-PATENT-4,139,862	c 32	N79-20297 *	US-PATENT-4,177,325	c 44	N80-16452 *
US-PATENT-4,106,687	c 37	N79-13364 *	US-PATENT-4,140,972	c 32	N79-20296 *	US-PATENT-4,177,333	c 25	N80-16116 *
US-PATENT-4,107,363	c 33	N79-12331 *	US-PATENT-4,141,219	c 34	N79-20335 *	US-PATENT-4,178,100	c 35	N80-18359 *
US-PATENT-4,107,627	c 72	N79-13826 *	US-PATENT-4,141,224	c 34	N79-20336 *	US-PATENT-4,180,648	c 27	N80-16158 *
US-PATENT-4,107,919	c 34	N79-13288 *	US-PATENT-4,141,259	c 37	N79-20377 *	US-PATENT-4,181,589	c 51	N80-16715 *
US-PATENT-4,108,241	c 34	N79-13289 *	US-PATENT-4,142,101	c 74	N79-20857 *	US-PATENT-4,182,158	c 35	N80-18358 *
US-PATENT-4,109,213	c 33	N79-22373 *	US-PATENT-4,142,119	c 33	N79-20314 *	US-PATENT-4,182,517	c 20	N80-18097 *
US-PATENT-4,109,644	c 52	N79-18580 *	US-PATENT-4,143,314	c 20	N79-20179 *	US-PATENT-4,184,072	c 44	N80-18552 *
US-PATENT-4,110,683	c 33	N79-18193 *	US-PATENT-4,145,058	c 37	N79-22475 *	US-PATENT-4,184,111	c 44	N80-18551 *
US-PATENT-4,110,703	c 36	N79-18307 *	US-PATENT-4,145,255	c 25	N79-22235 *	US-PATENT-4,184,149	c 06	N80-18036 *
US-PATENT-4,111,041	c 35	N79-14345 *	US-PATENT-4,145,524	c 27	N79-22300 *	US-PATENT-4,184,155	c 43	N80-18498 *
US-PATENT-4,111,058	c 35	N79-14347 *	US-PATENT-4,145,933	c 39	N79-22537 *	US-PATENT-4,184,327	c 07	N80-18039 *
US-PATENT-4,111,068	c 37	N79-14382 *	US-PATENT-4,146,180	c 37	N79-22474 *	US-PATENT-4,184,368	c 48	N80-18667 *
US-PATENT-4,111,184	c 44	N79-14526 *	US-PATENT-4,146,367	c 25	N81-33246 *	US-PATENT-4,184,472	c 76	N80-18951 *
US-PATENT-4,111,718	c 35	N79-14346 *	US-PATENT-4,146,409	c 26	N79-22271 *	US-PATENT-4,184,491	c 52	N80-18690 *
US-PATENT-4,111,729	c 28	N79-14228 *	US-PATENT-4,148,031	c 32	N79-24210 *	US-PATENT-4,184,609	c 37	N80-18393 *
US-PATENT-4,111,775	c 76	N79-14906 *	US-PATENT-4,148,295	c 44	N79-23481 *	US-PATENT-4,184,903	c 44	N80-18550 *
US-PATENT-4,111,851	c 24	N79-14156 *	US-PATENT-4,148,375	c 46	N79-22679 *	US-PATENT-4,185,164	c 33	N80-18286 *
US-PATENT-4,112,357	c 33	N79-14305 *	US-PATENT-4,148,452	c 08	N79-23097 *	US-PATENT-4,185,493	c 35	N80-18357 *
US-PATENT-4,112,497	c 32	N79-14267 *	US-PATENT-4,148,982	c 24	N79-24962 *	US-PATENT-4,186,347	c 32	N80-18253 *
US-PATENT-4,112,875	c 44	N79-33526 *	US-PATENT-4,149,034	c 71	N79-23753 *	US-PATENT-4,186,749	c 52	N80-18691 *
US-PATENT-4,116,131	c 20	N78-32179 *	US-PATENT-4,149,233	c 33	N79-24257 *	US-PATENT-4,187,394	c 32	N80-18252 *
US-PATENT-4,117,669	c 07	N79-10057 *	US-PATENT-4,149,278	c 54	N79-24652 *	US-PATENT-4,187,416	c 33	N80-18285 *
US-PATENT-4,117,731	c 35	N79-10390 *	US-PATENT-4,149,423	c 32	N79-24203 *	US-PATENT-4,187,470	c 36	N80-18372 *
US-PATENT-4,117,749	c 37	N79-10419 *	US-PATENT-4,149,521	c 44	N79-24433 *	US-PATENT-4,187,506	c 33	N80-18287 *
US-PATENT-4,117,881	c 51	N79-10694 *	US-PATENT-4,149,665	c 44	N79-24431 *	US-PATENT-4,188,368	c 31	N80-18231 *
US-PATENT-4,118,014	c 37	N79-10420 *	US-PATENT-4,149,817	c 44	N79-24432 *	US-PATENT-4,188,823	c 02	N80-20224 *
US-PATENT-4,118,315	c 51	N79-10693 *	US-PATENT-4,149,938	c 25	N79-24073 *	US-PATENT-4,189,234	c 74	N80-21138 *
US-PATENT-4,118,427	c 27	N80-32514 *	US-PATENT-4,150,425	c 33	N79-24254 *	US-PATENT-4,189,675	c 32	N80-20448 *
US-PATENT-4,118,620	c 37	N79-10421 *	US-PATENT-4,151,086	c 34	N79-24285 *	US-PATENT-4,189,914	c 07	N81-29129 *
US-PATENT-4,118,665	c 33	N79-10338 *	US-PATENT-4,151,456	c 33	N79-23345 *	US-PATENT-4,190,060	c 52	N81-29763 *
US-PATENT-4,118,666	c 32	N79-10262 *	US-PATENT-4,151,612	c 54	N79-24651 *	US-PATENT-4,190,626	c 24	N81-29163 *
US-PATENT-4,118,671	c 33	N79-10339 *	US-PATENT-4,151,800	c 24	N79-25142 *	US-PATENT-4,191,159	c 37	N80-29703 *
US-PATENT-4,118,701	c 32	N79-10264 *	US-PATENT-4,152,194	c 76	N79-23798 *	US-PATENT-4,191,505	c 44	N80-21828 *
US-PATENT-4,119,581	c 27	N81-14076 *	US-PATENT-4,153,134	c 46	N79-23555 *	US-PATENT-4,191,893	c 44	N80-29834 *
US-PATENT-4,119,926	c 33	N79-11313 *	US-PATENT-4,153,476	c 44	N79-25482 *	US-PATENT-4,192,290	c 44	N80-20810 *
US-PATENT-4,119,964	c 32	N79-11265 *	US-PATENT-4,153,818	c 32	N79-23310 *	US-PATENT-4,192,910	c 33	N80-20487 *
US-PATENT-4,119,972	c 32	N79-11264 *	US-PATENT-4,154,084	c 43	N79-25443 *	US-PATENT-4,192,910	c 44	N81-29524 *
US-PATENT-4,119,996	c 33	N79-12321 *	US-PATENT-4,154,228	c 52	N79-27836 *	US-PATENT-4,192,994	c 74	N80-21140 *
US-PATENT-4,121,965	c 76	N79-11920 *	US-PATENT-4,154,230	c 52	N79-26771 *	US-PATENT-4,193,388	c 44	N80-20808 *
US-PATENT-4,121,995	c 25	N79-11152 *	US-PATENT-4,154,256	c 05	N79-24976 *	US-PATENT-4,193,435	c 37	N80-23653 *
US-PATENT-4,122,214	c 44	N79-11472 *	US-PATENT-4,154,501	c 33	N81-29342 *	US-PATENT-4,193,570	c 35	N80-21719 *
US-PATENT-4,122,334	c 74	N79-12890 *	US-PATENT-4,154,912	c 44	N79-25481 *	US-PATENT-4,193,693	c 35	N80-20563 *
US-PATENT-4,122,383	c 44	N79-12541 *	US-PATENT-4,155,475	c 24	N79-25143 *	US-PATENT-4,193,827	c 28	N80-20402 *
US-PATENT-4,122,454	c 32	N79-13214 *	US-PATENT-4,156,309	c 44	N79-26475 *	US-PATENT-4,193,827	c 28	N81-14103 *
US-PATENT-4,122,518	c 52	N79-12694 *	US-PATENT-4,156,548	c 35	N79-26372 *	US-PATENT-4,194,115	c 25	N80-20334 *
US-PATENT-4,122,712	c 34	N79-12359 *	US-PATENT-4,156,752	c 15	N79-26100 *	US-PATENT-4,195,244	c 35	N80-20559 *
US-PATENT-4,122,725	c 38	N79-14398 *	US-PATENT-4,156,971	c 43	N79-26439 *	US-PATENT-4,195,279	c 35	N80-20580 *
US-PATENT-4,122,816	c 37	N79-11405 *	US-PATENT-4,157,655	c 43	N80-14423 *	US-PATENT-4,195,512	c 43	N80-23711 *
US-PATENT-4,122,833	c 44	N79-11471 *	US-PATENT-4,157,718	c 52	N80-14684 *	US-PATENT-4,195,666	c 37	N80-23654 *
US-PATENT-4,122,991	c 18	N79-11108 *	US-PATENT-4,158,583	c 28	N79-28342 *	US-PATENT-4,196,129	c 27	N80-32515 *
US-PATENT-4,123,355	c 45	N79-12584 *	US-PATENT-4,158,742	c 12	N79-26075 *	US-PATENT-4,196,619	c 46	N80-24906 *
US-PATENT-4,124,180	c 05	N79-12061 *	US-PATENT-4,158,775	c 72	N80-14877 *	US-PATENT-4,196,840	c 37	N80-23655 *
US-PATENT-4,124,330	c 07	N79-14095 *	US-PATENT-4,158,895	c 52	N79-26772 *	US-PATENT-4,197,530	c 33	N80-23559 *
US-PATENT-4,124,732	c 27	N79-12221 *	US-PATENT-4,159,262	c 27	N79-28307 *	US-PATENT-4,198,209	c 28	N80-23471 *
US-PATENT-4,128,814	c 36	N79-14362 *	US-PATENT-4,159,366	c 44	N79-26474 *	US-PATENT-4,198,232	c 26	N80-23419 *
US-PATENT-4,129,357	c 74	N79-14891 *	US-PATENT-4,159,634	c 37	N79-28550 *	US-PATENT-4,198,788	c 74	N80-24149 *
US-PATENT-4,130,032	c 37	N79-14383 *	US-PATENT-4,160,254	c 33	N79-28416 *	US-PATENT-4,198,792	c 25	N80-23383 *
US-PATENT-4,130,112	c 52	N79-14751 *	US-PATENT-4,160,508	c 37	N79-28551 *	US-PATENT-4,198,988	c 52	N80-23969 *
US-PATENT-4,130,471	c 25	N79-14169 *	US-PATENT-4,160,601	c 35	N79-28527 *	US-PATENT-4,199,448	c 27	N80-23452 *
US-PATENT-4,130,490	c 33	N79-15245 *	US-PATENT-4,161,661	c 33	N79-28415 *	US-PATENT-4,199,650	c 27	N80-24437 *
US-PATENT-4,130,795	c 35	N79-14349 *	US-PATENT-4,161,731	c 31	N79-28370 *	US-PATENT-4,199,764	c 32	N80-23524 *
US-PATENT-4,131,336	c 44	N79-14529 *	US-PATENT-4,161,747	c 37	N79-28549 *	US-PATENT-4,199,937	c 34	N80-24573 *
US-PATENT-4,131,459	c 27	N79-14213 *	US-PATENT-4,162,169	c 24	N79-31347 *	US-PATENT-4,199,937	c 44	N81-24519 *
US-PATENT-4,131,486	c 44	N79-14528 *	US-PATENT-4,162,701	c 34	N79-31523 *	US-PATENT-4,200,721	c 27	N80-24438 *
US-PATENT-4,132,068	c 07	N79-14097 *	US-PATENT-4,162,928	c 44	N79-31753 *	US-PATENT-4,201,468	c 32	N80-24510 *
US-PATENT-4,132,069	c 07	N79-14096 *	US-PATENT-4,163,678	c 44	N79-31752 *	US-PATENT-4,203,723	c 27	N80-26446 *
US-PATENT-4,132,130	c 47	N79-14527 *	US-PATENT-4,164,079	c 09	N79-31228 *	US-PATENT-4,204,037	c 51	N80-27067 *
US-PATENT-4,132,375	c 08	N79-14108 *	US-PATENT-4,164,718	c 32	N80-14281 *	US-PATENT-4,204,154	c 33	N80-26599 *
US-PATENT-4,132,594	c 52	N79-14749 *	US-PATENT-4,165,460	c 43	N79-31706 *	US-PATENT-4,204,402	c 07	N80-26298 *
US-PATENT-4,132,599	c 52	N79-14750 *	US-PATENT-4,166,170	c 27	N79-33316 *	US-PATENT-4,204,544	c 52	N80-27072 *
US-PATENT-4,132,829	c 27	N79-14214 *	US-PATENT-4,166,170	c 27	N81-14078 *	US-PATENT-4,204,899	c 24	N80-26388 *
US-PATENT-4,132,840	c 35	N79-14348 *	US-PATENT-4,166,959	c 74	N79-34011 *	US-PATENT-4,205,229	c 35	N80-26635 *
US-PATENT-4,132,989	c 32	N79-14268 *	US-PATENT-4,167,111	c 46	N80-10709 *	US-PATENT-4,206,383	c 72	N80-27163 *
US-PATENT-4,133,697	c 44	N79-17314 *	US-PATENT-4,168,287	c 27	N80-10358 *	US-PATENT-4,206,713	c 31	N81-15154 *
US-PATENT-4,133,697	c 44	N80-14474 *	US-PATENT-4,168,483	c 39	N80-10507 *	US-PATENT-4,206,970	c 74	N80-27185 *
US-PATENT-4,133,941	c 44	N79-17313 *	US-PATENT-4,168,706	c 54	N80-10799 *	US-PATENT-4,207,024	c 37	N80-26658 *

US-PATENT-4,207,024	c 37	N82-19540 *	US-PATENT-4,249,116	c 33	N81-20352 *	US-PATENT-4,287,518	c 32	N82-11336 *
US-PATENT-4,209,393	c 45	N82-11634 *	US-PATENT-4,249,238	c 07	N81-19115 *	US-PATENT-4,287,578	c 32	N82-18443 *
US-PATENT-4,209,561	c 24	N81-13999 *	US-PATENT-4,249,417	c 52	N81-20703 *	US-PATENT-4,287,606	c 74	N82-19029 *
US-PATENT-4,210,278	c 31	N80-32583 *	US-PATENT-4,249,957	c 44	N81-19558 *	US-PATENT-4,287,838	c 25	N82-11144 *
US-PATENT-4,210,401	c 35	N80-28687 *	US-PATENT-4,250,143	c 54	N81-24724 *	US-PATENT-4,288,585	c 27	N82-18389 *
US-PATENT-4,210,474	c 28	N80-28536 *	US-PATENT-4,252,007	c 33	N81-25299 *	US-PATENT-4,288,982	c 20	N82-18314 *
US-PATENT-4,210,622	c 44	N80-24741 *	US-PATENT-4,252,111	c 52	N81-25661 *	US-PATENT-4,290,612	c 37	N82-16408 *
US-PATENT-4,211,354	c 24	N81-17170 *	US-PATENT-4,252,440	c 39	N81-25400 *	US-PATENT-4,290,779	c 04	N82-16475 *
US-PATENT-4,211,354	c 24	N81-26179 *	US-PATENT-4,252,768	c 37	N81-25371 *	US-PATENT-4,291,294	c 44	N82-16059 *
US-PATENT-4,212,199	c 02	N80-28300 *	US-PATENT-4,253,156	c 34	N81-26402 *	US-PATENT-4,291,887	c 37	N82-12442 *
US-PATENT-4,212,297	c 51	N81-14605 *	US-PATENT-4,253,769	c 25	N81-25159 *	US-PATENT-4,292,375	c 24	N82-24296 *
US-PATENT-4,212,477	c 37	N80-28711 *	US-PATENT-4,254,464	c 62	N81-24779 *	US-PATENT-4,292,634	c 32	N82-12297 *
US-PATENT-4,212,477	c 37	N81-26447 *	US-PATENT-4,255,048	c 36	N81-24422 *	US-PATENT-4,293,522	c 25	N82-12166 *
US-PATENT-4,212,690	c 26	N80-28492 *	US-PATENT-4,255,495	c 26	N81-25188 *	US-PATENT-4,294,261	c 52	N82-11770 *
US-PATENT-4,213,051	c 35	N80-28686 *	US-PATENT-4,255,929	c 37	N81-25370 *	US-PATENT-4,294,264	c 52	N82-22875 *
US-PATENT-4,213,064	c 60	N81-15706 *	US-PATENT-4,256,093	c 52	N81-25660 *	US-PATENT-4,295,111	c 33	N82-11357 *
US-PATENT-4,213,131	c 32	N80-28578 *	US-PATENT-4,256,366	c 32	N81-25278 *	US-PATENT-4,295,140	c 35	N82-15381 *
US-PATENT-4,213,684	c 74	N81-17886 *	US-PATENT-4,259,821	c 31	N81-25258 *	US-PATENT-4,295,786	c 37	N82-19540 *
US-PATENT-4,214,226	c 31	N80-32584 *	US-PATENT-4,259,825	c 31	N81-25259 *	US-PATENT-4,298,833	c 33	N82-18493 *
US-PATENT-4,214,703	c 07	N80-32392 *	US-PATENT-4,260,166	c 37	N81-24442 *	US-PATENT-4,298,926	c 33	N82-18494 *
US-PATENT-4,214,902	c 26	N80-32484 *	US-PATENT-4,260,187	c 37	N81-27519 *	US-PATENT-4,298,987	c 60	N82-16747 *
US-PATENT-4,214,905	c 24	N80-33482 *	US-PATENT-4,261,349	c 52	N81-25662 *	US-PATENT-4,299,492	c 36	N82-16396 *
US-PATENT-4,215,273	c 74	N80-33210 *	US-PATENT-4,261,537	c 08	N81-24106 *	US-PATENT-4,300,106	c 36	N82-13415 *
US-PATENT-4,215,327	c 32	N80-32605 *	US-PATENT-4,262,064	c 44	N81-24521 *	US-PATENT-4,300,159	c 43	N82-13465 *
US-PATENT-4,215,345	c 04	N80-32359 *	US-PATENT-4,262,067	c 27	N81-24257 *	US-PATENT-4,300,656	c 71	N82-16800 *
US-PATENT-4,215,548	c 37	N80-31790 *	US-PATENT-4,262,080	c 27	N81-25209 *	US-PATENT-4,300,723	c 34	N82-13376 *
US-PATENT-4,215,590	c 37	N80-32717 *	US-PATENT-4,262,195	c 44	N81-24520 *	US-PATENT-4,301,740	c 37	N82-21587 *
US-PATENT-4,215,592	c 37	N80-32716 *	US-PATENT-4,262,198	c 74	N83-19597 *	US-PATENT-4,302,223	c 25	N82-21269 *
US-PATENT-4,216,186	c 76	N80-32244 *	US-PATENT-4,262,206	c 74	N81-24900 *	US-PATENT-4,302,734	c 33	N82-16340 *
US-PATENT-4,216,542	c 33	N81-15192 *	US-PATENT-4,262,258	c 33	N81-27396 *	US-PATENT-4,303,961	c 28	N82-18401 *
US-PATENT-4,217,165	c 76	N80-32245 *	US-PATENT-4,262,259	c 33	N81-24338 *	US-PATENT-4,304,219	c 44	N82-18686 *
US-PATENT-4,217,633	c 44	N81-12542 *	US-PATENT-4,263,112	c 28	N81-24280 *	US-PATENT-4,304,320	c 37	N82-18601 *
US-PATENT-4,218,280	c 27	N80-32516 *	US-PATENT-4,264,310	c 54	N81-27806 *	US-PATENT-4,305,205	c 37	N82-26672 *
US-PATENT-4,218,633	c 72	N80-33188 *	US-PATENT-4,264,728	c 51	N81-28698 *	US-PATENT-4,307,024	c 25	N82-24312 *
US-PATENT-4,218,650	c 33	N80-32650 *	US-PATENT-4,264,802	c 35	N81-26431 *	US-PATENT-4,307,510	c 60	N82-24839 *
US-PATENT-4,218,682	c 32	N80-32604 *	US-PATENT-4,264,908	c 33	N81-26358 *	US-PATENT-4,307,575	c 44	N82-26776 *
US-PATENT-4,218,685	c 32	N81-14187 *	US-PATENT-4,264,940	c 33	N81-27397 *	US-PATENT-4,307,856	c 05	N82-26277 *
US-PATENT-4,218,892	c 35	N81-14287 *	US-PATENT-4,264,984	c 60	N81-27814 *	US-PATENT-4,308,309	c 27	N82-24339 *
US-PATENT-4,218,921	c 71	N81-15767 *	US-PATENT-4,265,416	c 14	N81-26161 *	US-PATENT-4,308,868	c 52	N82-29863 *
US-PATENT-4,218,941	c 37	N81-14319 *	US-PATENT-4,266,177	c 33	N81-27395 *	US-PATENT-4,309,039	c 37	N82-24490 *
US-PATENT-4,219,027	c 52	N81-14612 *	US-PATENT-4,266,743	c 08	N81-26152 *	US-PATENT-4,309,146	c 44	N82-24639 *
US-PATENT-4,219,084	c 31	N81-14137 *	US-PATENT-4,266,788	c 37	N81-26447 *	US-PATENT-4,309,372	c 25	N82-21268 *
US-PATENT-4,219,107	c 37	N81-15364 *	US-PATENT-4,267,594	c 33	N81-26359 *	US-PATENT-4,310,049	c 25	N82-23282 *
US-PATENT-4,219,171	c 37	N81-14320 *	US-PATENT-4,267,953	c 24	N81-26179 *	US-PATENT-4,310,132	c 24	N82-26384 *
US-PATENT-4,219,203	c 37	N81-15363 *	US-PATENT-4,267,992	c 37	N81-24443 *	US-PATENT-4,310,574	c 27	N82-28441 *
US-PATENT-4,219,926	c 44	N81-14389 *	US-PATENT-4,269,640	c 37	N82-24491 *	US-PATENT-4,310,906	c 33	N82-26572 *
US-PATENT-4,220,171	c 07	N81-14999 *	US-PATENT-4,269,787	c 27	N81-24256 *	US-PATENT-4,311,055	c 54	N82-26987 *
US-PATENT-4,221,005	c 32	N81-15179 *	US-PATENT-4,270,539	c 52	N81-28740 *	US-PATENT-4,311,057	c 37	N82-24493 *
US-PATENT-4,222,098	c 33	N81-14220 *	US-PATENT-4,270,984	c 44	N81-29524 *	US-PATENT-4,311,378	c 35	N82-26628 *
US-PATENT-4,225,102	c 02	N81-14968 *	US-PATENT-4,271,761	c 15	N82-24272 *	US-PATENT-4,311,615	c 25	N82-26396 *
US-PATENT-4,225,372	c 27	N81-14077 *	US-PATENT-4,272,046	c 08	N82-24205 *	US-PATENT-4,311,870	c 44	N82-26777 *
US-PATENT-4,226,475	c 43	N81-26509 *	US-PATENT-4,272,302	c 33	N81-26360 *	US-PATENT-4,312,292	c 37	N82-24492 *
US-PATENT-4,227,096	c 33	N81-17348 *	US-PATENT-4,272,470	c 23	N81-29160 *	US-PATENT-4,313,077	c 33	N82-26569 *
US-PATENT-4,228,422	c 33	N81-14221 *	US-PATENT-4,272,720	c 47	N82-24779 *	US-PATENT-4,313,103	c 33	N82-26570 *
US-PATENT-4,228,656	c 37	N81-14318 *	US-PATENT-4,273,304	c 05	N81-26114 *	US-PATENT-4,313,291	c 09	N82-29330 *
US-PATENT-4,229,182	c 28	N81-15119 *	US-PATENT-4,273,505	c 54	N81-26718 *	US-PATENT-4,313,726	c 09	N82-24212 *
US-PATENT-4,229,196	c 28	N81-14103 *	US-PATENT-4,273,918	c 27	N82-24338 *	US-PATENT-4,313,745	c 27	N82-28442 *
US-PATENT-4,229,473	c 24	N81-14000 *	US-PATENT-4,274,038	c 37	N81-33483 *	US-PATENT-4,313,777	c 33	N82-26571 *
US-PATENT-4,229,473	c 24	N81-33235 *	US-PATENT-4,274,285	c 35	N81-29407 *	US-PATENT-4,314,984	c 25	N82-28368 *
US-PATENT-4,230,717	c 52	N81-14613 *	US-PATENT-4,274,901	c 24	N81-33235 *	US-PATENT-4,315,194	c 33	N82-26568 *
US-PATENT-4,233,258	c 27	N81-14078 *	US-PATENT-4,275,317	c 33	N82-24418 *	US-PATENT-4,315,197	c 33	N82-24421 *
US-PATENT-4,233,606	c 32	N81-14185 *	US-PATENT-4,275,453	c 33	N82-24417 *	US-PATENT-4,315,266	c 32	N82-27558 *
US-PATENT-4,234,258	c 25	N81-14015 *	US-PATENT-4,276,344	c 27	N81-27272 *	US-PATENT-4,316,035	c 23	N82-28353 *
US-PATENT-4,234,715	c 25	N81-14016 *	US-PATENT-4,276,344	c 27	N85-21347 *	US-PATENT-4,317,102	c 35	N82-24470 *
US-PATENT-4,234,971	c 32	N81-14186 *	US-PATENT-4,276,403	c 27	N81-27271 *	US-PATENT-4,319,133	c 33	N82-28545 *
US-PATENT-4,235,060	c 37	N81-14317 *	US-PATENT-4,276,553	c 32	N81-27341 *	US-PATENT-4,320,290	c 74	N82-24072 *
US-PATENT-4,236,383	c 44	N81-17518 *	US-PATENT-4,276,588	c 33	N81-33404 *	US-PATENT-4,320,397	c 32	N82-23376 *
US-PATENT-4,236,684	c 08	N81-19130 *	US-PATENT-4,277,402	c 23	N82-16174 *	US-PATENT-4,320,911	c 37	N82-24494 *
US-PATENT-4,237,662	c 31	N81-27323 *	US-PATENT-4,277,721	c 33	N82-24415 *	US-PATENT-4,321,099	c 44	N82-28780 *
US-PATENT-4,238,911	c 31	N81-27324 *	US-PATENT-4,278,220	c 07	N82-26293 *	US-PATENT-4,321,572	c 33	N82-24422 *
US-PATENT-4,239,057	c 37	N81-17433 *	US-PATENT-4,278,351	c 74	N81-29963 *	US-PATENT-4,325,001	c 35	N82-24471 *
US-PATENT-4,240,256	c 37	N81-17432 *	US-PATENT-4,278,830	c 44	N81-29525 *	US-PATENT-4,325,707	c 25	N82-29371 *
US-PATENT-4,240,290	c 06	N81-17057 *	US-PATENT-4,278,830	c 44	N82-28780 *	US-PATENT-4,326,381	c 44	N82-24640 *
US-PATENT-4,240,601	c 43	N81-17499 *	US-PATENT-4,278,978	c 32	N81-29308 *	US-PATENT-4,326,685	c 04	N82-23231 *
US-PATENT-4,241,308	c 33	N81-17349 *	US-PATENT-4,279-018	c 33	N81-33405 *	US-PATENT-4,327,150	c 27	N82-24340 *
US-PATENT-4,241,312	c 35	N81-19427 *	US-PATENT-4,279,001	c 33	N82-24416 *	US-PATENT-4,327,437	c 60	N82-29013 *
US-PATENT-4,242,498	c 27	N81-17259 *	US-PATENT-4,279,632	c 31	N81-33319 *	US-PATENT-4,327,581	c 09	N82-23254 *
US-PATENT-4,242,553	c 33	N81-19389 *	US-PATENT-4,279,906	c 52	N81-29764 *	US-PATENT-4,328,464	c 36	N82-28616 *
US-PATENT-4,242,864	c 07	N81-19116 *	US-PATENT-4,280,141	c 33	N81-33403 *	US-PATENT-4,329,114	c 07	N82-32366 *
US-PATENT-4,243,323	c 74	N81-17888 *	US-PATENT-4,280,689	c 37	N81-33482 *	US-PATENT-4,329,385	c 27	N82-28440 *
US-PATENT-4,243,327	c 74	N81-17887 *	US-PATENT-4,280,766	c 35	N81-33448 *	US-PATENT-4,330,100	c 05	N82-28279 *
US-PATENT-4,244,215	c 04	N81-21047 *	US-PATENT-4,281,102	c 27	N81-29229 *	US-PATENT-4,330,359	c 76	N82-30105 *
US-PATENT-4,244,810	c 09	N82-29330 *	US-PATENT-4,281,384	c 18	N81-29152 *	US-PATENT-4,330,572	c 27	N82-33520 *
US-PATENT-4,244,853	c 27	N81-19296 *	US-PATENT-4,281,708	c 33	N82-24419 *	US-PATENT-4,331,422	c 52	N82-29862 *
US-PATENT-4,244,857	c 27	N81-17260 *	US-PATENT-4,282,479	c 33	N82-24420 *	US-PATENT-4,331,742	c 44	N82-29710 *
US-PATENT-4,245,085	c 27	N81-17262 *	US-PATENT-4,282,525	c 46	N82-12685 *	US-PATENT-4,331,746	c 44	N82-29708 *
US-PATENT-4,245,286	c 33	N81-19392 *	US-PATENT-4,282,752	c 44	N82-16474 *	US-PATENT-4,331,873	c 44	N82-32841 *
US-PATENT-4,245,288	c 33	N81-19393 *	US-PATENT-4,283,705	c 06	N82-16075 *	US-PATENT-4,331,956	c 33	N82-29538 *
US-PATENT-4,245,469	c 44	N81-24519 *	US-PATENT-4,283,995	c 37	N81-32510 *	US-PATENT-4,332,441	c 36	N82-29589 *
US-PATENT-4,245,566	c 31	N81-19343 *	US-PATENT-4,284,034	c 51	N81-32829 *	US-PATENT-4,335,190	c 27	N83-13155 *
US-PATENT-4,245,768	c 37	N81-19455 *	US-PATENT-4,284,461	c 27	N82-11206 *	US-PATENT-4,335,196	c 44	N83-13579 *
US-PATENT-4,245,956	c 05	N81-19087 *	US-PATENT-4,284,682	c 27	N82-16238 *	US-PATENT-4,335,203	c 35	N82-28604 *
US-PATENT-4,246,001	c 27	N81-17261 *	US-PATENT-4,286,209	c 35	N82-11431 *	US-PATENT-4,335,503	c 44	N82-29709 *
US-PATENT-4,246,901	c 52	N81-24711 *	US-PATENT-4,286,460	c 09	N82-11088 *	US-PATENT-4,336,117	c 26	N82-29415 *
US-PATENT-4,247,434	c 25	N81-19242 *	US-PATENT-4,286,542	c 37	N82-12441 *	US-PATENT-4,336,276	c 27	N82-29453 *
US-PATENT-4,248,083	c 35	N81-19426 *	US-PATENT-4,287,152	c 35	N82-11432 *	US-PATENT-4,336,616	c 33	N82-29539 *

## REPORT NUMBER INDEX

## US-PATENT-4,455,532

US-PATENT-4,338,061	c 07	N83-31603 *	US-PATENT-4,384,823	c 34	N83-27144 *	US-PATENT-4,417,175	c 70	N84-28565 *
US-PATENT-4,338,368	c 27	N82-29456 *	US-PATENT-4,385,043	c 24	N83-25789 *	US-PATENT-4,417,190	c 33	N84-14424 *
US-PATENT-4,338,371	c 24	N82-29362 *	US-PATENT-4,385,113	c 51	N83-27569 *	US-PATENT-4,417,215	c 33	N84-14421 *
US-PATENT-4,338,371	c 54	N84-11758 *	US-PATENT-4,385,949	c 31	N83-34073 *	US-PATENT-4,418,130	c 33	N84-14422 *
US-PATENT-4,338,516	c 74	N82-30071 *	US-PATENT-4,386,157	c 51	N83-28849 *	US-PATENT-4,418,480	c 04	N84-14132 *
US-PATENT-4,338,568	c 33	N83-31954 *	US-PATENT-4,386,750	c 18	N83-28064 *	US-PATENT-4,418,722	c 44	N84-14583 *
US-PATENT-4,340,318	c 37	N82-32732 *	US-PATENT-4,387,513	c 06	N83-33882 *	US-PATENT-4,420,035	c 34	N84-14461 *
US-PATENT-4,340,425	c 26	N82-31505 *	US-PATENT-4,387,935	c 37	N83-32067 *	US-PATENT-4,420,352	c 27	N84-22748 *
US-PATENT-4,341,012	c 35	N83-31659 *	US-PATENT-4,388,171	c 23	N84-16255 *	US-PATENT-4,420,518	c 27	N84-14323 *
US-PATENT-4,341,843	c 26	N82-30371 *	US-PATENT-4,388,346	c 33	N84-16456 *	US-PATENT-4,420,836	c 36	N84-14509 *
US-PATENT-4,341,918	c 44	N82-31764 *	US-PATENT-4,388,502	c 05	N83-27975 *	US-PATENT-4,420,977	c 71	N84-23233 *
US-PATENT-4,341,925	c 32	N82-31583 *	US-PATENT-4,388,542	c 44	N83-28573 *	US-PATENT-4,421,109	c 54	N84-16803 *
US-PATENT-4,343,287	c 37	N82-32730 *	US-PATENT-4,388,585	c 33	N83-28319 *	US-PATENT-4,421,371	c 33	N84-14423 *
US-PATENT-4,343,447	c 08	N82-32373 *	US-PATENT-4,388,585	c 33	N84-33660 *	US-PATENT-4,421,700	c 24	N84-16262 *
US-PATENT-4,343,506	c 85	N82-33288 *	US-PATENT-4,388,965	c 34	N83-28356 *	US-PATENT-4,421,820	c 27	N84-14322 *
US-PATENT-4,343,584	c 37	N82-32731 *	US-PATENT-4,389,504	c 27	N83-28240 *	US-PATENT-4,422,012	c 33	N84-16452 *
US-PATENT-4,343,772	c 44	N83-10501 *	US-PATENT-4,389,504	c 27	N85-21349 *	US-PATENT-4,422,609	c 37	N84-16560 *
US-PATENT-4,343,791	c 24	N82-32417 *	US-PATENT-4,389,849	c 44	N83-28574 *	US-PATENT-4,423,605	c 34	N84-22903 *
US-PATENT-4,344,591	c 31	N83-31896 *	US-PATENT-4,389,904	c 35	N83-29650 *	US-PATENT-4,424,592	c 36	N84-16542 *
US-PATENT-4,344,787	c 27	N82-33521 *	US-PATENT-4,391,129	c 34	N83-31993 *	US-PATENT-4,425,376	c 71	N84-16940 *
US-PATENT-4,344,996	c 35	N82-32659 *	US-PATENT-4,391,423	c 18	N83-29303 *	US-PATENT-4,425,543	c 33	N84-16454 *
US-PATENT-4,345,153	c 06	N83-10040 *	US-PATENT-4,391,518	c 36	N83-34304 *	US-PATENT-4,425,785	c 15	N84-16231 *
US-PATENT-4,346,595	c 06	N84-34443 *	US-PATENT-4,391,609	c 36	N83-29680 *	US-PATENT-4,425,808	c 35	N84-28015 *
US-PATENT-4,346,595	c 52	N82-33996 *	US-PATENT-4,391,609	c 25	N83-31743 *	US-PATENT-4,425,808	c 35	N85-21598 *
US-PATENT-4,346,715	c 34	N83-34221 *	US-PATENT-4,392,356	c 34	N83-29625 *	US-PATENT-4,425,854	c 25	N84-16276 *
US-PATENT-4,346,754	c 36	N82-32712 *	US-PATENT-4,392,749	c 35	N83-29652 *	US-PATENT-4,426,614	c 33	N84-16455 *
US-PATENT-4,346,990	c 36	N83-10417 *	US-PATENT-4,392,920	c 35	N83-29652 *	US-PATENT-4,426,678	c 33	N84-16453 *
US-PATENT-4,349,424	c 24	N83-10117 *	US-PATENT-4,393,039	c 27	N83-29388 *	US-PATENT-4,426,874	c 35	N84-28019 *
US-PATENT-4,349,424	c 70	N84-28565 *	US-PATENT-4,393,706	c 25	N83-29324 *	US-PATENT-4,428,122	c 35	N84-16523 *
US-PATENT-4,349,429	c 25	N83-10126 *	US-PATENT-4,393,708	c 71	N83-32516 *	US-PATENT-4,428,226	c 07	N84-22559 *
US-PATENT-4,349,954	c 26	N83-10170 *	US-PATENT-4,393,716	c 71	N83-32515 *	US-PATENT-4,428,675	c 35	N84-22929 *
US-PATENT-4,350,410	c 74	N83-10900 *	US-PATENT-4,393,716	c 39	N83-32081 *	US-PATENT-4,428,703	c 37	N84-16561 *
US-PATENT-4,350,574	c 44	N83-10494 *	US-PATENT-4,393,777	c 37	N84-12491 *	US-PATENT-4,429,537	c 37	N84-22958 *
US-PATENT-4,351,022	c 33	N83-10345 *	US-PATENT-4,394,610	c 33	N83-31953 *	US-PATENT-4,430,360	c 37	N84-22957 *
US-PATENT-4,355,311	c 32	N83-31918 *	US-PATENT-4,394,726	c 60	N83-32342 *	US-PATENT-4,430,673	c 74	N84-23247 *
US-PATENT-4,355,870	c 74	N83-13978 *	US-PATENT-4,394,819	c 35	N83-32026 *	US-PATENT-4,431,306	c 35	N84-22931 *
US-PATENT-4,355,896	c 47	N83-32232 *	US-PATENT-4,395,123	c 74	N83-32577 *	US-PATENT-4,431,333	c 18	N84-22605 *
US-PATENT-4,357,402	c 25	N83-13188 *	US-PATENT-4,395,123	c 27	N83-34043 *	US-PATENT-4,431,761	c 27	N84-22747 *
US-PATENT-4,358,358	c 25	N83-13187 *	US-PATENT-4,395,511	c 27	N84-14324 *	US-PATENT-4,431,792	c 27	N84-22746 *
US-PATENT-4,358,480	c 24	N83-13172 *	US-PATENT-4,395,540	c 27	N84-22746 *	US-PATENT-4,432,853	c 52	N84-23095 *
US-PATENT-4,358,486	c 24	N83-13171 *	US-PATENT-4,395,557	c 27	N85-20123 *	US-PATENT-4,433,115	c 27	N84-22745 *
US-PATENT-4,358,732	c 33	N83-18996 *	US-PATENT-4,395,557	c 27	N83-31854 *	US-PATENT-4,433,276	c 33	N84-22885 *
US-PATENT-4,358,846	c 32	N83-13323 *	US-PATENT-4,395,557	c 27	N84-22745 *	US-PATENT-4,433,439	c 54	N84-23113 *
US-PATENT-4,360,325	c 44	N83-14693 *	US-PATENT-4,395,557	c 27	N85-21347 *	US-PATENT-4,433,544	c 44	N84-23018 *
US-PATENT-4,360,701	c 44	N83-14692 *	US-PATENT-4,395,557	c 33	N83-31952 *	US-PATENT-4,433,672	c 44	N84-22803 *
US-PATENT-4,362,361	c 74	N83-17305 *	US-PATENT-4,396,918	c 04	N84-27713 *	US-PATENT-4,434,106	c 27	N84-22744 *
US-PATENT-4,362,769	c 27	N83-34039 *	US-PATENT-4,397,716	c 44	N83-34449 *	US-PATENT-4,434,189	c 36	N84-22944 *
US-PATENT-4,363,188	c 51	N83-17045 *	US-PATENT-4,398,021	c 27	N83-34041 *	US-PATENT-4,434,490	c 36	N84-22943 *
US-PATENT-4,363,237	c 71	N83-17235 *	US-PATENT-4,398,021	c 27	N85-20124 *	US-PATENT-4,434,659	c 35	N84-22928 *
US-PATENT-4,363,242	c 33	N83-16626 *	US-PATENT-4,398,129	c 33	N83-34189 *	US-PATENT-4,435,642	c 35	N84-28016 *
US-PATENT-4,366,680	c 31	N83-31897 *	US-PATENT-4,398,412	c 35	N84-28018 *	US-PATENT-4,435,781	c 60	N84-28491 *
US-PATENT-4,370,750	c 34	N83-19015 *	US-PATENT-4,398,667	c 71	N84-14873 *	US-PATENT-4,437,069	c 33	N84-22887 *
US-PATENT-4,371,301	c 37	N83-19091 *	US-PATENT-4,398,925	c 71	N83-35781 *	US-PATENT-4,437,923	c 35	N84-22930 *
US-PATENT-4,371,596	c 44	N83-32176 *	US-PATENT-4,399,415	c 36	N83-35350 *	US-PATENT-4,437,961	c 33	N84-22884 *
US-PATENT-4,371,873	c 32	N83-19968 *	US-PATENT-4,399,515	c 35	N84-14491 *	US-PATENT-4,437,962	c 24	N84-22695 *
US-PATENT-4,371,946	c 32	N83-18975 *	US-PATENT-4,400,191	c 31	N83-35176 *	US-PATENT-4,437,962	c 24	N85-21267 *
US-PATENT-4,372,110	c 07	N83-33884 *	US-PATENT-4,400,642	c 76	N83-34796 *	US-PATENT-4,439,301	c 44	N84-23019 *
US-PATENT-4,372,158	c 44	N83-21503 *	US-PATENT-4,400,657	c 33	N83-34190 *	US-PATENT-4,439,465	c 26	N84-22734 *
US-PATENT-4,372,159	c 44	N83-21504 *	US-PATENT-4,401,505	c 76	N83-35888 *	US-PATENT-4,439,718	c 33	N84-22886 *
US-PATENT-4,372,377	c 74	N83-19596 *	US-PATENT-4,401,934	c 33	N83-35227 *	US-PATENT-4,439,766	c 32	N84-22820 *
US-PATENT-4,372,680	c 35	N83-21311 *	US-PATENT-4,401,953	c 33	N83-34191 *	US-PATENT-4,439,968	c 16	N84-22861 *
US-PATENT-4,373,003	c 27	N83-18908 *	US-PATENT-4,402,221	c 71	N83-36846 *	US-PATENT-4,442,716	c 35	N84-22934 *
US-PATENT-4,373,039	c 27	N83-19900 *	US-PATENT-4,402,358	c 34	N83-35307 *	US-PATENT-4,443,321	c 25	N84-22709 *
US-PATENT-4,373,142	c 44	N83-32175 *	US-PATENT-4,402,447	c 35	N83-35338 *	US-PATENT-4,443,701	c 74	N84-28590 *
US-PATENT-4,373,989	c 76	N83-20789 *	US-PATENT-4,402,992	c 31	N83-35177 *	US-PATENT-4,443,724	c 35	N84-28017 *
US-PATENT-4,374,183	c 26	N83-31795 *	US-PATENT-4,404,469	c 74	N84-11920 *	US-PATENT-4,444,368	c 05	N84-22551 *
US-PATENT-4,374,378	c 35	N83-34272 *	US-PATENT-4,404,793	c 07	N83-36029 *	US-PATENT-4,444,464	c 74	N84-23248 *
US-PATENT-4,375,281	c 05	N83-19737 *	US-PATENT-4,405,184	c 37	N84-12492 *	US-PATENT-4,444,972	c 27	N84-22750 *
US-PATENT-4,375,396	c 31	N83-19947 *	US-PATENT-4,405,197	c 74	N84-11921 *	US-PATENT-4,444,979	c 27	N84-22749 *
US-PATENT-4,375,536	c 27	N83-34040 *	US-PATENT-4,406,256	c 37	N83-36483 *	US-PATENT-4,445,118	c 04	N84-22546 *
US-PATENT-4,375,674	c 39	N83-20280 *	US-PATENT-4,406,797	c 25	N83-36118 *	US-PATENT-4,445,378	c 35	N84-22933 *
US-PATENT-4,376,637	c 35	N84-17555 *	US-PATENT-4,406,989	c 33	N83-36356 *	US-PATENT-4,446,199	c 26	N84-33555 *
US-PATENT-4,376,872	c 44	N83-32177 *	US-PATENT-4,407,001	c 33	N83-36355 *	US-PATENT-4,446,396	c 35	N84-22932 *
US-PATENT-4,377,089	c 35	N83-21312 *	US-PATENT-4,407,165	c 37	N83-36482 *	US-PATENT-4,446,459	c 60	N84-28492 *
US-PATENT-4,377,169	c 52	N83-21785 *	US-PATENT-4,407,468	c 01	N83-35992 *	US-PATENT-4,446,556	c 36	N84-28065 *
US-PATENT-4,377,266	c 07	N83-20944 *	US-PATENT-4,407,563	c 74	N83-36898 *	US-PATENT-4,446,757	c 37	N84-28084 *
US-PATENT-4,377,343	c 74	N83-21949 *	US-PATENT-4,407,589	c 33	N83-36357 *	US-PATENT-4,447,251	c 71	N84-28568 *
US-PATENT-4,377,371	c 18	N83-20996 *	US-PATENT-4,407,686	c 35	N84-12443 *	US-PATENT-4,447,943	c 52	N84-28389 *
US-PATENT-4,377,371	c 37	N84-22957 *	US-PATENT-4,408,597	c 52	N84-11744 *	US-PATENT-4,448,408	c 37	N84-28083 *
US-PATENT-4,377,949	c 45	N83-25217 *	US-PATENT-4,408,658	c 27	N83-36220 *	US-PATENT-4,449,370	c 37	N84-33808 *
US-PATENT-4,378,209	c 35	N83-24828 *	US-PATENT-4,410,189	c 37	N84-11497 *	US-PATENT-4,449,400	c 47	N84-28292 *
US-PATENT-4,378,813	c 52	N83-25346 *	US-PATENT-4,410,682	c 24	N84-11213 *	US-PATENT-4,449,514	c 44	N84-28204 *
US-PATENT-4,379,970	c 33	N83-24763 *	US-PATENT-4,411,380	c 24	N84-11214 *	US-PATENT-4,449,894	c 37	N84-28081 *
US-PATENT-4,380,046	c 60	N83-25378 *	US-PATENT-4,411,597	c 07	N84-22560 *	US-PATENT-4,450,268	c 27	N84-27884 *
US-PATENT-4,381,174	c 37	N83-26078 *	US-PATENT-4,411,660	c 54	N84-11758 *	US-PATENT-4,450,447	c 32	N84-27951 *
US-PATENT-4,381,333	c 44	N83-34448 *	US-PATENT-4,412,664	c 02	N84-11136 *	US-PATENT-4,451,017	c 18	N84-27787 *
US-PATENT-4,381,375	c 37	N83-34323 *	US-PATENT-4,413,522	c 35	N84-12445 *	US-PATENT-4,451,496	c 26	N84-27855 *
US-PATENT-4,381,583	c 31	N83-31895 *	US-PATENT-4,413,784	c 34	N84-12406 *	US-PATENT-4,452,088	c 24	N84-27829 *
US-PATENT-4,381,881	c 74	N83-29032 *	US-PATENT-4,414,080	c 25	N84-12262 *	US-PATENT-4,452,412	c 16	N84-27784 *
US-PATENT-4,382,116	c 44	N83-27344 *	US-PATENT-4,414,509	c 35	N84-12444 *	US-PATENT-4,453,163	c 06	N84-27733 *
US-PATENT-4,382,224	c 33	N83-27126 *	US-PATENT-4,414,816	c 07	N84-24577 *	US-PATENT-4,454,611	c 54	N84-28484 *
US-PATENT-4,382,239	c 32	N83-27085 *	US-PATENT-4,415,133	c 05	N84-12154 *	US-PATENT-4,454,649	c 44	N84-28205 *
US-PATENT-4,383,171	c 35	N83-27184 *	US-PATENT-4,415,311	c 37	N84-12493 *	US-PATENT-4,454,753	c 09	N84-27749 *
US-PATENT-4,383,533	c 52	N83-27578 *	US-PATENT-4,415,450	c 45	N84-12654 *	US-PATENT-4,455,418	c 27	N84-27885 *
US-PATENT-4,383,785	c 31	N83-27058 *	US-PATENT-4,416,111	c 07	N84-33410 *	US-PATENT-4,455,418	c 25	N85-28982 *
US-PATENT-4,384,578	c 52	N83-27577 *	US-PATENT-4,416,266	c 52	N84-28388 *	US-PATENT-4,455,532	c 72	N84-28575 *

## US-PATENT-4,455,680

US-PATENT-4,455,680 ..... c 32 N84-27952 \*  
US-PATENT-4,456,208 ..... c 27 N84-27886 \*  
US-PATENT-4,456,708 ..... c 51 N84-28361 \*  
US-PATENT-4,458,418 ..... c 37 N84-28085 \*  
US-PATENT-4,458,554 ..... c 37 N84-28082 \*  
US-PATENT-4,459,083 ..... c 02 N84-28732 \*  
US-PATENT-4,459,470 ..... c 27 N84-33589 \*  
US-PATENT-4,459,528 ..... c 33 N84-27975 \*  
US-PATENT-4,459,562 ..... c 33 N84-27974 \*  
US-PATENT-4,462,871 ..... c 76 N84-35112 \* #  
US-PATENT-4,463,357 ..... c 46 N85-21846 \*  
US-PATENT-4,463,465 ..... c 03 N84-33394 \*  
US-PATENT-4,463,606 ..... c 71 N85-22105 \*  
US-PATENT-4,464,710 ..... c 33 N84-33663 \*  
US-PATENT-4,466,242 ..... c 20 N85-21256 \*  
US-PATENT-4,466,667 ..... c 35 N84-33768 \*  
US-PATENT-4,468,552 ..... c 76 N84-35113 \*  
US-PATENT-4,469,942 ..... c 35 N84-33767 \*  
US-PATENT-4,469,998 ..... c 33 N84-33661 \*  
US-PATENT-4,470,293 ..... c 37 N84-33807 \*  
US-PATENT-4,470,403 ..... c 44 N84-34792 \*  
US-PATENT-4,471,357 ..... c 32 N84-34651 \*  
US-PATENT-4,472,473 ..... c 18 N84-33450 \*  
US-PATENT-4,472,716 ..... c 35 N84-33769 \*  
US-PATENT-4,472,728 ..... c 35 N84-33765 \*  
US-PATENT-4,473,259 ..... c 37 N85-20337 \*  
US-PATENT-4,473,674 ..... c 24 N84-34571 \*  
US-PATENT-4,473,792 ..... c 33 N84-33660 \*  
US-PATENT-4,474,062 ..... c 06 N84-34443 \*  
US-PATENT-4,474,180 ..... c 52 N84-34913 \*  
US-PATENT-4,474,471 ..... c 35 N84-34705 \*  
US-PATENT-4,474,975 ..... c 25 N85-21280 \*  
US-PATENT-4,475,063 ..... c 33 N85-21491 \*  
US-PATENT-4,475,385 ..... c 09 N84-34448 \*  
US-PATENT-4,475,527 ..... c 37 N85-21650 \*  
US-PATENT-4,475,921 ..... c 71 N85-22104 \*  
US-PATENT-4,478,879 ..... c 44 N85-20530 \*  
US-PATENT-4,479,053 ..... c 74 N85-22139 \*  
US-PATENT-4,479,386 ..... c 27 N85-20126 \*  
US-PATENT-4,479,560 ..... c 35 N85-20294 \*  
US-PATENT-4,481,570 ..... c 60 N85-21992 \*  
US-PATENT-4,482,778 ..... c 44 N85-21768 \*  
US-PATENT-4,482,779 ..... c 33 N85-21492 \*  
US-PATENT-4,483,512 ..... c 37 N85-20338 \*  
US-PATENT-4,483,639 ..... c 37 N85-21649 \*  
US-PATENT-4,483,817 ..... c 25 N85-21279 \*  
US-PATENT-4,485,151 ..... c 24 N85-21266 \*  
US-PATENT-4,485,151 ..... c 24 N85-35233 \*  
US-PATENT-4,485,670 ..... c 34 N85-21568 \*  
US-PATENT-4,485,671 ..... c 35 N85-20295 \*  
US-PATENT-4,485,992 ..... c 08 N85-19985 \*  
US-PATENT-4,488,155 ..... c 33 N85-21493 \*  
US-PATENT-4,488,335 ..... c 27 N85-20125 \*  
US-PATENT-4,488,663 ..... c 35 N85-21595 \*  
US-PATENT-4,489,027 ..... c 27 N85-20124 \*  
US-PATENT-4,489,239 ..... c 36 N85-21631 \*  
US-PATENT-4,489,243 ..... c 44 N85-21769 \*  
US-PATENT-4,489,264 ..... c 33 N85-22877 \*  
US-PATENT-4,490,117 ..... c 09 N85-19990 \*  
US-PATENT-4,490,229 ..... c 31 N85-20153 \*  
US-PATENT-4,491,427 ..... c 37 N85-21651 \*  
US-PATENT-4,493,021 ..... c 32 N85-21428 \*  
US-PATENT-4,493,211 ..... c 09 N85-21178 \*  
US-PATENT-4,493,553 ..... c 36 N85-21639 \*  
US-PATENT-4,495,044 ..... c 24 N85-21267 \*  
US-PATENT-4,495,339 ..... c 25 N85-30039 \*  
US-PATENT-4,495,520 ..... c 32 N85-21427 \*  
US-PATENT-4,496,122 ..... c 05 N85-21147 \*  
US-PATENT-4,496,701 ..... c 27 N85-21347 \*  
US-PATENT-4,497,540 ..... c 74 N85-23396 \*  
US-PATENT-4,497,935 ..... c 27 N85-21349 \*  
US-PATENT-4,497,939 ..... c 27 N85-21351 \*  
US-PATENT-4,497,940 ..... c 27 N85-21352 \*  
US-PATENT-4,497,948 ..... c 27 N85-21350 \*  
US-PATENT-4,498,231 ..... c 35 N85-21598 \*  
US-PATENT-4,498,333 ..... c 35 N85-21597 \*  
US-PATENT-4,499,260 ..... c 27 N85-21348 \*  
US-PATENT-4,499,424 ..... c 35 N85-21596 \*  
US-PATENT-4,499,470 ..... c 43 N85-21723 \*  
US-PATENT-4,500,265 ..... c 31 N85-21404 \*  
US-PATENT-4,500,492 ..... c 37 N85-21652 \*  
US-PATENT-4,503,436 ..... c 32 N85-29118 \*  
US-PATENT-4,505,998 ..... c 33 N85-29144 \*  
US-PATENT-4,506,183 ..... c 34 N85-29179 \*  
US-PATENT-4,507,928 ..... c 31 N85-29082 \*  
US-PATENT-4,508,296 ..... c 18 N85-29991 \*  
US-PATENT-4,509,048 ..... c 32 N85-34327 \*  
US-PATENT-4,509,130 ..... c 36 N85-29264 \*  
US-PATENT-4,509,132 ..... c 33 N85-34333 \*  
US-PATENT-4,509,548 ..... c 37 N85-34403 \*  
US-PATENT-4,510,277 ..... c 27 N85-34282 \*  
US-PATENT-4,510,296 ..... c 23 N85-28973 \*  
US-PATENT-4,510,476 ..... c 33 N85-29146 \*  
US-PATENT-4,511,362 ..... c 25 N85-35253 \*  
US-PATENT-4,511,838 ..... c 76 N85-30923 \*  
US-PATENT-4,512,332 ..... c 44 N85-30474 \*

US-PATENT-4,512,661 ..... c 35 N85-30282 \*  
US-PATENT-4,512,678 ..... c 37 N85-30334 \*  
US-PATENT-4,512,699 ..... c 37 N85-29285 \*  
US-PATENT-4,512,846 ..... c 76 N85-29800 \*  
US-PATENT-4,513,317 ..... c 32 N85-29117 \*  
US-PATENT-4,513,423 ..... c 36 N85-30305 \*  
US-PATENT-4,513,750 ..... c 52 N85-30618 \*  
US-PATENT-4,513,810 ..... c 35 N85-29214 \*  
US-PATENT-4,514,137 ..... c 37 N85-29282 \*  
US-PATENT-4,514,143 ..... c 05 N85-29947 \*  
US-PATENT-4,514,178 ..... c 35 N85-29212 \*  
US-PATENT-4,514,557 ..... c 25 N85-28982 \*  
US-PATENT-4,515,207 ..... c 34 N85-29180 \*  
US-PATENT-4,515,751 ..... c 35 N85-29213 \*  
US-PATENT-4,516,071 ..... c 33 N85-30187 \*  
US-PATENT-4,516,435 ..... c 37 N85-29286 \*  
US-PATENT-4,517,472 ..... c 33 N85-29147 \*  
US-PATENT-4,517,505 ..... c 37 N85-30333 \*  
US-PATENT-4,517,530 ..... c 33 N85-29143 \*  
US-PATENT-4,518,277 ..... c 37 N85-30336 \*  
US-PATENT-4,518,625 ..... c 24 N85-30027 \*  
US-PATENT-4,518,722 ..... c 27 N85-29044 \*  
US-PATENT-4,519,545 ..... c 37 N85-29283 \*  
US-PATENT-4,520,601 ..... c 37 N85-30335 \*  
US-PATENT-4,520,656 ..... c 71 N85-29693 \*  
US-PATENT-4,521,077 ..... c 74 N85-29750 \*  
US-PATENT-4,521,659 ..... c 31 N85-29083 \*  
US-PATENT-4,521,688 ..... c 35 N85-30281 \*  
US-PATENT-4,521,702 ..... c 33 N85-29145 \*  
US-PATENT-4,521,854 ..... c 33 N85-29142 \*  
US-PATENT-4,522,469 ..... c 76 N85-33826 \*  
US-PATENT-4,522,661 ..... c 76 N85-30922 \*  
US-PATENT-4,522,755 ..... c 27 N85-19455 \*  
US-PATENT-4,522,844 ..... c 26 N85-29005 \*  
US-PATENT-4,523,008 ..... c 27 N85-29043 \*  
US-PATENT-4,523,682 ..... c 71 N85-30765 \*  
US-PATENT-4,523,741 ..... c 37 N85-29284 \*  
US-PATENT-4,523,810 ..... c 74 N85-29749 \*  
US-PATENT-4,524,237 ..... c 44 N85-30475 \*  
US-PATENT-4,526,925 ..... c 27 N85-20560 \*  
US-PATENT-4,526,925 ..... c 27 N87-22845 \*  
US-PATENT-4,527,092 ..... c 37 N85-33489 \*  
US-PATENT-4,527,910 ..... c 37 N85-33490 \*  
US-PATENT-4,528,386 ..... c 23 N85-33187 \*  
US-PATENT-4,528,417 ..... c 44 N85-34441 \*  
US-PATENT-4,528,639 ..... c 60 N85-33701 \*  
US-PATENT-4,529,358 ..... c 34 N85-33433 \*  
US-PATENT-4,531,143 ..... c 33 N86-19516 \*  
US-PATENT-4,532,797 ..... c 35 N85-34373 \*  
US-PATENT-4,533,101 ..... c 07 N85-35194 \*  
US-PATENT-4,533,242 ..... c 74 N85-34629 \*  
US-PATENT-4,534,166 ..... c 07 N85-35195 \*  
US-PATENT-4,535,033 ..... c 24 N85-35233 \*  
US-PATENT-4,535,035 ..... c 26 N85-35267 \*  
US-PATENT-4,535,636 ..... c 35 N85-34375 \*  
US-PATENT-4,536,114 ..... c 37 N85-34401 \*  
US-PATENT-4,536,565 ..... c 27 N85-34280 \*  
US-PATENT-4,537,554 ..... c 85 N85-34722 \*  
US-PATENT-4,537,834 ..... c 27 N85-34281 \*  
US-PATENT-4,538,066 ..... c 35 N85-34374 \*  
US-PATENT-4,538,446 ..... c 34 N86-12547 \*  
US-PATENT-4,538,778 ..... c 08 N85-35200 \*  
US-PATENT-4,539,293 ..... c 23 N85-35227 \*  
US-PATENT-4,540,986 ..... c 04 N86-19304 \*  
US-PATENT-4,542,520 ..... c 74 N86-20126 \*  
US-PATENT-4,542,858 ..... c 33 N86-20669 \*  
US-PATENT-4,542,963 ..... c 74 N86-20125 \*  
US-PATENT-4,543,295 ..... c 27 N86-20561 \*  
US-PATENT-4,543,302 ..... c 44 N86-19721 \*  
US-PATENT-4,543,442 ..... c 76 N86-20150 \*  
US-PATENT-4,544,025 ..... c 35 N86-20750 \*  
US-PATENT-4,544,068 ..... c 35 N86-20751 \*  
US-PATENT-4,545,025 ..... c 60 N86-21154 \*  
US-PATENT-4,545,553 ..... c 33 N86-20671 \*  
US-PATENT-4,545,586 ..... c 37 N86-20788 \*  
US-PATENT-4,545,723 ..... c 37 N86-19603 \*  
US-PATENT-4,546,248 ..... c 32 N86-20647 \*  
US-PATENT-4,547,121 ..... c 37 N86-20789 \*  
US-PATENT-4,547,686 ..... c 33 N86-20672 \*  
US-PATENT-4,548,083 ..... c 39 N86-20841 \*  
US-PATENT-4,549,435 ..... c 35 N86-20752 \*  
US-PATENT-4,550,129 ..... c 24 N86-19380 \*  
US-PATENT-4,550,177 ..... c 23 N86-19376 \*  
US-PATENT-4,550,177 ..... c 23 N86-24692 \*  
US-PATENT-4,550,292 ..... c 33 N86-20668 \*  
US-PATENT-4,550,561 ..... c 07 N86-20389 \*  
US-PATENT-4,551,677 ..... c 35 N86-32698 \*  
US-PATENT-4,551,687 ..... c 33 N86-20670 \*  
US-PATENT-4,551,724 ..... c 43 N86-19711 \*  
US-PATENT-4,552,466 ..... c 37 N86-19606 \*  
US-PATENT-4,552,784 ..... c 26 N86-32550 \*  
US-PATENT-4,552,931 ..... c 27 N86-19456 \*  
US-PATENT-4,553,110 ..... c 33 N86-19515 \*  
US-PATENT-4,553,393 ..... c 37 N86-19604 \*  
US-PATENT-4,553,917 ..... c 26 N86-32551 \*  
US-PATENT-4,554,905 ..... c 18 N86-20469 \*

US-PATENT-4,556,327 ..... c 35 N86-19580 \*  
US-PATENT-4,556,986 ..... c 74 N86-21348 \*  
US-PATENT-4,557,097 ..... c 31 N86-19479 \*  
US-PATENT-4,557,149 ..... c 35 N86-19581 \*  
US-PATENT-4,557,444 ..... c 05 N86-19310 \*  
US-PATENT-4,558,585 ..... c 71 N86-21276 \*  
US-PATENT-4,558,967 ..... c 37 N86-19605 \*  
US-PATENT-4,560,577 ..... c 27 N86-19458 \*  
US-PATENT-4,560,742 ..... c 27 N86-19457 \*  
US-PATENT-4,561,784 ..... c 25 N86-19413 \*  
US-PATENT-4,562,583 ..... c 74 N86-20124 \*  
US-PATENT-4,564,787 ..... c 33 N86-21742 \*  
US-PATENT-4,565,557 ..... c 31 N86-21718 \*  
US-PATENT-4,565,886 ..... c 27 N86-21675 \*  
US-PATENT-4,566,447 ..... c 54 N86-22112 \*  
US-PATENT-4,567,301 ..... c 23 N86-21582 \*  
US-PATENT-4,567,348 ..... c 37 N86-21850 \*  
US-PATENT-4,568,733 ..... c 24 N86-21590 \*  
US-PATENT-4,572,004 ..... c 35 N86-25752 \*  
US-PATENT-4,572,699 ..... c 37 N87-22976 \*  
US-PATENT-4,573,356 ..... c 71 N88-24241 \*  
US-PATENT-4,578,678 ..... c 04 N86-22720 \*  
US-PATENT-4,578,920 ..... c 37 N86-25789 \*  
US-PATENT-4,579,782 ..... c 24 N86-25416 \*  
US-PATENT-4,579,302 ..... c 18 N86-24729 \*  
US-PATENT-4,579,475 ..... c 37 N86-27630 \*  
US-PATENT-4,580,791 ..... c 37 N86-25790 \*  
US-PATENT-4,582,277 ..... c 16 N86-26352 \*  
US-PATENT-4,582,289 ..... c 37 N87-21333 \*  
US-PATENT-4,582,590 ..... c 25 N86-25428 \*  
US-PATENT-4,583,587 ..... c 34 N86-27593 \*  
US-PATENT-4,583,860 ..... c 74 N86-26190 \*  
US-PATENT-4,584,249 ..... c 44 N86-25874 \*  
US-PATENT-4,584,510 ..... c 08 N86-27288 \*  
US-PATENT-4,584,887 ..... c 35 N86-26595 \*  
US-PATENT-4,585,191 ..... c 20 N86-26368 \*  
US-PATENT-4,585,344 ..... c 35 N86-25753 \*  
US-PATENT-4,586,140 ..... c 06 N86-27280 \*  
US-PATENT-4,586,394 ..... c 35 N87-21304 \*  
US-PATENT-4,586,487 ..... c 44 N86-27706 \*  
US-PATENT-4,587,312 ..... c 27 N86-27450 \*  
US-PATENT-4,587,324 ..... c 23 N86-32525 \*  
US-PATENT-4,587,526 ..... c 37 N86-25791 \*  
US-PATENT-4,588,778 ..... c 27 N86-27451 \*  
US-PATENT-4,588,986 ..... c 32 N86-27513 \*  
US-PATENT-4,591,772 ..... c 37 N86-27629 \*  
US-PATENT-4,591,838 ..... c 25 N86-27431 \*  
US-PATENT-4,593,415 ..... c 54 N86-28618 \*  
US-PATENT-4,594,540 ..... c 31 N86-29055 \*  
US-PATENT-4,594,720 ..... c 36 N86-29204 \*  
US-PATENT-4,594,734 ..... c 54 N86-28620 \*  
US-PATENT-4,595,399 ..... c 35 N86-29174 \*  
US-PATENT-4,595,548 ..... c 27 N86-29039 \*  
US-PATENT-4,596,626 ..... c 76 N86-28760 \*  
US-PATENT-4,598,007 ..... c 24 N86-28131 \*  
US-PATENT-4,598,427 ..... c 54 N86-28619 \*  
US-PATENT-4,598,428 ..... c 54 N86-29507 \* #  
US-PATENT-4,598,981 ..... c 74 N86-28732 \*  
US-PATENT-4,599,001 ..... c 74 N86-29650 \* #  
US-PATENT-4,600,299 ..... c 74 N86-32266 \*  
US-PATENT-4,600,301 ..... c 35 N86-32697 \*  
US-PATENT-4,600,769 ..... c 27 N86-31726 \* #  
US-PATENT-4,600,840 ..... c 72 N86-33127 \*  
US-PATENT-4,602,081 ..... c 27 N86-32568 \* #  
US-PATENT-4,602,509 ..... c 35 N86-32695 \* #  
US-PATENT-4,603,061 ..... c 27 N86-31727 \*  
US-PATENT-4,603,306 ..... c 33 N86-32624 \*  
US-PATENT-4,604,038 ..... c 37 N86-32738 \*  
US-PATENT-4,604,181 ..... c 27 N86-32569 \*  
US-PATENT-4,604,844 ..... c 37 N86-32737 \*  
US-PATENT-4,604,903 ..... c 35 N86-32696 \*  
US-PATENT-4,605,155 ..... c 37 N86-32736 \* #  
US-PATENT-4,605,303 ..... c 09 N86-32447 \*  
US-PATENT-4,605,424 ..... c 33 N90-20320 \*  
US-PATENT-4,605,946 ..... c 76 N87-13313 \*  
US-PATENT-4,607,193 ..... c 31 N86-32587 \*  
US-PATENT-4,608,452 ..... c 44 N86-32875 \*  
US-PATENT-4,608,821 ..... c 20 N87-16875 \*  
US-PATENT-4,610,736 ..... c 26 N87-14482 \*  
US-PATENT-4,612,072 ..... c 76 N87-15882 \*  
US-PATENT-4,614,428 ..... c 74 N87-14971 \*  
US-PATENT-4,615,637 ..... c 18 N87-14373 \*  
US-PATENT-4,616,793 ..... c 05 N87-14314 \*  
US-PATENT-4,618,215 ..... c 09 N87-14355 \*  
US-PATENT-4,618,380 ..... c 35 N87-14671 \*  
US-PATENT-4,618,652 ..... c 27 N87-15304 \*  
US-PATENT-4,619,142 ..... c 35 N87-14670 \*  
US-PATENT-4,619,423 ..... c 02 N87-16793 \*  
US-PATENT-4,620,898 ..... c 31 N87-21160 \*  
US-PATENT-4,621,492 ..... c 20 N87-14420 \*  
US-PATENT-4,622,182 ..... c 27 N87-14515 \*  
US-PATENT-4,623,255 ..... c 33 N87-14594 \*  
US-PATENT-4,624,142 ..... c 32 N87-14559 \*  
US-PATENT-4,624,561 ..... c 35 N87-14669 \*  
US-PATENT-4,624,888 ..... c 27 N87-14516 \*  
US-PATENT-4,626,046 ..... c 37 N87-17034 \*

## REPORT NUMBER INDEX



US-PATENT-4,626,593	c 27	N87-16908 *	US-PATENT-4,690,749	c 27	N92-25397 *	US-PATENT-4,781,326	c 09	N89-25242 *
US-PATENT-4,629,147	c 07	N87-16828 *	US-PATENT-4,695,610	c 27	N87-28657 *	US-PATENT-4,781,993	c 27	N89-29538 *
US-PATENT-4,631,352	c 44	N87-17399 *	US-PATENT-4,696,808	c 76	N87-29360 *	US-PATENT-4,783,822	c 54	N89-29953 *
US-PATENT-4,631,538	c 17	N87-16863 *	US-PATENT-4,697,425	c 31	N88-14223 *	US-PATENT-4,783,994	c 35	N89-14423 *
US-PATENT-4,632,548	c 36	N87-17026 *	US-PATENT-4,697,922	c 36	N88-14350 *	US-PATENT-4,786,168	c 33	N89-14385 *
US-PATENT-4,633,060	c 74	N87-17493 *	US-PATENT-4,698,028	c 33	N88-14270 *	US-PATENT-4,788,271	c 27	N89-14337 *
US-PATENT-4,633,060	c 74	N87-25843 *	US-PATENT-4,698,484	c 37	N88-14362 *	US-PATENT-4,790,026	c 60	N89-26400 *
US-PATENT-4,634,191	c 37	N87-17038 *	US-PATENT-4,698,518	c 33	N88-24862 *	US-PATENT-4,798,433	c 74	N89-25689 *
US-PATENT-4,634,759	c 27	N87-16909 *	US-PATENT-4,698,723	c 03	N88-14083 *	US-PATENT-4,800,756	c 71	N90-12289 *
US-PATENT-4,634,759	c 23	N88-24692 *	US-PATENT-4,704,168	c 26	N88-14179 *	US-PATENT-4,805,368	c 18	N89-28554 *
US-PATENT-4,635,663	c 37	N87-17035 *	US-PATENT-4,704,197	c 25	N88-24732 *	US-PATENT-4,807,834	c 18	N89-25266 *
US-PATENT-4,635,773	c 37	N87-17037 *	US-PATENT-4,706,387	c 37	N88-14361 *	US-PATENT-4,809,003	c 32	N89-28672 *
US-PATENT-4,637,181	c 31	N87-16918 *	US-PATENT-4,706,910	c 02	N88-14071 *	US-PATENT-4,809,441	c 37	N89-28831 *
US-PATENT-4,637,447	c 37	N87-17036 *	US-PATENT-4,708,280	c 37	N88-14359 *	US-PATENT-4,809,936	c 18	N89-28553 *
US-PATENT-4,638,083	c 27	N87-16907 *	US-PATENT-4,708,305	c 08	N88-23809 *	US-PATENT-4,810,094	c 35	N89-26202 *
US-PATENT-4,641,499	c 31	N87-21159 *	US-PATENT-4,708,330	c 37	N88-14360 *	US-PATENT-4,810,438	c 27	N89-29539 *
US-PATENT-4,642,523	c 33	N87-21234 *	US-PATENT-4,709,252	c 33	N88-14271 *	US-PATENT-4,811,033	c 32	N89-25363 *
US-PATENT-4,644,234	c 33	N87-21233 *	US-PATENT-4,710,618	c 44	N88-14492 *	US-PATENT-4,815,279	c 20	N89-25279 *
US-PATENT-4,644,306	c 33	N87-22895 *	US-PATENT-4,711,697	c 76	N88-14835 *	US-PATENT-4,818,868	c 72	N89-29169 *
US-PATENT-4,644,794	c 71	N87-21652 *	US-PATENT-4,711,857	c 76	N88-14836 *	US-PATENT-4,819,064	c 32	N89-28676 *
US-PATENT-4,645,358	c 32	N87-21206 *	US-PATENT-4,711,932	c 27	N88-18725 *	US-PATENT-4,819,438	c 25	N90-11824 *
US-PATENT-4,646,860	c 85	N87-21755 *	US-PATENT-4,713,275	c 24	N88-18628 *	US-PATENT-4,820,488	c 26	N89-28621 *
US-PATENT-4,647,144	c 74	N87-21679 *	US-PATENT-4,718,281	c 35	N88-23967 *	US-PATENT-4,821,907	c 31	N89-29578 *
US-PATENT-4,647,615	c 27	N87-22845 *	US-PATENT-4,720,139	c 37	N88-23982 *	US-PATENT-4,823,074	c 33	N89-29681 *
US-PATENT-4,648,133	c 32	N87-21207 *	US-PATENT-4,723,096	c 33	N88-23942 *	US-PATENT-4,823,299	c 33	N89-28713 *
US-PATENT-4,648,267	c 34	N87-21255 *	US-PATENT-4,723,800	c 37	N88-23979 *	US-PATENT-4,831,818	c 20	N90-19298 *
US-PATENT-4,648,569	c 08	N87-20999 *	US-PATENT-4,725,106	c 54	N88-24163 *	US-PATENT-4,833,233	c 52	N90-20616 *
US-PATENT-4,649,189	c 72	N87-21112 *	US-PATENT-4,726,890	c 76	N88-24543 *	US-PATENT-4,836,035	c 35	N90-17114 *
US-PATENT-4,649,273	c 27	N87-21661 *	US-PATENT-4,727,751	c 02	N88-23759 *	US-PATENT-4,836,707	c 37	N90-17157 *
US-PATENT-4,649,278	c 72	N87-21660 *	US-PATENT-4,728,257	c 37	N88-23978 *	US-PATENT-4,837,300	c 27	N90-16950 *
US-PATENT-4,649,287	c 44	N87-21410 *	US-PATENT-4,731,211	c 27	N88-23894 *	US-PATENT-4,838,346	c 34	N90-20323 *
US-PATENT-4,649,541	c 60	N87-21591 *	US-PATENT-4,732,353	c 08	N88-23808 *	US-PATENT-4,839,046	c 51	N91-14703 *
US-PATENT-4,649,750	c 71	N87-21653 *	US-PATENT-4,735,381	c 05	N88-23765 *	US-PATENT-4,839,121	c 31	N90-19425 *
US-PATENT-4,650,108	c 37	N87-21334 *	US-PATENT-4,736,247	c 36	N88-24958 *	US-PATENT-4,839,330	c 25	N90-20154 *
US-PATENT-4,650,385	c 37	N87-22976 *	US-PATENT-4,736,490	c 18	N88-23827 *	US-PATENT-4,839,489	c 37	N90-19602 *
US-PATENT-4,652,833	c 33	N87-21235 *	US-PATENT-4,736,676	c 37	N88-23981 *	US-PATENT-4,840,394	c 37	N90-17153 *
US-PATENT-4,654,065	c 27	N87-21111 *	US-PATENT-4,736,815	c 71	N88-24241 *	US-PATENT-4,840,496	c 36	N90-17132 *
US-PATENT-4,654,110	c 76	N87-23286 *	US-PATENT-4,736,927	c 35	N88-24927 *	US-PATENT-4,842,223	c 18	N90-19278 *
US-PATENT-4,655,482	c 37	N87-22977 *	US-PATENT-4,738,137	c 35	N88-23966 *	US-PATENT-4,842,224	c 18	N90-16860 *
US-PATENT-4,657,044	c 37	N87-21332 *	US-PATENT-4,738,583	c 18	N88-23828 *	US-PATENT-4,843,123	c 27	N90-16949 *
US-PATENT-4,660,000	c 33	N87-21232 *	US-PATENT-4,738,831	c 76	N88-24544 *	US-PATENT-4,843,328	c 32	N90-17005 *
US-PATENT-4,661,558	c 27	N87-22848 *	US-PATENT-4,740,264	c 76	N88-24545 *	US-PATENT-4,843,439	c 35	N90-17118 *
US-PATENT-4,661,770	c 33	N87-22894 *	US-PATENT-4,742,232	c 72	N88-24253 *	US-PATENT-4,843,440	c 33	N90-20282 *
US-PATENT-4,662,220	c 35	N87-22953 *	US-PATENT-4,748,263	c 23	N88-24692 *	US-PATENT-4,843,554	c 09	N90-20096 *
US-PATENT-4,662,751	c 74	N87-23259 *	US-PATENT-4,749,839	c 37	N88-23980 *	US-PATENT-4,845,167	c 23	N90-19300 *
US-PATENT-4,663,627	c 06	N87-22678 *	US-PATENT-4,750,031	c 33	N88-23941 *	US-PATENT-4,845,728	c 60	N90-21525 *
US-PATENT-4,663,483	c 27	N87-22847 *	US-PATENT-4,750,144	c 60	N88-24169 *	US-PATENT-4,845,993	c 09	N91-14357 *
US-PATENT-4,664,177	c 34	N87-22950 *	US-PATENT-4,750,543	c 34	N88-23958 *	US-PATENT-4,846,854	c 31	N90-20254 *
US-PATENT-4,664,177	c 34	N88-23958 *	US-PATENT-4,752,372	c 25	N88-23945 *	US-PATENT-4,847,502	c 35	N90-20351 *
US-PATENT-4,664,344	c 37	N87-22985 *	US-PATENT-4,757,278	c 33	N88-26596 *	US-PATENT-4,847,837	c 62	N90-19776 *
US-PATENT-4,664,980	c 27	N87-23736 *	US-PATENT-4,757,315	c 32	N88-26568 *	US-PATENT-4,848,153	c 34	N90-19534 *
US-PATENT-4,665,277	c 33	N87-23879 *	US-PATENT-4,757,767	c 18	N88-26398 *	US-PATENT-4,848,987	c 29	N90-20236 *
US-PATENT-4,665,334	c 37	N87-23970 *	US-PATENT-4,758,380	c 23	N88-26404 *	US-PATENT-4,849,033	c 76	N90-19884 *
US-PATENT-4,666,086	c 37	N87-24689 *	US-PATENT-4,761,744	c 25	N88-29002 *	US-PATENT-4,849,903	c 33	N90-19492 *
US-PATENT-4,666,561	c 25	N88-23846 *	US-PATENT-4,762,173	c 34	N88-29132 *	US-PATENT-4,851,071	c 31	N90-19427 *
US-PATENT-4,668,589	c 27	N87-25469 *	US-PATENT-4,762,619	c 31	N88-29052 *	US-PATENT-4,851,491	c 27	N90-21177 *
US-PATENT-4,669,354	c 37	N87-23983 *	US-PATENT-4,763,459	c 37	N88-29180 *	US-PATENT-4,851,544	c 23	N90-21118 *
US-PATENT-4,669,836	c 52	N87-24874 *	US-PATENT-4,763,762	c 37	N88-29181 *	US-PATENT-4,852,578	c 52	N90-21519 *
US-PATENT-4,669,958	c 08	N87-23631 *	US-PATENT-4,765,114	c 18	N88-28958 *	US-PATENT-4,855,274	c 25	N90-20180 *
US-PATENT-4,670,565	c 27	N87-23751 *	US-PATENT-4,765,139	c 35	N88-29151 *	US-PATENT-4,858,717	c 31	N90-21215 *
US-PATENT-4,672,202	c 37	N87-23982 *	US-PATENT-4,765,187	c 35	N88-29150 *	US-PATENT-4,858,857	c 18	N90-20126 *
US-PATENT-4,675,379	c 27	N87-24564 *	US-PATENT-4,765,396	c 34	N88-29133 *	US-PATENT-4,858,979	c 37	N90-20408 *
US-PATENT-4,675,563	c 33	N87-23904 *	US-PATENT-4,766,286	c 37	N88-30131 *	US-PATENT-4,860,014	c 32	N90-20280 *
US-PATENT-4,675,880	c 32	N87-25511 *	US-PATENT-4,766,369	c 35	N88-29149 *	US-PATENT-4,860,074	c 35	N90-21358 *
US-PATENT-4,676,110	c 39	N87-25601 *	US-PATENT-4,766,533	c 60	N88-29310 *	US-PATENT-4,860,149	c 33	N90-20320 *
US-PATENT-4,676,846	c 26	N87-28647 *	US-PATENT-4,766,724	c 09	N88-28939 *	US-PATENT-4,860,295	c 36	N91-17360 *
US-PATENT-4,676,853	c 37	N87-23981 *	US-PATENT-4,767,083	c 05	N88-28914 *	US-PATENT-4,860,669	c 31	N91-15423 *
US-PATENT-4,676,962	c 23	N87-23698 *	US-PATENT-4,767,484	c 35	N88-30108 *	US-PATENT-4,860,971	c 03	N91-15142 *
US-PATENT-4,677,629	c 36	N87-23960 *	US-PATENT-4,767,728	c 27	N88-29040 *	US-PATENT-4,860,975	c 18	N91-14374 *
US-PATENT-4,677,636	c 36	N87-23961 *	US-PATENT-4,769,968	c 31	N89-12786 *	US-PATENT-4,861,416	c 76	N91-15898 *
US-PATENT-4,677,642	c 35	N87-23944 *	US-PATENT-4,770,032	c 35	N89-12841 *	US-PATENT-4,863,118	c 05	N90-20079 *
US-PATENT-4,677,803	c 31	N87-25492 *	US-PATENT-4,770,038	c 35	N89-14407 *	US-PATENT-4,863,553	c 76	N90-20896 *
US-PATENT-4,678,438	c 14	N87-25344 *	US-PATENT-4,770,232	c 35	N89-12048 *	US-PATENT-4,864,050	c 23	N90-20133 *
US-PATENT-4,680,897	c 31	N87-25491 *	US-PATENT-4,770,238	c 34	N89-14392 *	US-PATENT-4,864,865	c 37	N90-20409 *
US-PATENT-4,681,818	c 26	N87-25455 *	US-PATENT-4,770,455	c 37	N89-13785 *	US-PATENT-4,864,910	c 37	N90-21390 *
US-PATENT-4,681,142	c 37	N87-25573 *	US-PATENT-4,771,250	c 32	N88-29076 *	US-PATENT-4,865,114	c 31	N90-21216 *
US-PATENT-4,681,437	c 76	N87-25862 *	US-PATENT-4,771,823	c 31	N89-12785 *	US-PATENT-4,865,270	c 54	N93-14713 *
US-PATENT-4,682,006	c 74	N87-25843 *	US-PATENT-4,772,050	c 37	N89-13786 *	US-PATENT-4,867,394	c 05	N90-20078 *
US-PATENT-4,682,053	c 36	N87-25567 *	US-PATENT-4,772,101	c 74	N89-14078 *	US-PATENT-4,868,818	c 60	N90-21527 *
US-PATENT-4,682,225	c 17	N87-25348 *	US-PATENT-4,772,175	c 18	N89-12621 *	US-PATENT-4,873,498	c 33	N90-23635 *
US-PATENT-4,682,343	c 33	N87-25531 *	US-PATENT-4,772,785	c 74	N89-14077 *	US-PATENT-4,873,990	c 35	N90-23706 *
US-PATENT-4,682,494	c 09	N87-25334 *	US-PATENT-4,772,893	c 32	N89-11961 *	US-PATENT-4,877,082	c 31	N90-23587 *
US-PATENT-4,682,745	c 37	N87-25582 *	US-PATENT-4,773,266	c 71	N89-13236 *	US-PATENT-4,877,689	c 24	N90-23480 *
US-PATENT-4,683,809	c 24	N87-27742 *	US-PATENT-4,773,620	c 05	N89-11738 *	US-PATENT-4,879,446	c 31	N90-23586 *
US-PATENT-4,684,156	c 18	N87-27713 *	US-PATENT-4,774,118	c 27	N89-12741 *	US-PATENT-4,883,116	c 27	N90-23541 *
US-PATENT-4,684,258	c 36	N87-28006 *	US-PATENT-4,774,359	c 23	N89-12667 *	US-PATENT-4,885,116	c 25	N90-23497 *
US-PATENT-4,684,424	c 74	N87-28416 *	US-PATENT-4,774,835	c 02	N89-12551 *	US-PATENT-4,886,896	c 23	N90-23475 *
US-PATENT-4,685,535	c 54	N87-29118 *	US-PATENT-4,775,740	c 27	N89-16042 *	US-PATENT-4,889,912	c 27	N90-23545 *
US-PATENT-4,687,048	c 34	N87-28867 *	US-PATENT-4,776,531	c 02	N89-14224 *	US-PATENT-4,890,252	c 33	N90-23636 *
US-PATENT-4,687,444	c 82	N87-29372 *	US-PATENT-4,776,541	c 35	N89-15379 *	US-PATENT-4,890,915	c 76	N90-24150 *
US-PATENT-4,687,964	c 33	N87-28832 *	US-PATENT-4,777,656	c 32	N89-14374 *	US-PATENT-4,891,591	c 27	N90-23544 *
US-PATENT-4,688,422	c 35	N87-28884 *	US-PATENT-4,777,823	c 35	N89-14422 *	US-PATENT-4,894,554	c 37	N90-23742 *
US-PATENT-4,689,188	c 27	N87-28656 *	US-PATENT-4,778,268	c 52	N89-16256 *	US-PATENT-4,895,430	c 35	N91-14590 *
US-PATENT-4,689,421	c 23	N87-28605 *	US-PATENT-4,779,222	c 33	N89-14384 *	US-PATENT-4,895,915	c 23	N91-14418 *
US-PATENT-4,689,522	c 33	N87-28831 *	US-PATENT-4,779,428	c 31	N89-14351 *	US-PATENT-4,895,972	c 27	N90-23546 *
US-PATENT-4,690,353	c 33	N87-28833 *	US-PATENT-4,780,276	c 26	N89-14303 *	US-PATENT-4,896,533	c 35	N90-23707 *



# US-PATENT-4,899,356

# REPORT NUMBER INDEX

US-PATENT-4,899,356	c 38	N90-23756 *	US-PATENT-4,981,345	c 37	N91-21545 *	US-PATENT-5,057,338	c 24	N92-10070 *
US-PATENT-4,902,354	c 09	N90-23415 *	US-PATENT-4,984,457	c 35	N91-21495 *	US-PATENT-5,057,473	c 25	N92-10073 *
US-PATENT-4,902,450	c 34	N90-23700 *	US-PATENT-4,986,132	c 37	N91-21540 *	US-PATENT-5,057,917	c 32	N92-10128 *
US-PATENT-4,902,647	c 72	N91-14813 *	US-PATENT-4,987,339	c 76	N91-21911 *	US-PATENT-5,058,281	c 35	N92-10186 *
US-PATENT-4,902,769	c 23	N91-27220 *	US-PATENT-4,988,623	c 51	N91-21700 *	US-PATENT-5,058,506	c 37	N91-32514 *
US-PATENT-4,904,538	c 24	N90-23493 *	US-PATENT-4,989,497	c 35	N91-21494 *	US-PATENT-5,058,591	c 52	N92-11621 *
US-PATENT-4,907,233	c 17	N90-21061 *	US-PATENT-4,990,312	c 09	N91-21157 *	US-PATENT-5,058,929	c 37	N92-10197 *
US-PATENT-4,909,133	c 37	N90-22042 *	US-PATENT-4,990,739	c 75	N91-25875 *	US-PATENT-5,059,409	c 27	N92-10090 *
US-PATENT-4,909,313	c 34	N90-21999 *	US-PATENT-4,990,922	c 43	N91-21621 *	US-PATENT-5,059,581	c 76	N92-10681 *
US-PATENT-4,909,436	c 35	N91-21496 *	US-PATENT-4,990,988	c 33	N91-21434 *	US-PATENT-5,061,112	c 31	N92-16161 *
US-PATENT-4,909,933	c 29	N90-21209 *	US-PATENT-4,991,181	c 25	N91-21270 *	US-PATENT-5,061,783	c 25	N92-16043 *
US-PATENT-4,910,233	c 27	N90-21198 *	US-PATENT-4,991,788	c 18	N91-21222 *	US-PATENT-5,062,693	c 74	N92-16808 *
US-PATENT-4,910,396	c 74	N90-22383 *	US-PATENT-4,995,272	c 14	N91-21176 *	US-PATENT-5,062,694	c 36	N92-16290 *
US-PATENT-4,911,062	c 24	N90-21822 *	US-PATENT-4,995,697	c 74	N91-21871 *	US-PATENT-5,063,734	c 20	N92-15122 *
US-PATENT-4,911,738	c 35	N90-22024 *	US-PATENT-4,997,158	c 37	N91-21541 *	US-PATENT-5,063,747	c 31	N92-15203 *
US-PATENT-4,911,890	c 35	N90-22025 *	US-PATENT-4,998,842	c 18	N91-21221 *	US-PATENT-5,063,789	c 34	N92-16241 *
US-PATENT-4,912,082	c 25	N90-23517 *	US-PATENT-4,999,553	c 37	N91-21544 *	US-PATENT-5,064,111	c 31	N92-16162 *
US-PATENT-4,912,238	c 23	N91-17141 *	US-PATENT-5,000,033	c 14	N91-21175 *	US-PATENT-5,064,151	c 18	N92-21999 *
US-PATENT-4,912,386	c 33	N90-21951 *	US-PATENT-5,000,416	c 37	N91-21543 *	US-PATENT-5,064,868	c 27	N92-16123 *
US-PATENT-4,912,411	c 26	N90-21170 *	US-PATENT-5,001,924	c 35	N91-21493 *	US-PATENT-5,065,236	c 74	N92-16809 *
US-PATENT-4,912,414	c 35	N90-22023 *	US-PATENT-5,002,890	c 51	N91-21701 *	US-PATENT-5,066,337	c 44	N92-16457 *
US-PATENT-4,913,225	c 31	N91-15424 *	US-PATENT-5,003,211	c 70	N91-21824 *	US-PATENT-5,066,625	c 27	N92-16122 *
US-PATENT-4,913,534	c 35	N91-13694 *	US-PATENT-5,003,235	c 37	N91-21539 *	US-PATENT-5,066,748	c 27	N92-16121 *
US-PATENT-4,916,954	c 35	N90-23712 *	US-PATENT-5,004,575	c 24	N91-25200 *	US-PATENT-5,067,019	c 60	N92-16563 *
US-PATENT-4,917,302	c 37	N90-23751 *	US-PATENT-5,005,147	c 32	N91-25317 *	US-PATENT-5,067,388	c 18	N92-15114 *
US-PATENT-4,917,332	c 05	N91-14345 *	US-PATENT-5,005,457	c 54	N91-26747 *	US-PATENT-5,068,951	c 37	N92-28754 *
US-PATENT-4,917,333	c 05	N90-23390 *	US-PATENT-5,005,787	c 54	N91-31803 *	US-PATENT-5,070,729	c 02	N92-21588 *
US-PATENT-4,917,940	c 76	N90-24168 *	US-PATENT-5,005,954	c 74	N91-26918 *	US-PATENT-5,070,964	c 54	N92-16559 *
US-PATENT-4,918,652	c 35	N90-23713 *	US-PATENT-5,007,068	c 32	N91-25316 *	US-PATENT-5,071,091	c 16	N92-16007 *
US-PATENT-4,919,852	c 27	N90-23566 *	US-PATENT-5,007,983	c 25	N91-31258 *	US-PATENT-5,072,133	c 33	N92-16196 *
US-PATENT-4,919,899	c 76	N90-24169 *	US-PATENT-5,008,061	c 24	N91-25199 *	US-PATENT-5,072,379	c 62	N92-15620 *
US-PATENT-4,920,487	c 62	N91-14769 *	US-PATENT-5,011,907	c 27	N91-27372 *	US-PATENT-5,073,412	c 24	N92-16025 *
US-PATENT-4,921,212	c 37	N91-14609 *	US-PATENT-5,011,955	c 23	N91-25185 *	US-PATENT-5,075,243	c 24	N92-18561 *
US-PATENT-4,921,293	c 37	N91-14616 *	US-PATENT-5,012,062	c 27	N91-25296 *	US-PATENT-5,076,103	c 35	N92-21586 *
US-PATENT-4,923,545	c 24	N90-25197 *	US-PATENT-5,013,531	c 76	N92-25398 *	US-PATENT-5,076,590	c 37	N92-16318 *
US-PATENT-4,923,741	c 54	N90-25498 *	US-PATENT-5,014,340	c 33	N91-31530 *	US-PATENT-5,077,015	c 34	N92-16243 *
US-PATENT-4,923,751	c 24	N90-25196 *	US-PATENT-5,014,917	c 37	N91-27560 *	US-PATENT-5,077,622	c 74	N92-16811 *
US-PATENT-4,924,053	c 31	N90-26168 *	US-PATENT-5,015,825	c 14	N91-27175 *	US-PATENT-5,079,082	c 24	N92-16026 *
US-PATENT-4,925,297	c 36	N90-25340 *	US-PATENT-5,015,851	c 72	N91-27936 *	US-PATENT-5,079,480	c 33	N92-15331 *
US-PATENT-4,926,481	c 60	N90-25583 *	US-PATENT-5,015,963	c 33	N91-26438 *	US-PATENT-5,080,286	c 34	N92-21724 *
US-PATENT-4,926,694	c 24	N91-14430 *	US-PATENT-5,016,418	c 18	N91-27199 *	US-PATENT-5,080,490	c 74	N92-22034 *
US-PATENT-4,927,326	c 37	N91-14608 *	US-PATENT-5,017,549	c 14	N92-15081 *	US-PATENT-5,080,724	c 44	N92-22037 *
US-PATENT-4,928,027	c 27	N91-14489 *	US-PATENT-5,017,883	c 32	N91-27439 *	US-PATENT-5,080,977	c 24	N92-21725 *
US-PATENT-4,932,270	c 35	N91-17350 *	US-PATENT-5,018,688	c 05	N91-27156 *	US-PATENT-5,081,198	c 27	N92-22044 *
US-PATENT-4,932,610	c 34	N91-14562 *	US-PATENT-5,019,176	c 44	N91-27614 *	US-PATENT-5,082,293	c 37	N92-22043 *
US-PATENT-4,932,688	c 37	N91-14613 *	US-PATENT-5,019,470	c 33	N91-27478 *	US-PATENT-5,083,378	c 35	N92-22039 *
US-PATENT-4,932,777	c 09	N91-14356 *	US-PATENT-5,019,533	c 76	N91-28014 *	US-PATENT-5,084,645	c 33	N92-22042 *
US-PATENT-4,932,806	c 37	N91-17387 *	US-PATENT-5,020,739	c 02	N91-27139 *	US-PATENT-5,085,073	c 35	N92-21710 *
US-PATENT-4,932,807	c 37	N91-15544 *	US-PATENT-5,020,742	c 03	N91-31113 *	US-PATENT-5,086,204	c 35	N92-22038 *
US-PATENT-4,933,558	c 74	N91-14835 *	US-PATENT-5,020,743	c 18	N91-27201 *	US-PATENT-5,086,400	c 37	N92-22036 *
US-PATENT-4,933,936	c 62	N91-14772 *	US-PATENT-5,020,774	c 34	N91-27504 *	US-PATENT-5,086,828	c 54	N92-21589 *
US-PATENT-4,936,146	c 34	N91-31596 *	US-PATENT-5,020,876	c 18	N91-27200 *	US-PATENT-5,087,088	c 37	N92-21500 *
US-PATENT-4,936,309	c 52	N91-14709 *	US-PATENT-5,021,065	c 54	N91-32795 *	US-PATENT-5,088,665	c 05	N92-21587 *
US-PATENT-4,936,869	c 28	N91-14495 *	US-PATENT-5,021,518	c 27	N91-31307 *	US-PATENT-5,090,857	c 37	N92-21726 *
US-PATENT-4,937,317	c 27	N91-15403 *	US-PATENT-5,021,729	c 33	N91-27479 *	US-PATENT-5,092,956	c 76	N92-21499 *
US-PATENT-4,937,356	c 23	N91-14419 *	US-PATENT-5,023,034	c 37	N91-27562 *	US-PATENT-5,094,974	c 76	N92-22035 *
US-PATENT-4,937,891	c 54	N91-14723 *	US-PATENT-5,024,288	c 71	N91-27913 *	US-PATENT-5,096,340	c 35	N92-21723 *
US-PATENT-4,942,632	c 54	N91-14724 *	US-PATENT-5,025,455	c 32	N91-25318 *	US-PATENT-5,098,961	c 27	N92-21711 *
US-PATENT-4,945,012	c 33	N91-14538 *	US-PATENT-5,026,008	c 34	N91-25380 *	US-PATENT-5,099,294	c 76	N92-22041 *
US-PATENT-4,945,549	c 32	N91-14523 *	US-PATENT-5,026,650	c 51	N91-30667 *	US-PATENT-5,100,694	c 76	N92-22040 *
US-PATENT-4,946,122	c 37	N91-14617 *	US-PATENT-5,027,182	c 74	N91-25841 *	US-PATENT-5,101,361	c 32	N92-22033 *
US-PATENT-4,946,421	c 37	N91-17388 *	US-PATENT-5,027,860	c 31	N91-25305 *	US-PATENT-5,102,150	c 37	N92-21727 *
US-PATENT-4,946,890	c 27	N91-15402 *	US-PATENT-5,029,216	c 35	N91-27522 *	US-PATENT-5,103,941	c 37	N92-21728 *
US-PATENT-4,947,408	c 32	N92-21712 *	US-PATENT-5,029,220	c 74	N91-25840 *	US-PATENT-5,104,683	c 74	N92-29158 *
US-PATENT-4,952,811	c 35	N91-14588 *	US-PATENT-5,031,089	c 62	N91-25693 *	US-PATENT-5,104,802	c 35	N92-31790 *
US-PATENT-4,952,836	c 76	N91-14872 *	US-PATENT-5,031,234	c 74	N91-27957 *	US-PATENT-5,107,107	c 74	N92-29133 *
US-PATENT-4,954,864	c 33	N91-14551 *	US-PATENT-5,031,627	c 71	N91-27914 *	US-PATENT-5,107,526	c 35	N92-29135 *
US-PATENT-4,955,653	c 37	N91-14615 *	US-PATENT-5,031,689	c 31	N91-27385 *	US-PATENT-5,107,920	c 34	N92-28752 *
US-PATENT-4,956,996	c 35	N91-15511 *	US-PATENT-5,032,045	c 37	N91-27561 *	US-PATENT-5,108,214	c 37	N92-29120 *
US-PATENT-4,957,139	c 34	N91-14563 *	US-PATENT-5,034,093	c 25	N92-25399 *	US-PATENT-5,108,568	c 25	N92-28728 *
US-PATENT-4,957,357	c 35	N91-14591 *	US-PATENT-5,034,187	c 24	N91-27244 *	US-PATENT-5,109,195	c 39	N92-29155 *
US-PATENT-4,957,661	c 24	N91-15320 *	US-PATENT-5,038,089	c 63	N91-31885 *	US-PATENT-5,109,345	c 18	N92-28750 *
US-PATENT-4,959,084	c 45	N91-14662 *	US-PATENT-5,038,473	c 37	N91-31655 *	US-PATENT-5,109,425	c 54	N92-29129 *
US-PATENT-4,959,656	c 04	N91-14321 *	US-PATENT-5,038,693	c 24	N91-31236 *	US-PATENT-5,110,436	c 25	N92-28756 *
US-PATENT-4,962,330	c 71	N91-14808 *	US-PATENT-5,040,886	c 74	N92-16810 *	US-PATENT-5,110,694	c 33	N92-28753 *
US-PATENT-4,963,052	c 37	N91-14614 *	US-PATENT-5,041,881	c 33	N92-16197 *	US-PATENT-5,111,345	c 60	N92-29132 *
US-PATENT-4,964,300	c 19	N91-14412 *	US-PATENT-5,044,063	c 37	N91-31656 *	US-PATENT-5,112,120	c 02	N92-28729 *
US-PATENT-4,964,303	c 71	N91-14807 *	US-PATENT-5,046,395	c 37	N91-32498 *	US-PATENT-5,112,154	c 37	N92-29140 *
US-PATENT-4,964,453	c 26	N91-14462 *	US-PATENT-5,047,686	c 74	N91-31950 *	US-PATENT-5,112,923	c 27	N92-31792 *
US-PATENT-4,964,722	c 35	N91-15512 *	US-PATENT-5,047,700	c 33	N91-31528 *	US-PATENT-5,113,064	c 74	N92-29122 *
US-PATENT-4,965,429	c 31	N91-14508 *	US-PATENT-5,047,942-CU	c 04	N91-31120 *	US-PATENT-5,113,659	c 44	N92-29143 *
US-PATENT-4,965,743	c 61	N91-14741 *	US-PATENT-5,048,023	c 60	N91-31810 *	US-PATENT-5,113,714	c 33	N92-29153 *
US-PATENT-4,966,823	c 33	N91-14536 *	US-PATENT-5,048,973	c 35	N91-31608 *	US-PATENT-5,116,331	c 35	N92-29097 *
US-PATENT-4,971,139	c 34	N91-21473 *	US-PATENT-5,049,492	c 51	N91-31755 *	US-PATENT-5,116,543	c 54	N92-29137 *
US-PATENT-4,971,474	c 37	N91-14610 *	US-PATENT-5,049,539	c 33	N91-31529 *	US-PATENT-5,116,690	c 27	N92-29090 *
US-PATENT-4,973,840	c 35	N91-14587 *	US-PATENT-5,050,789	c 31	N91-31476 *	US-PATENT-5,116,807	c 74	N92-28571 *
US-PATENT-4,973,914	c 33	N91-14550 *	US-PATENT-5,050,819	c 05	N91-31140 *	US-PATENT-5,116,934	c 27	N92-28751 *
US-PATENT-4,973,936	c 33	N91-14537 *	US-PATENT-5,051,559	c 37	N91-32508 *	US-PATENT-5,116,939	c 27	N92-29157 *
US-PATENT-4,974,181	c 17	N91-14371 *	US-PATENT-5,052,807	c 74	N91-32922 *	US-PATENT-5,117,139	c 37	N92-29099 *
US-PATENT-4,974,230	c 36	N91-15528 *	US-PATENT-5,052,817	c 25	N91-32196 *	US-PATENT-5,117,184	c 39	N92-29101 *
US-PATENT-4,975,672	c 33	N91-14539 *	US-PATENT-5,053,778	c 43	N91-32546 *	US-PATENT-5,117,689	c 47	N92-29148 *
US-PATENT-4,975,704	c 43	N91-14642 *	US-PATENT-5,054,287	c 20	N92-10054 *	US-PATENT-5,118,237	c 37	N92-29150 *
US-PATENT-4,977,395	c 37	N91-14607 *	US-PATENT-5,055,240	c 31	N91-32240 *	US-PATENT-5,118,781	c 23	N92-29141 *
US-PATENT-4,980,126	c 24	N91-17145 *	US-PATENT-5,056,037	c 62	N91-32852 *	US-PATENT-5,119,637	c 35	N92-29156 *
US-PATENT-4,980,626	c 37	N91-21542 *	US-PATENT-5,056,156	c 27	N92-10091 *	US-PATENT-5,120,101	c 37	N92-29138 *
US-PATENT-4,980,636	c 33	N91-14552 *	US-PATENT-5,056,381	c 35	N92-10185 *	US-PATENT-5,121,058	c 39	N92-28757 *

## REPORT NUMBER INDEX

US-PATENT-7,571,687

US-PATENT-5,122,731 ..... c 32 N92-29124 \*  
 US-PATENT-5,124,640 ..... c 38 N92-29154 \*  
 US-PATENT-5,125,601 ..... c 37 N92-28727 \*  
 US-PATENT-5,125,730 ..... c 52 N92-28755 \*  
 US-PATENT-5,126,131 ..... c 37 N92-29092 \*  
 US-PATENT-5,126,527 ..... c 26 N92-29094 \*  
 US-PATENT-5,126,669 ..... c 70 N92-29130 \*  
 US-PATENT-5,127,471 ..... c 34 N92-29125 \*  
 US-PATENT-5,128,796 ..... c 37 N92-29151 \*  
 US-PATENT-5,128,797 ..... c 74 N92-29117 \*  
 US-PATENT-5,128,849 ..... c 36 N92-31788 \*  
 US-PATENT-5,129,600 ..... c 35 N92-33010 \*  
 US-PATENT-5,130,105 ..... c 76 N92-34171 \*  
 US-PATENT-5,130,278 ..... c 27 N92-34160 \*  
 US-PATENT-5,130,530 ..... c 74 N92-33028 \*  
 US-PATENT-5,130,990 ..... c 33 N92-33011 \*  
 US-PATENT-5,131,055 ..... c 60 N92-33057 \*  
 US-PATENT-5,131,758 ..... c 09 N93-11057 \*  
 US-PATENT-5,132,763 ..... c 76 N93-11056 \*  
 US-PATENT-5,133,721 ..... c 52 N92-33032 \*  
 US-PATENT-5,140,992 ..... c 35 N92-33016 \*  
 US-PATENT-5,141,334 ..... c 35 N92-33614 \*  
 US-PATENT-5,141,636 ..... c 25 N92-33029 \*  
 US-PATENT-5,141,806 ..... c 25 N92-33009 \*  
 US-PATENT-5,142,932 ..... c 37 N92-33634 \*  
 US-PATENT-5,143,327 ..... c 18 N92-33013 \*  
 US-PATENT-5,145,063 ..... c 31 N92-33612 \*  
 US-PATENT-5,145,227 ..... c 37 N92-33018 \*  
 US-PATENT-5,145,937 ..... c 27 N92-33008 \*  
 US-PATENT-5,145,942 ..... c 27 N92-33015 \*  
 US-PATENT-5,146,083 ..... c 74 N92-33017 \*  
 US-PATENT-5,146,293 ..... c 74 N93-11058 \*  
 US-PATENT-5,146,482 ..... c 89 N92-33012 \* #  
 US-PATENT-5,146,780 ..... c 33 N92-33021 \*  
 US-PATENT-5,146,803 ..... c 37 N92-33031 \*  
 US-PATENT-5,147,562 ..... c 25 N92-33611 \*  
 US-PATENT-5,147,966 ..... c 27 N92-33014 \*  
 US-PATENT-5,149,046 ..... c 37 N92-33616 \*  
 US-PATENT-5,149,387 ..... c 31 N92-33020 \*  
 US-PATENT-5,149,746 ..... c 27 N93-11059 \*  
 US-PATENT-5,149,932 ..... c 33 N92-33030 \*  
 US-PATENT-5,150,026 ..... c 63 N92-33019 \*  
 US-PATENT-5,150,228 ..... c 74 N92-33022 \*  
 US-PATENT-5,150,620 ..... c 39 N92-34174 \*  
 US-PATENT-5,150,875 ..... c 37 N92-34173 \*  
 US-PATENT-5,153,131 ..... c 51 N92-34232 \*  
 US-PATENT-5,153,132 ..... c 51 N92-34229 \*  
 US-PATENT-5,153,133 ..... c 51 N93-10110 \*  
 US-PATENT-5,153,508 ..... c 47 N93-10108 \*  
 US-PATENT-5,153,665 ..... c 02 N92-34172 \*  
 US-PATENT-5,155,034 ..... c 51 N92-34231 \*  
 US-PATENT-5,155,035 ..... c 51 N93-10109 \*  
 US-PATENT-5,156,370 ..... c 39 N93-13420 \*  
 US-PATENT-5,157,938 ..... c 31 N93-13422 \*  
 US-PATENT-5,158,331 ..... c 37 N93-13417 \*  
 US-PATENT-5,158,801 ..... c 35 N93-14714 \*  
 US-PATENT-5,159,029 ..... c 24 N93-13416 \*  
 US-PATENT-5,159,199 ..... c 74 N93-13419 \*  
 US-PATENT-5,159,603 ..... c 36 N93-13418 \*  
 US-PATENT-5,159,843 ..... c 71 N93-13421 \*  
 US-PATENT-5,160,233 ..... c 37 N93-13423 \*  
 US-PATENT-5,161,027 ..... c 74 N93-13711 \*  
 US-PATENT-5,162,143 ..... c 24 N93-14700 \*  
 US-PATENT-5,163,966 ..... c 54 N93-14870 \*  
 US-PATENT-5,164,669 ..... c 26 N93-14705 \*  
 US-PATENT-5,164,956 ..... c 36 N93-14703 \*  
 US-PATENT-5,165,051 ..... c 61 N93-14882 \*  
 US-PATENT-5,165,169 ..... c 37 N93-14871 \*  
 US-PATENT-5,165,229 ..... c 37 N93-14702 \*  
 US-PATENT-5,166,679 ..... c 63 N93-14701 \*  
 US-PATENT-5,169,674 ..... c 24 N93-14706 \*  
 US-PATENT-5,171,822 ..... c 27 N93-14709 \*  
 US-PATENT-5,173,087 ..... c 76 N93-14707 \*  
 US-PATENT-5,173,873 ..... c 60 N93-14704 \*  
 US-PATENT-5,173,930 ..... c 74 N93-14711 \*  
 US-PATENT-5,174,590 ..... c 52 N93-14708 \*  
 US-PATENT-5,174,694 ..... c 37 N93-14710 \*  
 US-PATENT-5,174,772 ..... c 37 N93-14712 \*  
 US-PATENT-5,176,836 ..... c 51 N93-18351 \*  
 US-PATENT-5,178,004 ..... c 02 N93-18275 \*  
 US-PATENT-5,178,431 ..... c 37 N93-17625 \*  
 US-PATENT-5,179,025 ..... c 35 N93-17626 \*  
 US-PATENT-5,179,249 ..... c 28 N93-18274 \*  
 US-PATENT-5,179,289 ..... c 33 N93-18278 \*  
 US-PATENT-5,179,441 ..... c 74 N93-18276 \*  
 US-PATENT-5,179,568 ..... c 36 N93-18277 \*  
 US-PATENT-5,180,259 ..... c 37 N93-18286 \*  
 US-PATENT-5,181,259 ..... c 61 N93-18282 \*  
 US-PATENT-5,182,356 ..... c 23 N93-18283 \*  
 US-PATENT-5,182,641 ..... c 32 N93-18284 \*  
 US-PATENT-5,184,241 ..... c 36 N93-18287 \*  
 US-PATENT-5,184,460 ..... c 07 N93-22034 \*  
 US-PATENT-5,184,861 ..... c 37 N93-18288 \*  
 US-PATENT-5,185,046 ..... c 33 N93-18285 \*  
 US-PATENT-5,185,647 ..... c 35 N93-19387 \*  
 US-PATENT-5,187,542 ..... c 20 N93-18856 \*

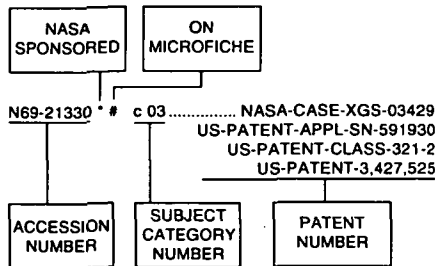
US-PATENT-5,187,794 ..... c 61 N93-18855 \*  
 US-PATENT-5,188,153 ..... c 31 N93-18857 \*  
 US-PATENT-5,189,127 ..... c 27 N93-19388 \*  
 US-PATENT-5,189,129 ..... c 27 N93-19327 \*  
 US-PATENT-5,189,709 ..... c 61 N93-18858 \*  
 US-PATENT-5,190,246 ..... c 16 N93-20115 \*  
 US-PATENT-5,190,392 ..... c 37 N93-20117 \*  
 US-PATENT-5,191,558 ..... c 35 N93-20569 \*  
 US-PATENT-5,192,450 ..... c 25 N93-20570 \*  
 US-PATENT-5,193,395 ..... c 39 N93-20118 \*  
 US-PATENT-5,193,929 ..... c 37 N93-20120 \*  
 US-PATENT-5,193,963 ..... c 37 N93-23078 \*  
 US-PATENT-5,194,290 ..... c 33 N93-20119 \*  
 US-PATENT-5,195,170 ..... c 60 N93-20116 \*  
 US-PATENT-5,196,069 ..... c 25 N93-22036 \*  
 US-PATENT-5,197,573 ..... c 37 N93-23075 \*  
 US-PATENT-5,197,817 ..... c 37 N93-23076 \*  
 US-PATENT-5,197,839 ..... c 37 N93-22384 \*  
 US-PATENT-5,199,128 ..... c 31 N93-22035 \*  
 US-PATENT-5,200,497 ..... c 27 N93-22033 \*  
 US-PATENT-5,200,610 ..... c 71 N93-24602 \*  
 US-PATENT-5,200,621 ..... c 74 N93-22037 \*  
 US-PATENT-5,200,963 ..... c 60 N93-22032 \*  
 US-PATENT-5,203,209 ..... c 09 N93-24601 \*  
 US-PATENT-5,203,435 ..... c 39 N93-24596 \*  
 US-PATENT-5,204,521 ..... c 63 N93-24599 \*  
 US-PATENT-5,205,898 ..... c 24 N93-24597 \*  
 US-PATENT-5,206,504 ..... c 29 N93-24600 \*  
 US-PATENT-5,207,110 ..... c 14 N93-24598 \*  
 US-PATENT-5,209,111 ..... c 34 N93-26000 \*  
 US-PATENT-5,209,123 ..... c 39 N93-26102 \*  
 US-PATENT-5,209,430 ..... c 08 N93-25998 \* #  
 US-PATENT-5,210,019 ..... c 51 N93-25994 \*  
 US-PATENT-5,211,057 ..... c 09 N93-25996 \*  
 US-PATENT-5,211,489 ..... c 37 N93-26001 \*  
 US-PATENT-5,212,276 ..... c 27 N93-25997 \* #  
 US-PATENT-5,212,283 ..... c 27 N93-25999 \*  
 US-PATENT-5,213,739 ..... c 27 N93-25995 \*  
 US-PATENT-5,213,843 ..... c 31 N93-26101 \*  
 US-PATENT-5,213,908 ..... c 44 N93-28974 \*  
 US-PATENT-5,214,004 ..... c 24 N93-26100 \*  
 US-PATENT-5,214,379 ..... c 35 N93-26103 \*  
 US-PATENT-5,214,388 ..... c 33 N93-26104 \*  
 US-PATENT-5,214,955 ..... c 35 N93-29084 \*  
 US-PATENT-5,215,790 ..... c 24 N93-29023 \*  
 US-PATENT-5,216,484 ..... c 74 N93-29086 \*  
 US-PATENT-5,217,185 ..... c 27 N93-29088 \*  
 US-PATENT-5,218,077 ..... c 27 N93-29085 \*  
 US-PATENT-5,218,083 ..... c 27 N93-29083 \*  
 US-PATENT-5,218,357 ..... c 32 N93-29087 \*  
 US-PATENT-5,218,709 ..... c 60 N93-29608 \*  
 US-PATENT-5,219,318 ..... c 37 N93-29505 \*  
 US-PATENT-5,220,070 ..... c 25 N93-29506 \*  
 US-PATENT-5,220,335 ..... c 32 N93-29507 \*  
 US-PATENT-5,223,310 ..... c 39 N93-29613 \*  
 US-PATENT-5,224,030 ..... c 24 N93-29614 \*  
 US-PATENT-5,224,519 ..... c 31 N93-29611 \*  
 US-PATENT-5,225,171 ..... c 24 N93-29609 \*  
 US-PATENT-5,226,110 ..... c 60 N93-29504 \*  
 US-PATENT-5,226,308 ..... c 37 N93-29618 \*  
 US-PATENT-5,226,447 ..... c 35 N93-29503 \*  
 US-PATENT-5,227,032 ..... c 25 N93-29617 \*  
 US-PATENT-5,227,731 ..... c 39 N93-29612 \*  
 US-PATENT-5,228,113 ..... c 53 N93-29610 \*  
 US-PATENT-7,571,687 ..... c 47 N93-10108 \*

# ACCESSION NUMBER INDEX

## NASA PATENT ABSTRACTS BIBLIOGRAPHY Section 2

JANUARY 1994

### Typical Accession Number Index Listing



Listings in this index are arranged numerically by accession number. The category number indicates the category in Section 1 (Abstracts) in which the citation is located. The accession number denotes the number by which the citation is identified within the subject category. An asterisk (\*) indicates that the item is a NASA report. A pound sign (#) indicates that the item is available on microfiche.

N69-21313\* # c 09 ..... NASA-CASE-XAR-03786  
N69-21313\* # c 09 ..... US-PATENT-APPL-SN-476763  
US-PATENT-CLASS-310-4  
US-PATENT-3,423,608  
N69-21330\* # c 03 ..... NASA-CASE-XGS-03429  
US-PATENT-APPL-SN-591930  
US-PATENT-CLASS-321-2  
US-PATENT-3,427,525  
N69-21337\* # c 03 ..... NASA-CASE-XNP-04264  
US-PATENT-APPL-SN-447933  
US-PATENT-CLASS-136-146  
US-PATENT-3,421,948  
N69-21362\* # c 15 ..... NASA-CASE-XLE-05130  
US-PATENT-APPL-SN-545224  
US-PATENT-CLASS-277-25  
US-PATENT-3,421,768  
N69-21363\* # c 14 ..... NASA-CASE-XGS-03865  
US-PATENT-APPL-SN-478491  
US-PATENT-CLASS-33-174  
US-PATENT-3,419,964  
N69-21380\* # c 05 ..... NASA-CASE-XLA-08491  
US-PATENT-APPL-SN-619520  
US-PATENT-CLASS-244-4  
US-PATENT-3,420,471  
N69-21460\* # c 15 ..... NASA-CASE-XKS-04614  
US-PATENT-APPL-SN-574280  
US-PATENT-CLASS-117-201  
US-PATENT-3,420,704  
N69-21465\* # c 15 ..... NASA-CASE-XLA-08645  
US-PATENT-APPL-SN-635970  
US-PATENT-CLASS-62-93  
US-PATENT-3,420,069  
N69-21466\* # c 12 ..... NASA-CASE-XLE-03512  
US-PATENT-APPL-SN-462762  
US-PATENT-CLASS-137-81.5  
US-PATENT-3,420,253  
N69-21467\* # c 09 ..... NASA-CASE-XMS-06949  
US-PATENT-APPL-SN-635328  
US-PATENT-CLASS-346-44  
US-PATENT-3,422,440  
N69-21468\* # c 09 ..... NASA-CASE-XNP-05612  
US-PATENT-APPL-SN-562934  
US-PATENT-CLASS-307-106  
US-PATENT-3,422,278  
N69-21469\* # c 03 ..... NASA-CASE-XMS-04843  
US-PATENT-APPL-SN-545229  
US-PATENT-CLASS-137-624.14  
US-PATENT-3,421,549  
N69-21470\* # c 09 ..... NASA-CASE-XLA-01288  
US-PATENT-APPL-SN-460876  
US-PATENT-CLASS-339-150  
US-PATENT-3,421,134  
N69-21471\* # c 15 ..... NASA-CASE-XMS-03537  
US-PATENT-APPL-SN-468655  
US-PATENT-CLASS-219-121

US-PATENT-3,420,978  
N69-21472\* # c 15 ..... NASA-CASE-XGS-02437  
US-PATENT-APPL-SN-487344  
US-PATENT-CLASS-317-157.5  
US-PATENT-3,421,053  
N69-21473\* # c 05 ..... NASA-CASE-XAR-01547  
US-PATENT-APPL-SN-391343  
US-PATENT-CLASS-128-2.08  
US-PATENT-3,420,225  
N69-21539\* # c 03 ..... NASA-CASE-XGS-01395  
US-PATENT-APPL-SN-545535  
US-PATENT-CLASS-174-72  
US-PATENT-3,422,213  
N69-21540\* # c 11 ..... NASA-CASE-XLA-02704  
US-PATENT-APPL-SN-469011  
US-PATENT-CLASS-73-67.2  
US-PATENT-3,421,363  
N69-21541\* # c 14 ..... NASA-CASE-XNP-09752  
US-PATENT-APPL-SN-640460  
US-PATENT-CLASS-317-246  
US-PATENT-3,422,324  
N69-21542\* # c 09 ..... NASA-CASE-XLE-03778  
US-PATENT-APPL-SN-628247  
US-PATENT-CLASS-174-18  
US-PATENT-3,420,945  
N69-21543\* # c 09 ..... NASA-CASE-XGS-04994  
US-PATENT-APPL-SN-619907  
US-PATENT-CLASS-331-4  
US-PATENT-3,421,105  
N69-21922\* # c 15 ..... NASA-CASE-XHO-03903  
US-PATENT-APPL-SN-560967  
US-PATENT-CLASS-23-208  
US-PATENT-3,423,179  
N69-21923\* # c 14 ..... NASA-CASE-XNP-07478  
US-PATENT-APPL-SN-605097  
US-PATENT-CLASS-175-323  
US-PATENT-3,421,591  
N69-21924\* # c 15 ..... NASA-CASE-XMS-05894-1  
US-PATENT-APPL-SN-685766  
US-PATENT-CLASS-137-491  
US-PATENT-3,421,541  
N69-21925\* # c 05 ..... NASA-CASE-XMS-02872  
US-PATENT-APPL-SN-422864  
US-PATENT-CLASS-128-2.06  
US-PATENT-3,420,223  
N69-21926\* # c 09 ..... NASA-CASE-XNP-06032  
US-PATENT-APPL-SN-590146  
US-PATENT-CLASS-324-156  
US-PATENT-3,422,354  
N69-21927\* # c 09 ..... NASA-CASE-XMS-07846-1  
US-PATENT-APPL-SN-694247  
US-PATENT-CLASS-339-91  
US-PATENT-3,422,390  
N69-21928\* # c 08 ..... NASA-CASE-XNP-09785  
US-PATENT-APPL-SN-599975  
US-PATENT-CLASS-340-172.5  
US-PATENT-3,422,403  
N69-21929\* # c 25 ..... NASA-CASE-XNP-07481  
US-PATENT-APPL-SN-563650  
US-PATENT-CLASS-310-11  
US-PATENT-3,422,291  
N69-23185\* # c 15 ..... NASA-CASE-XNP-05975  
US-PATENT-APPL-SN-570097  
US-PATENT-CLASS-239-416  
US-PATENT-3,421,700  
N69-23190\* # c 15 ..... NASA-CASE-NPO-10309  
US-PATENT-APPL-SN-574282  
US-PATENT-APPL-SN-700985  
US-PATENT-CLASS-62-6  
US-PATENT-3,421,331  
N69-23191\* # c 14 ..... NASA-CASE-XLE-10529  
US-PATENT-APPL-SN-603396  
US-PATENT-CLASS-317-234  
US-PATENT-3,421,056  
N69-23192\* # c 05 ..... NASA-CASE-XMS-06761  
US-PATENT-APPL-SN-575475  
US-PATENT-CLASS-128-283  
US-PATENT-3,421,506  
N69-24257\* # c 14 ..... NASA-CASE-XMS-04917  
US-PATENT-APPL-SN-574283  
US-PATENT-CLASS-73-198  
US-PATENT-3,425,276  
N69-24266\* # c 15 ..... NASA-CASE-XMS-03700

US-PATENT-APPL-SN-617783  
US-PATENT-CLASS-314-129  
US-PATENT-3,428,847  
N69-24267\* # c 03 ..... NASA-CASE-XGS-04531  
US-PATENT-APPL-SN-590141  
US-PATENT-CLASS-136-89  
US-PATENT-3,437,527  
N69-24317\* # c 09 ..... NASA-CASE-XGS-04999  
US-PATENT-APPL-SN-519395  
US-PATENT-CLASS-307-268  
US-PATENT-3,426,219  
N69-24318\* # c 09 ..... NASA-CASE-XGS-05003  
US-PATENT-APPL-SN-576797  
US-PATENT-CLASS-317-235  
US-PATENT-3,430,115  
N69-24319\* # c 15 ..... NASA-CASE-XNP-09227  
US-PATENT-APPL-SN-632164  
US-PATENT-CLASS-313-44  
US-PATENT-3,426,230  
N69-24320\* # c 15 ..... NASA-CASE-XGS-03864  
US-PATENT-APPL-SN-577114  
US-PATENT-CLASS-136-133  
US-PATENT-3,427,205  
N69-24321\* # c 11 ..... NASA-CASE-XLA-03271  
US-PATENT-APPL-SN-482313  
US-PATENT-CLASS-350-310  
US-PATENT-3,427,097  
N69-24322\* # c 15 ..... NASA-CASE-XMS-01108  
US-PATENT-APPL-SN-432032  
US-PATENT-CLASS-156-242  
US-PATENT-3,425,885  
N69-24323\* # c 07 ..... NASA-CASE-XGS-02816  
US-PATENT-APPL-SN-521998  
US-PATENT-CLASS-333-73  
US-PATENT-3,437,959  
N69-24324\* # c 09 ..... NASA-CASE-XGS-02171  
US-PATENT-APPL-SN-590159  
US-PATENT-CLASS-325-446  
US-PATENT-3,437,935  
N69-24329\* # c 09 ..... NASA-CASE-XNP-04183  
US-PATENT-APPL-SN-546142  
US-PATENT-CLASS-179-100.2  
US-PATENT-3,428,761  
N69-24330\* # c 09 ..... NASA-CASE-XMS-05307  
US-PATENT-APPL-SN-516154  
US-PATENT-CLASS-330-29  
US-PATENT-3,428,910  
N69-24331\* # c 14 ..... NASA-CASE-XNP-03930  
US-PATENT-APPL-SN-526665  
US-PATENT-CLASS-250-237  
US-PATENT-3,435,246  
N69-24332\* # c 23 ..... NASA-CASE-XNP-02340  
US-PATENT-APPL-SN-439490  
US-PATENT-CLASS-350-1  
US-PATENT-3,427,089  
N69-24333\* # c 09 ..... NASA-CASE-XNP-09225  
US-PATENT-APPL-SN-640785  
US-PATENT-CLASS-340-172.5  
US-PATENT-3,431,559  
N69-24334\* # c 07 ..... NASA-CASE-XGS-01110  
US-PATENT-APPL-SN-526664  
US-PATENT-CLASS-333-8  
US-PATENT-3,428,919  
N69-25146\* # c 03 ..... NASA-CASE-XGS-04808  
US-PATENT-APPL-SN-640781  
US-PATENT-CLASS-321-2  
US-PATENT-3,437,903  
N69-25147\* # c 17 ..... NASA-CASE-XLE-10466  
US-PATENT-APPL-SN-644448  
US-PATENT-CLASS-219-411  
US-PATENT-3,427,435  
N69-27422\* # c 09 ..... NASA-CASE-XLA-04980  
US-PATENT-APPL-SN-577548  
US-PATENT-CLASS-317-234  
US-PATENT-3,432,730  
N69-27423\* # c 14 ..... NASA-CASE-XAC-02407  
US-PATENT-APPL-SN-469013  
US-PATENT-CLASS-324-43  
US-PATENT-3,437,919  
N69-27431\* # c 14 ..... NASA-CASE-XMF-01483  
US-PATENT-APPL-SN-635325  
US-PATENT-CLASS-339-17  
US-PATENT-3,430,182

ACCESSION

N69-27432* #	c 14	NASA-CASE-XGS-08266 US-PATENT-APPL-SN-628248 US-PATENT-CLASS-250-203 US-PATENT-3,433,961	US-PATENT-CLASS-339-95 US-PATENT-3,458,851	US-PATENT-CLASS-250-49.5 US-PATENT-3,446,960
N69-27459* #	c 14	NASA-CASE-XMS-05909-1 US-PATENT-APPL-SN-685764 US-PATENT-CLASS-136-213 US-PATENT-3,431,149	N69-39735* # c 15 NASA-CASE-XGS-00963 US-PATENT-APPL-SN-494282 US-PATENT-CLASS-161-182 US-PATENT-3,453,172	N69-39983* # c 03 NASA-CASE-XLE-02083 US-PATENT-APPL-SN-568362 US-PATENT-CLASS-310-11 US-PATENT-3,453,462
N69-27460* #	c 07	NASA-CASE-XGS-05582 US-PATENT-APPL-SN-646424 US-PATENT-CLASS-343-854 US-PATENT-3,438,044	N69-39736* # c 07 NASA-CASE-XNP-04180 US-PATENT-APPL-SN-545228 US-PATENT-CLASS-250-203 US-PATENT-3,448,273	N69-39984* # c 09 NASA-CASE-XLA-08507 US-PATENT-APPL-SN-632154 US-PATENT-CLASS-321-11 US-PATENT-3,434,033
N69-27461* #	c 14	NASA-CASE-XLA-03724 US-PATENT-APPL-SN-568071 US-PATENT-CLASS-350-6 US-PATENT-3,437,394	N69-39785* # c 14 NASA-CASE-XKS-03495 US-PATENT-APPL-SN-559351 US-PATENT-CLASS-324-61 US-PATENT-3,426,272	N69-39986* # c 09 NASA-CASE-XMS-05562-1 US-PATENT-APPL-SN-529609 US-PATENT-CLASS-330-2 US-PATENT-3,434,064
N69-27462* #	c 07	NASA-CASE-XMS-05303 US-PATENT-APPL-SN-617022 US-PATENT-CLASS-333-97 US-PATENT-3,428,923	N69-39786* # c 15 NASA-CASE-XGS-04554 US-PATENT-APPL-SN-584072 US-PATENT-CLASS-29-472.9 US-PATENT-3,447,233	N69-39987* # c 09 NASA-CASE-XMS-04215-1 US-PATENT-APPL-SN-605102 US-PATENT-CLASS-307-265 US-PATENT-3,446,992
N69-27463* #	c 09	NASA-CASE-XGS-03095 US-PATENT-APPL-SN-552344 US-PATENT-CLASS-307-222 US-PATENT-3,437,832	N69-39884* # c 25 NASA-CASE-XLE-00690 US-PATENT-APPL-SN-489442 US-PATENT-CLASS-324-33 US-PATENT-3,447,071	N69-39988* # c 12 NASA-CASE-XLE-02624 US-PATENT-APPL-SN-635327 US-PATENT-CLASS-35-49 US-PATENT-3,429,058
N69-27466* #	c 11	NASA-CASE-XNP-04969 US-PATENT-APPL-SN-593604 US-PATENT-CLASS-248-317 US-PATENT-3,430,909	N69-39885* # c 09 NASA-CASE-XMS-04061-1 US-PATENT-APPL-SN-511564 US-PATENT-CLASS-328-116 US-PATENT-3,456,201	N70-10867* # c 15 NASA-CASE-ERC-10208 US-PATENT-APPL-SN-847596 US-PATENT-CLASS-ERC-10072 US-PATENT-APPL-SN-845972
N69-27483* #	c 15	NASA-CASE-XLA-03105 US-PATENT-APPL-SN-529594 US-PATENT-CLASS-263-48 US-PATENT-3,430,937	N69-39886* # c 10 NASA-CASE-XNP-02713 US-PATENT-APPL-SN-528031 US-PATENT-CLASS-307-252 US-PATENT-3,458,726	N70-11251* # c 06 NASA-CASE-NPO-10863 US-PATENT-APPL-SN-848325 US-PATENT-CLASS-NPO-10447 US-PATENT-APPL-SN-848351
N69-27484* #	c 14	NASA-CASE-XLA-04556 US-PATENT-APPL-SN-607608 US-PATENT-CLASS-250-83 US-PATENT-3,433,953	N69-39889* # c 06 NASA-CASE-XLE-07087 US-PATENT-APPL-SN-619521 US-PATENT-CLASS-313-231 US-PATENT-3,447,015	N70-12616* # c 07 NASA-CASE-MSC-12259-1 US-PATENT-APPL-SN-853763 US-PATENT-CLASS-MFS-14741 US-PATENT-APPL-SN-880247
N69-27485* #	c 14	NASA-CASE-XGS-02401 US-PATENT-APPL-SN-502740 US-PATENT-CLASS-250-203 US-PATENT-3,428,812	N69-39890* # c 03 NASA-CASE-XLE-02824 US-PATENT-APPL-SN-487343 US-PATENT-CLASS-310-10 US-PATENT-3,443,128	N70-22192* # c 15 NASA-CASE-XMS-04890-1 US-PATENT-APPL-SN-797057 US-PATENT-CLASS-60-258 US-PATENT-3,490,238
N69-27486* #	c 14	NASA-CASE-XAC-11225 US-PATENT-APPL-SN-638707 US-PATENT-CLASS-248-18 US-PATENT-3,430,902	N69-39895* # c 18 NASA-CASE-XNP-06508 US-PATENT-APPL-SN-617776 US-PATENT-CLASS-117-21 US-PATENT-3,446,642	N70-26819* # c 15 NASA-CASE-LAR-10590-1 US-PATENT-APPL-SN-21732 US-PATENT-CLASS-NASA-CASE-XMF-00447 US-PATENT-APPL-SN-134479
N69-27487* #	c 04	NASA-CASE-XGS-05533 US-PATENT-APPL-SN-568346 US-PATENT-CLASS-195-68 US-PATENT-3,437,560	N69-39896* # c 14 NASA-CASE-XAC-02970 US-PATENT-APPL-SN-447930 US-PATENT-CLASS-250-217 US-PATENT-3,452,872	N70-33180* # c 15 NASA-CASE-XLA-00137 US-PATENT-APPL-SN-8203 US-PATENT-CLASS-93-1 US-PATENT-3,010,372
N69-27490* #	c 15	NASA-CASE-XLA-02854 US-PATENT-APPL-SN-598118 US-PATENT-CLASS-285-3 US-PATENT-3,427,047	N69-39897* # c 09 NASA-CASE-XAC-08981 US-PATENT-APPL-SN-634060 US-PATENT-CLASS-317-16 US-PATENT-3,450,946	N70-33181* # c 21 NASA-CASE-XLA-00120 US-PATENT-APPL-SN-853984 US-PATENT-CLASS-250-83.3 US-PATENT-3,038,077
N69-27491* #	c 16	NASA-CASE-XGS-04480 US-PATENT-APPL-SN-591007 US-PATENT-CLASS-250-199 US-PATENT-3,433,960	N69-39898* # c 03 NASA-CASE-XLE-01015 US-PATENT-APPL-SN-502746 US-PATENT-CLASS-310-4 US-PATENT-3,446,997	N70-33182* # c 09 NASA-CASE-XAC-00086 US-PATENT-APPL-SN-824755 US-PATENT-CLASS-340-147 US-PATENT-3,059,220
N69-27499* #	c 31	NASA-CASE-XMS-12158-1 US-PATENT-APPL-SN-762936 US-PATENT-CLASS-244-1 US-PATENT-3,439,886	N69-39929* # c 09 NASA-CASE-XNP-09776 US-PATENT-APPL-SN-617779 US-PATENT-CLASS-310-4 US-PATENT-3,446,998	N70-33226* # c 15 NASA-CASE-XLE-00020 US-PATENT-APPL-SN-387332 US-PATENT-CLASS-253-39.15 US-PATENT-3,011,760
N69-27500* #	c 09	NASA-CASE-XNP-09228 US-PATENT-APPL-SN-584070 US-PATENT-CLASS-307-136 US-PATENT-3,430,063	N69-39935* # c 15 NASA-CASE-XNP-08882 US-PATENT-APPL-SN-640784 US-PATENT-CLASS-220-14 US-PATENT-3,446,387	N70-33241* # c 28 NASA-CASE-XLE-00103 US-PATENT-APPL-SN-517100 US-PATENT-CLASS-60-39.74 US-PATENT-2,940,259
N69-27502* #	c 15	NASA-CASE-XMF-04132 US-PATENT-APPL-SN-640788 US-PATENT-CLASS-220-55 US-PATENT-3,429,477	N69-39936* # c 06 NASA-CASE-XNP-04816 US-PATENT-APPL-SN-578926 US-PATENT-CLASS-73-23.1 US-PATENT-3,443,416	N70-33242* # c 31 NASA-CASE-XLA-00165 US-PATENT-APPL-SN-47120 US-PATENT-CLASS-244-117 US-PATENT-3,028,128
N69-27503* #	c 14	NASA-CASE-XFR-09479 US-PATENT-APPL-SN-653278 US-PATENT-CLASS-73-49.8 US-PATENT-3,433,079	N69-39937* # c 14 NASA-CASE-XNP-09750 US-PATENT-APPL-SN-632162 US-PATENT-CLASS-250-83 US-PATENT-3,456,112	N70-33254* # c 14 NASA-CASE-XLA-00062 US-PATENT-APPL-SN-853983 US-PATENT-CLASS-88-16 US-PATENT-3,041,924
N69-27504* #	c 15	NASA-CASE-XNP-09452 US-PATENT-APPL-SN-840789 US-PATENT-CLASS-267-1 US-PATENT-3,430,942	N69-39974* # c 07 NASA-CASE-XGS-05918 US-PATENT-APPL-SN-685497 US-PATENT-CLASS-343-7.5 US-PATENT-3,430,237	N70-33255* # c 02 NASA-CASE-XLA-00230 US-PATENT-APPL-SN-41455 US-PATENT-CLASS-244-43 US-PATENT-3,053,484
N69-27505* #	c 15	NASA-CASE-XLA-09122 US-PATENT-APPL-SN-619903 US-PATENT-CLASS-64-28 US-PATENT-3,430,460	N69-39975* # c 14 NASA-CASE-XLA-01781 US-PATENT-APPL-SN-441936 US-PATENT-CLASS-73-86 US-PATENT-3,425,268	N70-33264* # c 15 NASA-CASE-XLE-00092 US-PATENT-APPL-SN-835146 US-PATENT-CLASS-253-39.15 US-PATENT-3,057,597
N69-27871* #	c 15	NASA-CASE-XMS-04318 US-PATENT-APPL-SN-521996 US-PATENT-CLASS-219-347 US-PATENT-3,431,397	N69-39978* # c 07 NASA-CASE-XGS-02749 US-PATENT-APPL-SN-502753 US-PATENT-CLASS-179-15 US-PATENT-3,450,842	N70-33265* # c 28 NASA-CASE-XLE-00817 US-PATENT-APPL-SN-264735 US-PATENT-CLASS-60-35.3 US-PATENT-3,173,246
N69-31244* #	c 06	NASA-CASE-NPO-10714 US-PATENT-APPL-SN-817569 US-PATENT-CLASS-ERC-10187 US-PATENT-APPL-SN-825253	N69-39979* # c 18 NASA-CASE-XGS-04119 US-PATENT-APPL-SN-452945 US-PATENT-CLASS-106-74 US-PATENT-3,454,410	N70-33266* # c 02 NASA-CASE-XLA-00221 US-PATENT-APPL-SN-51473 US-PATENT-CLASS-244-46 US-PATENT-3,064,928
N69-31343* #	c 16	NASA-CASE-ERC-10187 US-PATENT-APPL-SN-825253 US-PATENT-CLASS-ERC-10120 US-PATENT-APPL-SN-827597	N69-39980* # c 07 NASA-CASE-XGS-05211 US-PATENT-APPL-SN-590145 US-PATENT-CLASS-250-209 US-PATENT-3,444,380	N70-33267* # c 25 NASA-CASE-XLA-00675 US-PATENT-APPL-SN-178213 US-PATENT-CLASS-315-111 US-PATENT-3,171,060
N69-33482* #	c 26	NASA-CASE-ERC-10120 US-PATENT-APPL-SN-827597 US-PATENT-CLASS-XMF-03873 US-PATENT-APPL-SN-543774	N69-39981* # c 01 NASA-CASE-XLA-06095 US-PATENT-APPL-SN-683612 US-PATENT-CLASS-244-138 US-PATENT-3,443,779	N70-33278* # c 11 NASA-CASE-XLE-00168 US-PATENT-APPL-SN-842170 US-PATENT-CLASS-73-116 US-PATENT-3,063,291
N69-39733* #	c 06	NASA-CASE-XMF-03873 US-PATENT-APPL-SN-543774 US-PATENT-CLASS-73-24 US-PATENT-3,429,177	N69-39982* # c 14 NASA-CASE-XGS-01725 US-PATENT-APPL-SN-483891	
N69-39734* #	c 09	NASA-CASE-XMF-04238 US-PATENT-APPL-SN-562443		

## ACCESSION NUMBER INDEX

N70-34820

N70-33279*	c 21	NASA-CASE-XFR-00181 US-PATENT-APPL-SN-28175 US-PATENT-CLASS-244-83 US-PATENT-3,028,126	N70-33386*	c 14	NASA-CASE-XLA-00113 US-PATENT-APPL-SN-2792 US-PATENT-CLASS-73-147 US-PATENT-3,001,395	N70-34559* #	c 09	NASA-CASE-LAR-10218-1 US-PATENT-APPL-SN-47441
N70-33283*	c 17	NASA-CASE-XLE-00151 US-PATENT-APPL-SN-848481 US-PATENT-CLASS-75-171 US-PATENT-2,971,837	N70-34134*	c 03	NASA-CASE-XLE-00212 US-PATENT-APPL-SN-151598 US-PATENT-CLASS-310-4 US-PATENT-3,202,844	N70-34596*	c 09	NASA-CASE-XMF-00324 US-PATENT-APPL-SN-109789 US-PATENT-CLASS-339-176 US-PATENT-3,189,864
N70-33284*	c 28	NASA-CASE-XLE-00078 US-PATENT-APPL-SN-18776 US-PATENT-CLASS-60-35.6 US-PATENT-3,049,876	N70-34135*	c 31	NASA-CASE-XLA-00686 US-PATENT-APPL-SN-195347 US-PATENT-CLASS-343-833 US-PATENT-3,202,998	N70-34646* #	c 03	NASA-CASE-NPO-11138 US-PATENT-APPL-SN-9251
N70-33285*	c 05	NASA-CASE-XLA-00118 US-PATENT-APPL-SN-840983 US-PATENT-CLASS-5-345 US-PATENT-3,038,175	N70-34156*	c 14	NASA-CASE-XLE-00266 US-PATENT-APPL-SN-202024 US-PATENT-CLASS-73-15 US-PATENT-3,204,447	N70-34661*	c 25	NASA-CASE-XLA-00147 US-PATENT-APPL-SN-178215 US-PATENT-CLASS-313-156 US-PATENT-3,201,635
N70-33286*	c 02	NASA-CASE-XLA-00142 US-PATENT-APPL-SN-26375 US-PATENT-CLASS-244-46 US-PATENT-3,028,122	N70-34157*	c 03	NASA-CASE-XMF-00517 US-PATENT-APPL-SN-216711 US-PATENT-CLASS-244-1 US-PATENT-3,204,889	N70-34664*	c 15	NASA-CASE-XMF-00515 US-PATENT-APPL-SN-278790 US-PATENT-CLASS-308-9 US-PATENT-3,199,931
N70-33287*	c 11	NASA-CASE-XLA-00112 US-PATENT-APPL-SN-843022 US-PATENT-CLASS-73-147 US-PATENT-3,005,339	N70-34158*	c 14	NASA-CASE-XGS-00359 US-PATENT-APPL-SN-94952 US-PATENT-CLASS-250-203 US-PATENT-3,205,361	N70-34667*	c 03	NASA-CASE-XLA-00326 US-PATENT-APPL-SN-318443 US-PATENT-CLASS-89-1 US-PATENT-3,200,706
N70-33288*	c 17	NASA-CASE-XLE-02428 US-PATENT-APPL-SN-339821 US-PATENT-CLASS-29-198 US-PATENT-3,170,773	N70-34159*	c 31	NASA-CASE-XMF-03856 US-PATENT-APPL-SN-416941 US-PATENT-CLASS-248-188.9 US-PATENT-3,208,707	N70-34675* #	c 08	NASA-CASE-XNP-04162-1 US-PATENT-APPL-SN-872664
N70-33305*	c 12	NASA-CASE-XLA-00229 US-PATENT-APPL-SN-18780 US-PATENT-CLASS-114-66.5 US-PATENT-3,016,863	N70-34160*	c 02	NASA-CASE-XLA-01804 US-PATENT-APPL-SN-353637 US-PATENT-CLASS-244-50 US-PATENT-3,208,694	N70-34697* #	c 14	NASA-CASE-NPO-11106 US-PATENT-APPL-SN-15020
N70-33311*	c 15	NASA-CASE-XLE-00046 US-PATENT-APPL-SN-686796 US-PATENT-CLASS-29-488 US-PATENT-3,008,229	N70-34161*	c 14	NASA-CASE-XLA-00203 US-PATENT-APPL-SN-227682 US-PATENT-CLASS-73-105 US-PATENT-3,208,272	N70-34699* #	c 15	NASA-CASE-NPO-10682 US-PATENT-APPL-SN-15023
N70-33312*	c 09	NASA-CASE-XLA-00141 US-PATENT-APPL-SN-19971 US-PATENT-CLASS-219-34 US-PATENT-3,005,081	N70-34162*	c 28	NASA-CASE-XMF-01544 US-PATENT-APPL-SN-394638 US-PATENT-CLASS-60-35.55 US-PATENT-3,208,215	N70-34705*	c 14	NASA-CASE-XMF-00456 US-PATENT-APPL-SN-298800 US-PATENT-CLASS-73-88.5 US-PATENT-3,212,325
N70-33322*	c 14	NASA-CASE-XLA-00135 US-PATENT-APPL-SN-861152 US-PATENT-CLASS-244-14 US-PATENT-3,004,735	N70-34175*	c 28	NASA-CASE-XLE-01783 US-PATENT-APPL-SN-313132 US-PATENT-CLASS-60-35.5 US-PATENT-3,210,927	N70-34743*	c 08	NASA-CASE-XGS-00174 US-PATENT-APPL-SN-120803 US-PATENT-CLASS-307-88 US-PATENT-3,198,955
N70-33323*	c 15	NASA-CASE-XMF-00341 US-PATENT-APPL-SN-77256 US-PATENT-CLASS-62-45 US-PATENT-3,012,407	N70-34176*	c 31	NASA-CASE-XMF-00389 US-PATENT-APPL-SN-151114 US-PATENT-CLASS-244-1 US-PATENT-3,202,381	N70-34778*	c 08	NASA-CASE-XLA-00471 US-PATENT-APPL-SN-197553 US-PATENT-CLASS-235-154 US-PATENT-3,194,951
N70-33329*	c 11	NASA-CASE-XLA-00119 US-PATENT-APPL-SN-842171 US-PATENT-CLASS-240-1.2 US-PATENT-2,984,735	N70-34178*	c 02	NASA-CASE-XLA-00166 US-PATENT-APPL-SN-84961 US-PATENT-CLASS-244-46 US-PATENT-3,087,692	N70-34783*	c 27	NASA-CASE-XLA-00304 US-PATENT-APPL-SN-54552 US-PATENT-CLASS-18-39 US-PATENT-3,193,883
N70-33330*	c 15	NASA-CASE-XLE-00023 US-PATENT-APPL-SN-512352 US-PATENT-CLASS-78-1 US-PATENT-2,991,671	N70-34247*	c 15	NASA-CASE-XLE-00288 US-PATENT-APPL-SN-118200 US-PATENT-CLASS-62-50 US-PATENT-3,068,658	N70-34786*	c 11	NASA-CASE-XLA-00493 US-PATENT-APPL-SN-202029 US-PATENT-CLASS-73-432 US-PATENT-3,196,690
N70-33331*	c 28	NASA-CASE-XLA-00105 US-PATENT-APPL-SN-719173 US-PATENT-CLASS-60-35.6 US-PATENT-3,001,363	N70-34249*	c 15	NASA-CASE-XMF-00375 US-PATENT-APPL-SN-166969 US-PATENT-CLASS-72-56 US-PATENT-3,188,844	N70-34787*	c 08	NASA-CASE-XGS-00689 US-PATENT-APPL-SN-250451 US-PATENT-CLASS-235-176 US-PATENT-3,196,261
N70-33332*	c 02	NASA-CASE-XLA-00087 US-PATENT-APPL-SN-811509 US-PATENT-CLASS-244-12 US-PATENT-2,991,961	N70-34294*	c 28	NASA-CASE-XLE-00208 US-PATENT-APPL-SN-106135 US-PATENT-CLASS-60-35.54 US-PATENT-3,132,476	N70-34788*	c 28	NASA-CASE-XLE-00388 US-PATENT-APPL-SN-234568 US-PATENT-CLASS-55-306 US-PATENT-3,196,598
N70-33343*	c 03	NASA-CASE-XLA-00115 US-PATENT-APPL-SN-847027 US-PATENT-CLASS-244-1 US-PATENT-3,001,739	N70-34295*	c 21	NASA-CASE-XLA-01989 US-PATENT-APPL-SN-305020 US-PATENT-CLASS-244-1 US-PATENT-3,189,299	N70-34794*	c 14	NASA-CASE-XMF-00479 US-PATENT-APPL-SN-169977 US-PATENT-CLASS-73-71.2 US-PATENT-3,194,060
N70-33344*	c 33	NASA-CASE-XMS-00486 US-PATENT-APPL-SN-300113 US-PATENT-CLASS-244-1 US-PATENT-3,130,940	N70-34296*	c 31	NASA-CASE-XLA-00678 US-PATENT-APPL-SN-197551 US-PATENT-CLASS-244-1 US-PATENT-3,169,725	N70-34799*	c 14	NASA-CASE-XLA-00492 US-PATENT-APPL-SN-284265 US-PATENT-CLASS-73-88.5 US-PATENT-3,199,340
N70-33356*	c 28	NASA-CASE-XLE-00267 US-PATENT-APPL-SN-58147 US-PATENT-CLASS-60-35.5 US-PATENT-3,016,693	N70-34297*	c 21	NASA-CASE-XGS-00466 US-PATENT-APPL-SN-123597 US-PATENT-CLASS-250-83.3 US-PATENT-3,188,472	N70-34812*	c 33	NASA-CASE-XLE-00387 US-PATENT-APPL-SN-203411 US-PATENT-CLASS-219-19 US-PATENT-3,108,171
N70-33372*	c 28	NASA-CASE-XLE-00037 US-PATENT-APPL-SN-639589 US-PATENT-CLASS-253-39.15 US-PATENT-2,974,925	N70-34298*	c 14	NASA-CASE-XMF-00462 US-PATENT-APPL-SN-148001 US-PATENT-CLASS-88-14 US-PATENT-3,185,023	N70-34813*	c 14	NASA-CASE-XAC-00073 US-PATENT-APPL-SN-47122 US-PATENT-CLASS-73-147 US-PATENT-3,100,990
N70-33374*	c 28	NASA-CASE-XLA-00154 US-PATENT-APPL-SN-31242 US-PATENT-CLASS-60-35.6 US-PATENT-3,012,400	N70-34502*	c 09	NASA-CASE-XMF-00421 US-PATENT-APPL-SN-197548 US-PATENT-CLASS-317-140 US-PATENT-3,189,794	N70-34814*	c 15	NASA-CASE-XMF-00392 US-PATENT-APPL-SN-151112 US-PATENT-CLASS-219-137 US-PATENT-3,102,948
N70-33375*	c 28	NASA-CASE-XLE-00207 US-PATENT-APPL-SN-180370 US-PATENT-CLASS-60-35.6 US-PATENT-3,173,251	N70-34539*	c 21	NASA-CASE-XMF-00185 US-PATENT-APPL-SN-97112 US-PATENT-CLASS-244-76 US-PATENT-3,070,330	N70-34815*	c 11	NASA-CASE-XAC-00399 US-PATENT-APPL-SN-134481 US-PATENT-CLASS-35-12 US-PATENT-3,196,557
N70-33376*	c 15	NASA-CASE-XLE-00101 US-PATENT-APPL-SN-551961 US-PATENT-CLASS-251-173 US-PATENT-2,945,667	N70-34540*	c 33	NASA-CASE-XLA-00330 US-PATENT-APPL-SN-264729 US-PATENT-CLASS-219-121 US-PATENT-3,201,560	N70-34816*	c 14	NASA-CASE-XAC-00042 US-PATENT-APPL-SN-734805 US-PATENT-CLASS-73-398 US-PATENT-3,022,672
N70-33382*	c 15	NASA-CASE-XLE-00010 US-PATENT-APPL-SN-554899 US-PATENT-CLASS-266-19 US-PATENT-2,934,331	N70-34545*	c 33	NASA-CASE-XLE-00490 US-PATENT-APPL-SN-252259 US-PATENT-CLASS-219-347 US-PATENT-3,189,726	N70-34817*	c 15	NASA-CASE-XAC-00074 US-PATENT-APPL-SN-47123 US-PATENT-CLASS-137-340 US-PATENT-3,158,172
						N70-34818*	c 14	NASA-CASE-XLE-00503 US-PATENT-APPL-SN-261912 US-PATENT-CLASS-73-136 US-PATENT-3,196,675
						N70-34819*	c 09	NASA-CASE-XGS-00381 US-PATENT-APPL-SN-104188 US-PATENT-CLASS-307-88.5 US-PATENT-3,085,165
						N70-34820*	c 14	NASA-CASE-XAC-00030 US-PATENT-APPL-SN-760819

N70-34844*	c 11	US-PATENT-CLASS-73-401	US-PATENT-APPL-SN-178721	N70-36802*	c 28	US-PATENT-3,150,387
		US-PATENT-3,024,659	US-PATENT-CLASS-310-5			NASA-CASE-XMF-00923
N70-34844*	c 11	NASA-CASE-XLE-00252	US-PATENT-3,205,381	N70-36803*	c 03	US-PATENT-APPL-SN-264736
		US-PATENT-APPL-SN-144803	NASA-CASE-XHQ-01208			US-PATENT-CLASS-60-35.5
N70-34850*	c 15	US-PATENT-CLASS-73-116	US-PATENT-APPL-SN-42022	N70-36804*	c 02	US-PATENT-3,159,967
		US-PATENT-3,199,343	US-PATENT-CLASS-121-38			NASA-CASE-XNP-00644
N70-34856*	c 02	NASA-CASE-XLA-00754	US-PATENT-3,088,441	N70-36805*	c 26	US-PATENT-APPL-SN-212496
		US-PATENT-APPL-SN-209479	NASA-CASE-LEW-10814-1			US-PATENT-CLASS-310-11
N70-34857*	c 05	US-PATENT-CLASS-244-100	US-PATENT-APPL-SN-38262	N70-36806*	c 28	US-PATENT-3,158,764
		US-PATENT-3,143,321	NASA-CASE-XNP-00432			NASA-CASE-XLA-00898
N70-34858*	c 02	NASA-CASE-XAC-00139	US-PATENT-APPL-SN-127234	N70-36807*	c 14	US-PATENT-APPL-SN-227683
		US-PATENT-APPL-SN-168560	US-PATENT-CLASS-340-347			US-PATENT-CLASS-244-152
N70-34859*	c 15	US-PATENT-CLASS-244-51	US-PATENT-3,172,097	N70-36824*	c 14	US-PATENT-3,170,660
		US-PATENT-3,144,999	NASA-CASE-XNP-00683			NASA-CASE-XLA-00158
N70-34860*	c 28	NASA-CASE-XMS-00863	US-PATENT-APPL-SN-251451	N70-36825*	c 02	US-PATENT-APPL-SN-221637
		US-PATENT-APPL-SN-221634	US-PATENT-CLASS-343-781			US-PATENT-CLASS-23-208
N70-34861*	c 15	US-PATENT-CLASS-9-11	US-PATENT-3,209,361	N70-36845*	c 31	US-PATENT-3,174,827
		US-PATENT-3,155,992	NASA-CASE-XGS-00809			NASA-CASE-XLE-00145
N70-34946*	c 06	NASA-CASE-XLA-00806	US-PATENT-APPL-SN-85585	N70-36901*	c 15	US-PATENT-APPL-SN-173081
		US-PATENT-APPL-SN-181828	US-PATENT-CLASS-88-1			US-PATENT-CLASS-60-35.6
N70-34966*	c 31	US-PATENT-CLASS-244-46	US-PATENT-3,083,611	N70-36907*	c 14	US-PATENT-3,174,279
		US-PATENT-3,170,657	NASA-CASE-XAC-00435			NASA-CASE-XLA-00100
N70-34967*	c 15	NASA-CASE-XLE-00715	US-PATENT-APPL-SN-164428	N70-36908*	c 15	US-PATENT-APPL-SN-534901
		US-PATENT-APPL-SN-212174	US-PATENT-CLASS-330-14			US-PATENT-CLASS-73-178
N70-35087*	c 15	US-PATENT-CLASS-251-333	US-PATENT-3,196,362	N70-36910*	c 28	US-PATENT-3,168,827
		US-PATENT-3,191,907	NASA-CASE-XGS-03556			NASA-CASE-XLA-00481
N70-35089*	c 21	NASA-CASE-XLE-00144	US-PATENT-APPL-SN-94259	N70-36911*	c 07	US-PATENT-APPL-SN-120797
		US-PATENT-APPL-SN-177684	US-PATENT-CLASS-60-35.6			US-PATENT-CLASS-73-212
N70-35152*	c 05	US-PATENT-CLASS-60-35.6	US-PATENT-3,191,379	N70-36913*	c 11	US-PATENT-3,170,324
		US-PATENT-3,120,101	NASA-CASE-FRC-10053			NASA-CASE-XLA-01583
N70-35219*	c 09	NASA-CASE-XLE-00810	US-PATENT-APPL-SN-33398	N70-36938*	c 21	US-PATENT-APPL-SN-327565
		US-PATENT-APPL-SN-249540	NASA-CASE-XNP-00646			US-PATENT-CLASS-244-103
N70-35220*	c 14	US-PATENT-CLASS-188-1	US-PATENT-APPL-SN-173981	N70-36943*	c 21	US-PATENT-3,169,001
		US-PATENT-3,164,222	US-PATENT-CLASS-324-33			NASA-CASE-XMF-02108
N70-35368*	c 14	US-PATENT-3,191,316	US-PATENT-3,171,081	N70-36946*	c 25	US-PATENT-APPL-SN-372727
		NASA-CASE-XNP-00733	NASA-CASE-MSG-12279-1			US-PATENT-CLASS-244-100
N70-35381*	c 28	US-PATENT-APPL-SN-256484	US-PATENT-APPL-SN-24154	N70-37245*	c 28	US-PATENT-3,181,821
		US-PATENT-CLASS-62-15	NASA-CASE-XMS-00259			NASA-CASE-XLA-00189
N70-35382*	c 09	US-PATENT-CLASS-62-15	US-PATENT-APPL-SN-145007	N70-37246*	c 31	US-PATENT-APPL-SN-223003
		US-PATENT-3,192,730	US-PATENT-CLASS-117-69			US-PATENT-CLASS-102-49
N70-35383*	c 11	NASA-CASE-XFR-00929	US-PATENT-3,157,529	N70-37247*	c 31	US-PATENT-3,180,264
		US-PATENT-APPL-SN-290868	NASA-CASE-XLA-00482			NASA-CASE-XNP-00463
N70-35384*	c 14	US-PATENT-CLASS-35-12	US-PATENT-APPL-SN-166970	N70-37248*	c 31	US-PATENT-APPL-SN-259487
		US-PATENT-3,191,316	US-PATENT-CLASS-29-423			US-PATENT-CLASS-165-96
N70-35385*	c 14	NASA-CASE-XNP-00595	US-PATENT-3,160,950	N70-37249*	c 31	US-PATENT-3,177,933
		US-PATENT-APPL-SN-188594	NASA-CASE-XMF-00641			NASA-CASE-XFR-00811
N70-35386*	c 14	US-PATENT-CLASS-204-298	US-PATENT-APPL-SN-221945	N70-37250*	c 31	US-PATENT-APPL-SN-257346
		US-PATENT-3,189,535	US-PATENT-CLASS-244-1			US-PATENT-CLASS-29-234
N70-35387*	c 15	NASA-CASE-XGS-00587	US-PATENT-3,158,336	N70-37251*	c 31	US-PATENT-3,166,834
		US-PATENT-APPL-SN-313135	NASA-CASE-XLE-00164			NASA-CASE-XNP-00614
N70-35388*	c 15	US-PATENT-CLASS-137-340	US-PATENT-APPL-SN-107870	N70-37252*	c 31	US-PATENT-APPL-SN-247419
		US-PATENT-3,211,169	US-PATENT-CLASS-60-39.66			US-PATENT-CLASS-33-1
N70-35389*	c 15	NASA-CASE-XNP-00438	US-PATENT-3,162,012	N70-37253*	c 31	US-PATENT-3,163,935
		US-PATENT-APPL-SN-180381	NASA-CASE-XLE-00170			NASA-CASE-XNP-00214
N70-35390*	c 15	US-PATENT-CLASS-250-203	US-PATENT-APPL-SN-232914	N70-37254*	c 31	US-PATENT-APPL-SN-180377
		US-PATENT-3,205,362	US-PATENT-CLASS-253-66			US-PATENT-CLASS-137-625.69
N70-35391*	c 15	NASA-CASE-XMS-01240	US-PATENT-3,164,369	N70-37255*	c 31	US-PATENT-3,140,728
		US-PATENT-APPL-SN-331324	NASA-CASE-XLE-00397			NASA-CASE-XNP-00610
N70-35392*	c 15	US-PATENT-CLASS-297-216	US-PATENT-APPL-SN-195346	N70-37256*	c 31	US-PATENT-APPL-SN-211464
		US-PATENT-3,165,356	US-PATENT-CLASS-137-614			US-PATENT-CLASS-60-35.6
N70-35393*	c 15	NASA-CASE-XNP-00611	US-PATENT-3,170,486	N70-37257*	c 31	US-PATENT-3,170,290
		US-PATENT-APPL-SN-140443	NASA-CASE-XMS-00864			NASA-CASE-XNP-00748
N70-35394*	c 15	US-PATENT-CLASS-343-781	US-PATENT-APPL-SN-258932	N70-37258*	c 31	US-PATENT-APPL-SN-184649
		US-PATENT-3,209,360	US-PATENT-CLASS-9-316			US-PATENT-CLASS-343-17.2
N70-35395*	c 15	NASA-CASE-XNP-00449	US-PATENT-3,152,344	N70-37259*	c 31	US-PATENT-3,183,506
		US-PATENT-APPL-SN-118169	NASA-CASE-XMF-00369			NASA-CASE-XMF-00411
N70-35396*	c 15	US-PATENT-CLASS-330-49	US-PATENT-APPL-SN-134782	N70-37260*	c 31	US-PATENT-APPL-SN-158914
		US-PATENT-3,160,825	US-PATENT-CLASS-339-176			US-PATENT-CLASS-73-147
N70-35397*	c 15	NASA-CASE-XLE-00335	US-PATENT-3,149,897	N70-37261*	c 31	US-PATENT-3,182,496
		US-PATENT-APPL-SN-197554	NASA-CASE-XLE-00303			NASA-CASE-XNP-00294
N70-35398*	c 15	US-PATENT-CLASS-73-15.6	US-PATENT-APPL-SN-182692	N70-37262*	c 31	US-PATENT-APPL-SN-182696
		US-PATENT-3,176,499	US-PATENT-CLASS-60-35.6			US-PATENT-CLASS-60-35.5
N70-35399*	c 15	NASA-CASE-XHQ-01897	US-PATENT-3,170,286	N70-37263*	c 31	US-PATENT-3,178,883
		US-PATENT-APPL-SN-129579	NASA-CASE-XLA-00204			NASA-CASE-XLA-00281
N70-35400*	c 15	US-PATENT-CLASS-60-35.6	US-PATENT-APPL-SN-189648	N70-37264*	c 31	US-PATENT-APPL-SN-84962
		US-PATENT-3,121,309	US-PATENT-CLASS-135-1			US-PATENT-CLASS-244-1
N70-35401*	c 15	NASA-CASE-XNP-00540	US-PATENT-3,170,471	N70-37265*	c 31	US-PATENT-3,180,587
		US-PATENT-APPL-SN-140509	NASA-CASE-XLE-00293			NASA-CASE-XLA-01354
N70-35402*	c 15	US-PATENT-CLASS-343-781	US-PATENT-APPL-SN-107866	N70-37266*	c 31	US-PATENT-APPL-SN-253774
		US-PATENT-3,212,096	US-PATENT-CLASS-75-171			US-PATENT-CLASS-60-35.5
N70-35403*	c 15	NASA-CASE-XMF-00580	US-PATENT-3,167,426	N70-37267*	c 31	US-PATENT-3,174,278
		US-PATENT-APPL-SN-343425	NASA-CASE-XLA-01291			NASA-CASE-XNP-00416
N70-35404*	c 15	US-PATENT-CLASS-248-119	US-PATENT-APPL-SN-277961	N70-37268*	c 31	US-PATENT-APPL-SN-180395
		US-PATENT-3,194,525	US-PATENT-CLASS-244-1			US-PATENT-CLASS-189-36
N70-35405*	c 15	NASA-CASE-XNP-00708	US-PATENT-3,176,933	N70-37269*	c 31	US-PATENT-3,169,613
		US-PATENT-APPL-SN-281069	NASA-CASE-XLE-00143			NASA-CASE-XLE-00376
N70-35406*	c 15	US-PATENT-CLASS-35-45	US-PATENT-APPL-SN-104187	N70-37270*	c 31	US-PATENT-APPL-SN-139007
		US-PATENT-3,196,558	US-PATENT-CLASS-324-61			US-PATENT-CLASS-60-35.5
N70-35407*	c 15	NASA-CASE-XNP-00465	US-PATENT-3,176,222	N70-37271*	c 31	US-PATENT-3,156,090
		US-PATENT-APPL-SN-180379	NASA-CASE-XMF-02853			NASA-CASE-XGS-00260
N70-35408*	c 03	US-PATENT-CLASS-244-1	US-PATENT-APPL-SN-360182	N70-37272*	c 31	US-PATENT-APPL-SN-187446
		US-PATENT-3,206,141	US-PATENT-CLASS-244-100			US-PATENT-CLASS-244-1
N70-35409*	c 15	NASA-CASE-XLE-00815	US-PATENT-3,175,789	N70-37273*	c 15	US-PATENT-3,090,580
		US-PATENT-APPL-SN-300712	NASA-CASE-XLA-00838			NASA-CASE-XLA-00128
N70-35410*	c 15	US-PATENT-CLASS-251-11	US-PATENT-APPL-SN-192016	N70-37274*	c 15	US-PATENT-APPL-SN-32496
		US-PATENT-3,211,414	US-PATENT-CLASS-9-8			US-PATENT-CLASS-73-384
N70-35411*	c 15	NASA-CASE-XGS-01593		N70-37275*	c 15	



## ACCESSION NUMBER INDEX

N70-40272

N70-37938*	c 31	US-PATENT-3,093,000 NASA-CASE-XLA-00149 US-PATENT-APPL-SN-847023 US-PATENT-CLASS-244-1 US-PATENT-3,093,346	N70-38601*	c 15	US-PATENT-3,135,090 NASA-CASE-XLA-00679 US-PATENT-APPL-SN-213836 US-PATENT-CLASS-188-1 US-PATENT-3,128,845	N70-39925*	c 28	US-PATENT-3,229,884 NASA-CASE-XLE-00660 US-PATENT-APPL-SN-231604 US-PATENT-CLASS-313-11.5 US-PATENT-3,229,139
N70-37939*	c 02	NASA-CASE-XLE-00222 US-PATENT-APPL-SN-77252 US-PATENT-CLASS-244-113 US-PATENT-3,098,630	N70-38602*	c 14	NASA-CASE-XLE-00243 US-PATENT-APPL-SN-118203 US-PATENT-CLASS-324-106 US-PATENT-3,202,915	N70-39930*	c 03	NASA-CASE-XLA-00791 US-PATENT-APPL-SN-347960 US-PATENT-CLASS-102-49 US-PATENT-3,229,636
N70-37979*	c 33	NASA-CASE-XLA-00349 US-PATENT-APPL-SN-141220 US-PATENT-CLASS-62-467 US-PATENT-3,090,212	N70-38603*	c 15	NASA-CASE-XNP-00450 US-PATENT-APPL-SN-180394 US-PATENT-CLASS-137-495 US-PATENT-3,105,515	N70-39931*	c 28	NASA-CASE-XNP-01104 US-PATENT-APPL-SN-290867 US-PATENT-CLASS-60-39.48 US-PATENT-3,229,463
N70-37980*	c 28	NASA-CASE-XLE-00342 US-PATENT-APPL-SN-60531 US-PATENT-CLASS-60-35.5 US-PATENT-3,119,232	N70-38604*	c 09	NASA-CASE-XGS-00458 US-PATENT-APPL-SN-139006 US-PATENT-CLASS-307-88 US-PATENT-3,128,389	N70-40003*	c 14	NASA-CASE-XGS-01036 US-PATENT-APPL-SN-227692 US-PATENT-CLASS-88-14 US-PATENT-3,229,568
N70-37981*	c 31	NASA-CASE-XLA-00138 US-PATENT-APPL-SN-8204 US-PATENT-CLASS-343-18 US-PATENT-3,115,630	N70-38620*	c 15	NASA-CASE-XNP-00476 US-PATENT-APPL-SN-182698 US-PATENT-CLASS-308-9 US-PATENT-3,132,903	N70-40015*	c 26	NASA-CASE-XLA-02057 US-PATENT-APPL-SN-320595 US-PATENT-CLASS-23-277 US-PATENT-3,230,053
N70-37986*	c 31	NASA-CASE-XLA-00241 US-PATENT-APPL-SN-61329 US-PATENT-CLASS-244-1 US-PATENT-3,104,079	N70-38645*	c 28	NASA-CASE-XNP-00234 US-PATENT-APPL-SN-180382 US-PATENT-CLASS-60-35.54 US-PATENT-3,139,725	N70-40016*	c 30	NASA-CASE-XGS-00619 US-PATENT-APPL-SN-264728 US-PATENT-CLASS-244-1 US-PATENT-3,229,930
N70-38009*	c 02	NASA-CASE-XLA-00195 US-PATENT-APPL-SN-60536 US-PATENT-CLASS-244-140 US-PATENT-3,079,113	N70-38675*	c 11	NASA-CASE-XNP-00459 US-PATENT-APPL-SN-180384 US-PATENT-CLASS-73-432 US-PATENT-3,187,583	N70-40062*	c 15	NASA-CASE-XMS-01624 US-PATENT-APPL-SN-422867 US-PATENT-CLASS-55-408 US-PATENT-3,224,173
N70-38010*	c 31	NASA-CASE-XLA-00805 US-PATENT-APPL-SN-181829 US-PATENT-CLASS-244-46 US-PATENT-3,120,361	N70-38676*	c 31	NASA-CASE-XLA-00258 US-PATENT-APPL-SN-101029 US-PATENT-CLASS-244-1 US-PATENT-3,144,219	N70-40063*	c 07	NASA-CASE-XMS-00893 US-PATENT-APPL-SN-251449 US-PATENT-CLASS-343-18 US-PATENT-3,224,001
N70-38011*	c 02	NASA-CASE-XLA-00350 US-PATENT-APPL-SN-153266 US-PATENT-CLASS-244-46 US-PATENT-3,104,082	N70-38710*	c 28	NASA-CASE-XMF-00148 US-PATENT-APPL-SN-118202 US-PATENT-CLASS-60-35.6 US-PATENT-3,122,885	N70-40123*	c 09	NASA-CASE-XGS-01881 US-PATENT-APPL-SN-155584 US-PATENT-CLASS-324-43 US-PATENT-3,218,547
N70-38020*	c 15	NASA-CASE-XLE-00345 US-PATENT-APPL-SN-183978 US-PATENT-CLASS-62-55 US-PATENT-3,122,000	N70-38711*	c 28	NASA-CASE-XLE-00057 US-PATENT-APPL-SN-0914 US-PATENT-CLASS-60-35.55 US-PATENT-3,080,711	N70-40124*	c 12	NASA-CASE-XLE-01512 US-PATENT-APPL-SN-315096 US-PATENT-CLASS-149-2 US-PATENT-3,215,572
N70-38181*	c 28	NASA-CASE-XNP-00217 US-PATENT-APPL-SN-180374 US-PATENT-CLASS-102-49 US-PATENT-3,122,098	N70-38712*	c 09	NASA-CASE-XMF-01129 US-PATENT-APPL-SN-273534 US-PATENT-CLASS-318-260 US-PATENT-3,147,422	N70-40125*	c 08	NASA-CASE-XAC-00404 US-PATENT-APPL-SN-209801 US-PATENT-CLASS-340-347 US-PATENT-3,216,007
N70-38182*	c 11	NASA-CASE-XNP-00612 US-PATENT-APPL-SN-228507 US-PATENT-CLASS-220-63 US-PATENT-3,123,248	N70-38713*	c 03	NASA-CASE-XGS-00473 US-PATENT-APPL-SN-139012 US-PATENT-CLASS-200-39 US-PATENT-3,141,932	N70-40156*	c 15	NASA-CASE-XLA-01019 US-PATENT-APPL-SN-282817 US-PATENT-CLASS-248-358 US-PATENT-3,223,374
N70-38196*	c 11	NASA-CASE-XMF-00424 US-PATENT-APPL-SN-159804 US-PATENT-CLASS-73-517 US-PATENT-3,141,340	N70-38995*	c 09	NASA-CASE-XGS-00131 US-PATENT-APPL-SN-14488 US-PATENT-CLASS-331-113 US-PATENT-3,150,329	N70-40157*	c 14	NASA-CASE-XLA-00487 US-PATENT-APPL-SN-236748 US-PATENT-CLASS-73-178 US-PATENT-3,221,549
N70-38197*	c 28	NASA-CASE-XLE-00455 US-PATENT-APPL-SN-203409 US-PATENT-CLASS-75-222 US-PATENT-3,141,769	N70-38996*	c 15	NASA-CASE-XNP-00676 US-PATENT-APPL-SN-290870 US-PATENT-CLASS-222-389 US-PATENT-3,170,605	N70-40180*	c 15	NASA-CASE-XAC-00472 US-PATENT-APPL-SN-236749 US-PATENT-CLASS-73-142 US-PATENT-3,224,263
N70-38198*	c 17	NASA-CASE-XLE-00231 US-PATENT-APPL-SN-64226 US-PATENT-CLASS-22-203 US-PATENT-3,138,837	N70-38997*	c 12	NASA-CASE-XMF-00658 US-PATENT-APPL-SN-216710 US-PATENT-CLASS-137-1 US-PATENT-3,110,318	N70-40201*	c 14	NASA-CASE-XLE-00720 US-PATENT-APPL-SN-302749 US-PATENT-CLASS-73-134 US-PATENT-3,221,547
N70-38199*	c 28	NASA-CASE-XLE-00111 US-PATENT-APPL-SN-835152 US-PATENT-CLASS-60-39.48 US-PATENT-3,136,123	N70-38998*	c 09	NASA-CASE-XNP-00431 US-PATENT-APPL-SN-180380 US-PATENT-CLASS-340-147 US-PATENT-3,100,294	N70-40202*	c 07	NASA-CASE-XMF-00437 US-PATENT-APPL-SN-120795 US-PATENT-CLASS-343-705 US-PATENT-3,077,599
N70-38200*	c 07	NASA-CASE-XLA-00414 US-PATENT-APPL-SN-209478 US-PATENT-CLASS-343-705 US-PATENT-3,132,342	N70-39895*	c 28	NASA-CASE-XLE-00085 US-PATENT-APPL-SN-25175 US-PATENT-CLASS-253-66 US-PATENT-3,070,349	N70-40203*	c 14	NASA-CASE-XLE-00702 US-PATENT-APPL-SN-258931 US-PATENT-CLASS-73-116 US-PATENT-3,201,980
N70-38201*	c 09	NASA-CASE-XNP-00738 US-PATENT-APPL-SN-204015 US-PATENT-CLASS-174-115 US-PATENT-3,106,603	N70-39896*	c 15	NASA-CASE-XMF-00339 US-PATENT-APPL-SN-110591 US-PATENT-CLASS-308-9 US-PATENT-3,070,407	N70-40204*	c 15	NASA-CASE-XMF-00722 US-PATENT-APPL-SN-347626 US-PATENT-CLASS-228-50 US-PATENT-3,219,250
N70-38202*	c 11	NASA-CASE-XNP-00425 US-PATENT-APPL-SN-180396 US-PATENT-CLASS-89-1.7 US-PATENT-3,112,672	N70-39897*	c 18	NASA-CASE-XLE-00353 US-PATENT-APPL-SN-65548 US-PATENT-CLASS-252-58 US-PATENT-3,072,574	N70-40233*	c 14	NASA-CASE-XMS-01546 US-PATENT-APPL-SN-386467 US-PATENT-CLASS-222-45 US-PATENT-3,228,558
N70-38225*	c 15	NASA-CASE-XNP-00840 US-PATENT-APPL-SN-269222 US-PATENT-CLASS-267-1 US-PATENT-3,127,157	N70-39898*	c 14	NASA-CASE-XMF-00480 US-PATENT-APPL-SN-144804 US-PATENT-CLASS-248-346 US-PATENT-3,069,123	N70-40234*	c 09	NASA-CASE-XLE-01716 US-PATENT-APPL-SN-349778 US-PATENT-CLASS-126-270 US-PATENT-3,229,682
N70-38249*	c 28	NASA-CASE-XNP-00249 US-PATENT-APPL-SN-180391 US-PATENT-CLASS-60-35.6 US-PATENT-3,120,738	N70-39899*	c 28	NASA-CASE-XLE-00005 US-PATENT-APPL-SN-718095 US-PATENT-CLASS-60-35.6 US-PATENT-3,067,573	N70-40238*	c 14	NASA-CASE-XMF-00908 US-PATENT-APPL-SN-241085 US-PATENT-CLASS-250-201 US-PATENT-3,229,099
N70-38490*	c 17	NASA-CASE-XLE-00228 US-PATENT-APPL-SN-64224 US-PATENT-CLASS-29-183.5 US-PATENT-3,084,421	N70-39915*	c 09	NASA-CASE-XAC-00060 US-PATENT-APPL-SN-47121 US-PATENT-CLASS-200-19 US-PATENT-3,076,065	N70-40239*	c 14	NASA-CASE-XLA-00183 US-PATENT-APPL-SN-199202 US-PATENT-CLASS-250-203 US-PATENT-3,229,102
N70-38504*	c 28	NASA-CASE-XMS-00583 US-PATENT-APPL-SN-182699 US-PATENT-CLASS-60-35.6 US-PATENT-3,135,089	N70-39922*	c 05	NASA-CASE-XMS-01115 US-PATENT-APPL-SN-277404 US-PATENT-CLASS-128-29 US-PATENT-3,229,689	N70-40240*	c 14	NASA-CASE-XHQ-04106 US-PATENT-APPL-SN-91180 US-PATENT-CLASS-250-105 US-PATENT-3,143,651
N70-38505*	c 28	NASA-CASE-XLE-00323 US-PATENT-APPL-SN-183977 US-PATENT-CLASS-60-35.6	N70-39924*	c 15	NASA-CASE-XMF-00640 US-PATENT-APPL-SN-341467 US-PATENT-CLASS-228-50	N70-40272*	c 09	NASA-CASE-XMF-00701 US-PATENT-APPL-SN-261917 US-PATENT-CLASS-307-88.5

## N70-40273

N70-40273\* c 14 ..... US-PATENT-3,218,479  
 NASA-CASE-XNP-00637  
 US-PATENT-APPL-SN-280776  
 US-PATENT-CLASS-95-58  
 US-PATENT-3,217,624  
 N70-40309\* c 30 ..... NASA-CASE-XLA-00210  
 US-PATENT-APPL-SN-82658  
 US-PATENT-CLASS-343-18  
 US-PATENT-3,220,004  
 N70-40353\* c 30 ..... NASA-CASE-XMF-03198  
 US-PATENT-APPL-SN-370134  
 US-PATENT-CLASS-89-1.7  
 US-PATENT-3,224,336  
 N70-40354\* c 15 ..... NASA-CASE-XMF-01045  
 US-PATENT-APPL-SN-355130  
 US-PATENT-CLASS-188-1  
 US-PATENT-3,228,492  
 N70-40367\* c 28 ..... NASA-CASE-XLE-00177  
 US-PATENT-APPL-SN-10812  
 US-PATENT-CLASS-60-35.3  
 US-PATENT-3,045,424  
 N70-40400\* c 14 ..... NASA-CASE-XAC-00648  
 US-PATENT-APPL-SN-216939  
 US-PATENT-CLASS-73-147  
 US-PATENT-3,218,850  
 N70-41275\* c 28 ..... NASA-CASE-XNP-01390  
 US-PATENT-APPL-SN-424157  
 US-PATENT-CLASS-60-259  
 US-PATENT-3,300,981  
 N70-41297\* c 05 ..... NASA-CASE-XMS-01492  
 US-PATENT-APPL-SN-398131  
 US-PATENT-CLASS-55-35  
 US-PATENT-3,300,949  
 N70-41310\* c 15 ..... NASA-CASE-XNP-01567  
 US-PATENT-APPL-SN-448898  
 US-PATENT-CLASS-248-178  
 US-PATENT-3,295,808  
 N70-41311\* c 28 ..... NASA-CASE-XNP-00876  
 US-PATENT-APPL-SN-377784  
 US-PATENT-CLASS-60-251  
 US-PATENT-3,298,182  
 N70-41329\* c 05 ..... NASA-CASE-XMS-01615  
 US-PATENT-APPL-SN-329595  
 US-PATENT-CLASS-128-2.05  
 US-PATENT-3,298,362  
 N70-41330\* c 14 ..... NASA-CASE-XLE-00688  
 US-PATENT-APPL-SN-334672  
 US-PATENT-CLASS-73-32  
 US-PATENT-3,298,221  
 N70-41331\* c 07 ..... NASA-CASE-XLA-01400  
 US-PATENT-APPL-SN-363653  
 US-PATENT-CLASS-325-65  
 US-PATENT-3,296,531  
 N70-41332\* c 14 ..... NASA-CASE-XLA-00495  
 US-PATENT-APPL-SN-269215  
 US-PATENT-CLASS-324-70  
 US-PATENT-3,296,526  
 N70-41366\* c 14 ..... NASA-CASE-XLA-01353  
 US-PATENT-APPL-SN-403960  
 US-PATENT-CLASS-73-147  
 US-PATENT-3,301,046  
 N70-41367\* c 32 ..... NASA-CASE-XGS-00938  
 US-PATENT-APPL-SN-392970  
 US-PATENT-CLASS-214-1  
 US-PATENT-3,295,699  
 N70-41370\* c 32 ..... NASA-CASE-XNP-01962  
 US-PATENT-APPL-SN-369640  
 US-PATENT-CLASS-92-94  
 US-PATENT-3,298,285  
 N70-41371\* c 15 ..... NASA-CASE-XMF-01452  
 US-PATENT-APPL-SN-356692  
 US-PATENT-CLASS-29-271  
 US-PATENT-3,300,847  
 N70-41372\* c 07 ..... NASA-CASE-XLA-01127  
 US-PATENT-APPL-SN-363654  
 US-PATENT-CLASS-325-65  
 US-PATENT-3,300,731  
 N70-41373\* c 31 ..... NASA-CASE-XMS-01906  
 US-PATENT-APPL-SN-339040  
 US-PATENT-CLASS-244-1  
 US-PATENT-3,300,162  
 N70-41447\* c 28 ..... NASA-CASE-XNP-00732  
 US-PATENT-APPL-SN-261918  
 US-PATENT-CLASS-210-314  
 US-PATENT-3,295,684  
 N70-41576\* c 28 ..... NASA-CASE-XLE-00519  
 US-PATENT-APPL-SN-249542  
 US-PATENT-CLASS-313-63  
 US-PATENT-3,287,582  
 N70-41578\* c 16 ..... NASA-CASE-XGS-01504  
 US-PATENT-APPL-SN-340113  
 US-PATENT-CLASS-331-94  
 US-PATENT-3,287,660  
 N70-41579\* c 32 ..... NASA-CASE-XLE-00620  
 US-PATENT-APPL-SN-304698  
 US-PATENT-CLASS-138-119

N70-41580\* c 03 ..... US-PATENT-3,295,556  
 NASA-CASE-XLA-04822  
 US-PATENT-APPL-SN-277833  
 US-PATENT-CLASS-126-270  
 US-PATENT-3,295,512  
 N70-41581\* c 05 ..... NASA-CASE-XAC-01404  
 US-PATENT-APPL-SN-363348  
 US-PATENT-CLASS-74-471  
 US-PATENT-3,295,386  
 N70-41582\* c 28 ..... NASA-CASE-XMF-01813  
 US-PATENT-APPL-SN-375674  
 US-PATENT-CLASS-181-52  
 US-PATENT-3,270,835  
 N70-41583\* c 18 ..... NASA-CASE-XMF-01030  
 US-PATENT-APPL-SN-317389  
 US-PATENT-CLASS-161-115  
 US-PATENT-3,296,060  
 N70-41588\* c 31 ..... NASA-CASE-XMF-01973  
 US-PATENT-APPL-SN-375682  
 US-PATENT-CLASS-244-1  
 US-PATENT-3,295,790  
 N70-41589\* c 02 ..... NASA-CASE-XMF-01174  
 US-PATENT-APPL-SN-410331  
 US-PATENT-CLASS-244-100  
 US-PATENT-3,295,798  
 N70-41628\* c 25 ..... NASA-CASE-XAC-00319  
 US-PATENT-APPL-SN-77251  
 US-PATENT-CLASS-315-111  
 US-PATENT-3,229,155  
 N70-41629\* c 15 ..... NASA-CASE-XGS-02441  
 US-PATENT-APPL-SN-411944  
 US-PATENT-CLASS-285-331  
 US-PATENT-3,301,578  
 N70-41630\* c 02 ..... NASA-CASE-XMS-00907  
 US-PATENT-APPL-SN-428890  
 US-PATENT-CLASS-244-138  
 US-PATENT-3,301,511  
 N70-41631\* c 31 ..... NASA-CASE-XMS-04142  
 US-PATENT-APPL-SN-422865  
 US-PATENT-CLASS-244-1  
 US-PATENT-3,301,507  
 N70-41646\* c 15 ..... NASA-CASE-XLE-01449  
 US-PATENT-APPL-SN-330209  
 US-PATENT-CLASS-137-197  
 US-PATENT-3,295,545  
 N70-41647\* c 14 ..... NASA-CASE-XGS-00769  
 US-PATENT-APPL-SN-319893  
 US-PATENT-CLASS-242-55.19  
 US-PATENT-3,295,782  
 N70-41655\* c 09 ..... NASA-CASE-XMF-00906  
 US-PATENT-APPL-SN-264731  
 US-PATENT-CLASS-324-113  
 US-PATENT-3,287,640  
 N70-41675\* c 09 ..... NASA-CASE-XMS-01315  
 US-PATENT-APPL-SN-347101  
 US-PATENT-CLASS-307-88.5  
 US-PATENT-3,302,040  
 N70-41676\* c 14 ..... NASA-CASE-XGS-01231  
 US-PATENT-APPL-SN-346356  
 US-PATENT-CLASS-250-71  
 US-PATENT-3,302,023  
 N70-41677\* c 11 ..... NASA-CASE-XMF-01772  
 US-PATENT-APPL-SN-370135  
 US-PATENT-CLASS-73-116  
 US-PATENT-3,295,366  
 N70-41678\* c 07 ..... NASA-CASE-XGS-02608  
 US-PATENT-APPL-SN-456578  
 US-PATENT-CLASS-343-18  
 US-PATENT-3,289,205  
 N70-41679\* c 15 ..... NASA-CASE-XLA-01441  
 US-PATENT-APPL-SN-516151  
 US-PATENT-CLASS-102-49  
 US-PATENT-3,302,569  
 N70-41680\* c 07 ..... NASA-CASE-XNP-02723  
 US-PATENT-APPL-SN-371857  
 US-PATENT-CLASS-343-14  
 US-PATENT-3,287,725  
 N70-41681\* c 14 ..... NASA-CASE-XAC-02877  
 US-PATENT-APPL-SN-449902  
 US-PATENT-CLASS-73-30  
 US-PATENT-3,295,360  
 N70-41682\* c 14 ..... NASA-CASE-XMS-05936  
 US-PATENT-APPL-SN-557868  
 US-PATENT-CLASS-73-517  
 US-PATENT-3,295,377  
 N70-41717\* c 09 ..... NASA-CASE-XMS-02087  
 US-PATENT-APPL-SN-439489  
 US-PATENT-CLASS-165-1  
 US-PATENT-3,301,315  
 N70-41807\* c 14 ..... NASA-CASE-XNP-01472  
 US-PATENT-APPL-SN-321656  
 US-PATENT-CLASS-178-7.2  
 US-PATENT-3,287,496  
 N70-41808\* c 15 ..... NASA-CASE-XMS-02532  
 US-PATENT-APPL-SN-398132  
 US-PATENT-CLASS-285-27

## ACCESSION NUMBER INDEX

N70-41811\* c 15 ..... US-PATENT-3,287,031  
 NASA-CASE-XNP-01152  
 US-PATENT-APPL-SN-369337  
 US-PATENT-CLASS-137-539  
 US-PATENT-3,302,662  
 N70-41812\* c 14 ..... NASA-CASE-XMS-03792  
 US-PATENT-APPL-SN-516159  
 US-PATENT-CLASS-200-61.45  
 US-PATENT-3,303,304  
 N70-41818\* c 28 ..... NASA-CASE-XLE-00150  
 US-PATENT-APPL-SN-843032  
 US-PATENT-CLASS-29-157.3  
 US-PATENT-3,035,333  
 N70-41819\* c 05 ..... NASA-CASE-XAC-00405  
 US-PATENT-APPL-SN-158916  
 US-PATENT-CLASS-128-1  
 US-PATENT-3,302,633  
 N70-41829\* c 15 ..... NASA-CASE-XMF-01371  
 US-PATENT-APPL-SN-353634  
 US-PATENT-CLASS-287-119  
 US-PATENT-3,302,960  
 N70-41855\* c 31 ..... NASA-CASE-XNP-02982  
 US-PATENT-APPL-SN-388966  
 US-PATENT-CLASS-244-1  
 US-PATENT-3,304,028  
 N70-41856\* c 21 ..... NASA-CASE-XNP-01307  
 US-PATENT-APPL-SN-390250  
 US-PATENT-CLASS-244-1  
 US-PATENT-3,286,953  
 N70-41863\* c 02 ..... NASA-CASE-XLA-01220  
 US-PATENT-APPL-SN-379417  
 US-PATENT-CLASS-244-16  
 US-PATENT-3,286,957  
 N70-41864\* c 03 ..... NASA-CASE-XGS-01419  
 US-PATENT-APPL-SN-323182  
 US-PATENT-CLASS-136-179  
 US-PATENT-3,287,174  
 N70-41871\* c 31 ..... NASA-CASE-XMS-04390  
 US-PATENT-APPL-SN-502729  
 US-PATENT-CLASS-62-45  
 US-PATENT-3,304,729  
 N70-41897\* c 27 ..... NASA-CASE-XNP-01749  
 US-PATENT-APPL-SN-440033  
 US-PATENT-CLASS-149-109  
 US-PATENT-3,305,415  
 N70-41922\* c 28 ..... NASA-CASE-XNP-02839  
 US-PATENT-APPL-SN-477333  
 US-PATENT-CLASS-60-202  
 US-PATENT-3,304,718  
 N70-41929\* c 09 ..... NASA-CASE-XNP-01951  
 US-PATENT-APPL-SN-413662  
 US-PATENT-CLASS-335-300  
 US-PATENT-3,305,810  
 N70-41930\* c 21 ..... NASA-CASE-XNP-01501  
 US-PATENT-APPL-SN-432027  
 US-PATENT-CLASS-343-12  
 US-PATENT-3,305,861  
 N70-41946\* c 14 ..... NASA-CASE-XLE-00011  
 US-PATENT-APPL-SN-735911  
 US-PATENT-CLASS-88-14  
 US-PATENT-2,960,002  
 N70-41948\* c 31 ..... NASA-CASE-XMF-01899  
 US-PATENT-APPL-SN-428882  
 US-PATENT-CLASS-60-257  
 US-PATENT-3,304,724  
 N70-41954\* c 03 ..... NASA-CASE-XAC-03392  
 US-PATENT-APPL-SN-430776  
 US-PATENT-CLASS-74-519  
 US-PATENT-3,304,799  
 N70-41955\* c 14 ..... NASA-CASE-XNP-02029  
 US-PATENT-APPL-SN-221276  
 US-PATENT-CLASS-88-14  
 US-PATENT-3,323,408  
 N70-41957\* c 14 ..... NASA-CASE-XAC-01101  
 US-PATENT-APPL-SN-355129  
 US-PATENT-CLASS-73-141  
 US-PATENT-3,304,773  
 N70-41960\* c 15 ..... NASA-CASE-XNP-05082  
 US-PATENT-APPL-SN-521753  
 US-PATENT-CLASS-174-68.5  
 US-PATENT-3,321,570  
 N70-41961\* c 08 ..... NASA-CASE-XNP-00911  
 US-PATENT-APPL-SN-280777  
 US-PATENT-CLASS-178-67  
 US-PATENT-3,305,636  
 N70-41964\* c 10 ..... NASA-CASE-XGS-01983  
 US-PATENT-APPL-SN-388023  
 US-PATENT-CLASS-333-79  
 US-PATENT-3,305,801  
 N70-41967\* c 28 ..... NASA-CASE-XLA-02651  
 US-PATENT-APPL-SN-449901  
 US-PATENT-CLASS-102-49  
 US-PATENT-3,304,865  
 N70-41991\* c 10 ..... NASA-CASE-XNP-03128  
 US-PATENT-APPL-SN-397665  
 US-PATENT-CLASS-250-83.6

## ACCESSION NUMBER INDEX

N71-11194

N70-41992*	c 28	US-PATENT-3,321,628 NASA-CASE-XLE-00685 US-PATENT-APPL-SN-407595 US-PATENT-CLASS-60-260 US-PATENT-3,321,922	N71-10616*	c 14	US-PATENT-3,311,315 NASA-CASE-XMF-02433 US-PATENT-APPL-SN-405630 US-PATENT-CLASS-73-70.2 US-PATENT-3,310,978	N71-10781*	c 14	US-PATENT-3,316,716 NASA-CASE-XLE-01481 US-PATENT-APPL-SN-319905 US-PATENT-CLASS-73-99 US-PATENT-3,282,091
N70-41993*	c 15	NASA-CASE-XLE-01300 US-PATENT-APPL-SN-380960 US-PATENT-CLASS-73-100 US-PATENT-3,323,356	N71-10617*	c 15	NASA-CASE-XMF-01887 US-PATENT-APPL-SN-422868 US-PATENT-CLASS-308-5 US-PATENT-3,325,229	N71-10782*	c 15	NASA-CASE-XKS-01985 US-PATENT-APPL-SN-357337 US-PATENT-CLASS-285-24 US-PATENT-3,319,979
N70-41994*	c 14	NASA-CASE-XMF-02822 US-PATENT-APPL-SN-403959 US-PATENT-CLASS-73-194 US-PATENT-3,323,362	N71-10618*	c 09	NASA-CASE-XNP-03332 US-PATENT-APPL-SN-368123 US-PATENT-CLASS-313-63 US-PATENT-3,311,772	N71-10797*	c 14	NASA-CASE-XLE-01246 US-PATENT-APPL-SN-249537 US-PATENT-CLASS-324-61 US-PATENT-3,324,388
N70-42000*	c 05	NASA-CASE-XMS-03371 US-PATENT-APPL-SN-418931 US-PATENT-CLASS-73-432 US-PATENT-3,323,370	N71-10658*	c 15	NASA-CASE-XMS-03252 US-PATENT-APPL-SN-425362 US-PATENT-CLASS-60-54.5 US-PATENT-3,318,093	N71-10798*	c 09	NASA-CASE-XMS-00945 US-PATENT-APPL-SN-385530 US-PATENT-CLASS-330-22 US-PATENT-3,319,175
N70-42003*	c 32	NASA-CASE-XLA-02131 US-PATENT-APPL-SN-377777 US-PATENT-CLASS-73-90 US-PATENT-3,304,768	N71-10659*	c 09	NASA-CASE-XNP-01383 US-PATENT-APPL-SN-369336 US-PATENT-CLASS-324-77 US-PATENT-3,317,832	N71-10799*	c 15	NASA-CASE-XLA-01807 US-PATENT-APPL-SN-442558 US-PATENT-CLASS-287-189.36 US-PATENT-3,318,622
N70-42015*	c 31	NASA-CASE-XLA-01967 US-PATENT-APPL-SN-457875 US-PATENT-CLASS-244-135 US-PATENT-3,321,159	N71-10672*	c 15	NASA-CASE-XLA-01091 US-PATENT-APPL-SN-351259 US-PATENT-CLASS-264-102 US-PATENT-3,317,641	N71-10809*	c 15	NASA-CASE-XMF-02107 US-PATENT-APPL-SN-384811 US-PATENT-CLASS-140-124 US-PATENT-3,318,343
N70-42016*	c 02	NASA-CASE-XLA-01290 US-PATENT-APPL-SN-393451 US-PATENT-CLASS-244-42 US-PATENT-3,321,157	N71-10673*	c 09	NASA-CASE-XGS-01473 US-PATENT-APPL-SN-364867 US-PATENT-CLASS-307-88.5 US-PATENT-3,317,751	N71-11037*	c 02	NASA-CASE-XLA-06824-2 US-PATENT-APPL-SN-775966 US-PATENT-CLASS-244-31 US-PATENT-3,508,724
N70-42017*	c 15	NASA-CASE-XMS-04072 US-PATENT-APPL-SN-485960 US-PATENT-CLASS-30-228 US-PATENT-3,320,669	N71-10676*	c 07	NASA-CASE-XNP-03134 US-PATENT-APPL-SN-422095 US-PATENT-CLASS-333-21 US-PATENT-3,324,423	N71-11038*	c 02	NASA-CASE-XLA-06958 US-PATENT-APPL-SN-551815 US-PATENT-CLASS-244-44 US-PATENT-3,310,261
N70-42032*	c 10	NASA-CASE-XNP-02654 US-PATENT-APPL-SN-435387 US-PATENT-CLASS-307-88.5 US-PATENT-3,321,645	N71-10677*	c 09	NASA-CASE-XGS-01451 US-PATENT-APPL-SN-405629 US-PATENT-CLASS-318-138 US-PATENT-3,324,370	N71-11039*	c 02	NASA-CASE-MS-12111-1 US-PATENT-APPL-SN-775877 US-PATENT-CLASS-244-23 US-PATENT-3,490,721
N70-42033*	c 15	NASA-CASE-XNP-02092 US-PATENT-APPL-SN-371856 US-PATENT-CLASS-156-345 US-PATENT-3,323,967	N71-10678*	c 21	NASA-CASE-XGS-01159 US-PATENT-APPL-SN-332313 US-PATENT-CLASS-250-203 US-PATENT-3,311,748	N71-11041* #	c 02	NASA-CASE-XLA-03659 US-PATENT-APPL-SN-444087 US-PATENT-CLASS-244-46 US-PATENT-3,270,989
N70-42034*	c 15	NASA-CASE-XNP-01412 US-PATENT-APPL-SN-426702 US-PATENT-CLASS-175-310 US-PATENT-3,321,034	N71-10728*	c 03	NASA-CASE-XNP-01464 US-PATENT-APPL-SN-430778 US-PATENT-CLASS-136-182 US-PATENT-3,317,352	N71-11043*	c 02	NASA-CASE-XLA-08801-1 US-PATENT-APPL-SN-710533 US-PATENT-CLASS-244-43 US-PATENT-3,493,197
N70-42073*	c 03	NASA-CASE-XFR-04104 US-PATENT-APPL-SN-476759 US-PATENT-CLASS-74-471 US-PATENT-3,323,386	N71-10746*	c 11	NASA-CASE-XMS-02977 US-PATENT-APPL-SN-416938 US-PATENT-CLASS-35-12 US-PATENT-3,281,963	N71-11049*	c 03	NASA-CASE-NPO-10109 US-PATENT-APPL-SN-701654 US-PATENT-CLASS-136-89 US-PATENT-3,532,551
N70-42074*	c 14	NASA-CASE-XLE-02998 US-PATENT-APPL-SN-516794 US-PATENT-CLASS-116-117 US-PATENT-3,323,484	N71-10747*	c 31	NASA-CASE-XMF-00442 US-PATENT-APPL-SN-202030 US-PATENT-CLASS-343-705 US-PATENT-3,277,486	N71-11050*	c 03	NASA-CASE-XNP-06506 US-PATENT-APPL-SN-577778 US-PATENT-CLASS-136-89 US-PATENT-3,446,676
N70-42075*	c 31	NASA-CASE-XMS-02677 US-PATENT-APPL-SN-472066 US-PATENT-CLASS-244-1 US-PATENT-3,321,154	N71-10748*	c 11	NASA-CASE-XFR-04147 US-PATENT-APPL-SN-476761 US-PATENT-CLASS-35-12 US-PATENT-3,281,965	N71-11051*	c 03	NASA-CASE-XNP-03378 US-PATENT-APPL-SN-360878 US-PATENT-CLASS-136-170 US-PATENT-3,282,740
N71-10500*	c 14	NASA-CASE-XLE-01609 US-PATENT-APPL-SN-438797 US-PATENT-CLASS-73-290 US-PATENT-3,326,043	N71-10771*	c 21	NASA-CASE-XNP-03914 US-PATENT-APPL-SN-468647 US-PATENT-CLASS-250-203 US-PATENT-3,317,731	N71-11052*	c 03	NASA-CASE-XLE-04526 US-PATENT-APPL-SN-640457 US-PATENT-CLASS-136-86 US-PATENT-3,507,704
N71-10560*	c 24	NASA-CASE-XLE-00808 US-PATENT-APPL-SN-307269 US-PATENT-CLASS-148-188 US-PATENT-3,310,443	N71-10772*	c 18	NASA-CASE-XLE-01765 US-PATENT-APPL-SN-316477 US-PATENT-CLASS-117-65.2 US-PATENT-3,317,341	N71-11053*	c 03	NASA-CASE-XGS-00886 US-PATENT-APPL-SN-319894 US-PATENT-CLASS-136-132 US-PATENT-3,282,739
N71-10574*	c 28	NASA-CASE-XLE-01902 US-PATENT-APPL-SN-485656 US-PATENT-CLASS-60-202 US-PATENT-3,324,659	N71-10773*	c 14	NASA-CASE-XLA-02605 US-PATENT-APPL-SN-459138 US-PATENT-CLASS-177-210 US-PATENT-3,316,991	N71-11055*	c 03	NASA-CASE-XMF-05843 US-PATENT-APPL-SN-666553 US-PATENT-CLASS-310-4 US-PATENT-3,509,386
N71-10577*	c 15	NASA-CASE-XLE-04677 US-PATENT-APPL-SN-447928 US-PATENT-CLASS-220-67 US-PATENT-3,326,407	N71-10774*	c 14	NASA-CASE-XLA-01131 US-PATENT-APPL-SN-322545 US-PATENT-CLASS-73-23 US-PATENT-3,312,101	N71-11056*	c 03	NASA-CASE-XNP-05821 US-PATENT-APPL-SN-545223 US-PATENT-CLASS-136-89 US-PATENT-3,493,437
N71-10578*	c 10	NASA-CASE-XMS-01554 US-PATENT-APPL-SN-414482 US-PATENT-CLASS-323-8 US-PATENT-3,325,723	N71-10775*	c 07	NASA-CASE-XLA-00901 US-PATENT-APPL-SN-269212 US-PATENT-CLASS-325-305 US-PATENT-3,311,832	N71-11057*	c 03	NASA-CASE-MS-13112 US-PATENT-APPL-SN-765738 US-PATENT-CLASS-290-40 US-PATENT-3,508,070
N71-10582*	c 31	NASA-CASE-XLA-02132 US-PATENT-APPL-SN-453227 US-PATENT-CLASS-102-49 US-PATENT-3,286,630	N71-10776*	c 11	NASA-CASE-XLA-03127 US-PATENT-APPL-SN-447927 US-PATENT-CLASS-35-12 US-PATENT-3,281,964	N71-11058*	c 03	NASA-CASE-XGS-01475 US-PATENT-APPL-SN-344793 US-PATENT-CLASS-244-1 US-PATENT-3,459,391
N71-10604*	c 11	NASA-CASE-XMF-03248 US-PATENT-APPL-SN-377780 US-PATENT-CLASS-73-116 US-PATENT-3,310,980	N71-10777*	c 11	NASA-CASE-XLE-01533 US-PATENT-APPL-SN-334678 US-PATENT-CLASS-55-400 US-PATENT-3,282,035	N71-11189*	c 05	NASA-CASE-XFR-10856 US-PATENT-APPL-SN-626376 US-PATENT-CLASS-534,727 US-PATENT-3,504,935
N71-10607*	c 26	NASA-CASE-XLE-02792 US-PATENT-APPL-SN-352400 US-PATENT-CLASS-148-1.5 US-PATENT-3,311,510	N71-10778*	c 15	NASA-CASE-XNP-00710 US-PATENT-APPL-SN-271821 US-PATENT-CLASS-251-61 US-PATENT-3,317,180	N71-11190*	c 05	NASA-CASE-XMS-04935 US-PATENT-APPL-SN-518487 US-PATENT-CLASS-128-142.5 US-PATENT-3,502,074
N71-10608*	c 03	NASA-CASE-XGS-03505 US-PATENT-APPL-SN-498167 US-PATENT-CLASS-136-28 US-PATENT-3,311,502	N71-10779*	c 14	NASA-CASE-XMF-02307 US-PATENT-APPL-SN-422869 US-PATENT-CLASS-73-40.5 US-PATENT-3,316,752	N71-11193*	c 05	NASA-CASE-ARC-10043-1 US-PATENT-APPL-SN-676012 US-PATENT-CLASS-128-2.1 US-PATENT-3,508,541
N71-10609*	c 07	NASA-CASE-XGS-01223 US-PATENT-APPL-SN-319892 US-PATENT-CLASS-242-55.19	N71-10780*	c 28	NASA-CASE-XLA-01043 US-PATENT-APPL-SN-379768 US-PATENT-CLASS-60-225	N71-11194*	c 05	NASA-CASE-XLA-05332 US-PATENT-APPL-SN-757861 US-PATENT-CLASS-2-2.1 US-PATENT-3,534,407

## N71-11195

N71-11195\* c 05 ..... NASA-CASE-LAR-10007-1  
US-PATENT-APPL-SN-770203  
US-PATENT-CLASS-2-2.1  
US-PATENT-3,534,406  
N71-11199\* c 05 ..... NASA-CASE-XKS-02342  
US-PATENT-APPL-SN-407603  
US-PATENT-CLASS-182-191  
US-PATENT-3,262,518  
N71-11202\* c 05 ..... NASA-CASE-XFR-08403  
US-PATENT-APPL-SN-704420  
US-PATENT-CLASS-73-23  
US-PATENT-3,507,146  
N71-11203\* c 05 ..... NASA-CASE-XMS-09632-1  
US-PATENT-APPL-SN-791693  
US-PATENT-CLASS-128-142.5  
US-PATENT-3,500,827  
N71-11207\* c 05 ..... NASA-CASE-XLA-03213  
US-PATENT-APPL-SN-621715  
US-PATENT-CLASS-202-182  
US-PATENT-3,444,051  
N71-11235\* c 06 ..... NASA-CASE-XLA-03104  
US-PATENT-APPL-SN-510155  
US-PATENT-CLASS-260-78  
US-PATENT-3,518,232  
N71-11236\* c 06 ..... NASA-CASE-XMF-08651  
US-PATENT-APPL-SN-593594  
US-PATENT-CLASS-260-72.5  
US-PATENT-3,526,611  
N71-11237\* c 06 ..... NASA-CASE-XMF-10753  
US-PATENT-APPL-SN-668751  
US-PATENT-CLASS-260-46.5  
US-PATENT-3,444,127  
N71-11238\* c 06 ..... NASA-CASE-XLA-08802  
US-PATENT-APPL-SN-640454  
US-PATENT-CLASS-260-78  
US-PATENT-3,532,673  
N71-11239\* c 06 ..... NASA-CASE-XMF-08655  
US-PATENT-APPL-SN-593593  
US-PATENT-CLASS-260-72.5  
US-PATENT-3,516,970  
N71-11240\* c 06 ..... NASA-CASE-MFS-13994-1  
US-PATENT-APPL-SN-715975  
US-PATENT-CLASS-260-46.5  
US-PATENT-3,516,964  
N71-11242\* c 06 ..... NASA-CASE-XMF-08656  
US-PATENT-APPL-SN-593605  
US-PATENT-CLASS-260-2.5  
US-PATENT-3,493,524  
N71-11243\* c 06 ..... NASA-CASE-XMF-08652  
US-PATENT-APPL-SN-593606  
US-PATENT-CLASS-260-2  
US-PATENT-3,493,522  
N71-11266\* c 07 ..... NASA-CASE-XLA-03076  
US-PATENT-APPL-SN-591004  
US-PATENT-CLASS-325-42  
US-PATENT-3,508,152  
N71-11267\* c 07 ..... NASA-CASE-XNP-10843  
US-PATENT-APPL-SN-649358  
US-PATENT-CLASS-325-363  
US-PATENT-3,508,156  
N71-11281\* c 07 ..... NASA-CASE-XNP-10830  
US-PATENT-APPL-SN-692332  
US-PATENT-CLASS-178-69.5  
US-PATENT-3,535,451  
N71-11282\* c 07 ..... NASA-CASE-XGS-02889  
US-PATENT-APPL-SN-685748  
US-PATENT-CLASS-329-104  
US-PATENT-3,501,704  
N71-11284\* c 07 ..... NASA-CASE-XLA-01552  
US-PATENT-APPL-SN-332339  
US-PATENT-CLASS-325-65  
US-PATENT-3,277,375  
N71-11285\* c 07 ..... NASA-CASE-NPO-10539  
US-PATENT-APPL-SN-743429  
US-PATENT-CLASS-343-779  
US-PATENT-3,534,375  
N71-11298\* c 07 ..... NASA-CASE-XMF-01160  
US-PATENT-APPL-SN-310507  
US-PATENT-CLASS-340-198  
US-PATENT-3,243,791  
N71-11300\* c 07 ..... NASA-CASE-XMS-07168  
US-PATENT-APPL-SN-769788  
US-PATENT-CLASS-178-6.6  
US-PATENT-3,493,677  
N71-11766\* c 21 ..... NASA-CASE-LAR-10403  
US-PATENT-APPL-SN-676391  
US-PATENT-CLASS-343-6.5  
US-PATENT-3,447,154  
N71-12217\* # c 01 ..... NASA-CASE-FRC-10063  
US-PATENT-APPL-SN-21263  
N71-12243\* c 02 ..... NASA-CASE-XLA-04451  
US-PATENT-APPL-SN-457876  
US-PATENT-CLASS-244-45  
US-PATENT-3,310,262  
N71-12255\* c 03 ..... NASA-CASE-NPO-10404  
US-PATENT-APPL-SN-728234

N71-12258\* c 03 ..... NASA-CASE-XLA-00711  
US-PATENT-APPL-SN-357334  
US-PATENT-CLASS-89-1.7  
US-PATENT-3,249,012  
N71-12259\* c 03 ..... NASA-CASE-XLA-01396  
US-PATENT-APPL-SN-357336  
US-PATENT-CLASS-89-1.7  
US-PATENT-3,249,013  
N71-12260\* c 03 ..... NASA-CASE-XNP-01020  
US-PATENT-APPL-SN-430780  
US-PATENT-CLASS-60-97  
US-PATENT-3,238,730  
N71-12335\* c 05 ..... NASA-CASE-XMS-00784  
US-PATENT-APPL-SN-358127  
US-PATENT-CLASS-2-2.1  
US-PATENT-3,286,274  
N71-12336\* c 05 ..... NASA-CASE-XMS-05304  
US-PATENT-APPL-SN-511567  
US-PATENT-CLASS-244-4  
US-PATENT-3,270,986  
N71-12341\* c 05 ..... NASA-CASE-MFS-14671  
US-PATENT-APPL-SN-723476  
US-PATENT-CLASS-297-385  
US-PATENT-3,516,711  
N71-12342\* c 05 ..... NASA-CASE-XAC-05706  
US-PATENT-APPL-SN-592694  
US-PATENT-CLASS-325-143  
US-PATENT-3,453,546  
N71-12343\* c 05 ..... NASA-CASE-MSC-11253  
US-PATENT-APPL-SN-695973  
US-PATENT-CLASS-297-68  
US-PATENT-3,466,085  
N71-12344\* c 05 ..... NASA-CASE-XMS-09636  
US-PATENT-APPL-SN-586330  
US-PATENT-CLASS-2-2.1  
US-PATENT-3,492,672  
N71-12345\* c 05 ..... NASA-CASE-MSC-12086-1  
US-PATENT-APPL-SN-812999  
US-PATENT-CLASS-29-400  
US-PATENT-3,490,130  
N71-12346\* c 05 ..... NASA-CASE-XMS-04212-1  
US-PATENT-APPL-SN-679885  
US-PATENT-CLASS-128-2.1  
US-PATENT-3,490,440  
N71-12351\* c 05 ..... NASA-CASE-LAR-10056  
US-PATENT-APPL-SN-674357  
US-PATENT-CLASS-224-25  
US-PATENT-3,493,153  
N71-12389\* c 07 ..... NASA-CASE-XLA-01090  
US-PATENT-APPL-SN-741824  
US-PATENT-CLASS-250-199  
US-PATENT-RE-26,548  
N71-12390\* c 07 ..... NASA-CASE-XER-09213  
US-PATENT-APPL-SN-668302  
US-PATENT-CLASS-332-9  
US-PATENT-3,535,657  
N71-12391\* c 07 ..... NASA-CASE-XMS-05454-1  
US-PATENT-APPL-SN-771803  
US-PATENT-CLASS-343-17.7  
US-PATENT-3,471,858  
N71-12392\* c 07 ..... NASA-CASE-XGS-01590  
US-PATENT-APPL-SN-584067  
US-PATENT-CLASS-178-88  
US-PATENT-3,491,202  
N71-12396\* c 07 ..... NASA-CASE-GSC-10452  
US-PATENT-APPL-SN-797794  
US-PATENT-CLASS-343-776  
US-PATENT-3,495,262  
N71-12494\* c 08 ..... NASA-CASE-XGS-04767  
US-PATENT-APPL-SN-645584  
US-PATENT-CLASS-307-296  
US-PATENT-3,535,560  
N71-12500\* c 08 ..... NASA-CASE-XNP-07040  
US-PATENT-APPL-SN-649357  
US-PATENT-CLASS-332-31  
US-PATENT-3,535,658  
N71-12501\* c 08 ..... NASA-CASE-XLA-00670  
US-PATENT-APPL-SN-235162  
US-PATENT-CLASS-340-347  
US-PATENT-3,251,053  
N71-12502\* c 08 ..... NASA-CASE-NPO-10112  
US-PATENT-APPL-SN-673226  
US-PATENT-CLASS-340-172.5  
US-PATENT-3,533,074  
N71-12503\* c 08 ..... NASA-CASE-NPO-10351  
US-PATENT-APPL-SN-712065  
US-PATENT-CLASS-328-37  
US-PATENT-3,535,642  
N71-12504\* c 08 ..... NASA-CASE-XMF-05835  
US-PATENT-APPL-SN-627257  
US-PATENT-CLASS-340-174  
US-PATENT-3,493,942  
N71-12505\* c 08 ..... NASA-CASE-XNP-05415  
US-PATENT-APPL-SN-578932

## ACCESSION NUMBER INDEX

N71-12506\* c 08 ..... NASA-CASE-XNP-08832  
US-PATENT-APPL-SN-681692  
US-PATENT-CLASS-340-172.5  
US-PATENT-3,535,696  
N71-12507\* c 08 ..... NASA-CASE-XLA-01952  
US-PATENT-APPL-SN-676386  
US-PATENT-CLASS-340-324  
US-PATENT-3,537,096  
N71-12513\* c 09 ..... NASA-CASE-XGS-07801  
US-PATENT-APPL-SN-640452  
US-PATENT-CLASS-148-188  
US-PATENT-3,490,965  
N71-12514\* c 09 ..... NASA-CASE-XLA-07497  
US-PATENT-APPL-SN-631848  
US-PATENT-CLASS-307-252  
US-PATENT-3,491,255  
N71-12515\* c 09 ..... NASA-CASE-XNP-08836  
US-PATENT-APPL-SN-668968  
US-PATENT-CLASS-340-174  
US-PATENT-3,535,702  
N71-12516\* c 09 ..... NASA-CASE-XNP-09768  
US-PATENT-APPL-SN-698629  
US-PATENT-CLASS-307-243  
US-PATENT-3,535,554  
N71-12517\* c 09 ..... NASA-CASE-XAC-10608-1  
US-PATENT-APPL-SN-710561  
US-PATENT-CLASS-333-80  
US-PATENT-3,493,801  
N71-12518\* c 09 ..... NASA-CASE-XNP-09808  
US-PATENT-APPL-SN-692471  
US-PATENT-CLASS-200-61.42  
US-PATENT-3,488,461  
N71-12519\* c 09 ..... NASA-CASE-XMF-06519  
US-PATENT-APPL-SN-656952  
US-PATENT-CLASS-328-110  
US-PATENT-3,535,644  
N71-12520\* c 09 ..... NASA-CASE-NPO-10230  
US-PATENT-APPL-SN-691735  
US-PATENT-CLASS-307-229  
US-PATENT-3,535,547  
N71-12521\* c 09 ..... NASA-CASE-ARC-10030  
US-PATENT-APPL-SN-679885  
US-PATENT-CLASS-313-110  
US-PATENT-3,493,805  
N71-12526\* c 09 ..... NASA-CASE-MSC-12135-1  
US-PATENT-APPL-SN-761404  
US-PATENT-CLASS-317-31  
US-PATENT-3,448,341  
N71-12539\* c 09 ..... NASA-CASE-ERC-10552  
US-PATENT-APPL-SN-720125  
US-PATENT-CLASS-178-7.7  
US-PATENT-3,535,446  
N71-12540\* c 09 ..... NASA-CASE-XNP-01058  
US-PATENT-APPL-SN-313136  
US-PATENT-CLASS-315-160  
US-PATENT-3,271,620  
N71-12554\* c 10 ..... NASA-CASE-NPO-10348  
US-PATENT-APPL-SN-704668  
US-PATENT-CLASS-324-95  
US-PATENT-3,532,979  
N71-13410\* c 01 ..... NASA-CASE-XLA-00755  
US-PATENT-APPL-SN-247422  
US-PATENT-CLASS-244-35  
US-PATENT-3,270,988  
N71-13411\* c 01 ..... NASA-CASE-XLA-05828  
US-PATENT-APPL-SN-509460  
US-PATENT-CLASS-235-61.6  
US-PATENT-3,500,020  
N71-13421\* c 02 ..... NASA-CASE-XFR-00756  
US-PATENT-APPL-SN-212173  
US-PATENT-CLASS-235-150.22  
US-PATENT-3,258,582  
N71-13422\* c 02 ..... NASA-CASE-XLA-06339  
US-PATENT-APPL-SN-801336  
US-PATENT-CLASS-244-76  
US-PATENT-3,534,930  
N71-13461\* c 06 ..... NASA-CASE-LAR-10180-1  
US-PATENT-APPL-SN-709398  
US-PATENT-CLASS-250-41.9  
US-PATENT-3,521,054  
N71-13486\* c 09 ..... NASA-CASE-MFS-20333  
US-PATENT-APPL-SN-820965  
US-PATENT-CLASS-307-149  
US-PATENT-3,535,543  
N71-13518\* c 09 ..... NASA-CASE-MSC-12178-1  
US-PATENT-APPL-SN-845365  
US-PATENT-CLASS-315-241  
US-PATENT-3,530,336  
N71-13521\* c 09 ..... NASA-CASE-XKS-09348  
US-PATENT-APPL-SN-677505  
US-PATENT-CLASS-343-703  
US-PATENT-3,526,897  
N71-13522\* c 09 ..... NASA-CASE-LEW-10364-1  
US-PATENT-APPL-SN-822518

## ACCESSION NUMBER INDEX

N71-15871

		US-PATENT-CLASS-317-258				US-PATENT-CLASS-350-3.5				US-PATENT-CLASS-60-35.6
		US-PATENT-3,535,602				US-PATENT-3,535,013				US-PATENT-3,270,503
N71-13530*	c 09	NASA-CASE-XNP-00384	N71-15562*	c 25	NASA-CASE-XLA-03374	N71-15625*	c 33	NASA-CASE-XLE-01399		
		US-PATENT-APPL-SN-180392			US-PATENT-APPL-SN-793770			US-PATENT-APPL-SN-320233		
		US-PATENT-CLASS-324-132			US-PATENT-CLASS-315-111			US-PATENT-CLASS-13-26		
		US-PATENT-3,263,171			US-PATENT-3,535,586			US-PATENT-3,263,016		
N71-13531*	c 09	NASA-CASE-MSC-12033-1	N71-15563*	c 28	NASA-CASE-XLA-02865	N71-15634*	c 27	NASA-CASE-XLE-01988		
		US-PATENT-APPL-SN-602828			US-PATENT-APPL-SN-416946			US-PATENT-APPL-SN-308918		
		US-PATENT-CLASS-330-11			US-PATENT-CLASS-244-53			US-PATENT-CLASS-60-35.6		
		US-PATENT-3,526,845			US-PATENT-3,270,990			US-PATENT-3,258,912		
N71-13537*	c 10	NASA-CASE-XNP-08274	N71-15565*	c 16	NASA-CASE-MFS-20074	N71-15635*	c 27	NASA-CASE-XLE-01182		
		US-PATENT-APPL-SN-730703			US-PATENT-APPL-SN-801312			US-PATENT-APPL-SN-411949		
		US-PATENT-CLASS-73-382			US-PATENT-CLASS-350-3.5			US-PATENT-CLASS-60-39.46		
		US-PATENT-3,520,190			US-PATENT-3,535,014			US-PATENT-3,258,918		
N71-13545*	c 10	NASA-CASE-LAR-10774	N71-15566*	c 31	NASA-CASE-XKS-08012-2	N71-15637*	c 31	NASA-CASE-XLE-01640		
		US-PATENT-APPL-SN-802820			US-PATENT-APPL-SN-874958			US-PATENT-APPL-SN-473535		
		US-PATENT-CLASS-73-1			US-PATENT-CLASS-340-172.5			US-PATENT-CLASS-60-35.6		
		US-PATENT-3,534,584			US-PATENT-3,535,683			US-PATENT-3,270,504		
N71-13789*	c 15	NASA-CASE-XLA-01141	N71-15567*	c 16	NASA-CASE-ERC-10017	N71-15641*	c 33	NASA-CASE-XNP-09802		
		US-PATENT-APPL-SN-353632			US-PATENT-APPL-SN-677506			US-PATENT-APPL-SN-673229		
		US-PATENT-CLASS-102-49			US-PATENT-CLASS-350-3.5			US-PATENT-CLASS-73-190		
		US-PATENT-3,263,610			US-PATENT-3,535,012			US-PATENT-3,531,989		
N71-13958*	c 21	NASA-CASE-GSC-10087-2	N71-15568*	c 33	NASA-CASE-XLE-09475-1	N71-15642*	c 21	NASA-CASE-XGS-03431		
		US-PATENT-APPL-SN-701744			US-PATENT-APPL-SN-710945			US-PATENT-APPL-SN-588635		
		US-PATENT-CLASS-343-112			US-PATENT-CLASS-136-228			US-PATENT-CLASS-250-203		
		US-PATENT-3,495,260			US-PATENT-3,535,165			US-PATENT-3,488,504		
N71-14014*	c 18	NASA-CASE-GSC-10072	N71-15571*	c 15	NASA-CASE-XLA-07911	N71-15643*	c 31	NASA-CASE-NPO-10311		
		US-PATENT-APPL-SN-686296			US-PATENT-APPL-SN-660572			US-PATENT-APPL-SN-725475		
		US-PATENT-CLASS-106-15			US-PATENT-CLASS-33-207			US-PATENT-CLASS-73-116		
		US-PATENT-3,493,401			US-PATENT-3,492,739			US-PATENT-3,534,597		
N71-14032*	c 33	NASA-CASE-XLE-05913	N71-15582*	c 21	NASA-CASE-XLA-01163	N71-15644*	c 17	NASA-CASE-XLE-00726		
		US-PATENT-APPL-SN-551933			US-PATENT-APPL-SN-405632			US-PATENT-APPL-SN-355126		
		US-PATENT-CLASS-117-106			US-PATENT-CLASS-60-35.55			US-PATENT-CLASS-75-170		
		US-PATENT-3,490,939			US-PATENT-3,270,505			US-PATENT-3,271,140		
N71-14035*	c 33	NASA-CASE-XLE-03307	N71-15583*	c 21	NASA-CASE-XMF-01598	N71-15647*	c 31	NASA-CASE-XGS-01143		
		US-PATENT-APPL-SN-613979			US-PATENT-APPL-SN-333770			US-PATENT-APPL-SN-349781		
		US-PATENT-CLASS-244-1			US-PATENT-CLASS-244-1			US-PATENT-CLASS-60-35.6		
		US-PATENT-3,490,718			US-PATENT-3,270,985			US-PATENT-3,270,501		
N71-14043*	c 28	NASA-CASE-XLE-01124	N71-15597*	c 15	NASA-CASE-XLE-08917	N71-15658*	c 28	NASA-CASE-XLE-00409		
		US-PATENT-APPL-SN-312269			US-PATENT-APPL-SN-662829			US-PATENT-APPL-SN-249539		
		US-PATENT-CLASS-60-35.5			US-PATENT-CLASS-113-116			US-PATENT-CLASS-29-157		
		US-PATENT-3,238,715			US-PATENT-3,490,405			US-PATENT-3,254,395		
N71-14044*	c 28	NASA-CASE-XGS-08729	N71-15598*	c 14	NASA-CASE-XAC-00812	N71-15659*	c 28	NASA-CASE-XLE-05689		
		US-PATENT-APPL-SN-667637			US-PATENT-APPL-SN-255132			US-PATENT-APPL-SN-491845		
		US-PATENT-CLASS-60-200			US-PATENT-CLASS-73-341			US-PATENT-CLASS-60-35.60		
		US-PATENT-3,490,235			US-PATENT-3,238,777			US-PATENT-3,254,487		
N71-14056*	c 28	NASA-CASE-MSC-12139-1	N71-15599*	c 14	NASA-CASE-XNP-04161	N71-15660*	c 28	NASA-CASE-XMF-00968		
		US-PATENT-APPL-SN-797796			US-PATENT-APPL-SN-568356			US-PATENT-APPL-SN-339825		
		US-PATENT-CLASS-103-37			US-PATENT-CLASS-250-83.3			US-PATENT-CLASS-60-35.6		
		US-PATENT-3,492,947			US-PATENT-3,444,375			US-PATENT-3,270,499		
N71-14090*	c 27	NASA-CASE-LAR-10173-1	N71-15600*	c 14	NASA-CASE-XKS-06250	N71-15661*	c 28	NASA-CASE-XLE-02066		
		US-PATENT-APPL-SN-758942			US-PATENT-APPL-SN-649075			US-PATENT-APPL-SN-426455		
		US-PATENT-CLASS-149-19			US-PATENT-CLASS-73-97			US-PATENT-CLASS-60-35.5		
		US-PATENT-3,492,176			US-PATENT-3,492,862			US-PATENT-3,262,262		
N71-14132*	c 21	NASA-CASE-XLA-05464	N71-15604*	c 14	NASA-CASE-NPO-10337	N71-15663*	c 31	NASA-CASE-XLA-00256		
		US-PATENT-APPL-SN-656995			US-PATENT-APPL-SN-714296			US-PATENT-APPL-SN-333766		
		US-PATENT-CLASS-244-1			US-PATENT-CLASS-350-58			US-PATENT-CLASS-244-1		
		US-PATENT-3,493,194			US-PATENT-3,488,103			US-PATENT-3,262,655		
N71-14159*	c 21	NASA-CASE-XGS-04393	N71-15605*	c 14	NASA-CASE-GSC-10062	N71-15664*	c 31	NASA-CASE-XLA-01332		
		US-PATENT-APPL-SN-700142			US-PATENT-APPL-SN-658955			US-PATENT-APPL-SN-250974		
		US-PATENT-CLASS-244-1			US-PATENT-CLASS-350-285			US-PATENT-CLASS-220-15		
		US-PATENT-3,490,719			US-PATENT-3,493,294			US-PATENT-3,270,908		
N71-14354*	c 26	NASA-CASE-ERC-10138	N71-15606*	c 15	NASA-CASE-XNP-06031	N71-15673*	c 23	NASA-CASE-XMS-01620		
		US-PATENT-APPL-SN-821586			US-PATENT-APPL-SN-590144			US-PATENT-APPL-SN-357340		
		US-PATENT-CLASS-225-2			US-PATENT-CLASS-250-52			US-PATENT-CLASS-248-358		
		US-PATENT-3,493,155			US-PATENT-3,493,746			US-PATENT-3,243,154		
N71-14932*	c 15	NASA-CASE-LEW-11531	N71-15607*	c 15	NASA-CASE-XMF-03287	N71-15674*	c 31	NASA-CASE-XLA-03691		
		US-PATENT-APPL-SN-643332			US-PATENT-APPL-SN-658956			US-PATENT-APPL-SN-667625		
		US-PATENT-CLASS-219-72			US-PATENT-CLASS-228-7			US-PATENT-CLASS-244-1		
		US-PATENT-3,493,711			US-PATENT-3,443,732			US-PATENT-3,534,924		
N71-14996*	c 14	NASA-CASE-XLA-00936	N71-15608*	c 15	NASA-CASE-NPO-10117	N71-15675*	c 31	NASA-CASE-XMF-03169		
		US-PATENT-APPL-SN-282818			US-PATENT-APPL-SN-668238			US-PATENT-APPL-SN-375405		
		US-PATENT-CLASS-73-170			US-PATENT-CLASS-138-42			US-PATENT-CLASS-89-1.5		
		US-PATENT-3,238,774			US-PATENT-3,493,012			US-PATENT-3,262,365		
N71-15467*	c 23	NASA-CASE-XNP-03796	N71-15609*	c 15	NASA-CASE-XMF-04709	N71-15676*	c 31	NASA-CASE-XGS-05579		
		US-PATENT-APPL-SN-453231			US-PATENT-APPL-SN-683507			US-PATENT-APPL-SN-719869		
		US-PATENT-CLASS-62-6			US-PATENT-CLASS-137-81.5			US-PATENT-CLASS-244-1		
		US-PATENT-3,260,055			US-PATENT-3,493,003			US-PATENT-3,534,925		
N71-15468*	c 17	NASA-CASE-LEW-10393-1	N71-15610*	c 15	NASA-CASE-XLE-01604-2	N71-15687*	c 31	NASA-CASE-XLA-05369		
		US-PATENT-APPL-SN-644799			US-PATENT-APPL-SN-683613			US-PATENT-APPL-SN-765123		
		US-PATENT-CLASS-75-202			US-PATENT-CLASS-117-50			US-PATENT-CLASS-102-49.5		
		US-PATENT-3,535,110			US-PATENT-3,493,415			US-PATENT-3,534,686		
N71-15469*	c 18	NASA-CASE-ARC-10099-1	N71-15620*	c 14	NASA-CASE-XLA-01926	N71-15688*	c 18	NASA-CASE-XNP-03459-2		
		US-PATENT-APPL-SN-704224			US-PATENT-APPL-SN-784521			US-PATENT-APPL-SN-681942		
		US-PATENT-CLASS-106-15			US-PATENT-CLASS-340-57			US-PATENT-CLASS-260-404.5		
		US-PATENT-3,535,130			US-PATENT-3,491,335			US-PATENT-3,535,352		
N71-15545*	c 18	NASA-CASE-XMS-09691-1	N71-15621*	c 14	NASA-CASE-XNP-09572	N71-15689*	c 31	NASA-CASE-MFS-14685		
		US-PATENT-APPL-SN-738119			US-PATENT-APPL-SN-660841			US-PATENT-APPL-SN-752947		
		US-PATENT-CLASS-8-94.12			US-PATENT-CLASS-35-10.2			US-PATENT-CLASS-180-118		
		US-PATENT-3,526,473			US-PATENT-3,493,665			US-PATENT-CLASS-180-121		
N71-15550*	c 16	NASA-CASE-XNP-05219	N71-15622*	c 14	NASA-CASE-XNP-04111	N71-15692*	c 31	US-PATENT-3,534,826		
		US-PATENT-APPL-SN-336103			US-PATENT-APPL-SN-560969			NASA-CASE-XLA-01339		
		US-PATENT-CLASS-330-4			US-PATENT-CLASS-350-213			US-PATENT-APPL-SN-373591		
		US-PATENT-3,299,364			US-PATENT-3,493,291			US-PATENT-CLASS-102-49		
N71-15551*	c 16	NASA-CASE-ERC-10019	N71-15623*	c 33	NASA-CASE-XMS-01816			US-PATENT-3,260,204		
		US-PATENT-APPL-SN-677508			US-PATENT-APPL-SN-425364	N71-15871*	c 15	NASA-CASE-XMF-02039		

## N71-15906

US-PATENT-APPL-SN-434143  
US-PATENT-CLASS-219-131  
N71-15906\* c 15 ..... NASA-CASE-XNP-00920  
US-PATENT-APPL-SN-329331  
US-PATENT-CLASS-62-2  
US-PATENT-3,270,512  
N71-15907\* c 07 ..... NASA-CASE-XNP-01057  
US-PATENT-APPL-SN-301683  
US-PATENT-CLASS-343-786  
US-PATENT-3,305,870  
N71-15908\* c 08 ..... NASA-CASE-XLA-02705  
US-PATENT-APPL-SN-473537  
US-PATENT-CLASS-129-16.7  
US-PATENT-3,310,054  
N71-15909\* c 10 ..... NASA-CASE-XAC-03777  
US-PATENT-APPL-SN-484489  
US-PATENT-CLASS-200-6  
US-PATENT-3,283,088  
N71-15910\* c 10 ..... NASA-CASE-XGS-00823  
US-PATENT-APPL-SN-336607  
US-PATENT-CLASS-307-88.5  
US-PATENT-3,283,175  
N71-15918\* c 15 ..... NASA-CASE-XMS-02383  
US-PATENT-APPL-SN-299042  
US-PATENT-CLASS-140-123  
US-PATENT-3,299,913  
N71-15922\* c 15 ..... NASA-CASE-XGS-01971  
US-PATENT-APPL-SN-353645  
US-PATENT-CLASS-85-33  
US-PATENT-3,262,351  
N71-15925\* c 11 ..... NASA-CASE-XLA-00378  
US-PATENT-APPL-SN-266107  
US-PATENT-CLASS-219-10.49  
US-PATENT-3,238,345  
N71-15926\* c 11 ..... NASA-CASE-XLA-00939  
US-PATENT-APPL-SN-309354  
US-PATENT-CLASS-73-147  
US-PATENT-3,276,251  
N71-15960\* c 11 ..... NASA-CASE-XAC-00731  
US-PATENT-APPL-SN-232318  
US-PATENT-CLASS-220-89  
US-PATENT-3,145,874  
N71-15962\* c 14 ..... NASA-CASE-XGS-01587  
US-PATENT-APPL-SN-298799  
US-PATENT-CLASS-324-43  
US-PATENT-3,258,687  
N71-15966\* c 15 ..... NASA-CASE-XLE-00953  
US-PATENT-APPL-SN-336320  
US-PATENT-CLASS-22-200  
US-PATENT-3,237,253  
N71-15967\* c 15 ..... NASA-CASE-XLE-00703  
US-PATENT-APPL-SN-271822  
US-PATENT-CLASS-137-13  
US-PATENT-3,270,756  
N71-15968\* c 15 ..... NASA-CASE-XLE-00586  
US-PATENT-APPL-SN-317391  
US-PATENT-CLASS-55-160  
US-PATENT-3,257,780  
N71-15969\* c 14 ..... NASA-CASE-XMF-01099  
US-PATENT-APPL-SN-73367  
US-PATENT-CLASS-73-517  
US-PATENT-3,261,210  
N71-15974\* c 32 ..... NASA-CASE-XMS-06782  
US-PATENT-APPL-SN-691739  
US-PATENT-CLASS-338-5  
US-PATENT-3,464,049  
N71-15978\* c 23 ..... NASA-CASE-XGS-00373  
US-PATENT-APPL-SN-105518  
US-PATENT-CLASS-161-189  
US-PATENT-3,276,946  
N71-15986\* c 15 ..... NASA-CASE-XMF-03498  
US-PATENT-APPL-SN-396443  
US-PATENT-CLASS-29-155.55  
US-PATENT-3,258,831  
N71-15990\* c 30 ..... NASA-CASE-XAC-08494  
US-PATENT-APPL-SN-690998  
US-PATENT-CLASS-356-74  
US-PATENT-3,532,428  
N71-15992\* c 14 ..... NASA-CASE-XGS-01052  
US-PATENT-APPL-SN-314572  
US-PATENT-CLASS-73-15  
US-PATENT-3,242,716  
N71-16014\* c 14 ..... NASA-CASE-XLE-00820  
US-PATENT-APPL-SN-228569  
US-PATENT-CLASS-324-32  
US-PATENT-3,283,241  
N71-16025\* c 17 ..... NASA-CASE-XLE-02991  
US-PATENT-APPL-SN-375401  
US-PATENT-CLASS-75-170  
US-PATENT-3,276,865  
N71-16026\* c 17 ..... NASA-CASE-XLE-02082  
US-PATENT-APPL-SN-360180  
US-PATENT-CLASS-75-171  
US-PATENT-3,276,866  
N71-16028\* c 11 ..... NASA-CASE-XLA-01787

US-PATENT-APPL-SN-304749  
US-PATENT-CLASS-35-29  
US-PATENT-3,270,441  
N71-16030\* c 10 ..... NASA-CASE-XMF-01096  
US-PATENT-APPL-SN-307270  
US-PATENT-CLASS-318-376  
US-PATENT-3,271,649  
N71-16031\* c 12 ..... NASA-CASE-XMS-01445  
US-PATENT-APPL-SN-385526  
US-PATENT-CLASS-137-615  
US-PATENT-3,308,848  
N71-16037\* c 26 ..... NASA-CASE-XGS-05718  
US-PATENT-APPL-SN-584071  
US-PATENT-CLASS-29-472.9  
US-PATENT-3,452,423  
N71-16042\* c 10 ..... NASA-CASE-XAC-00942  
US-PATENT-APPL-SN-310506  
US-PATENT-CLASS-307-88.5  
US-PATENT-3,277,314  
N71-16044\* c 17 ..... NASA-CASE-XGS-06306  
US-PATENT-APPL-SN-685473  
US-PATENT-CLASS-156-3  
US-PATENT-3,532,568  
N71-16046\* c 18 ..... NASA-CASE-GSC-10007  
US-PATENT-APPL-SN-627599  
US-PATENT-CLASS-117-201  
US-PATENT-3,532,538  
N71-16052\* c 15 ..... NASA-CASE-XLE-02899  
US-PATENT-APPL-SN-431235  
US-PATENT-CLASS-29-148.4  
US-PATENT-3,262,186  
N71-16057\* c 10 ..... NASA-CASE-XNP-01193  
US-PATENT-APPL-SN-366226  
US-PATENT-CLASS-324-57  
US-PATENT-3,277,366  
N71-16058\* c 10 ..... NASA-CASE-XMF-01097  
US-PATENT-APPL-SN-290873  
US-PATENT-CLASS-340-227  
US-PATENT-3,277,458  
N71-16073\* c 25 ..... NASA-CASE-XAC-05695  
US-PATENT-APPL-SN-634038  
US-PATENT-CLASS-324-34  
US-PATENT-3,517,302  
N71-16075\* c 15 ..... NASA-CASE-XLA-00284  
US-PATENT-APPL-SN-240760  
US-PATENT-CLASS-117-69  
US-PATENT-3,264,135  
N71-16076\* c 15 ..... NASA-CASE-XLE-00106  
US-PATENT-APPL-SN-629759  
US-PATENT-CLASS-25-156  
US-PATENT-2,944,316  
N71-16077\* c 15 ..... NASA-CASE-XLA-00302  
US-PATENT-APPL-SN-284266  
US-PATENT-CLASS-117-46  
US-PATENT-3,271,181  
N71-16078\* c 15 ..... NASA-CASE-XGS-00824  
US-PATENT-APPL-SN-379072  
US-PATENT-CLASS-89-1  
US-PATENT-3,309,961  
N71-16079\* c 15 ..... NASA-CASE-XLA-00415  
US-PATENT-APPL-SN-314074  
US-PATENT-CLASS-233-11  
US-PATENT-3,276,679  
N71-16080\* c 31 ..... NASA-CASE-MSC-12049  
US-PATENT-APPL-SN-693420  
US-PATENT-CLASS-52-3  
US-PATENT-3,465,482  
N71-16081\* c 31 ..... NASA-CASE-XGS-03351  
US-PATENT-APPL-SN-472747  
US-PATENT-CLASS-244-31  
US-PATENT-3,276,726  
N71-16085\* c 31 ..... NASA-CASE-XLA-09881  
US-PATENT-APPL-SN-710562  
US-PATENT-CLASS-244-138  
US-PATENT-3,520,503  
N71-16086\* c 09 ..... NASA-CASE-XLE-02038  
US-PATENT-APPL-SN-349782  
US-PATENT-CLASS-73-147  
US-PATENT-3,273,388  
N71-16087\* c 02 ..... NASA-CASE-XAC-02058  
US-PATENT-APPL-SN-342572  
US-PATENT-CLASS-244-1  
US-PATENT-3,276,722  
N71-16088\* c 07 ..... NASA-CASE-XGS-01022  
US-PATENT-APPL-SN-331323  
US-PATENT-CLASS-325-4  
US-PATENT-3,277,373  
N71-16089\* c 09 ..... NASA-CASE-XAC-02405  
US-PATENT-APPL-SN-433821  
US-PATENT-CLASS-200-6  
US-PATENT-3,271,532  
N71-16090\* c 30 ..... NASA-CASE-GSC-10083-1  
US-PATENT-APPL-SN-641431  
US-PATENT-CLASS-343-6  
US-PATENT-3,471,856  
N71-16095\* c 24 ..... NASA-CASE-XAC-05506-1

## ACCESSION NUMBER INDEX

US-PATENT-APPL-SN-701732  
US-PATENT-CLASS-250-41.9  
US-PATENT-3,532,880  
N71-16098\* c 23 ..... NASA-CASE-XAC-03107  
US-PATENT-APPL-SN-538168  
US-PATENT-CLASS-73-505  
US-PATENT-3,455,171  
N71-16099\* c 23 ..... NASA-CASE-XGS-07514  
US-PATENT-APPL-SN-640453  
US-PATENT-CLASS-328-1  
US-PATENT-3,509,469  
N71-16100\* c 23 ..... NASA-CASE-XGS-05715  
US-PATENT-APPL-SN-668257  
US-PATENT-CLASS-250-233  
US-PATENT-3,532,894  
N71-16101\* c 23 ..... NASA-CASE-XNP-08883  
US-PATENT-APPL-SN-617021  
US-PATENT-CLASS-356-117  
US-PATENT-3,520,617  
N71-16102\* c 31 ..... NASA-CASE-XGS-09190  
US-PATENT-APPL-SN-647298  
US-PATENT-CLASS-343-915  
US-PATENT-3,521,290  
N71-16103\* c 32 ..... NASA-CASE-LAR-10317-1  
US-PATENT-APPL-SN-739927  
US-PATENT-CLASS-137-582  
US-PATENT-3,508,578  
N71-16104\* c 33 ..... NASA-CASE-XLE-00785  
US-PATENT-APPL-SN-666554  
US-PATENT-CLASS-60-108  
US-PATENT-3,508,402  
N71-16105\* c 18 ..... NASA-CASE-XLE-08511-93  
US-PATENT-APPL-SN-711921  
US-PATENT-CLASS-117-119  
US-PATENT-3,508,955  
N71-16106\* c 32 ..... NASA-CASE-XLA-04605  
US-PATENT-APPL-SN-619519  
US-PATENT-CLASS-137-582  
US-PATENT-3,443,584  
N71-16124\* c 18 ..... NASA-CASE-XMF-05279  
US-PATENT-APPL-SN-617774  
US-PATENT-CLASS-106-88  
US-PATENT-3,508,940  
N71-16210\* c 18 ..... NASA-CASE-XNP-08837  
US-PATENT-APPL-SN-691736  
US-PATENT-CLASS-204-20  
US-PATENT-3,526,580  
N71-16212\* c 23 ..... NASA-CASE-NPO-10250  
US-PATENT-APPL-SN-736848  
US-PATENT-CLASS-149-1  
US-PATENT-3,516,879  
N71-16213\* c 24 ..... NASA-CASE-XGS-06628  
US-PATENT-APPL-SN-665680  
US-PATENT-CLASS-315-111  
US-PATENT-3,509,419  
N71-16221\* c 31 ..... NASA-CASE-XLA-05906  
US-PATENT-APPL-SN-777766  
US-PATENT-CLASS-73-432  
US-PATENT-3,526,139  
N71-16222\* c 31 ..... NASA-CASE-MFS-11133  
US-PATENT-APPL-SN-693419  
US-PATENT-CLASS-244-1  
US-PATENT-3,508,723  
N71-16223\* c 27 ..... NASA-CASE-MFS-12750  
US-PATENT-APPL-SN-806149  
US-PATENT-CLASS-73-432  
US-PATENT-3,526,140  
N71-16224\* c 28 ..... NASA-CASE-MFS-11497  
US-PATENT-APPL-SN-730733  
US-PATENT-CLASS-239-265.43  
US-PATENT-3,526,365  
N71-16277\* c 33 ..... NASA-CASE-XMS-04268  
US-PATENT-APPL-SN-516160  
US-PATENT-CLASS-165-133  
US-PATENT-3,502,141  
N71-16278\* c 33 ..... NASA-CASE-XMF-04237  
US-PATENT-APPL-SN-539237  
US-PATENT-CLASS-219-364  
US-PATENT-3,517,162  
N71-16281\* c 20 ..... NASA-CASE-XLA-02081  
US-PATENT-APPL-SN-522795  
US-PATENT-CLASS-73-189  
US-PATENT-3,507,150  
N71-16340\* c 20 ..... NASA-CASE-XMF-14032  
US-PATENT-APPL-SN-679862  
US-PATENT-CLASS-250-209  
US-PATENT-3,501,641  
N71-16341\* c 23 ..... NASA-CASE-XGS-05291  
US-PATENT-APPL-SN-553891  
US-PATENT-CLASS-356-209  
US-PATENT-3,504,983  
N71-16345\* c 31 ..... NASA-CASE-XMF-05344  
US-PATENT-APPL-SN-702396  
US-PATENT-CLASS-244-1  
US-PATENT-3,520,496  
N71-16346\* c 31 ..... NASA-CASE-XMS-03613



## ACCESSION NUMBER INDEX

N71-18481

		US-PATENT-APPL-SN-802816			US-PATENT-APPL-SN-270118	N71-17685*	c 15	NASA-CASE-NPO-10034
		US-PATENT-CLASS-244-1			US-PATENT-CLASS-230-162			US-PATENT-APPL-SN-668241
		US-PATENT-3,526,372			US-PATENT-3,309,012			US-PATENT-CLASS-339-17
N71-16348*	c 27	NASA-CASE-MSC-12280	N71-17626*	c 14	NASA-CASE-LAR-10274-1	N71-17686*	c 15	US-PATENT-3,464,051
		US-PATENT-APPL-SN-372648			US-PATENT-APPL-SN-717052			NASA-CASE-MFS-20586
		US-PATENT-CLASS-250-43.5			US-PATENT-CLASS-188-1			US-PATENT-APPL-SN-688868
		US-PATENT-3,501,632			US-PATENT-3,491,857			US-PATENT-CLASS-29-428
N71-16355*	c 23	NASA-CASE-XGS-05534	N71-17627*	c 14	NASA-CASE-XGS-03532	N71-17687*	c 15	US-PATENT-3,526,030
		US-PATENT-APPL-SN-578925			US-PATENT-APPL-SN-538913			NASA-CASE-XLA-04143
		US-PATENT-CLASS-23-253			US-PATENT-CLASS-356-106			US-PATENT-APPL-SN-628246
		US-PATENT-3,520,660			US-PATENT-3,488,123			US-PATENT-CLASS-156-510
N71-16356*	c 33	NASA-CASE-NPO-10158	N71-17628*	c 15	NASA-CASE-MFS-10340			US-PATENT-3,508,999
		US-PATENT-APPL-SN-730702			US-PATENT-APPL-SN-716734	N71-17688*	c 15	NASA-CASE-XLE-09527
		US-PATENT-CLASS-73-343			US-PATENT-CLASS-225-1			US-PATENT-APPL-SN-686344
		US-PATENT-3,526,134			US-PATENT-3,507,425			US-PATENT-CLASS-29-148.4
N71-16357*	c 33	NASA-CASE-NPO-10138	N71-17629*	c 31	NASA-CASE-XLE-03583			US-PATENT-3,500,525
		US-PATENT-APPL-SN-759457			US-PATENT-APPL-SN-400617	N71-17691*	c 31	NASA-CASE-XLA-008937
		US-PATENT-CLASS-236-1			US-PATENT-CLASS-244-3.22			US-PATENT-APPL-SN-393461
		US-PATENT-3,526,359			US-PATENT-3,276,376			US-PATENT-CLASS-244-3.14
N71-16365*	c 23	NASA-CASE-XNP-08840	N71-17631*	c 12	NASA-CASE-NPO-10122			US-PATENT-3,310,258
		US-PATENT-APPL-SN-649360			US-PATENT-APPL-SN-710949	N71-17692*	c 15	NASA-CASE-MFS-14772
		US-PATENT-CLASS-356-36			US-PATENT-CLASS-60-217			US-PATENT-APPL-SN-774151
		US-PATENT-3,526,460			US-PATENT-3,534,555			US-PATENT-CLASS-74-63
N71-16392*	c 27	NASA-CASE-XNP-09744	N71-17645*	c 32	NASA-CASE-XNP-01153	N71-17693*	c 15	US-PATENT-3,529,480
		US-PATENT-APPL-SN-685750			US-PATENT-APPL-SN-336608			NASA-CASE-NPO-10064
		US-PATENT-CLASS-60-39.47			US-PATENT-CLASS-73-88			US-PATENT-APPL-SN-668755
		US-PATENT-3,507,114			US-PATENT-3,273,381			US-PATENT-CLASS-244-1
N71-16393*	c 17	NASA-CASE-NPO-10271	N71-17647*	c 15	NASA-CASE-XMF-01667			US-PATENT-3,501,112
		US-PATENT-APPL-SN-763869			US-PATENT-APPL-SN-577115	N71-17694*	c 15	NASA-CASE-XNP-08897
		US-PATENT-CLASS-21-207			US-PATENT-CLASS-118-11			US-PATENT-APPL-SN-640450
		US-PATENT-3,529,928			US-PATENT-3,502,051			US-PATENT-CLASS-318-22
N71-16428*	c 32	NASA-CASE-XLA-03135	N71-17648*	c 15	NASA-CASE-MSC-12116-1			US-PATENT-3,501,683
		US-PATENT-APPL-SN-582171			US-PATENT-APPL-SN-768336	N71-17696*	c 15	NASA-CASE-XLA-05100
		US-PATENT-CLASS-73-71.4			US-PATENT-CLASS-251-358			US-PATENT-APPL-SN-724551
		US-PATENT-3,503,251			US-PATENT-3,508,739			US-PATENT-CLASS-73-103
N71-16894*	c 12	NASA-CASE-XLA-02079	N71-17649*	c 15	NASA-CASE-MFS-11132			US-PATENT-3,487,680
		US-PATENT-APPL-SN-435756			US-PATENT-APPL-SN-744910	N71-17701*	c 14	NASA-CASE-NPO-10144
		US-PATENT-CLASS-188-87			US-PATENT-CLASS-248-360			US-PATENT-APPL-SN-688805
		US-PATENT-3,310,138			US-PATENT-3,526,382			US-PATENT-CLASS-73-29
N71-17569*	c 12	NASA-CASE-MSC-12084-1	N71-17650*	c 15	NASA-CASE-XMF-05114			US-PATENT-3,534,585
		US-PATENT-APPL-SN-762438			US-PATENT-APPL-SN-637882	N71-17705*	c 06	NASA-CASE-XGS-05532
		US-PATENT-CLASS-73-204			US-PATENT-CLASS-29-517			US-PATENT-APPL-SN-570093
		US-PATENT-3,500,686			US-PATENT-3,507,034			US-PATENT-CLASS-195-99
N71-17573*	c 12	NASA-CASE-LAR-10323-1	N71-17651*	c 15	NASA-CASE-XLE-03803-2			US-PATENT-3,423,290
		US-PATENT-APPL-SN-738314			US-PATENT-APPL-SN-669336	N71-17729*	c 31	NASA-CASE-XAC-01591
		US-PATENT-CLASS-73-45.5			US-PATENT-CLASS-156-172			US-PATENT-APPL-SN-385527
		US-PATENT-3,516,284			US-PATENT-3,535,179			US-PATENT-CLASS-244-1
N71-17574*	c 14	NASA-CASE-XGS-04993	N71-17652*	c 15	NASA-CASE-XLE-05079			US-PATENT-3,282,532
		US-PATENT-APPL-SN-577775			US-PATENT-APPL-SN-601228	N71-17730*	c 31	NASA-CASE-XMF-01543
		US-PATENT-CLASS-96-49			US-PATENT-CLASS-310-93			US-PATENT-APPL-SN-402365
		US-PATENT-3,458,313			US-PATENT-3,493,797			US-PATENT-CLASS-102-49
N71-17575*	c 14	NASA-CASE-XMF-06531	N71-17653*	c 15	NASA-CASE-ARC-10140-1			US-PATENT-3,286,629
		US-PATENT-APPL-SN-732917			US-PATENT-APPL-SN-783379	N71-17788*	c 30	NASA-CASE-XGS-00783
		US-PATENT-CLASS-204-195			US-PATENT-CLASS-24-211			US-PATENT-APPL-SN-372438
		US-PATENT-3,509,034			US-PATENT-CLASS-85-3			US-PATENT-CLASS-73-432
N71-17578*	c 12	NASA-CASE-MFS-10412			US-PATENT-3,534,650			US-PATENT-3,286,531
		US-PATENT-APPL-SN-701635	N71-17654*	c 15	NASA-CASE-XNP-09702	N71-17802*	c 23	NASA-CASE-XLE-00454
		US-PATENT-CLASS-137-81.5			US-PATENT-APPL-SN-730734			US-PATENT-APPL-SN-295855
		US-PATENT-3,520,317			US-PATENT-CLASS-239-416			US-PATENT-CLASS-73-295
N71-17579*	c 12	NASA-CASE-XLA-07391			US-PATENT-3,534,909			US-PATENT-3,273,392
		US-PATENT-APPL-SN-726898	N71-17655*	c 14	NASA-CASE-NPO-10320	N71-17803*	c 15	NASA-CASE-XMS-05516
		US-PATENT-CLASS-137-81.5			US-PATENT-APPL-SN-718689			US-PATENT-APPL-SN-563648
		US-PATENT-3,493,004			US-PATENT-CLASS-356-106			US-PATENT-CLASS-264-92
N71-17584*	c 14	NASA-CASE-XNP-09462			US-PATENT-3,535,041			US-PATENT-3,488,414
		US-PATENT-APPL-SN-658957	N71-17656*	c 14	NASA-CASE-MFS-12827	N71-17805*	c 15	NASA-CASE-MFS-12805
		US-PATENT-CLASS-73-57			US-PATENT-APPL-SN-742816			US-PATENT-APPL-SN-758082
		US-PATENT-3,500,677			US-PATENT-CLASS-73-88.5			US-PATENT-CLASS-192-43.1
N71-17585*	c 14	NASA-CASE-XGS-05680			US-PATENT-3,534,592			US-PATENT-CLASS-81-63.1
		US-PATENT-APPL-SN-656953	N71-17657*	c 14	NASA-CASE-XNP-09205			US-PATENT-3,534,836
		US-PATENT-CLASS-318-138			US-PATENT-APPL-SN-768473	N71-17818*	c 26	NASA-CASE-XMF-01016
		US-PATENT-3,501,664			US-PATENT-CLASS-33-149			US-PATENT-APPL-SN-326299
N71-17586*	c 14	NASA-CASE-XLA-08646			US-PATENT-3,534,479			US-PATENT-CLASS-264-27
		US-PATENT-APPL-SN-677476	N71-17658*	c 14	NASA-CASE-XMF-04966			US-PATENT-3,274,304
		US-PATENT-CLASS-73-105			US-PATENT-APPL-SN-727480	N71-17822*	c 15	NASA-CASE-ARC-10009-1
		US-PATENT-3,534,596			US-PATENT-CLASS-33-174			US-PATENT-APPL-SN-714595
N71-17587*	c 14	NASA-CASE-XMF-05844			US-PATENT-3,534,480			US-PATENT-CLASS-324-58.5
		US-PATENT-APPL-SN-706564	N71-17659*	c 14	NASA-CASE-XMF-02964			US-PATENT-3,532,973
		US-PATENT-CLASS-73-382			US-PATENT-APPL-SN-493942	N71-17897*	c 33	NASA-CASE-XLA-00892
		US-PATENT-3,500,688			US-PATENT-CLASS-73-15.4			US-PATENT-APPL-SN-245941
N71-17588*	c 14	NASA-CASE-MFS-12806			US-PATENT-3,465,569			US-PATENT-CLASS-62-467
		US-PATENT-APPL-SN-668933	N71-17661*	c 12	NASA-CASE-NPO-10298			US-PATENT-3,273,355
		US-PATENT-CLASS-55-179			US-PATENT-APPL-SN-745852	N71-18064*	c 26	NASA-CASE-XNP-01328
		US-PATENT-3,490,205			US-PATENT-CLASS-137-341			US-PATENT-APPL-SN-296879
N71-17599*	c 05	NASA-CASE-MSC-12206-1			US-PATENT-3,534,765			US-PATENT-CLASS-317-234
		US-PATENT-APPL-SN-856258	N71-17662*	c 14	NASA-CASE-NPO-10300			US-PATENT-3,271,637
		US-PATENT-CLASS-128-142.5			US-PATENT-APPL-SN-718769	N71-18132*	c 15	NASA-CASE-MFS-13686
		US-PATENT-3,516,404			US-PATENT-CLASS-350-285			US-PATENT-APPL-SN-716183
N71-17600*	c 11	NASA-CASE-MFS-12915			US-PATENT-3,535,024			US-PATENT-CLASS-73-67.2
		US-PATENT-APPL-SN-694340	N71-17679*	c 31	NASA-CASE-XNP-02507			US-PATENT-3,531,982
		US-PATENT-CLASS-220-89			US-PATENT-APPL-SN-475299	N71-18465*	c 14	NASA-CASE-NPO-10174
		US-PATENT-3,469,734			US-PATENT-CLASS-244-1			US-PATENT-APPL-SN-690163
N71-17609*	c 32	NASA-CASE-XLA-02332			US-PATENT-3,310,256			US-PATENT-CLASS-95-11
		US-PATENT-APPL-SN-388024	N71-17680*	c 31	NASA-CASE-XLA-00117			US-PATENT-3,520,238
		US-PATENT-CLASS-212-11			US-PATENT-APPL-SN-835153	N71-18481*	c 14	NASA-CASE-XLA-02758
		US-PATENT-3,276,602			US-PATENT-CLASS-220-1			US-PATENT-APPL-SN-759665
N71-17610*	c 33	NASA-CASE-XLA-00377			US-PATENT-2,996,212			US-PATENT-CLASS-73-4

## N71-18482

N71-18482\* c 14 ..... US-PATENT-3,531,978  
NASA-CASE-XLA-07424  
US-PATENT-APPL-SN-635326  
US-PATENT-CLASS-313-7  
US-PATENT-3,466,484  
N71-18483\* c 14 ..... NASA-CASE-XER-09519  
US-PATENT-APPL-SN-676375  
US-PATENT-CLASS-55-208  
US-PATENT-3,469,375  
N71-18578\* c 11 ..... NASA-CASE-XAC-05902  
US-PATENT-APPL-SN-662828  
US-PATENT-CLASS-89-8  
US-PATENT-3,465,638  
N71-18579\* c 15 ..... NASA-CASE-XGS-04175  
US-PATENT-APPL-SN-606464  
US-PATENT-CLASS-72-364  
US-PATENT-3,465,567  
N71-18580\* c 15 ..... NASA-CASE-XNP-09698  
US-PATENT-APPL-SN-698592  
US-PATENT-CLASS-138-4  
US-PATENT-CLASS-138-45  
US-PATENT-CLASS-251-118  
US-PATENT-CLASS-251-121  
US-PATENT-3,532,128  
N71-18594\* c 08 ..... NASA-CASE-XAC-04031  
US-PATENT-APPL-SN-538905  
US-PATENT-CLASS-340-347  
US-PATENT-3,533,098  
N71-18595\* c 08 ..... NASA-CASE-XGS-03303  
US-PATENT-APPL-SN-520838  
US-PATENT-CLASS-340-174  
US-PATENT-3,501,752  
N71-18598\* c 09 ..... NASA-CASE-NPO-10066  
US-PATENT-APPL-SN-681693  
US-PATENT-CLASS-343-13  
US-PATENT-3,447,155  
N71-18599\* c 09 ..... NASA-CASE-LAR-10372  
US-PATENT-APPL-SN-730162  
US-PATENT-CLASS-102-70.2  
US-PATENT-3,500,747  
N71-18600\* c 09 ..... NASA-CASE-MS-12168-1  
US-PATENT-APPL-SN-640154  
US-PATENT-CLASS-312-296  
US-PATENT-3,447,850  
N71-18602\* c 08 ..... NASA-CASE-XGS-04766  
US-PATENT-APPL-SN-598120  
US-PATENT-CLASS-235-175  
US-PATENT-3,532,866  
N71-18603\* c 12 ..... NASA-CASE-ERC-10031  
US-PATENT-APPL-SN-741461  
US-PATENT-CLASS-40-28  
US-PATENT-3,516,185  
N71-18611\* c 31 ..... NASA-CASE-MFS-20400  
US-PATENT-APPL-SN-551694  
US-PATENT-CLASS-152-11  
US-PATENT-3,493,027  
N71-18613\* c 15 ..... NASA-CASE-XNP-02588  
US-PATENT-APPL-SN-563644  
US-PATENT-CLASS-219-91  
US-PATENT-3,466,418  
N71-18614\* c 16 ..... NASA-CASE-XGS-03644  
US-PATENT-APPL-SN-505320  
US-PATENT-CLASS-331-94.5  
US-PATENT-3,517,328  
N71-18615\* c 12 ..... NASA-CASE-XNP-09704  
US-PATENT-APPL-SN-730701  
US-PATENT-CLASS-137-594  
US-PATENT-CLASS-138-46  
US-PATENT-CLASS-251-127  
US-PATENT-CLASS-251-333  
US-PATENT-CLASS-251-342  
US-PATENT-CLASS-251-61.1  
US-PATENT-3,532,118  
N71-18616\* c 15 ..... NASA-CASE-XLA-07390  
US-PATENT-APPL-SN-665681  
US-PATENT-CLASS-72-53  
US-PATENT-3,531,964  
N71-18625\* c 14 ..... NASA-CASE-NPO-10175  
US-PATENT-APPL-SN-685787  
US-PATENT-CLASS-137-505.12  
US-PATENT-3,443,583  
N71-18692\* c 08 ..... NASA-CASE-MFS-14322  
US-PATENT-APPL-SN-646934  
US-PATENT-CLASS-328-134  
US-PATENT-3,501,701  
N71-18693\* c 08 ..... NASA-CASE-XGS-04765  
US-PATENT-APPL-SN-577545  
US-PATENT-CLASS-235-156  
US-PATENT-3,508,036  
N71-18694\* c 08 ..... NASA-CASE-NPO-10201  
US-PATENT-APPL-SN-691738  
US-PATENT-CLASS-340-174  
US-PATENT-3,509,551  
N71-18698\* c 03 ..... NASA-CASE-NPO-10373  
US-PATENT-APPL-SN-718752  
US-PATENT-CLASS-136-89

N71-18699\* c 14 ..... US-PATENT-3,507,706  
NASA-CASE-XLA-03273  
US-PATENT-APPL-SN-487352  
US-PATENT-CLASS-250-83.3  
US-PATENT-3,458,702  
N71-18701\* c 15 ..... NASA-CASE-XMF-07587  
US-PATENT-APPL-SN-649359  
US-PATENT-CLASS-317-122  
US-PATENT-3,448,346  
N71-18720\* c 09 ..... NASA-CASE-MS-12101  
US-PATENT-APPL-SN-763705  
US-PATENT-CLASS-343-718  
US-PATENT-3,509,570  
N71-18721\* c 09 ..... NASA-CASE-XER-07894  
US-PATENT-APPL-SN-644444  
US-PATENT-CLASS-331-107  
US-PATENT-3,509,491  
N71-18722\* c 10 ..... NASA-CASE-ERC-10046  
US-PATENT-APPL-SN-793772  
US-PATENT-CLASS-343-100  
US-PATENT-3,501,764  
N71-18723\* c 10 ..... NASA-CASE-XNP-09450  
US-PATENT-APPL-SN-640459  
US-PATENT-CLASS-307-273  
US-PATENT-3,501,649  
N71-18724\* c 10 ..... NASA-CASE-XLA-09371  
US-PATENT-APPL-SN-568160  
US-PATENT-CLASS-318-257  
US-PATENT-3,504,258  
N71-18751\* c 08 ..... NASA-CASE-XLA-07732  
US-PATENT-APPL-SN-641441  
US-PATENT-CLASS-307-216  
US-PATENT-3,512,009  
N71-18752\* c 08 ..... NASA-CASE-XMF-00663  
US-PATENT-APPL-SN-205470  
US-PATENT-CLASS-321-5  
US-PATENT-3,521,143  
N71-18772\* c 10 ..... NASA-CASE-GSC-10366-1  
US-PATENT-APPL-SN-771523  
US-PATENT-CLASS-318-138  
US-PATENT-3,532,948  
N71-18773\* c 11 ..... NASA-CASE-XMF-07488  
US-PATENT-APPL-SN-707495  
US-PATENT-CLASS-35-12  
US-PATENT-3,534,485  
N71-18830\* c 09 ..... NASA-CASE-XAC-10768  
US-PATENT-APPL-SN-711970  
US-PATENT-CLASS-250-83  
US-PATENT-3,508,053  
N71-18843\* c 09 ..... NASA-CASE-XNP-03263  
US-PATENT-APPL-SN-506908  
US-PATENT-CLASS-340-146.1  
US-PATENT-3,501,743  
N71-19212\* c 21 ..... NASA-CASE-MFS-20386  
US-PATENT-APPL-SN-818349  
US-PATENT-CLASS-356-28  
US-PATENT-3,532,427  
N71-19213\* c 15 ..... NASA-CASE-MFS-14259  
US-PATENT-APPL-SN-787410  
US-PATENT-CLASS-138-43  
US-PATENT-3,536,103  
N71-19214\* c 15 ..... NASA-CASE-MFS-20410  
US-PATENT-APPL-SN-819599  
US-PATENT-CLASS-244-1  
US-PATENT-3,534,926  
N71-19287\* c 02 ..... NASA-CASE-GSC-10087-1  
US-PATENT-APPL-SN-701679  
US-PATENT-CLASS-343-112  
US-PATENT-3,534,367  
N71-19288\* c 08 ..... NASA-CASE-NPO-10068  
US-PATENT-APPL-SN-668969  
US-PATENT-CLASS-340-172.5  
US-PATENT-3,501,750  
N71-19417\* c 10 ..... NASA-CASE-XMS-10984-1  
US-PATENT-APPL-SN-605095  
US-PATENT-CLASS-340-213.1  
US-PATENT-3,533,093  
N71-19418\* c 10 ..... NASA-CASE-GSC-10041-1  
US-PATENT-APPL-SN-684209  
US-PATENT-CLASS-331-113  
US-PATENT-3,458,833  
N71-19420\* c 08 ..... NASA-CASE-XNP-09453  
US-PATENT-APPL-SN-640448  
US-PATENT-CLASS-226-190  
US-PATENT-3,507,436  
N71-19421\* c 10 ..... NASA-CASE-XLA-08493  
US-PATENT-APPL-SN-749148  
US-PATENT-CLASS-324-72  
US-PATENT-3,532,975  
N71-19431\* c 14 ..... NASA-CASE-XGS-02439  
US-PATENT-APPL-SN-487341  
US-PATENT-CLASS-324-120  
US-PATENT-3,422,352  
N71-19432\* c 08 ..... NASA-CASE-XGS-02440  
US-PATENT-APPL-SN-655677  
US-PATENT-CLASS-328-42

## ACCESSION NUMBER INDEX

N71-19433\* c 07 ..... US-PATENT-3,517,318  
NASA-CASE-MFS-13046  
US-PATENT-APPL-SN-673228  
US-PATENT-CLASS-178-6  
US-PATENT-3,532,807  
N71-19435\* c 08 ..... NASA-CASE-XGS-02612  
US-PATENT-APPL-SN-502743  
US-PATENT-CLASS-340-347  
US-PATENT-3,509,558  
N71-19436\* c 07 ..... NASA-CASE-XMF-09422  
US-PATENT-APPL-SN-783378  
US-PATENT-CLASS-174-35  
US-PATENT-3,517,109  
N71-19437\* c 08 ..... NASA-CASE-XGS-04768  
US-PATENT-APPL-SN-598119  
US-PATENT-CLASS-235-158  
US-PATENT-3,508,039  
N71-19438\* c 03 ..... NASA-CASE-XGS-05432  
US-PATENT-APPL-SN-549860  
US-PATENT-CLASS-320-23  
US-PATENT-3,426,263  
N71-19439\* c 05 ..... NASA-CASE-XMS-09571  
US-PATENT-APPL-SN-678700  
US-PATENT-CLASS-165-46  
US-PATENT-3,425,487  
N71-19440\* c 05 ..... NASA-CASE-XMS-01177  
US-PATENT-APPL-SN-516150  
US-PATENT-CLASS-250-83  
US-PATENT-3,427,454  
N71-19449\* c 09 ..... NASA-CASE-XFR-03107  
US-PATENT-APPL-SN-507257  
US-PATENT-CLASS-178-6  
US-PATENT-3,458,651  
N71-19466\* c 09 ..... NASA-CASE-XGS-02812  
US-PATENT-APPL-SN-502750  
US-PATENT-CLASS-330-30  
US-PATENT-3,466,560  
N71-19467\* c 10 ..... NASA-CASE-XMF-08665  
US-PATENT-APPL-SN-582609  
US-PATENT-CLASS-325-63  
US-PATENT-3,470,475  
N71-19468\* c 10 ..... NASA-CASE-XMS-05605-1  
US-PATENT-APPL-SN-764812  
US-PATENT-CLASS-178-69.5  
US-PATENT-3,532,819  
N71-19469\* c 10 ..... NASA-CASE-XNP-00777  
US-PATENT-APPL-SN-486573  
US-PATENT-CLASS-329-122  
US-PATENT-3,517,268  
N71-19470\* c 09 ..... NASA-CASE-XGS-05289  
US-PATENT-APPL-SN-632104  
US-PATENT-CLASS-331-113  
US-PATENT-3,470,496  
N71-19471\* c 10 ..... NASA-CASE-XLE-03804  
US-PATENT-APPL-SN-526631  
US-PATENT-CLASS-307-235  
US-PATENT-3,463,939  
N71-19472\* c 10 ..... NASA-CASE-XAC-04030  
US-PATENT-APPL-SN-520839  
US-PATENT-CLASS-328-1  
US-PATENT-3,464,016  
N71-19479\* c 09 ..... NASA-CASE-XMS-04300  
US-PATENT-APPL-SN-516158  
US-PATENT-CLASS-350-275  
US-PATENT-3,427,093  
N71-19480\* c 09 ..... NASA-CASE-XFR-05637  
US-PATENT-APPL-SN-484855  
US-PATENT-CLASS-235-194  
US-PATENT-3,423,579  
N71-19485\* c 15 ..... NASA-CASE-MS-11010  
US-PATENT-APPL-SN-605090  
US-PATENT-CLASS-251-31  
US-PATENT-3,447,774  
N71-19486\* c 15 ..... NASA-CASE-XMF-08522  
US-PATENT-APPL-SN-640447  
US-PATENT-CLASS-219-121  
US-PATENT-3,474,220  
N71-19489\* c 15 ..... NASA-CASE-XMF-04680  
US-PATENT-APPL-SN-634040  
US-PATENT-CLASS-33-147  
US-PATENT-3,425,131  
N71-19493\* c 07 ..... NASA-CASE-XKS-08485  
US-PATENT-APPL-SN-649078  
US-PATENT-CLASS-343-873  
US-PATENT-3,509,578  
N71-19494\* c 11 ..... NASA-CASE-MFS-10555  
US-PATENT-APPL-SN-700984  
US-PATENT-CLASS-35-12  
US-PATENT-3,516,179  
N71-19516\* c 09 ..... NASA-CASE-XNP-06937  
US-PATENT-APPL-SN-640449  
US-PATENT-CLASS-330-30  
US-PATENT-3,501,712  
N71-19544\* c 08 ..... NASA-CASE-XGS-01230  
US-PATENT-APPL-SN-356488  
US-PATENT-CLASS-340-347

## ACCESSION NUMBER INDEX

N71-21045

N71-19545*	c 03	US-PATENT-3,474,441 NASA-CASE-NPO-10821 US-PATENT-APPL-SN-670814 US-PATENT-CLASS-136-89 US-PATENT-3,466,198	N71-20439*	c 14	US-PATENT-3,461,721 NASA-CASE-XAC-04886-1 US-PATENT-APPL-SN-574290 US-PATENT-CLASS-73-142 US-PATENT-3,425,272	N71-20742*	c 18	US-PATENT-3,360,980 NASA-CASE-XMS-02952 US-PATENT-APPL-SN-519160 US-PATENT-CLASS-55-158 US-PATENT-3,355,861
N71-19547*	c 10	NASA-CASE-XGS-03058 US-PATENT-APPL-SN-568987 US-PATENT-CLASS-307-289 US-PATENT-3,517,221	N71-20440*	c 15	NASA-CASE-XNP-09770 US-PATENT-APPL-SN-700120 US-PATENT-CLASS-209-10 US-PATENT-3,472,372	N71-20743*	c 17	NASA-CASE-XMF-02786 US-PATENT-APPL-SN-466873 US-PATENT-CLASS-75-142 US-PATENT-3,347,665
N71-19568*	c 14	NASA-CASE-MS-10966 US-PATENT-APPL-SN-665676 US-PATENT-CLASS-250-203 US-PATENT-3,421,004	N71-20441*	c 15	NASA-CASE-XMS-06329-1 US-PATENT-APPL-SN-688742 US-PATENT-CLASS-73-141 US-PATENT-3,472,069	N71-20747*	c 25	NASA-CASE-XLE-02578 US-PATENT-APPL-SN-469012 US-PATENT-CLASS-313-271 US-PATENT-3,356,885
N71-19569*	c 15	NASA-CASE-XLA-05749 US-PATENT-APPL-SN-621714 US-PATENT-CLASS-137-582 US-PATENT-3,426,791	N71-20442*	c 14	NASA-CASE-MFS-11537 US-PATENT-APPL-SN-636878 US-PATENT-CLASS-23-254 US-PATENT-3,472,629	N71-20782*	c 10	NASA-CASE-XGS-01784 US-PATENT-APPL-SN-396444 US-PATENT-CLASS-250-206 US-PATENT-3,348,053
N71-19570*	c 15	NASA-CASE-XLE-05130-2 US-PATENT-APPL-SN-700586 US-PATENT-CLASS-277-25 US-PATENT-3,466,052	N71-20443*	c 15	NASA-CASE-MFS-07369 US-PATENT-APPL-SN-640462 US-PATENT-CLASS-29-492 US-PATENT-3,473,216	N71-20791*	c 07	NASA-CASE-XNP-05254 US-PATENT-APPL-SN-472372 US-PATENT-CLASS-325-31 US-PATENT-3,350,643
N71-19610*	c 09	NASA-CASE-NPO-10037 US-PATENT-APPL-SN-700987 US-PATENT-CLASS-200-152 US-PATENT-3,470,342	N71-20445*	c 09	NASA-CASE-XNP-09775 US-PATENT-APPL-SN-668247 US-PATENT-CLASS-333-96 US-PATENT-3,474,357	N71-20813*	c 15	NASA-CASE-XMS-02184 US-PATENT-APPL-SN-608247 US-PATENT-CLASS-248-27 US-PATENT-3,361,400
N71-19687*	c 08	NASA-CASE-XNP-04780 US-PATENT-APPL-SN-455477 US-PATENT-CLASS-340-347 US-PATENT-3,430,227	N71-20446*	c 09	NASA-CASE-XLE-04250 US-PATENT-APPL-SN-621098 US-PATENT-CLASS-310-54 US-PATENT-3,447,003	N71-20814*	c 07	NASA-CASE-XNP-01306 US-PATENT-APPL-SN-343426 US-PATENT-CLASS-179-15 US-PATENT-3,364,311
N71-19763*	c 08	NASA-CASE-XAC-06302 US-PATENT-APPL-SN-574284 US-PATENT-CLASS-325-60 US-PATENT-3,456,193	N71-20447*	c 09	NASA-CASE-XLA-02850 US-PATENT-APPL-SN-556784 US-PATENT-CLASS-307-267 US-PATENT-3,473,050	N71-20815*	c 12	NASA-CASE-XMF-01779 US-PATENT-APPL-SN-521999 US-PATENT-CLASS-346-1 US-PATENT-3,357,024
N71-19773*	c 07	NASA-CASE-GSC-10373-1 US-PATENT-APPL-SN-712658 US-PATENT-CLASS-325-4 US-PATENT-3,532,985	N71-20448*	c 10	NASA-CASE-XNP-03744 US-PATENT-APPL-SN-547677 US-PATENT-CLASS-318-314 US-PATENT-3,424,968	N71-20816*	c 09	NASA-CASE-XAC-01677 US-PATENT-APPL-SN-596338 US-PATENT-CLASS-73-147 US-PATENT-3,360,988
N71-19854*	c 07	NASA-CASE-GSC-10553-1 US-PATENT-APPL-SN-820963 US-PATENT-CLASS-343-100 US-PATENT-3,534,365	N71-20461*	c 14	NASA-CASE-XNP-09763 US-PATENT-APPL-SN-600682 US-PATENT-CLASS-117-6 US-PATENT-3,433,662	N71-20834*	c 33	NASA-CASE-XMS-02009 US-PATENT-APPL-SN-455352 US-PATENT-CLASS-141-5 US-PATENT-3,349,814
N71-20268*	c 05	NASA-CASE-XLA-02898 US-PATENT-APPL-SN-429932 US-PATENT-CLASS-128-1 US-PATENT-3,461,855	N71-20491*	c 03	NASA-CASE-XGS-05434 US-PATENT-APPL-SN-667636 US-PATENT-CLASS-136-182 US-PATENT-3,463,673	N71-20841*	c 10	NASA-CASE-XGS-01222 US-PATENT-APPL-SN-354182 US-PATENT-CLASS-325-305 US-PATENT-3,348,152
N71-20273*	c 03	NASA-CASE-NPO-10188 US-PATENT-APPL-SN-681687 US-PATENT-CLASS-244-1 US-PATENT-3,473,758	N71-20492*	c 03	NASA-CASE-XLE-04787 US-PATENT-APPL-SN-551846 US-PATENT-CLASS-136-89 US-PATENT-3,434,885	N71-20842*	c 09	NASA-CASE-XNP-05381 US-PATENT-APPL-SN-568352 US-PATENT-CLASS-338-82 US-PATENT-3,350,671
N71-20330*	c 28	NASA-CASE-XLE-103477-1 US-PATENT-APPL-SN-466390 US-PATENT-CLASS-60-39.36 US-PATENT-3,433,015	N71-20518*	c 24	NASA-CASE-XNP-02592 US-PATENT-APPL-SN-484490 US-PATENT-CLASS-324-33 US-PATENT-3,430,131	N71-20851*	c 09	NASA-CASE-XNP-04732 US-PATENT-APPL-SN-557584 US-PATENT-CLASS-339-177 US-PATENT-3,358,264
N71-20393*	c 15	NASA-CASE-MFS-06074 US-PATENT-APPL-SN-688743 US-PATENT-CLASS-228-9 US-PATENT-3,458,104	N71-20563*	c 25	NASA-CASE-XLA-06232 US-PATENT-APPL-SN-612740 US-PATENT-CLASS-324-58.5 US-PATENT-3,473,116	N71-20852*	c 10	NASA-CASE-XGS-03502 US-PATENT-APPL-SN-584066 US-PATENT-CLASS-331-17 US-PATENT-3,361,985
N71-20395*	c 15	NASA-CASE-XMF-06065 US-PATENT-APPL-SN-665679 US-PATENT-CLASS-219-275 US-PATENT-3,466,424	N71-20569*	c 09	NASA-CASE-XMS-08589-1 US-PATENT-APPL-SN-544899 US-PATENT-CLASS-324-57 US-PATENT-3,434,050	N71-20864*	c 09	NASA-CASE-XGS-03501 US-PATENT-APPL-SN-576521 US-PATENT-CLASS-343-16 US-PATENT-3,359,555
N71-20396*	c 31	NASA-CASE-XMF-08523 US-PATENT-APPL-SN-645563 US-PATENT-CLASS-244-1 US-PATENT-3,465,986	N71-20570*	c 02	NASA-CASE-XAC-08972 US-PATENT-APPL-SN-700174 US-PATENT-CLASS-244-76 US-PATENT-3,472,470	N71-20895*	c 03	NASA-CASE-XNP-00826 US-PATENT-APPL-SN-327163 US-PATENT-CLASS-136-89 US-PATENT-3,346,419
N71-20400*	c 16	NASA-CASE-MFS-11279 US-PATENT-APPL-SN-628094 US-PATENT-CLASS-219-121 US-PATENT-3,472,998	N71-20571*	c 08	NASA-CASE-XGS-04987 US-PATENT-APPL-SN-619908 US-PATENT-CLASS-315-24 US-PATENT-3,437,874	N71-20896*	c 12	NASA-CASE-XNP-02251 US-PATENT-APPL-SN-432030 US-PATENT-CLASS-321-48 US-PATENT-3,337,790
N71-20407*	c 03	NASA-CASE-NPO-10194 US-PATENT-APPL-SN-668249 US-PATENT-CLASS-136-182 US-PATENT-3,460,995	N71-20658*	c 09	NASA-CASE-XMS-03454 US-PATENT-APPL-SN-425363 US-PATENT-CLASS-343-915 US-PATENT-3,360,798	N71-20904*	c 03	NASA-CASE-XLE-01645 US-PATENT-APPL-SN-342574 US-PATENT-CLASS-136-86 US-PATENT-3,357,862
N71-20427*	c 14	NASA-CASE-XMS-13052 US-PATENT-APPL-SN-561223 US-PATENT-CLASS-62-268 US-PATENT-3,455,121	N71-20705*	c 09	NASA-CASE-XMF-01599 US-PATENT-APPL-SN-381940 US-PATENT-CLASS-117-212 US-PATENT-3,359,132	N71-20905*	c 06	NASA-CASE-XMF-02584 US-PATENT-APPL-SN-506135 US-PATENT-CLASS-260-2 US-PATENT-3,346,515
N71-20428*	c 14	NASA-CASE-XGS-04879 US-PATENT-APPL-SN-541399 US-PATENT-CLASS-324-5 US-PATENT-3,443,208	N71-20717*	c 06	NASA-CASE-XMF-04133 US-PATENT-APPL-SN-554949 US-PATENT-CLASS-260-2 US-PATENT-3,354,098	N71-20942*	c 28	NASA-CASE-XNP-04389 US-PATENT-APPL-SN-523511 US-PATENT-CLASS-60-265 US-PATENT-3,353,359
N71-20429*	c 14	NASA-CASE-XLE-05260 US-PATENT-APPL-SN-674355 US-PATENT-CLASS-73-117.4 US-PATENT-3,463,001	N71-20718*	c 05	NASA-CASE-XMS-04625 US-PATENT-APPL-SN-519161 US-PATENT-CLASS-244-122 US-PATENT-3,356,320	N71-21006*	c 14	NASA-CASE-XLA-01832 US-PATENT-APPL-SN-517858 US-PATENT-CLASS-346-50 US-PATENT-3,354,462
N71-20430*	c 14	NASA-CASE-XLA-03645 US-PATENT-APPL-SN-600266 US-PATENT-CLASS-250-83 US-PATENT-3,450,878	N71-20739*	c 15	NASA-CASE-XGS-02011 US-PATENT-APPL-SN-502693 US-PATENT-CLASS-308-9 US-PATENT-3,359,046	N71-21007*	c 14	NASA-CASE-XMS-06236 US-PATENT-APPL-SN-482670 US-PATENT-CLASS-73-290 US-PATENT-3,355,948
N71-20435*	c 14	NASA-CASE-XMS-06767-1 US-PATENT-APPL-SN-716795 US-PATENT-CLASS-73-422 US-PATENT-3,438,263	N71-20740*	c 15	NASA-CASE-XLA-01808 US-PATENT-APPL-SN-517159 US-PATENT-CLASS-74-471 US-PATENT-3,364,777	N71-21042*	c 08	NASA-CASE-XGS-01021 US-PATENT-APPL-SN-279646 US-PATENT-CLASS-340-174.1 US-PATENT-3,327,298
N71-20436*	c 12	NASA-CASE-LAR-11138 US-PATENT-APPL-SN-694317 US-PATENT-CLASS-73-147	N71-20741*	c 14	NASA-CASE-XMS-01618 US-PATENT-APPL-SN-418362 US-PATENT-CLASS-73-29	N71-21045*	c 32	NASA-CASE-XLA-01731 US-PATENT-APPL-SN-425365 US-PATENT-CLASS-52-2

N71-21060*	c 15	US-PATENT-3,364,631 NASA-CASE-XLA-03660 US-PATENT-APPL-SN-482307 US-PATENT-CLASS-95-53 US-PATENT-3,361,045	N71-21483*	c 10	US-PATENT-3,345,866 NASA-CASE-XGS-01155 US-PATENT-APPL-SN-557871 US-PATENT-CLASS-343-16 US-PATENT-3,344,425	N71-22706*	c 15	US-PATENT-3,341,977 NASA-CASE-XMS-09310 US-PATENT-APPL-SN-655724 US-PATENT-CLASS-137-496 US-PATENT-3,384,111
N71-21064*	c 31	US-PATENT-3,361,045 NASA-CASE-XGS-02554 US-PATENT-APPL-SN-504266 US-PATENT-CLASS-244-1 US-PATENT-3,350,034	N71-21489*	c 15	US-PATENT-3,344,425 NASA-CASE-XNP-06914 US-PATENT-APPL-SN-590147 US-PATENT-CLASS-85-33 US-PATENT-3,352,192	N71-22707*	c 08	US-PATENT-3,384,111 NASA-CASE-XNP-04067 US-PATENT-APPL-SN-466875 US-PATENT-CLASS-340-172.5 US-PATENT-3,369,222
N71-21068*	c 18	US-PATENT-3,350,034 NASA-CASE-XNP-02888 US-PATENT-APPL-SN-409126 US-PATENT-CLASS-239-265.11 US-PATENT-3,347,465	N71-21493*	c 28	US-PATENT-3,352,192 NASA-CASE-XLA-10450 US-PATENT-APPL-SN-594587 US-PATENT-CLASS-239-265.19 US-PATENT-3,347,466	N71-22710*	c 08	US-PATENT-3,369,222 NASA-CASE-XNP-02778 US-PATENT-APPL-SN-508170 US-PATENT-CLASS-340-172.5 US-PATENT-3,369,223
N71-21072*	c 14	US-PATENT-3,347,465 NASA-CASE-XAC-02981 US-PATENT-APPL-SN-464879 US-PATENT-CLASS-73-398 US-PATENT-3,352,157	N71-21507*	c 33	US-PATENT-3,347,466 NASA-CASE-XLE-04603 US-PATENT-APPL-SN-638194 US-PATENT-CLASS-60-243 US-PATENT-3,347,046	N71-22713*	c 15	US-PATENT-3,342,653 NASA-CASE-XMF-03212 US-PATENT-APPL-SN-577549 US-PATENT-CLASS-55-418 US-PATENT-3,385,036
N71-21076*	c 15	US-PATENT-3,352,157 NASA-CASE-XMS-03745 US-PATENT-APPL-SN-534295 US-PATENT-CLASS-24-263 US-PATENT-3,346,929	N71-21528*	c 15	US-PATENT-3,336,725 NASA-CASE-XGS-02422 US-PATENT-APPL-SN-493943 US-PATENT-CLASS-74-126 US-PATENT-3,331,255	N71-22722*	c 15	US-PATENT-3,385,036 NASA-CASE-XMS-04292 US-PATENT-APPL-SN-517157 US-PATENT-CLASS-82-14 US-PATENT-3,373,640
N71-21078*	c 15	US-PATENT-3,357,093 NASA-CASE-XNP-03459 US-PATENT-APPL-SN-457679 US-PATENT-CLASS-29-495 US-PATENT-3,357,093	N71-21530*	c 15	US-PATENT-3,331,255 NASA-CASE-XMS-03722 US-PATENT-APPL-SN-487934 US-PATENT-CLASS-267-64 US-PATENT-3,330,549	N71-22723*	c 15	US-PATENT-3,373,640 NASA-CASE-XMF-01083 US-PATENT-APPL-SN-432028 US-PATENT-CLASS-72-83 US-PATENT-3,340,713
N71-21079*	c 14	US-PATENT-3,357,093 NASA-CASE-XLA-03102 US-PATENT-APPL-SN-576195 US-PATENT-CLASS-33-31 US-PATENT-3,364,578	N71-21531*	c 15	US-PATENT-3,330,549 NASA-CASE-XNP-02341 US-PATENT-APPL-SN-432025 US-PATENT-CLASS-52-127 US-PATENT-3,330,082	N71-22748*	c 05	US-PATENT-3,340,713 NASA-CASE-XMS-04170 US-PATENT-APPL-SN-482311 US-PATENT-CLASS-9-312 US-PATENT-3,343,189
N71-21082*	c 14	US-PATENT-3,350,033 NASA-CASE-XGS-02629 US-PATENT-APPL-SN-500435 US-PATENT-CLASS-244-1 US-PATENT-3,350,033	N71-21536*	c 15	US-PATENT-3,345,840 NASA-CASE-XMS-06876 US-PATENT-APPL-SN-605100 US-PATENT-CLASS-72-34 US-PATENT-3,345,840	N71-22749*	c 08	US-PATENT-3,343,189 NASA-CASE-XNP-02748 US-PATENT-APPL-SN-420245 US-PATENT-CLASS-340-146.1 US-PATENT-3,373,404
N71-21088*	c 14	US-PATENT-3,348,048 NASA-CASE-XNP-06957 US-PATENT-APPL-SN-406097 US-PATENT-CLASS-250-83.3 US-PATENT-3,348,048	N71-21583*	c 09	US-PATENT-3,345,840 NASA-CASE-XLE-02008 US-PATENT-APPL-SN-487342 US-PATENT-CLASS-338-64 US-PATENT-3,329,918	N71-22750*	c 07	US-PATENT-3,373,404 NASA-CASE-XNP-01735 US-PATENT-APPL-SN-408438 US-PATENT-CLASS-343-786 US-PATENT-3,373,431
N71-21089*	c 12	US-PATENT-3,331,404 NASA-CASE-XMS-01905 US-PATENT-APPL-SN-280580 US-PATENT-CLASS-141-91 US-PATENT-3,331,404	N71-21586*	c 33	US-PATENT-3,329,918 NASA-CASE-XLA-01794 US-PATENT-APPL-SN-464880 US-PATENT-CLASS-73-86 US-PATENT-3,357,237	N71-22752*	c 14	US-PATENT-3,373,431 NASA-CASE-XMF-01974 US-PATENT-APPL-SN-568354 US-PATENT-CLASS-73-419 US-PATENT-3,383,922
N71-21090*	c 14	US-PATENT-3,346,806 NASA-CASE-XNP-02983 US-PATENT-APPL-SN-407599 US-PATENT-CLASS-73-88.5 US-PATENT-3,350,926	N71-21651*	c 18	US-PATENT-3,346,442 NASA-CASE-XMF-01402 US-PATENT-APPL-SN-328140 US-PATENT-CLASS-161-68 US-PATENT-3,346,442	N71-22765*	c 14	US-PATENT-3,383,922 NASA-CASE-XLA-00934 US-PATENT-APPL-SN-326298 US-PATENT-CLASS-73-84 US-PATENT-3,339,404
N71-21091*	c 14	US-PATENT-3,350,926 NASA-CASE-XAC-06956 US-PATENT-APPL-SN-538166 US-PATENT-CLASS-259-71 US-PATENT-3,347,531	N71-21688*	c 21	US-PATENT-3,346,442 NASA-CASE-XMF-00684 US-PATENT-APPL-SN-260087 US-PATENT-CLASS-235-150.25 US-PATENT-3,331,951	N71-22792*	c 33	US-PATENT-3,339,404 NASA-CASE-XLA-01243 US-PATENT-APPL-SN-538911 US-PATENT-CLASS-244-1 US-PATENT-3,384,324
N71-21177*	c 15	US-PATENT-3,347,531 NASA-CASE-XLA-01401 US-PATENT-APPL-SN-382976 US-PATENT-CLASS-235-61.6 US-PATENT-3,346,724	N71-21693*	c 25	US-PATENT-3,331,951 NASA-CASE-XLA-03103 US-PATENT-APPL-SN-531642 US-PATENT-CLASS-315-111 US-PATENT-3,333,152	N71-22796*	c 09	US-PATENT-3,384,324 NASA-CASE-XKS-03381 US-PATENT-APPL-SN-437611 US-PATENT-CLASS-317-9 US-PATENT-3,340,430
N71-21234*	c 15	US-PATENT-3,346,724 NASA-CASE-XKS-02582 US-PATENT-APPL-SN-424153 US-PATENT-CLASS-251-172 US-PATENT-3,327,991	N71-21694*	c 25	US-PATENT-3,333,152 NASA-CASE-XLE-02902 US-PATENT-APPL-SN-485957 US-PATENT-CLASS-60-202 US-PATENT-3,336,748	N71-22797*	c 15	US-PATENT-3,340,430 NASA-CASE-XLE-01092 US-PATENT-APPL-SN-422098 US-PATENT-CLASS-72-253 US-PATENT-3,342,055
N71-21311*	c 15	US-PATENT-3,327,991 NASA-CASE-XNP-03637 US-PATENT-APPL-SN-453232 US-PATENT-CLASS-310-9.1 US-PATENT-3,359,435	N71-21708*	c 21	US-PATENT-3,336,748 NASA-CASE-XLA-02551 US-PATENT-APPL-SN-416940 US-PATENT-CLASS-244-1 US-PATENT-3,329,375	N71-22798*	c 15	US-PATENT-3,342,055 NASA-CASE-XMS-04178 US-PATENT-APPL-SN-511299 US-PATENT-CLASS-83-467 US-PATENT-3,367,224
N71-21403*	c 15	US-PATENT-3,359,435 NASA-CASE-XMF-03988 US-PATENT-APPL-SN-578923 US-PATENT-CLASS-252-26 US-PATENT-3,361,666	N71-21744*	c 15	US-PATENT-3,329,375 NASA-CASE-XGS-04227 US-PATENT-APPL-SN-545805 US-PATENT-CLASS-74-409 US-PATENT-3,359,819	N71-22799*	c 15	US-PATENT-3,367,224 NASA-CASE-XMF-03511 US-PATENT-APPL-SN-540414 US-PATENT-CLASS-90-12 US-PATENT-3,386,337
N71-21404*	c 15	US-PATENT-3,361,666 NASA-CASE-XLA-01262 US-PATENT-APPL-SN-386800 US-PATENT-CLASS-156-3 US-PATENT-3,356,549	N71-21819*	c 27	US-PATENT-3,359,819 NASA-CASE-XLE-03494 US-PATENT-APPL-SN-529593 US-PATENT-CLASS-60-251 US-PATENT-3,345,822	N71-22874*	c 15	US-PATENT-3,386,337 NASA-CASE-XLA-00188 US-PATENT-APPL-SN-254847 US-PATENT-CLASS-102-49.5 US-PATENT-3,368,486
N71-21449*	c 09	US-PATENT-3,356,549 NASA-CASE-XMS-01991 US-PATENT-APPL-SN-410326 US-PATENT-CLASS-323-22 US-PATENT-3,344,340	N71-21821*	c 23	US-PATENT-3,345,822 NASA-CASE-XNP-01059 US-PATENT-APPL-SN-393464 US-PATENT-CLASS-250-232 US-PATENT-3,354,320	N71-22875*	c 11	US-PATENT-3,368,486 NASA-CASE-XAC-05333 US-PATENT-APPL-SN-546148 US-PATENT-CLASS-119-15 US-PATENT-3,367,308
N71-21473*	c 10	US-PATENT-3,344,340 NASA-CASE-XGS-08679 US-PATENT-APPL-SN-312443 US-PATENT-CLASS-343-113 US-PATENT-3,340,532	N71-21822*	c 28	US-PATENT-3,354,320 NASA-CASE-XNP-04124 US-PATENT-APPL-SN-498168 US-PATENT-CLASS-60-202 US-PATENT-3,345,820	N71-22877*	c 15	US-PATENT-3,367,308 NASA-CASE-XMF-10040 US-PATENT-APPL-SN-592680 US-PATENT-CLASS-188-1 US-PATENT-3,381,778
N71-21474*	c 11	US-PATENT-3,340,532 NASA-CASE-XMS-04798 US-PATENT-APPL-SN-480210 US-PATENT-CLASS-35-12 US-PATENT-3,330,052	N71-21824*	c 26	US-PATENT-3,345,820 NASA-CASE-XNP-05429 US-PATENT-APPL-SN-578928 US-PATENT-CLASS-103-1 US-PATENT-3,361,067	N71-22878*	c 15	US-PATENT-3,381,778 NASA-CASE-XMS-04545 US-PATENT-APPL-SN-508601 US-PATENT-CLASS-73-144 US-PATENT-3,381,527
N71-21475*	c 11	US-PATENT-3,330,052 NASA-CASE-XLA-05378 US-PATENT-APPL-SN-484156 US-PATENT-CLASS-73-343 US-PATENT-3,331,246	N71-21881*	c 31	US-PATENT-3,361,067 NASA-CASE-XNP-02595 US-PATENT-APPL-SN-502709 US-PATENT-CLASS-244-1 US-PATENT-3,333,788	N71-22880*	c 21	US-PATENT-3,381,527 NASA-CASE-XLA-00793 US-PATENT-APPL-SN-369334 US-PATENT-CLASS-88-1 US-PATENT-3,381,569
N71-21476*	c 07	US-PATENT-3,331,246 NASA-CASE-XNP-00746 US-PATENT-APPL-SN-271824 US-PATENT-CLASS-235-181 US-PATENT-3,359,409	N71-21882*	c 23	US-PATENT-3,333,788 NASA-CASE-XNP-03853 US-PATENT-APPL-SN-578931 US-PATENT-CLASS-88-24 US-PATENT-3,359,855	N71-22881*	c 23	US-PATENT-3,381,569 NASA-CASE-XLE-04222 US-PATENT-APPL-SN-512559 US-PATENT-CLASS-220-9 US-PATENT-3,379,330
N71-21481*	c 11	US-PATENT-3,359,409 NASA-CASE-XLA-01326 US-PATENT-APPL-SN-422097 US-PATENT-CLASS-73-147	N71-22705*	c 15	US-PATENT-3,359,855 NASA-CASE-XGS-02884 US-PATENT-APPL-SN-432435 US-PATENT-CLASS-51-57	N71-22888*	c 09	US-PATENT-3,379,330 NASA-CASE-XLA-03114 US-PATENT-APPL-SN-440039 US-PATENT-CLASS-343-708

## ACCESSION NUMBER INDEX

N71-23097

N71-22890*	c 33	US-PATENT-3,373,430 NASA-CASE-XLA-07728 US-PATENT-APPL-SN-538908 US-PATENT-CLASS-165-96 US-PATENT-3,374,830	N71-22993*	c 14	US-PATENT-3,377,845 NASA-CASE-XMS-05365 US-PATENT-APPL-SN-515484 US-PATENT-CLASS-310-8.5 US-PATENT-3,387,149	N71-23037*	c 14	US-PATENT-3,383,903 NASA-CASE-XAC-01662 US-PATENT-APPL-SN-385520 US-PATENT-CLASS-324-117 US-PATENT-3,365,665
N71-22894*	c 18	NASA-CASE-XLE-03925 US-PATENT-APPL-SN-514407 US-PATENT-CLASS-75-204 US-PATENT-3,337,337	N71-22994*	c 15	NASA-CASE-XFR-05421 US-PATENT-APPL-SN-567686 US-PATENT-CLASS-24-126 US-PATENT-3,378,892	N71-23039*	c 14	NASA-CASE-XNP-01659 US-PATENT-APPL-SN-410332 US-PATENT-CLASS-136-230 US-PATENT-3,377,208
N71-22895*	c 16	NASA-CASE-XMS-04269 US-PATENT-APPL-SN-516793 US-PATENT-CLASS-250-199 US-PATENT-3,341,708	N71-22995*	c 14	NASA-CASE-XNP-08680 US-PATENT-APPL-SN-562444 US-PATENT-CLASS-73-9 US-PATENT-3,376,730	N71-23040*	c 14	NASA-CASE-XNP-05535 US-PATENT-APPL-SN-487939 US-PATENT-CLASS-244-1 US-PATENT-3,339,863
N71-22896*	c 05	NASA-CASE-XMS-02399 US-PATENT-APPL-SN-492344 US-PATENT-CLASS-128-2.06 US-PATENT-3,384,075	N71-22996*	c 14	NASA-CASE-XGS-01331 US-PATENT-APPL-SN-445807 US-PATENT-CLASS-250-218 US-PATENT-3,388,258	N71-23041*	c 14	NASA-CASE-XNP-01056 US-PATENT-APPL-SN-377146 US-PATENT-CLASS-250-41.9 US-PATENT-3,340,395
N71-22897*	c 08	NASA-CASE-XNP-01753 US-PATENT-APPL-SN-423412 US-PATENT-CLASS-235-92 US-PATENT-3,374,339	N71-22997*	c 15	NASA-CASE-XNP-01641 US-PATENT-APPL-SN-464885 US-PATENT-CLASS-308-10 US-PATENT-3,378,315	N71-23042*	c 11	NASA-CASE-XMS-02930 US-PATENT-APPL-SN-417253 US-PATENT-CLASS-250-52 US-PATENT-3,340,397
N71-22961*	c 10	NASA-CASE-XMS-02159 US-PATENT-APPL-SN-534564 US-PATENT-CLASS-323-56 US-PATENT-3,365,657	N71-22998*	c 18	NASA-CASE-XGS-02435 US-PATENT-APPL-SN-392965 US-PATENT-CLASS-106-40 US-PATENT-3,382,082	N71-23043*	c 26	NASA-CASE-XNP-01959 US-PATENT-APPL-SN-410330 US-PATENT-CLASS-136-89 US-PATENT-3,396,057
N71-22962*	c 10	NASA-CASE-XGS-05441 US-PATENT-APPL-SN-505321 US-PATENT-CLASS-328-233 US-PATENT-3,366,886	N71-22999*	c 09	NASA-CASE-XLA-00781 US-PATENT-APPL-SN-307271 US-PATENT-CLASS-88-14 US-PATENT-3,364,813	N71-23046*	c 17	NASA-CASE-XNP-04338 US-PATENT-APPL-SN-461765 US-PATENT-CLASS-29-182.2 US-PATENT-3,421,864
N71-22964*	c 14	NASA-CASE-XLE-02024 US-PATENT-APPL-SN-422099 US-PATENT-CLASS-73-15 US-PATENT-3,365,930	N71-23001*	c 07	NASA-CASE-XGS-01812 US-PATENT-APPL-SN-392973 US-PATENT-CLASS-340-174.1 US-PATENT-3,380,042	N71-23047*	c 18	NASA-CASE-XLA-01995 US-PATENT-APPL-SN-411945 US-PATENT-CLASS-148-6.16 US-PATENT-3,395,053
N71-22965*	c 14	NASA-CASE-XGS-02319 US-PATENT-APPL-SN-496205 US-PATENT-CLASS-73-117 US-PATENT-3,365,941	N71-23006*	c 03	NASA-CASE-XGS-02631 US-PATENT-APPL-SN-425972 US-PATENT-CLASS-136-133 US-PATENT-3,340,099	N71-23048*	c 15	NASA-CASE-XNP-03972 US-PATENT-APPL-SN-502710 US-PATENT-CLASS-184-1 US-PATENT-3,367,445
N71-22968*	c 31	NASA-CASE-XLA-02050 US-PATENT-APPL-SN-568067 US-PATENT-CLASS-244-1 US-PATENT-3,386,685	N71-23007*	c 02	NASA-CASE-XMF-04163 US-PATENT-APPL-SN-424156 US-PATENT-CLASS-73-189 US-PATENT-3,340,732	N71-23049*	c 15	NASA-CASE-XMF-01049 US-PATENT-APPL-SN-506137 US-PATENT-CLASS-339-5 US-PATENT-3,375,479
N71-22969*	c 31	NASA-CASE-XLA-03132 US-PATENT-APPL-SN-610728 US-PATENT-CLASS-244-1 US-PATENT-3,386,686	N71-23008*	c 31	NASA-CASE-XLA-04804 US-PATENT-APPL-SN-577546 US-PATENT-CLASS-102-49.5 US-PATENT-3,384,016	N71-23050*	c 15	NASA-CASE-XMF-01730 US-PATENT-APPL-SN-517869 US-PATENT-CLASS-228-8 US-PATENT-3,373,914
N71-22974*	c 03	NASA-CASE-XGS-02630 US-PATENT-APPL-SN-494287 US-PATENT-CLASS-136-132 US-PATENT-3,382,107	N71-23009*	c 31	NASA-CASE-XGS-02607 US-PATENT-APPL-SN-474531 US-PATENT-CLASS-244-1 US-PATENT-3,341,151	N71-23051*	c 15	NASA-CASE-XAC-01158 US-PATENT-APPL-SN-420250 US-PATENT-CLASS-137-625.5 US-PATENT-3,369,564
N71-22975*	c 06	NASA-CASE-XNP-07659 US-PATENT-APPL-SN-567806 US-PATENT-CLASS-18-26 US-PATENT-3,381,339	N71-23015*	c 09	NASA-CASE-XGS-02751 US-PATENT-APPL-SN-491059 US-PATENT-CLASS-307-288 US-PATENT-3,374,366	N71-23052*	c 15	NASA-CASE-XLA-03497 US-PATENT-APPL-SN-392992 US-PATENT-CLASS-156-285 US-PATENT-3,373,069
N71-22982*	c 15	NASA-CASE-XLA-02809 US-PATENT-APPL-SN-554897 US-PATENT-CLASS-308-176 US-PATENT-3,397,932	N71-23021*	c 09	NASA-CASE-XAC-02807 US-PATENT-APPL-SN-456581 US-PATENT-CLASS-324-120 US-PATENT-3,384,820	N71-23080*	c 05	NASA-CASE-XLE-02531 US-PATENT-APPL-SN-425096 US-PATENT-CLASS-312-1 US-PATENT-3,337,279
N71-22983*	c 28	NASA-CASE-XMF-06926 US-PATENT-APPL-SN-537615 US-PATENT-CLASS-60-258 US-PATENT-3,336,754	N71-23022*	c 15	NASA-CASE-XMS-01625 US-PATENT-APPL-SN-418933 US-PATENT-CLASS-136-86 US-PATENT-3,389,017	N71-23081*	c 28	NASA-CASE-XNP-02923 US-PATENT-APPL-SN-494280 US-PATENT-CLASS-60-202 US-PATENT-3,367,114
N71-22984*	c 07	NASA-CASE-XMS-04312 US-PATENT-APPL-SN-521754 US-PATENT-CLASS-343-708 US-PATENT-3,384,895	N71-23023*	c 15	NASA-CASE-XMF-04042 US-PATENT-APPL-SN-605518 US-PATENT-CLASS-55-204 US-PATENT-3,397,512	N71-23084*	c 10	NASA-CASE-XLA-01219 US-PATENT-APPL-SN-402978 US-PATENT-CLASS-332-1 US-PATENT-3,366,894
N71-22985*	c 09	NASA-CASE-XMF-03934 US-PATENT-APPL-SN-530958 US-PATENT-CLASS-250-83.3 US-PATENT-3,379,885	N71-23024*	c 15	NASA-CASE-XNP-01747 US-PATENT-APPL-SN-413661 US-PATENT-CLASS-251-148 US-PATENT-3,341,169	N71-23085*	c 33	NASA-CASE-XFR-03802 US-PATENT-APPL-SN-460877 US-PATENT-CLASS-73-190 US-PATENT-3,367,182
N71-22986*	c 10	NASA-CASE-XMF-01892 US-PATENT-APPL-SN-464878 US-PATENT-CLASS-328-167 US-PATENT-3,375,451	N71-23025*	c 15	NASA-CASE-XNP-08877 US-PATENT-APPL-SN-574282 US-PATENT-CLASS-62-6 US-PATENT-3,367,121	N71-23086*	c 15	NASA-CASE-XMS-04533 US-PATENT-APPL-SN-557016 US-PATENT-CLASS-202-234 US-PATENT-3,397,117
N71-22987*	c 09	NASA-CASE-XLE-04788 US-PATENT-APPL-SN-537617 US-PATENT-CLASS-313-352 US-PATENT-3,396,303	N71-23026*	c 07	NASA-CASE-XNP-02791 US-PATENT-APPL-SN-390251 US-PATENT-CLASS-178-6 US-PATENT-3,383,461	N71-23087*	c 14	NASA-CASE-XNP-03918 US-PATENT-APPL-SN-510475 US-PATENT-CLASS-73-88.5 US-PATENT-3,388,590
N71-22988*	c 09	NASA-CASE-XGS-03304 US-PATENT-APPL-SN-483886 US-PATENT-CLASS-73-1 US-PATENT-3,381,517	N71-23027*	c 09	NASA-CASE-XNP-01960 US-PATENT-APPL-SN-438135 US-PATENT-CLASS-29-572 US-PATENT-3,340,599	N71-23088*	c 18	NASA-CASE-XNP-00597 US-PATENT-APPL-SN-410325 US-PATENT-CLASS-65-7 US-PATENT-3,337,315
N71-22989*	c 14	NASA-CASE-XLA-01551 US-PATENT-APPL-SN-422092 US-PATENT-CLASS-73-190 US-PATENT-3,382,714	N71-23029*	c 10	NASA-CASE-XGS-03427 US-PATENT-APPL-SN-500446 US-PATENT-CLASS-307-265 US-PATENT-3,383,524	N71-23092*	c 14	NASA-CASE-XLA-01530 US-PATENT-APPL-SN-420466 US-PATENT-CLASS-188-1 US-PATENT-3,337,004
N71-22990*	c 14	NASA-CASE-XMS-04201 US-PATENT-APPL-SN-507254 US-PATENT-CLASS-324-70 US-PATENT-3,379,974	N71-23030*	c 11	NASA-CASE-XNP-03578 US-PATENT-APPL-SN-445292 US-PATENT-CLASS-73-147 US-PATENT-3,342,066	N71-23093*	c 14	NASA-CASE-XLE-03280 US-PATENT-APPL-SN-517156 US-PATENT-CLASS-73-400 US-PATENT-3,379,064
N71-22991*	c 14	NASA-CASE-XLA-01791 US-PATENT-APPL-SN-462763 US-PATENT-CLASS-250-227 US-PATENT-3,397,318	N71-23033*	c 10	NASA-CASE-XNP-01318 US-PATENT-APPL-SN-380965 US-PATENT-CLASS-340-174 US-PATENT-3,388,387	N71-23096*	c 05	NASA-CASE-XMS-06064 US-PATENT-APPL-SN-563646 US-PATENT-CLASS-2-14 US-PATENT-3,378,851
N71-22992*	c 14	NASA-CASE-XGS-01023 US-PATENT-APPL-SN-446131 US-PATENT-CLASS-73-65	N71-23036*	c 14	NASA-CASE-XNP-01660 US-PATENT-APPL-SN-578916 US-PATENT-CLASS-73-4	N71-23097*	c 09	NASA-CASE-XNP-02140 US-PATENT-APPL-SN-440036 US-PATENT-CLASS-330-61

## N71-23098

N71-23098\* c 07 ..... US-PATENT-3,337,812  
 NASA-CASE-XGS-00740  
 US-PATENT-APPL-SN-353644  
 US-PATENT-CLASS-325-305  
 US-PATENT-3,341,778  
 N71-23099\* c 10 ..... NASA-CASE-XNP-08875  
 US-PATENT-APPL-SN-640455  
 US-PATENT-CLASS-343-6.5  
 US-PATENT-3,380,049  
 N71-23159\* c 05 ..... NASA-CASE-XMF-06589  
 US-PATENT-APPL-SN-543206  
 US-PATENT-CLASS-5-82  
 US-PATENT-3,343,180  
 N71-23161\* c 05 ..... NASA-CASE-XAC-07043  
 US-PATENT-APPL-SN-566397  
 US-PATENT-CLASS-2-2.1  
 US-PATENT-3,405,406  
 N71-23174\* c 14 ..... NASA-CASE-XGS-02610  
 US-PATENT-APPL-SN-491054  
 US-PATENT-CLASS-321-60  
 US-PATENT-3,417,316  
 N71-23175\* c 14 ..... NASA-CASE-XKS-03509  
 US-PATENT-APPL-SN-566392  
 US-PATENT-CLASS-356-166  
 US-PATENT-3,414,358  
 N71-23185\* c 04 ..... NASA-CASE-XAC-05422  
 US-PATENT-APPL-SN-483885  
 US-PATENT-CLASS-128-2.05  
 US-PATENT-3,412,729  
 N71-23187\* c 03 ..... NASA-CASE-XGS-03390  
 US-PATENT-APPL-SN-551182  
 US-PATENT-CLASS-136-89  
 US-PATENT-3,419,433  
 N71-23188\* c 09 ..... NASA-CASE-XMF-14301  
 US-PATENT-APPL-SN-697341  
 US-PATENT-CLASS-321-2  
 US-PATENT-3,470,446  
 N71-23189\* c 09 ..... NASA-CASE-XNP-06028  
 US-PATENT-APPL-SN-649356  
 US-PATENT-CLASS-315-26  
 US-PATENT-3,431,460  
 N71-23190\* c 09 ..... NASA-CASE-XLE-04501  
 US-PATENT-APPL-SN-522794  
 US-PATENT-CLASS-313-231  
 US-PATENT-3,413,510  
 N71-23191\* c 09 ..... NASA-CASE-XMS-05890  
 US-PATENT-APPL-SN-650166  
 US-PATENT-CLASS-137-554  
 US-PATENT-3,414,012  
 N71-23225\* c 14 ..... NASA-CASE-XNP-04817  
 US-PATENT-APPL-SN-516152  
 US-PATENT-CLASS-73-12  
 US-PATENT-3,412,598  
 N71-23226\* c 14 ..... NASA-CASE-XNP-06509  
 US-PATENT-APPL-SN-570095  
 US-PATENT-CLASS-73-194  
 US-PATENT-3,411,356  
 N71-23227\* c 14 ..... NASA-CASE-XMF-06515  
 US-PATENT-APPL-SN-548808  
 US-PATENT-CLASS-73-432  
 US-PATENT-3,408,870  
 N71-23230\* c 06 ..... NASA-CASE-XMF-06409  
 US-PATENT-APPL-SN-575930  
 US-PATENT-CLASS-260-448.2  
 US-PATENT-3,433,818  
 N71-23239\* c 03 ..... NASA-CASE-XMF-08217  
 US-PATENT-APPL-SN-688807  
 US-PATENT-CLASS-321-2  
 US-PATENT-3,470,443  
 N71-23240\* c 14 ..... NASA-CASE-XLA-00941  
 US-PATENT-APPL-SN-508873  
 US-PATENT-CLASS-250-227  
 US-PATENT-3,407,304  
 N71-23248\* c 17 ..... NASA-CASE-XLE-03629  
 US-PATENT-APPL-SN-554950  
 US-PATENT-CLASS-75-170  
 US-PATENT-3,415,643  
 N71-23254\* c 15 ..... NASA-CASE-XFR-05302  
 US-PATENT-APPL-SN-685463  
 US-PATENT-CLASS-85-7  
 US-PATENT-3,443,472  
 N71-23255\* c 15 ..... NASA-CASE-XMS-07487  
 US-PATENT-APPL-SN-580365  
 US-PATENT-CLASS-244-83  
 US-PATENT-3,409,252  
 N71-23256\* c 15 ..... NASA-CASE-XMF-03290  
 US-PATENT-APPL-SN-479353  
 US-PATENT-CLASS-53-22  
 US-PATENT-3,415,032  
 N71-23267\* c 14 ..... NASA-CASE-XLE-04026  
 US-PATENT-APPL-SN-617770  
 US-PATENT-CLASS-13-26  
 US-PATENT-3,470,304  
 N71-23268\* c 14 ..... NASA-CASE-XLA-01907  
 US-PATENT-APPL-SN-335441  
 US-PATENT-CLASS-356-72

N71-23269\* c 14 ..... US-PATENT-3,419,329  
 NASA-CASE-XLA-01584  
 US-PATENT-APPL-SN-416943  
 US-PATENT-CLASS-250-203  
 US-PATENT-3,389,260  
 N71-23270\* c 09 ..... NASA-CASE-XMS-04919  
 US-PATENT-APPL-SN-516155  
 US-PATENT-CLASS-307-263  
 US-PATENT-3,417,266  
 N71-23271\* c 10 ..... NASA-CASE-XNP-00952  
 US-PATENT-APPL-SN-388967  
 US-PATENT-CLASS-317-148.5  
 US-PATENT-3,417,298  
 N71-23289\* c 21 ..... NASA-CASE-XMF-01669  
 US-PATENT-APPL-SN-399419  
 US-PATENT-CLASS-74-5.47  
 US-PATENT-3,415,126  
 N71-23292\* c 26 ..... NASA-CASE-XLE-10715  
 US-PATENT-APPL-SN-603397  
 US-PATENT-CLASS-252-62.3  
 US-PATENT-3,409,554  
 N71-23293\* c 28 ..... NASA-CASE-XNP-06942  
 US-PATENT-APPL-SN-563651  
 US-PATENT-CLASS-60-202  
 US-PATENT-3,412,559  
 N71-23295\* c 08 ..... NASA-CASE-XNP-04819  
 US-PATENT-APPL-SN-502701  
 US-PATENT-CLASS-340-146.2  
 US-PATENT-3,390,378  
 N71-23311\* c 09 ..... NASA-CASE-XGS-03632  
 US-PATENT-APPL-SN-502739  
 US-PATENT-CLASS-307-260  
 US-PATENT-3,390,282  
 N71-23315\* c 10 ..... NASA-CASE-XLA-03356  
 US-PATENT-APPL-SN-536216  
 US-PATENT-CLASS-307-234  
 US-PATENT-3,448,290  
 N71-23316\* c 09 ..... NASA-CASE-XMS-09352  
 US-PATENT-APPL-SN-564919  
 US-PATENT-CLASS-323-22  
 US-PATENT-3,417,321  
 N71-23317\* c 05 ..... NASA-CASE-XMS-06061  
 US-PATENT-APPL-SN-605092  
 US-PATENT-CLASS-307-260  
 US-PATENT-3,467,837  
 N71-23336\* c 03 ..... NASA-CASE-XGS-01513  
 US-PATENT-APPL-SN-502756  
 US-PATENT-CLASS-136-166  
 US-PATENT-3,390,017  
 N71-23354\* c 03 ..... NASA-CASE-XLE-04535  
 US-PATENT-APPL-SN-588671  
 US-PATENT-CLASS-250-212  
 US-PATENT-3,437,818  
 N71-23365\* c 17 ..... NASA-CASE-XNP-03063  
 US-PATENT-APPL-SN-521994  
 US-PATENT-CLASS-75-172  
 US-PATENT-3,413,115  
 N71-23401\* c 14 ..... NASA-CASE-XGS-03230  
 US-PATENT-APPL-SN-517158  
 US-PATENT-CLASS-250-83  
 US-PATENT-3,419,992  
 N71-23405\* c 07 ..... NASA-CASE-XGS-01537  
 US-PATENT-APPL-SN-432026  
 US-PATENT-CLASS-325-163  
 US-PATENT-3,417,332  
 N71-23443\* c 09 ..... NASA-CASE-XLE-02823  
 US-PATENT-APPL-SN-491058  
 US-PATENT-CLASS-310-10  
 US-PATENT-3,393,332  
 N71-23449\* c 03 ..... NASA-CASE-XLE-08569  
 US-PATENT-APPL-SN-641420  
 US-PATENT-CLASS-136-89  
 US-PATENT-3,472,698  
 N71-23497\* c 01 ..... NASA-CASE-XLA-01486  
 US-PATENT-APPL-SN-484485  
 US-PATENT-CLASS-244-13  
 US-PATENT-3,392,936  
 N71-23499\* c 06 ..... NASA-CASE-XNP-03835  
 US-PATENT-APPL-SN-456874  
 US-PATENT-CLASS-44-77  
 US-PATENT-3,393,059  
 N71-23500\* c 06 ..... NASA-CASE-XNP-03250  
 US-PATENT-APPL-SN-485058  
 US-PATENT-CLASS-260-85.5  
 US-PATENT-3,419,537  
 N71-23525\* c 09 ..... NASA-CASE-XGS-02317  
 US-PATENT-APPL-SN-576183  
 US-PATENT-CLASS-328-61  
 US-PATENT-3,464,018  
 N71-23527\* c 06 ..... NASA-CASE-XLE-01997  
 US-PATENT-APPL-SN-427990  
 US-PATENT-CLASS-23-230  
 US-PATENT-3,472,625  
 N71-23543\* c 10 ..... NASA-CASE-XMS-00913  
 US-PATENT-APPL-SN-416945  
 US-PATENT-CLASS-317-31

N71-23544\* c 10 ..... US-PATENT-3,393,347  
 NASA-CASE-XNP-05382  
 US-PATENT-APPL-SN-536217  
 US-PATENT-CLASS-332-19  
 US-PATENT-3,393,380  
 N71-23545\* c 09 ..... NASA-CASE-XMF-04367  
 US-PATENT-APPL-SN-457874  
 US-PATENT-CLASS-307-235  
 US-PATENT-3,404,289  
 N71-23548\* c 09 ..... NASA-CASE-XNP-06507  
 US-PATENT-APPL-SN-605099  
 US-PATENT-CLASS-333-98  
 US-PATENT-3,419,827  
 N71-23573\* c 09 ..... NASA-CASE-XGS-01418  
 US-PATENT-APPL-SN-392969  
 US-PATENT-CLASS-333-73  
 US-PATENT-3,393,384  
 N71-23598\* c 09 ..... NASA-CASE-XER-11019  
 US-PATENT-APPL-SN-711971  
 US-PATENT-CLASS-331-78  
 US-PATENT-3,470,489  
 N71-23599\* c 22 ..... NASA-CASE-XLE-01903  
 US-PATENT-APPL-SN-466868  
 US-PATENT-CLASS-310-4  
 US-PATENT-3,393,330  
 N71-23654\* c 26 ..... NASA-CASE-XLE-02798  
 US-PATENT-APPL-SN-660571  
 US-PATENT-CLASS-148-1.5  
 US-PATENT-3,390,020  
 N71-23658\* c 18 ..... NASA-CASE-XLE-02647  
 US-PATENT-APPL-SN-430226  
 US-PATENT-CLASS-220-9  
 US-PATENT-3,392,864  
 N71-23662\* c 10 ..... NASA-CASE-XGS-01118  
 US-PATENT-APPL-SN-408442  
 US-PATENT-CLASS-235-154  
 US-PATENT-3,399,299  
 N71-23663\* c 10 ..... NASA-CASE-XKS-04631  
 US-PATENT-APPL-SN-663180  
 US-PATENT-CLASS-200-82  
 US-PATENT-3,433,909  
 N71-23669\* c 10 ..... NASA-CASE-XAC-10607  
 US-PATENT-APPL-SN-694345  
 US-PATENT-CLASS-331-111  
 US-PATENT-3,470,495  
 N71-23698\* c 14 ..... NASA-CASE-XGS-08259  
 US-PATENT-APPL-SN-666551  
 US-PATENT-CLASS-242-192  
 US-PATENT-3,460,781  
 N71-23699\* c 14 ..... NASA-CASE-XMF-10289  
 US-PATENT-APPL-SN-674356  
 US-PATENT-CLASS-324-72  
 US-PATENT-3,470,466  
 N71-23710\* c 18 ..... NASA-CASE-XLE-08511  
 US-PATENT-APPL-SN-635972  
 US-PATENT-CLASS-29-182.1  
 US-PATENT-3,419,363  
 N71-23723\* c 30 ..... NASA-CASE-XNP-09832  
 US-PATENT-APPL-SN-632163  
 US-PATENT-CLASS-343-100  
 US-PATENT-3,417,399  
 N71-23725\* c 14 ..... NASA-CASE-XGS-01013  
 US-PATENT-APPL-SN-665209  
 US-PATENT-CLASS-73-133  
 US-PATENT-3,460,381  
 N71-23726\* c 14 ..... NASA-CASE-XMF-05224  
 US-PATENT-APPL-SN-660842  
 US-PATENT-CLASS-73-189  
 US-PATENT-3,465,584  
 N71-23755\* c 14 ..... NASA-CASE-XMF-04134  
 US-PATENT-APPL-SN-610723  
 US-PATENT-CLASS-73-4  
 US-PATENT-3,472,059  
 N71-23790\* c 14 ..... NASA-CASE-XAC-04885  
 US-PATENT-APPL-SN-573432  
 US-PATENT-CLASS-73-141  
 US-PATENT-3,415,116  
 N71-23797\* c 14 ..... NASA-CASE-XNP-06510  
 US-PATENT-APPL-SN-562445  
 US-PATENT-CLASS-250-203  
 US-PATENT-3,417,247  
 N71-23798\* c 15 ..... NASA-CASE-XMF-02330  
 US-PATENT-APPL-SN-608944  
 US-PATENT-CLASS-219-130  
 US-PATENT-3,469,069  
 N71-23809\* c 15 ..... NASA-CASE-XAC-10019  
 US-PATENT-APPL-SN-686209  
 US-PATENT-CLASS-74-89.18  
 US-PATENT-3,472,086  
 N71-23810\* c 15 ..... NASA-CASE-XLE-05033  
 US-PATENT-APPL-SN-510474  
 US-PATENT-CLASS-252-12  
 US-PATENT-3,466,243  
 N71-23811\* c 15 ..... NASA-CASE-XNP-05297  
 US-PATENT-APPL-SN-640458  
 US-PATENT-CLASS-72-354

## ACCESSION NUMBER INDEX



## ACCESSION NUMBER INDEX

N71-24741

N71-23812*	c 15	US-PATENT-3,443,412 NASA-CASE-XMF-07808 US-PATENT-APPL-SN-684178 US-PATENT-CLASS-308-2 US-PATENT-3,463,563	N71-24232*	c 14	US-PATENT-3,434,855 NASA-CASE-XAC-04458 US-PATENT-APPL-SN-534975 US-PATENT-CLASS-73-400 US-PATENT-3,392,586	N71-24623*	c 05	US-PATENT-CLASS-324-77 US-PATENT-3,548,107 NASA-CASE-XMS-09635 US-PATENT-APPL-SN-586329 US-PATENT-CLASS-2-2.1 US-PATENT-3,516,091
N71-23815*	c 15	NASA-CASE-XMF-07069 US-PATENT-APPL-SN-672382 US-PATENT-CLASS-219-125 US-PATENT-3,469,068	N71-24233*	c 14	NASA-CASE-XGS-04478 US-PATENT-APPL-SN-566717 US-PATENT-CLASS-73-88.5 US-PATENT-3,460,378	N71-24624*	c 07	NASA-CASE-GSC-10131-1 US-PATENT-APPL-SN-754055 US-PATENT-CLASS-340-172.5 US-PATENT-3,546,684
N71-23816*	c 15	NASA-CASE-XLE-03803 US-PATENT-APPL-SN-505765 US-PATENT-CLASS-220-9 US-PATENT-3,392,865	N71-24234*	c 14	NASA-CASE-XMF-10968 US-PATENT-APPL-SN-644447 US-PATENT-CLASS-73-15.6 US-PATENT-3,469,437	N71-24625*	c 07	NASA-CASE-XMS-09610 US-PATENT-APPL-SN-766170 US-PATENT-CLASS-343-113 US-PATENT-3,540,054
N71-23817*	c 15	NASA-CASE-XLE-06773 US-PATENT-APPL-SN-646124 US-PATENT-CLASS-72-467 US-PATENT-3,469,436	N71-24276*	c 33	NASA-CASE-XLA-02059 US-PATENT-APPL-SN-576182 US-PATENT-CLASS-165-12 US-PATENT-3,406,742	N71-24633*	c 08	NASA-CASE-NPO-10567 US-PATENT-APPL-SN-679055 US-PATENT-CLASS-235-153 US-PATENT-3,517,171
N71-23828*	c 17	NASA-CASE-XMF-02303 US-PATENT-APPL-SN-453229 US-PATENT-CLASS-148-6.20 US-PATENT-3,416,975	N71-24285*	c 32	NASA-CASE-XMF-02392 US-PATENT-APPL-SN-596735 US-PATENT-CLASS-73-49.2 US-PATENT-3,399,574	N71-24650*	c 08	NASA-CASE-NPO-10150 US-PATENT-APPL-SN-660843 US-PATENT-CLASS-340-347 US-PATENT-3,537,103
N71-23912*	c 31	NASA-CASE-XMF-05941 US-PATENT-APPL-SN-653277 US-PATENT-CLASS-244-1 US-PATENT-3,443,773	N71-24315*	c 31	NASA-CASE-XLA-04901 US-PATENT-APPL-SN-586325 US-PATENT-CLASS-244-1 US-PATENT-3,405,887	N71-24679*	c 15	NASA-CASE-XNP-10475 US-PATENT-APPL-SN-763868 US-PATENT-CLASS-72-369 US-PATENT-3,546,917
N71-23968*	c 28	NASA-CASE-XLE-04857 US-PATENT-APPL-SN-621742 US-PATENT-CLASS-239-127.1 US-PATENT-3,460,759	N71-24321*	c 28	NASA-CASE-XNP-03692 US-PATENT-APPL-SN-640787 US-PATENT-CLASS-60-263 US-PATENT-3,443,384	N71-24681*	c 03	NASA-CASE-XLE-08569-2 US-PATENT-APPL-SN-829825 US-PATENT-CLASS-29-572 US-PATENT-3,541,679
N71-23971*	c 32	NASA-CASE-XAC-05632 US-PATENT-APPL-SN-568355 US-PATENT-CLASS-244-77 US-PATENT-3,412,961	N71-24583*	c 07	NASA-CASE-NPO-10096 US-PATENT-APPL-SN-730700 US-PATENT-CLASS-329-140 US-PATENT-3,533,001	N71-24692*	c 12	NASA-CASE-XFR-02007 US-PATENT-APPL-SN-378080 US-PATENT-CLASS-73-389 US-PATENT-3,273,399
N71-23976*	c 23	NASA-CASE-XLA-01987 US-PATENT-APPL-SN-542713 US-PATENT-CLASS-346-107 US-PATENT-3,392,403	N71-24595*	c 09	NASA-CASE-GSC-10021-1 US-PATENT-APPL-SN-790420 US-PATENT-CLASS-343-7.5 US-PATENT-3,540,045	N71-24693*	c 14	NASA-CASE-XMF-04415 US-PATENT-APPL-SN-644446 US-PATENT-CLASS-33-174 US-PATENT-3,360,864
N71-24035*	c 31	NASA-CASE-XLA-01027 US-PATENT-APPL-SN-494283 US-PATENT-CLASS-52-272 US-PATENT-3,416,274	N71-24596*	c 09	NASA-CASE-XNP-01306-2 US-PATENT-APPL-SN-684083 US-PATENT-CLASS-328-133 US-PATENT-3,509,475	N71-24694*	c 15	NASA-CASE-GSC-10306-1 US-PATENT-APPL-SN-789278 US-PATENT-CLASS-248-358 US-PATENT-3,537,672
N71-24042*	c 15	NASA-CASE-XNP-04731 US-PATENT-APPL-SN-534966 US-PATENT-CLASS-103-48 US-PATENT-3,367,271	N71-24597*	c 09	NASA-CASE-ARC-10132-1 US-PATENT-APPL-SN-759460 US-PATENT-CLASS-73-398 US-PATENT-3,545,275	N71-24695*	c 15	NASA-CASE-XNP-06936 US-PATENT-APPL-SN-640786 US-PATENT-CLASS-318-382 US-PATENT-3,487,281
N71-24043*	c 15	NASA-CASE-XKS-03338 US-PATENT-APPL-SN-547072 US-PATENT-CLASS-89-1.806 US-PATENT-3,415,156	N71-24599*	c 15	NASA-CASE-MS-12052-1 US-PATENT-APPL-SN-770371 US-PATENT-CLASS-254-150 US-PATENT-CLASS-254-173 US-PATENT-CLASS-254-186 US-PATENT-3,545,725	N71-24696*	c 15	NASA-CASE-NPO-10173 US-PATENT-APPL-SN-796360 US-PATENT-CLASS-310-101 US-PATENT-3,535,570
N71-24044*	c 15	NASA-CASE-XMF-06888 US-PATENT-APPL-SN-591000 US-PATENT-CLASS-62-40 US-PATENT-3,415,069	N71-24600*	c 15	NASA-CASE-XGS-08718 US-PATENT-APPL-SN-785611 US-PATENT-CLASS-244-1 US-PATENT-CLASS-244-150 US-PATENT-CLASS-74-2 US-PATENT-CLASS-89-1.5 US-PATENT-CLASS-9-9 US-PATENT-3,540,676	N71-24717*	c 09	NASA-CASE-XMF-08804 US-PATENT-APPL-SN-683606 US-PATENT-CLASS-324-181 US-PATENT-3,543,159
N71-24045*	c 15	NASA-CASE-XGS-04548 US-PATENT-APPL-SN-672383 US-PATENT-CLASS-74-100 US-PATENT-3,460,397	N71-24605*	c 03	NASA-CASE-XNP-04758 US-PATENT-APPL-SN-557861 US-PATENT-CLASS-320-17 US-PATENT-3,413,536	N71-24718*	c 03	NASA-CASE-MS-10960-1 US-PATENT-APPL-SN-751198 US-PATENT-CLASS-204-305 US-PATENT-3,547,801
N71-24046*	c 15	NASA-CASE-XLE-10337 US-PATENT-APPL-SN-594633 US-PATENT-CLASS-252-26 US-PATENT-3,391,080	N71-24606*	c 05	NASA-CASE-XKS-10804 US-PATENT-APPL-SN-691909 US-PATENT-CLASS-35-17 US-PATENT-3,508,347	N71-24719*	c 03	NASA-CASE-GSC-10487-1 US-PATENT-APPL-SN-828983 US-PATENT-CLASS-320-39 US-PATENT-3,541,422
N71-24047*	c 15	NASA-CASE-XGS-03120 US-PATENT-APPL-SN-485958 US-PATENT-CLASS-156-3 US-PATENT-3,470,043	N71-24607*	c 06	NASA-CASE-XNP-09699 US-PATENT-APPL-SN-711972 US-PATENT-CLASS-73-17 US-PATENT-3,546,920	N71-24725*	c 23	NASA-CASE-GSC-10188-1 US-PATENT-APPL-SN-791888 US-PATENT-CLASS-62-384 US-PATENT-3,545,226
N71-24074*	c 16	NASA-CASE-XLA-03375 US-PATENT-APPL-SN-512562 US-PATENT-CLASS-356-104 US-PATENT-3,446,558	N71-24612*	c 07	NASA-CASE-XMF-06092 US-PATENT-APPL-SN-550088 US-PATENT-CLASS-178-7.1 US-PATENT-3,470,318	N71-24728*	c 05	NASA-CASE-MS-12243-1 US-PATENT-APPL-SN-857445 US-PATENT-CLASS-244-1 US-PATENT-3,537,668
N71-24142*	c 17	NASA-CASE-XLE-06969 US-PATENT-APPL-SN-655675 US-PATENT-CLASS-148-126 US-PATENT-3,463,679	N71-24613*	c 07	NASA-CASE-NPO-10851 US-PATENT-APPL-SN-805406 US-PATENT-CLASS-325-325 US-PATENT-3,551,816	N71-24729*	c 05	NASA-CASE-MS-13282-1 US-PATENT-APPL-SN-8498 US-PATENT-CLASS-128-2.1 US-PATENT-3,548,812
N71-24145*	c 33	NASA-CASE-XLE-03432 US-PATENT-APPL-SN-559349 US-PATENT-CLASS-13-35 US-PATENT-3,409,730	N71-24614*	c 07	NASA-CASE-XKS-09340 US-PATENT-APPL-SN-666555 US-PATENT-CLASS-343-703 US-PATENT-3,540,056	N71-24730*	c 05	NASA-CASE-XMS-09637-1 US-PATENT-APPL-SN-785710 US-PATENT-CLASS-2-2.1 US-PATENT-3,537,107
N71-24147*	c 05	NASA-CASE-XMS-10269 US-PATENT-APPL-SN-590158 US-PATENT-CLASS-165-46 US-PATENT-3,425,486	N71-24618*	c 09	NASA-CASE-FRC-10029 US-PATENT-APPL-SN-760389 US-PATENT-CLASS-128-2.06 US-PATENT-3,547,105	N71-24736*	c 28	NASA-CASE-XLE-03157 US-PATENT-APPL-SN-551014 US-PATENT-CLASS-60-240 US-PATENT-3,408,816
N71-24164*	c 15	NASA-CASE-XLA-01494 US-PATENT-APPL-SN-499122 US-PATENT-CLASS-156-545 US-PATENT-3,416,988	N71-24621*	c 07	NASA-CASE-GSC-10118-1 US-PATENT-APPL-SN-783375 US-PATENT-CLASS-179-15 US-PATENT-CLASS-325-4 US-PATENT-CLASS-343-100 US-PATENT-3,546,386	N71-24738*	c 05	NASA-CASE-ARC-10100-1 US-PATENT-APPL-SN-797058 US-PATENT-CLASS-128-24 US-PATENT-CLASS-128-25 US-PATENT-3,550,585
N71-24170*	c 16	NASA-CASE-XLA-04295 US-PATENT-APPL-SN-546149 US-PATENT-CLASS-356-107 US-PATENT-3,468,609	N71-24622*	c 07	NASA-CASE-NPO-10388 US-PATENT-APPL-SN-725432 US-PATENT-CLASS-179-15	N71-24739*	c 06	NASA-CASE-ARC-10098-1 US-PATENT-APPL-SN-702967 US-PATENT-CLASS-260-2.5 US-PATENT-3,549,564
N71-24183*	c 18	NASA-CASE-XGS-04799 US-PATENT-APPL-SN-452944 US-PATENT-CLASS-106-84 US-PATENT-3,416,939				N71-24740*	c 06	NASA-CASE-XMF-03074 US-PATENT-APPL-SN-593595 US-PATENT-CLASS-260-72.5 US-PATENT-3,516,971
N71-24184*	c 18	NASA-CASE-XNP-02139 US-PATENT-APPL-SN-430777 US-PATENT-CLASS-106-84				N71-24741*	c 07	NASA-CASE-NPO-10118

		US-PATENT-APPL-SN-704465				US-PATENT-APPL-SN-698630	N71-24910*	c 15	NASA-CASE-ERC-10045
		US-PATENT-CLASS-235-152				US-PATENT-CLASS-333-83			US-PATENT-APPL-SN-763685
N71-24742*	c 07	NASA-CASE-NPO-10140	N71-24842*	c 09	NASA-CASE-MSC-12209	US-PATENT-3,541,479			US-PATENT-CLASS-73-40.7
		US-PATENT-APPL-SN-691737			US-PATENT-APPL-SN-881039		N71-24911*	c 17	US-PATENT-3,548,636
		US-PATENT-CLASS-187-7.1			US-PATENT-CLASS-343-797				NASA-CASE-XLE-04946
		US-PATENT-3,541,250			US-PATENT-3,546,705				US-PATENT-APPL-SN-605093
N71-24750*	c 31	NASA-CASE-XGS-01654	N71-24843*	c 09	NASA-CASE-XMF-06617				US-PATENT-CLASS-118-308
		US-PATENT-APPL-SN-434148			US-PATENT-APPL-SN-656993		N71-24934*	c 18	US-PATENT-3,472,202
		US-PATENT-CLASS-102-50			US-PATENT-CLASS-324-71				NASA-CASE-NPO-10051
		US-PATENT-3,282,541			US-PATENT-3,541,439				US-PATENT-APPL-SN-711898
N71-24798*	c 10	NASA-CASE-XLE-03061-1	N71-24844*	c 10	NASA-CASE-NPO-10169				US-PATENT-CLASS-73-38
		US-PATENT-APPL-SN-632152			US-PATENT-CLASS-328-171		N71-24948*	c 21	US-PATENT-3,548,633
		US-PATENT-CLASS-340-412			US-PATENT-3,541,459				NASA-CASE-ERC-10090
		US-PATENT-3,546,694			NASA-CASE-XMS-06056-1				US-PATENT-APPL-SN-811542
N71-24799*	c 10	NASA-CASE-XNP-06505	N71-24857*	c 23	US-PATENT-APPL-SN-532006		N71-24964*	c 11	US-PATENT-3,550,129
		US-PATENT-APPL-SN-562933			US-PATENT-CLASS-350-189				NASA-CASE-NPO-10141
		US-PATENT-CLASS-307-254			US-PATENT-3,472,577				US-PATENT-APPL-SN-673227
		US-PATENT-3,501,648			NASA-CASE-MFS-14253				US-PATENT-CLASS-62-55.5
N71-24800*	c 09	NASA-CASE-ERC-10075	N71-24858*	c 33	US-PATENT-APPL-SN-709622		N71-24984*	c 15	US-PATENT-3,443,390
		US-PATENT-APPL-SN-775870			US-PATENT-CLASS-161-69				NASA-CASE-MFS-14971
		US-PATENT-CLASS-321-45			US-PATENT-3,551,266				US-PATENT-APPL-SN-827579
		US-PATENT-3,539,905			NASA-CASE-XMF-05195				US-PATENT-CLASS-74-468
N71-24803*	c 09	NASA-CASE-NPO-10242	N71-24861*	c 10	US-PATENT-APPL-SN-785595		N71-24985*	c 11	US-PATENT-3,541,875
		US-PATENT-APPL-SN-749181			US-PATENT-CLASS-318-599				NASA-CASE-KSC-10126
		US-PATENT-CLASS-307-88			US-PATENT-3,523,228				US-PATENT-APPL-SN-845973
		US-PATENT-3,541,346			NASA-CASE-FRC-10010				US-PATENT-CLASS-73-15
N71-24804*	c 09	NASA-CASE-GSC-10299-1	N71-24862*	c 10	US-PATENT-APPL-SN-771937		N71-25139*	c 10	US-PATENT-3,545,252
		US-PATENT-APPL-SN-836367			US-PATENT-CLASS-307-235				NASA-CASE-MFS-10068
		US-PATENT-CLASS-343-100			US-PATENT-3,543,050				US-PATENT-APPL-SN-700541
		US-PATENT-3,540,050			NASA-CASE-XMF-02966				US-PATENT-CLASS-321-9
N71-24805*	c 09	NASA-CASE-XMF-06892	N71-24863*	c 10	US-PATENT-APPL-SN-560968		N71-25213*	c 28	US-PATENT-3,487,288
		US-PATENT-APPL-SN-757875			US-PATENT-CLASS-324-70				NASA-CASE-GSC-10709-1
		US-PATENT-CLASS-318-318			US-PATENT-3,406,336				US-PATENT-APPL-SN-791288
		US-PATENT-3,546,553			NASA-CASE-XLE-04503				US-PATENT-CLASS-60-202
N71-24806*	c 09	NASA-CASE-NPO-10198	N71-24864*	c 14	US-PATENT-APPL-SN-606463		N71-25351*	c 33	US-PATENT-3,545,208
		US-PATENT-APPL-SN-723804			US-PATENT-CLASS-250-225				NASA-CASE-MFS-14023
		US-PATENT-CLASS-328-165			US-PATENT-3,546,471				US-PATENT-APPL-SN-795217
		US-PATENT-3,550,023			NASA-CASE-XMF-05114-3				US-PATENT-CLASS-161-161
N71-24807*	c 09	NASA-CASE-MFS-14114-2	N71-24865*	c 15	US-PATENT-APPL-SN-837378				US-PATENT-CLASS-220-9
		US-PATENT-APPL-SN-854815			US-PATENT-CLASS-72-56				US-PATENT-CLASS-52-249
		US-PATENT-CLASS-165-105			US-PATENT-3,540,250				US-PATENT-CLASS-52-404
		US-PATENT-CLASS-165-107			NASA-CASE-ERC-10001				US-PATENT-CLASS-62-45
		US-PATENT-CLASS-165-138	N71-24868*	c 23	US-PATENT-APPL-SN-712099		N71-25353*	c 33	US-PATENT-3,540,615
		US-PATENT-CLASS-310-4			US-PATENT-CLASS-350-310				NASA-CASE-MFS-20355
		US-PATENT-3,537,515			US-PATENT-3,540,802				US-PATENT-APPL-SN-845974
N71-24808*	c 09	NASA-CASE-XNP-08880	N71-24875*	c 15	NASA-CASE-XLA-06199				US-PATENT-CLASS-165-104
		US-PATENT-APPL-SN-605094			US-PATENT-APPL-SN-702911				US-PATENT-CLASS-165-105
		US-PATENT-CLASS-333-98			US-PATENT-CLASS-148-6.11				US-PATENT-CLASS-165-133
		US-PATENT-3,416,106			US-PATENT-3,540,942				US-PATENT-CLASS-219-378
N71-24809*	c 14	NASA-CASE-XNP-08961	N71-24876*	c 33	NASA-CASE-XNP-05524				US-PATENT-CLASS-219-530
		US-PATENT-APPL-SN-661170			US-PATENT-APPL-SN-250567				US-PATENT-CLASS-244-1
		US-PATENT-CLASS-250-84			US-PATENT-CLASS-165-2		N71-25360*	c 32	US-PATENT-3,548,930
		US-PATENT-3,487,216			US-PATENT-3,270,802				NASA-CASE-XLA-08530
N71-24813*	c 31	NASA-CASE-XAC-06029-1	N71-24890*	c 08	NASA-CASE-XKS-06167				US-PATENT-APPL-SN-808577
		US-PATENT-APPL-SN-588651			US-PATENT-APPL-SN-649076				US-PATENT-CLASS-73-90
		US-PATENT-CLASS-343-100			US-PATENT-CLASS-235-155				US-PATENT-3,546,931
		US-PATENT-3,540,048			US-PATENT-3,535,497		N71-25434*	c 31	NASA-CASE-MSC-13047-1
N71-24828*	c 16	NASA-CASE-XAC-10770-1	N71-24891*	c 08	NASA-CASE-XNP-09759				US-PATENT-APPL-SN-850586
		US-PATENT-APPL-SN-690997			US-PATENT-APPL-SN-606462				US-PATENT-CLASS-244-1
		US-PATENT-CLASS-356-28			US-PATENT-CLASS-235-92				US-PATENT-CLASS-244-113
		US-PATENT-3,547,540			US-PATENT-3,541,312				US-PATENT-CLASS-244-138
N71-24830*	c 17	NASA-CASE-XNP-04148	N71-24892*	c 09	NASA-CASE-NPO-10716		N71-25490*	c 26	US-PATENT-3,547,376
		US-PATENT-APPL-SN-536210			US-PATENT-APPL-SN-851394				NASA-CASE-ERC-10088
		US-PATENT-CLASS-204-38			US-PATENT-CLASS-307-104				US-PATENT-APPL-SN-760927
		US-PATENT-3,472,742			US-PATENT-CLASS-317-123				US-PATENT-CLASS-73-141
N71-24831*	c 16	NASA-CASE-NPO-10548			US-PATENT-CLASS-317-148.5				US-PATENT-3,537,305
		US-PATENT-APPL-SN-775072			US-PATENT-3,549,955		N71-25555*	c 24	NASA-CASE-XNP-09469
		US-PATENT-CLASS-330-4			NASA-CASE-ERC-10125				US-PATENT-APPL-SN-645573
		US-PATENT-3,486,123	N71-24893*	c 09	US-PATENT-APPL-SN-773029				US-PATENT-CLASS-204-168
N71-24832*	c 16	NASA-CASE-ERC-10178			US-PATENT-CLASS-323-56		N71-25865*	c 10	US-PATENT-3,540,989
		US-PATENT-APPL-SN-800973			US-PATENT-3,541,428				NASA-CASE-KSC-10002
		US-PATENT-CLASS-331-94.5			NASA-CASE-XLA-07473				US-PATENT-APPL-SN-782956
		US-PATENT-3,550,034			US-PATENT-APPL-SN-839935				US-PATENT-CLASS-178-69.5
N71-24833*	c 15	NASA-CASE-XMF-03793			US-PATENT-CLASS-318-265				US-PATENT-3,567,861
		US-PATENT-APPL-SN-453225			US-PATENT-3,546,552		N71-25866*	c 09	NASA-CASE-ARC-10003-1
		US-PATENT-CLASS-72-56			NASA-CASE-ERC-10034				US-PATENT-APPL-SN-717822
		US-PATENT-3,360,972			US-PATENT-APPL-SN-763706				US-PATENT-CLASS-178-66
N71-24834*	c 15	NASA-CASE-XNP-05634			US-PATENT-CLASS-250-43.5				US-PATENT-CLASS-179-100.2
		US-PATENT-APPL-SN-605096			US-PATENT-3,549,882				US-PATENT-3,549,799
		US-PATENT-CLASS-73-95			NASA-CASE-XLA-03538		N71-25881*	c 18	NASA-CASE-XGS-05180
		US-PATENT-3,460,379	N71-24897*	c 15	US-PATENT-APPL-SN-749149				US-PATENT-APPL-SN-721607
N71-24835*	c 15	NASA-CASE-NPO-10123			US-PATENT-CLASS-294-83				US-PATENT-CLASS-260-37
		US-PATENT-APPL-SN-731388			US-PATENT-3,508,779		N71-25882*	c 10	US-PATENT-3,567,677
		US-PATENT-CLASS-128-272			NASA-CASE-MFS-20395				NASA-CASE-GSC-10022-1
		US-PATENT-CLASS-128-275			US-PATENT-APPL-SN-830715				US-PATENT-APPL-SN-785546
		US-PATENT-3,540,449			US-PATENT-CLASS-285-314				US-PATENT-CLASS-331-113
N71-24836*	c 15	NASA-CASE-XLE-08917-2			US-PATENT-CLASS-285-317				US-PATENT-3,559,096
		US-PATENT-APPL-SN-852131			US-PATENT-CLASS-285-38		N71-25892*	c 14	NASA-CASE-XLA-04555-1
		US-PATENT-CLASS-72-60			US-PATENT-CLASS-285-406				US-PATENT-APPL-SN-594584
		US-PATENT-3,541,825			US-PATENT-3,545,792				US-PATENT-CLASS-148-13
N71-24840*	c 07	NASA-CASE-NPO-10649	N71-24904*	c 09	NASA-CASE-MFS-20385		N71-25899*	c 10	US-PATENT-3,468,727
		US-PATENT-APPL-SN-795182			US-PATENT-APPL-SN-853716				NASA-CASE-LEW-10345-1
		US-PATENT-CLASS-325-113			US-PATENT-CLASS-310-10				US-PATENT-APPL-SN-805298
		US-PATENT-3,541,450			US-PATENT-3,541,361				US-PATENT-CLASS-137-81.5
N71-24841*	c 09	NASA-CASE-XNP-09771							US-PATENT-CLASS-235-201

## ACCESSION NUMBER INDEX

N71-26577

N71-25900*	c 10	US-PATENT-3,568,702 NASA-CASE-ERC-10032 US-PATENT-APPL-SN-757857 US-PATENT-CLASS-333-30 US-PATENT-CLASS-333-72 US-PATENT-3,568,103	N71-26136*	c 14	US-PATENT-3,564,401 NASA-CASE-XLA-01782 US-PATENT-APPL-SN-576792 US-PATENT-CLASS-73-15.6 US-PATENT-3,472,060	N71-26293*	c 05	US-PATENT-APPL-SN-719870 US-PATENT-CLASS-325-67 US-PATENT-3,553,586 NASA-CASE-XFR-07658-1 US-PATENT-APPL-SN-586324 US-PATENT-CLASS-128-2.06 US-PATENT-3,426,746
N71-25901*	c 14	NASA-CASE-XLA-02810 US-PATENT-APPL-SN-764252 US-PATENT-CLASS-250-43.5 US-PATENT-CLASS-250-83.3 US-PATENT-CLASS-340-233 US-PATENT-CLASS-340-285 US-PATENT-3,569,710	N71-26137*	c 14	NASA-CASE-LAR-10305 US-PATENT-APPL-SN-811037 US-PATENT-CLASS-324-0.5 US-PATENT-CLASS-324-58.5 US-PATENT-3,562,631	N71-26294*	c 15	NASA-CASE-XNP-02862-1 US-PATENT-APPL-SN-556830 US-PATENT-CLASS-277-13 US-PATENT-3,468,548
N71-25903*	c 17	NASA-CASE-XLA-08966-1 US-PATENT-APPL-SN-570678 US-PATENT-CLASS-204-33 US-PATENT-3,468,765	N71-26142*	c 10	NASA-CASE-NPO-10302 US-PATENT-APPL-SN-848811 US-PATENT-CLASS-343-768 US-PATENT-3,553,704	N71-26312*	c 15	NASA-CASE-XNP-01263-2 US-PATENT-APPL-SN-718279 US-PATENT-CLASS-287-189.365 US-PATENT-3,481,638
N71-25914*	c 16	NASA-CASE-XLA-03410 US-PATENT-APPL-SN-512561 US-PATENT-CLASS-250-199 US-PATENT-3,469,087	N71-26145*	c 15	NASA-CASE-FRC-10005 US-PATENT-APPL-SN-756266 US-PATENT-CLASS-33-189 US-PATENT-3,562,919	N71-26326*	c 10	NASA-CASE-NPO-10143 US-PATENT-APPL-SN-692331 US-PATENT-CLASS-58-24 US-PATENT-3,472,019
N71-25917*	c 10	NASA-CASE-NPO-10595 US-PATENT-APPL-SN-771760 US-PATENT-CLASS-340-347 US-PATENT-3,569,956	N71-26148*	c 15	NASA-CASE-XMF-05114-2 US-PATENT-APPL-SN-837377 US-PATENT-CLASS-72-56 US-PATENT-3,555,867	N71-26331*	c 10	NASA-CASE-XNP-10354 US-PATENT-APPL-SN-668248 US-PATENT-CLASS-330-31 US-PATENT-3,482,179
N71-25929*	c 06	NASA-CASE-NPO-10596 US-PATENT-APPL-SN-756381 US-PATENT-CLASS-260-2.5 US-PATENT-3,557,027	N71-26153*	c 18	NASA-CASE-XLE-03940 US-PATENT-APPL-SN-539255 US-PATENT-CLASS-148-126 US-PATENT-3,472,709	N71-26333*	c 05	NASA-CASE-XMS-09652-1 US-PATENT-APPL-SN-618969 US-PATENT-CLASS-2-6 US-PATENT-3,473,165
N71-25950*	c 10	NASA-CASE-XGS-06226 US-PATENT-APPL-SN-676387 US-PATENT-CLASS-331-113 US-PATENT-3,466,570	N71-26154*	c 16	NASA-CASE-ERC-10020 US-PATENT-APPL-SN-709399 US-PATENT-CLASS-350-3.5 US-PATENT-3,540,790	N71-26334*	c 10	NASA-CASE-XLA-02619 US-PATENT-APPL-SN-796691 US-PATENT-CLASS-317-DIG.3 US-PATENT-CLASS-317-153 US-PATENT-CLASS-340-233 US-PATENT-3,575,641
N71-25975*	c 15	NASA-CASE-XMS-10660-1 US-PATENT-APPL-SN-797056 US-PATENT-CLASS-24-205.17 US-PATENT-3,469,289	N71-26155*	c 18	NASA-CASE-LAR-10373-1 US-PATENT-APPL-SN-761007 US-PATENT-CLASS-260-2.5 US-PATENT-3,481,887	N71-26339*	c 10	NASA-CASE-NPO-10185 US-PATENT-APPL-SN-723805 US-PATENT-CLASS-73-432 US-PATENT-3,472,080
N71-25999*	c 09	NASA-CASE-XGS-05290 US-PATENT-APPL-SN-754019 US-PATENT-CLASS-310-168 US-PATENT-CLASS-310-254 US-PATENT-CLASS-318-138 US-PATENT-CLASS-318-254 US-PATENT-3,569,804	N71-26161*	c 14	NASA-CASE-XLA-08254 US-PATENT-APPL-SN-867843 US-PATENT-CLASS-73-12 US-PATENT-CLASS-73-79 US-PATENT-3,576,127	N71-26346*	c 15	NASA-CASE-XLE-05641-1 US-PATENT-APPL-SN-605091 US-PATENT-CLASS-72-61 US-PATENT-3,461,700
N71-26000*	c 09	NASA-CASE-XNP-08567 US-PATENT-APPL-SN-640783 US-PATENT-CLASS-307-88 US-PATENT-3,466,459	N71-26162*	c 15	NASA-CASE-MSC-15474-1 US-PATENT-APPL-SN-878731 US-PATENT-CLASS-24-263 US-PATENT-3,564,564	N71-26374*	c 10	NASA-CASE-GSC-11367 US-PATENT-APPL-SN-675238 US-PATENT-CLASS-331-18 US-PATENT-3,484,712
N71-26002*	c 09	NASA-CASE-XMS-04213-1 US-PATENT-APPL-SN-607484 US-PATENT-CLASS-128-2.1 US-PATENT-3,468,303	N71-26173*	c 28	NASA-CASE-LEW-10689-1 US-PATENT-APPL-SN-830978 US-PATENT-CLASS-60-202 US-PATENT-3,552,125	N71-26387*	c 12	NASA-CASE-XLA-05541 US-PATENT-APPL-SN-700986 US-PATENT-CLASS-73-301 US-PATENT-3,473,379
N71-26084*	c 03	NASA-CASE-LEW-11358 US-PATENT-APPL-SN-787906 US-PATENT-CLASS-136-6 US-PATENT-3,554,806	N71-26181*	c 07	NASA-CASE-MSC-12223-1 US-PATENT-APPL-SN-839941 US-PATENT-CLASS-179-1 US-PATENT-3,555,192	N71-26414*	c 10	NASA-CASE-XMF-04958-1 US-PATENT-APPL-SN-448365 US-PATENT-CLASS-321-69 US-PATENT-3,434,037
N71-26085*	c 10	NASA-CASE-GSC-10735-1 US-PATENT-APPL-SN-863963 US-PATENT-CLASS-321-2 US-PATENT-3,559,031	N71-26182*	c 09	NASA-CASE-NPO-10625 US-PATENT-APPL-SN-856415 US-PATENT-CLASS-313-236 US-PATENT-CLASS-313-237 US-PATENT-CLASS-60-23 US-PATENT-3,562,575	N71-26415*	c 10	NASA-CASE-NPO-10003 US-PATENT-APPL-SN-638192 US-PATENT-CLASS-330-13 US-PATENT-3,461,393
N71-26092*	c 09	NASA-CASE-XNP-07477 US-PATENT-APPL-SN-605098 US-PATENT-CLASS-318-258 US-PATENT-3,501,684	N71-26185*	c 15	NASA-CASE-MFS-14711 US-PATENT-APPL-SN-774266 US-PATENT-CLASS-55-75 US-PATENT-3,557,534	N71-26418*	c 10	NASA-CASE-XGS-04224 US-PATENT-APPL-SN-568364 US-PATENT-CLASS-340-174 US-PATENT-3,483,535
N71-26100*	c 18	NASA-CASE-XLA-04251 US-PATENT-APPL-SN-657742 US-PATENT-CLASS-117-104 US-PATENT-3,553,002	N71-26189*	c 15	NASA-CASE-XLE-09527-2 US-PATENT-APPL-SN-840870 US-PATENT-CLASS-308-187 US-PATENT-3,561,828	N71-26434*	c 10	NASA-CASE-XNP-01466 US-PATENT-APPL-SN-487940 US-PATENT-CLASS-340-174 US-PATENT-3,461,437
N71-26101*	c 07	NASA-CASE-NPO-10231 US-PATENT-APPL-SN-701767 US-PATENT-CLASS-343-786 US-PATENT-3,534,376	N71-26199*	c 14	NASA-CASE-NPO-10691 US-PATENT-APPL-SN-816988 US-PATENT-CLASS-73-61 US-PATENT-3,566,676	N71-26474*	c 14	NASA-CASE-XMF-03844-1 US-PATENT-APPL-SN-601229 US-PATENT-CLASS-95-44 US-PATENT-3,472,140
N71-26102*	c 07	NASA-CASE-XNP-06611 US-PATENT-APPL-SN-593607 US-PATENT-CLASS-178-6.6 US-PATENT-3,474,192	N71-26206*	c 23	NASA-CASE-XGS-08269 US-PATENT-APPL-SN-787393 US-PATENT-CLASS-356-76 US-PATENT-3,554,647	N71-26475*	c 14	NASA-CASE-XNP-09701 US-PATENT-APPL-SN-584015 US-PATENT-CLASS-250-83.3 US-PATENT-3,461,290
N71-26103*	c 10	NASA-CASE-XNP-04623 US-PATENT-APPL-SN-510150 US-PATENT-CLASS-340-146.1 US-PATENT-3,474,413	N71-26243*	c 15	NASA-CASE-MSC-10959 US-PATENT-APPL-SN-725719 US-PATENT-CLASS-188-1 US-PATENT-3,420,338	N71-26531*	c 10	NASA-CASE-GSC-10413 US-PATENT-APPL-SN-789043 US-PATENT-CLASS-317-20 US-PATENT-CLASS-317-33 US-PATENT-3,555,361
N71-26110*	c 02	NASA-CASE-LAR-10249-1 US-PATENT-APPL-SN-835060 US-PATENT-CLASS-244-42 US-PATENT-3,576,301	N71-26244*	c 14	NASA-CASE-XMS-06497 US-PATENT-APPL-SN-617778 US-PATENT-CLASS-324-115 US-PATENT-3,464,012	N71-26537*	c 31	NASA-CASE-GSC-10556-1 NASA-CASE-GSC-10557-1 US-PATENT-APPL-SN-808193 US-PATENT-CLASS-244-1 US-PATENT-CLASS-308-1 US-PATENT-CLASS-74-5.12 US-PATENT-3,554,466
N71-26133*	c 09	NASA-CASE-MFS-20075 US-PATENT-APPL-SN-835059 US-PATENT-CLASS-317-101 US-PATENT-3,575,638	N71-26266*	c 14	NASA-CASE-XNP-09830 US-PATENT-APPL-SN-632165 US-PATENT-CLASS-324-0.5 US-PATENT-3,474,328	N71-26544*	c 10	NASA-CASE-NPO-10344 US-PATENT-APPL-SN-732921 US-PATENT-CLASS-340-347 US-PATENT-3,566,396
N71-26134*	c 15	NASA-CASE-XKS-07953 US-PATENT-APPL-SN-725405 US-PATENT-CLASS-51-170 US-PATENT-3,553,904	N71-26285*	c 16	NASA-CASE-MSC-12109 US-PATENT-APPL-SN-889376 US-PATENT-CLASS-112-402 US-PATENT-CLASS-2-275 US-PATENT-CLASS-2-81 US-PATENT-3,563,198	N71-26546*	c 12	NASA-CASE-FRC-10022 US-PATENT-APPL-SN-763729 US-PATENT-CLASS-73-194 US-PATENT-3,555,898
N71-26135*	c 14	NASA-CASE-XAC-03740 US-PATENT-APPL-SN-480211 US-PATENT-CLASS-324-43	N71-26291*	c 07	NASA-CASE-HQN-10541-1 US-PATENT-APPL-SN-494739 US-PATENT-CLASS-350-96 US-PATENT-3,556,634	N71-26577*	c 10	NASA-CASE-NPO-10214 US-PATENT-APPL-SN-704299 US-PATENT-CLASS-325-41
			N71-26292*	c 07	NASA-CASE-XKS-10543			

N71-26579*	c 07	US-PATENT-3,566,268 NASA-CASE-XMS-06740-1 US-PATENT-APPL-SN-554277 US-PATENT-CLASS-178-6 US-PATENT-3,470,313	N71-26787*	c 09	US-PATENT-APPL-SN-804172 US-PATENT-CLASS-313-63 US-PATENT-CLASS-315-111 US-PATENT-CLASS-60-202 US-PATENT-3,576,107	N71-27094*	c 28	NASA-CASE-GSC-10710-1 US-PATENT-APPL-SN-828909 US-PATENT-CLASS-73-117.4 US-PATENT-3,572,104
N71-26611*	c 15	NASA-CASE-MSC-11817-1 US-PATENT-APPL-SN-7668 US-PATENT-CLASS-165-44 US-PATENT-CLASS-165-86 US-PATENT-CLASS-188-88 US-PATENT-CLASS-244-1 US-PATENT-CLASS-244-57 US-PATENT-3,563,307	N71-26788*	c 14	NASA-CASE-XKS-05932 US-PATENT-APPL-SN-752729 US-PATENT-CLASS-240-11.2 US-PATENT-CLASS-240-11.4 US-PATENT-CLASS-240-51.11 US-PATENT-CLASS-313-22 US-PATENT-3,564,234	N71-27095*	c 28	NASA-CASE-MFS-20325 US-PATENT-APPL-SN-840176 US-PATENT-CLASS-244-1 US-PATENT-3,572,610
N71-26626*	c 10	NASA-CASE-GSC-10891-1 US-PATENT-APPL-SN-568620 US-PATENT-CLASS-307-53 US-PATENT-3,480,789	N71-27001*	c 09	NASA-CASE-XGS-11177 US-PATENT-APPL-SN-828921 US-PATENT-CLASS-317-33 US-PATENT-CLASS-317-9 US-PATENT-3,571,656	N71-27126*	c 10	NASA-CASE-LEW-10233 US-PATENT-APPL-SN-750787 US-PATENT-CLASS-307-253 US-PATENT-CLASS-307-300 US-PATENT-3,566,158
N71-26627*	c 14	NASA-CASE-MFS-14017 US-PATENT-APPL-SN-762956 US-PATENT-CLASS-248-183 US-PATENT-CLASS-308-9 US-PATENT-3,559,937	N71-27005*	c 14	NASA-CASE-MFS-20261 US-PATENT-APPL-SN-845990 US-PATENT-CLASS-1 US-PATENT-CLASS-141-258 US-PATENT-CLASS-222-137 US-PATENT-CLASS-222-49 US-PATENT-3,568,885	N71-27135*	c 15	NASA-CASE-HQN-10541-2 US-PATENT-APPL-SN-822088 US-PATENT-CLASS-219-121 US-PATENT-CLASS-331-94.5 US-PATENT-3,571,555
N71-26635*	c 15	NASA-CASE-ERC-10022 US-PATENT-APPL-SN-874733 US-PATENT-CLASS-74-424.8 US-PATENT-CLASS-74-89.15 US-PATENT-3,576,135	N71-27006*	c 15	NASA-CASE-LAR-10083-1 US-PATENT-APPL-SN-837825 US-PATENT-CLASS-73-147 US-PATENT-3,572,112	N71-27136*	c 10	NASA-CASE-GSC-10065-1 US-PATENT-APPL-SN-808462 US-PATENT-CLASS-318-571 US-PATENT-CLASS-318-653 US-PATENT-3,568,028
N71-26642*	c 28	NASA-CASE-LEW-10106-1 US-PATENT-APPL-SN-758390 US-PATENT-CLASS-60-202 US-PATENT-3,552,124	N71-27016*	c 09	NASA-CASE-GSC-11139 US-PATENT-APPL-SN-756511 US-PATENT-CLASS-307-234 US-PATENT-CLASS-307-246 US-PATENT-CLASS-307-273 US-PATENT-CLASS-328-120 US-PATENT-CLASS-330-30 US-PATENT-3,569,744	N71-27137*	c 10	NASA-CASE-XNP-06234 US-PATENT-APPL-SN-723827 US-PATENT-CLASS-235-92 US-PATENT-CLASS-328-49 US-PATENT-3,567,913
N71-26654*	c 23	NASA-CASE-NPO-10467 US-PATENT-APPL-SN-798277 US-PATENT-CLASS-62-514 US-PATENT-3,564,866	N71-27036*	c 11	NASA-CASE-XNP-09770-3 US-PATENT-APPL-SN-863967 US-PATENT-CLASS-74-18.2 US-PATENT-3,574,286	N71-27146*	c 15	NASA-CASE-LAR-10193-1 US-PATENT-APPL-SN-794968 US-PATENT-CLASS-188-1 US-PATENT-CLASS-188-103 US-PATENT-3,568,805
N71-26672*	c 14	NASA-CASE-ERC-10033 US-PATENT-APPL-SN-801660 US-PATENT-CLASS-73-49.3 US-PATENT-3,559,460	N71-27053*	c 09	NASA-CASE-ERC-10113 US-PATENT-APPL-SN-865811 US-PATENT-CLASS-323-48 US-PATENT-CLASS-323-60 US-PATENT-3,571,699	N71-27147*	c 15	NASA-CASE-MSC-12121-1 US-PATENT-APPL-SN-783374 US-PATENT-CLASS-91-390 US-PATENT-CLASS-91-461 US-PATENT-3,563,135
N71-26673*	c 15	NASA-CASE-XAC-09489-1 US-PATENT-APPL-SN-694246 US-PATENT-CLASS-356-154 US-PATENT-3,565,530	N71-27056*	c 07	NASA-CASE-MSC-12205-1 US-PATENT-APPL-SN-882577 US-PATENT-CLASS-325-16 US-PATENT-CLASS-325-23 US-PATENT-CLASS-325-369 US-PATENT-CLASS-343-100 US-PATENT-CLASS-343-117 US-PATENT-CLASS-343-176 US-PATENT-3,568,197	N71-27169*	c 15	NASA-CASE-LAR-10106-1 US-PATENT-APPL-SN-810575 US-PATENT-CLASS-188-1 US-PATENT-CLASS-310-51 US-PATENT-3,566,993
N71-26674*	c 19	NASA-CASE-XGS-04173 US-PATENT-APPL-SN-658964 US-PATENT-CLASS-350-285 US-PATENT-3,560,081	N71-27057*	c 08	NASA-CASE-XLA-07828 US-PATENT-APPL-SN-770209 US-PATENT-CLASS-318-20.105 US-PATENT-CLASS-325-151.11 US-PATENT-CLASS-340-347DA US-PATENT-3,573,797	N71-27170*	c 18	NASA-CASE-XMF-02221 US-PATENT-APPL-SN-430192 US-PATENT-CLASS-252-301.2 US-PATENT-3,567,651
N71-26678*	c 09	NASA-CASE-ERC-10013 US-PATENT-APPL-SN-802972 US-PATENT-CLASS-29-25.18 US-PATENT-3,562,881	N71-27058*	c 14	NASA-CASE-MSC-13276-1 US-PATENT-APPL-SN-880272 US-PATENT-CLASS-219-505 US-PATENT-3,575,585	N71-27183*	c 16	NASA-CASE-HQN-10541-4 US-PATENT-APPL-SN-822090 US-PATENT-CLASS-250-199 US-PATENT-3,575,602
N71-26681*	c 32	NASA-CASE-LAR-10098 US-PATENT-APPL-SN-677475 US-PATENT-CLASS-73-71.4 US-PATENT-3,564,906	N71-27067*	c 15	NASA-CASE-XKS-07814 US-PATENT-APPL-SN-672384 US-PATENT-CLASS-182-10 US-PATENT-CLASS-188-65.5 US-PATENT-3,568,795	N71-27184*	c 15	NASA-CASE-XNP-08124 US-PATENT-APPL-SN-697075 US-PATENT-CLASS-75-63 US-PATENT-3,563,727
N71-26701*	c 09	NASA-CASE-NPO-10331 US-PATENT-APPL-SN-757625 US-PATENT-CLASS-118-49.5 US-PATENT-CLASS-204-298 US-PATENT-3,556,048	N71-27068*	c 15	NASA-CASE-NPO-10796 US-PATENT-APPL-SN-815760 US-PATENT-CLASS-220-46 US-PATENT-3,568,874	N71-27185*	c 14	NASA-CASE-NPO-10556 US-PATENT-APPL-SN-796405 US-PATENT-CLASS-73-71.6 US-PATENT-3,572,089
N71-26721*	c 15	NASA-CASE-LAR-10121-1 US-PATENT-APPL-SN-766244 US-PATENT-CLASS-18-6 US-PATENT-3,562,857	N71-27084*	c 15	NASA-CASE-NPO-10755 US-PATENT-APPL-SN-816733 US-PATENT-CLASS-417-50 US-PATENT-3,567,339	N71-27186*	c 14	NASA-CASE-XMF-03968 US-PATENT-APPL-SN-719029 US-PATENT-CLASS-174-110.3 US-PATENT-CLASS-324-65 US-PATENT-CLASS-340-227 US-PATENT-CLASS-60-35.6 US-PATENT-3,569,828
N71-26722*	c 23	NASA-CASE-GSC-10216-1 US-PATENT-APPL-SN-756260 US-PATENT-CLASS-331-94.5 US-PATENT-3,555,455	N71-27088*	c 02	NASA-CASE-XLA-08967 US-PATENT-APPL-SN-837830 US-PATENT-CLASS-244-90 US-PATENT-3,570,789	N71-27191*	c 07	NASA-CASE-MFS-20068 US-PATENT-APPL-SN-797795 US-PATENT-CLASS-174-28 US-PATENT-CLASS-333-95 US-PATENT-CLASS-333-96 US-PATENT-CLASS-343-884 US-PATENT-3,569,875
N71-26726*	c 03	NASA-CASE-XNP-03413 US-PATENT-APPL-SN-640456 US-PATENT-CLASS-156-212 US-PATENT-3,565,719	N71-27090*	c 14	NASA-CASE-ERC-10044-1 US-PATENT-APPL-SN-811892 US-PATENT-CLASS-250-43.5R US-PATENT-CLASS-250-83.6R US-PATENT-CLASS-324-33 US-PATENT-3,575,597	N71-27210*	c 08	NASA-CASE-GSC-10097-1 US-PATENT-APPL-SN-762957 US-PATENT-CLASS-179-100.2 US-PATENT-CLASS-29-603 US-PATENT-CLASS-340-174.1 US-PATENT-3,566,045
N71-26754*	c 06	NASA-CASE-XNP-09451 US-PATENT-APPL-SN-713162 US-PATENT-CLASS-23-253 US-PATENT-3,560,161	N71-27091*	c 15	NASA-CASE-MFS-13929 US-PATENT-APPL-SN-779847 US-PATENT-CLASS-152-225 US-PATENT-CLASS-152-250 US-PATENT-3,568,748	N71-27214*	c 15	NASA-CASE-XLA-08911 US-PATENT-APPL-SN-777664 US-PATENT-CLASS-219-229 US-PATENT-CLASS-228-53 US-PATENT-3,575,336
N71-26772*	c 18	NASA-CASE-XMF-07770-2 US-PATENT-APPL-SN-711903 US-PATENT-CLASS-106-296 US-PATENT-3,576,656				N71-27215*	c 14	NASA-CASE-LAR-10204 US-PATENT-APPL-SN-766245 US-PATENT-CLASS-235-92 US-PATENT-CLASS-356-106 US-PATENT-3,572,935
N71-26773*	c 17	NASA-CASE-XNP-04262-2 US-PATENT-APPL-SN-684894 US-PATENT-CLASS-75-66 US-PATENT-3,565,607				N71-27232*	c 09	NASA-CASE-NPO-10607 US-PATENT-APPL-SN-799353 US-PATENT-CLASS-250-83 US-PATENT-CLASS-317-230 US-PATENT-CLASS-317-231 US-PATENT-CLASS-317-238 US-PATENT-3,568,010
N71-26774*	c 14	NASA-CASE-ERC-11020 US-PATENT-APPL-SN-686248 US-PATENT-CLASS-325-363 US-PATENT-3,564,420						
N71-26779*	c 28	NASA-CASE-XLA-04126 US-PATENT-APPL-SN-467820 US-PATENT-CLASS-102-101 US-PATENT-CLASS-264-3 US-PATENT-CLASS-86-1 US-PATENT-CLASS-86-20.2 US-PATENT-3,570,364						
N71-26781*	c 28	NASA-CASE-LEW-10210-1						

## ACCESSION NUMBER INDEX

N71-28892

N71-27233*	c 07	NASA-CASE-GSC-10220-1 US-PATENT-APPL-SN-759256 US-PATENT-CLASS-343-777 US-PATENT-CLASS-343-786 US-PATENT-CLASS-343-799 US-PATENT-CLASS-343-840 US-PATENT-CLASS-343-854 US-PATENT-CLASS-3,569,976	N71-27407*	c 14	NASA-CASE-GSC-10376-1 US-PATENT-APPL-SN-806226 US-PATENT-CLASS-307-126 US-PATENT-CLASS-323-20 US-PATENT-CLASS-3,566,143	N71-28729*	c 18	NASA-CASE-LEW-10219-1 US-PATENT-APPL-SN-785780 US-PATENT-CLASS-148-126 US-PATENT-CLASS-3,579,390
N71-27234*	c 05	NASA-CASE-XFR-07172 US-PATENT-APPL-SN-720041 US-PATENT-CLASS-128-2.05 US-PATENT-CLASS-3,563,232	N71-27432*	c 15	NASA-CASE-NPO-10808 US-PATENT-APPL-SN-808192 US-PATENT-CLASS-60-243 US-PATENT-CLASS-3,568,447	N71-28739*	c 10	NASA-CASE-XNP-01068 US-PATENT-APPL-SN-375680 US-PATENT-CLASS-307-88.5 US-PATENT-CLASS-3,271,594
N71-27254*	c 06	NASA-CASE-NPO-10768 US-PATENT-APPL-SN-770398 US-PATENT-CLASS-260-615 US-PATENT-CLASS-3,574,770	N71-27585*	c 28	NASA-CASE-MFS-20130 US-PATENT-APPL-SN-809822 US-PATENT-CLASS-244-4 US-PATENT-CLASS-3,570,785	N71-28740*	c 15	NASA-CASE-XLA-09346 US-PATENT-APPL-SN-820964 US-PATENT-CLASS-356-150 US-PATENT-CLASS-356-152 US-PATENT-CLASS-356-153 US-PATENT-CLASS-73-147 US-PATENT-CLASS-3,583,815
N71-27255*	c 08	NASA-CASE-NPO-12107 US-PATENT-APPL-SN-555189 US-PATENT-CLASS-179-100.2 US-PATENT-CLASS-340-146.1 US-PATENT-CLASS-340-172.5 US-PATENT-CLASS-3,571,801	N71-27754*	c 15	NASA-CASE-ARC-10131-1 US-PATENT-APPL-SN-808576 US-PATENT-CLASS-60-51 US-PATENT-CLASS-91-361 US-PATENT-CLASS-91-390 US-PATENT-CLASS-91-448 US-PATENT-CLASS-3,568,572	N71-28741*	c 12	NASA-CASE-XLE-09341 US-PATENT-APPL-SN-780065 US-PATENT-CLASS-137-81.5 US-PATENT-CLASS-3,583,419
N71-27271*	c 10	NASA-CASE-XLA-03893 US-PATENT-APPL-SN-779024 US-PATENT-CLASS-331-109 US-PATENT-CLASS-331-117 US-PATENT-CLASS-331-177 US-PATENT-CLASS-332-30 US-PATENT-CLASS-3,569,866	N71-27862*	c 33	NASA-CASE-MFS-14114 US-PATENT-APPL-SN-706013 US-PATENT-CLASS-310-4 US-PATENT-CLASS-3,535,562	N71-28747*	c 17	NASA-CASE-XNP-08881 US-PATENT-APPL-SN-732922 US-PATENT-CLASS-161-89 US-PATENT-CLASS-3,579,412
N71-27272*	c 10	NASA-CASE-XLA-08799 US-PATENT-APPL-SN-668242 US-PATENT-CLASS-340-150 US-PATENT-CLASS-340-164 US-PATENT-CLASS-340-166 US-PATENT-CLASS-340-213 US-PATENT-CLASS-340-403 US-PATENT-CLASS-3,571,800	N71-28421*	c 09	NASA-CASE-NPO-10412 US-PATENT-APPL-SN-768470 US-PATENT-CLASS-310-4 US-PATENT-CLASS-3,578,992	N71-28759*	c 22	NASA-CASE-LEW-10250-1 US-PATENT-APPL-SN-732455 US-PATENT-CLASS-176-45 US-PATENT-CLASS-3,574,057
N71-27323*	c 14	NASA-CASE-NPO-10810 US-PATENT-APPL-SN-805405 US-PATENT-CLASS-250-83.3 US-PATENT-CLASS-73-355 US-PATENT-CLASS-3,566,122	N71-28429*	c 07	NASA-CASE-MSC-13201-1 US-PATENT-APPL-SN-789903 US-PATENT-CLASS-332-29 US-PATENT-CLASS-332-30 US-PATENT-CLASS-3,579,147	N71-28779*	c 11	NASA-CASE-XNP-00250 US-PATENT-APPL-SN-212497 US-PATENT-CLASS-181-5 US-PATENT-CLASS-3,260,326
N71-27324*	c 21	NASA-CASE-GSC-10555-1 US-PATENT-APPL-SN-785620 US-PATENT-CLASS-244-1 US-PATENT-CLASS-3,567,155	N71-28430*	c 07	NASA-CASE-GSC-10668-1 US-PATENT-APPL-SN-743525 US-PATENT-CLASS-307-296 US-PATENT-CLASS-325-185 US-PATENT-CLASS-330-124 US-PATENT-CLASS-330-200 US-PATENT-CLASS-330-40 US-PATENT-CLASS-3,577,092	N71-28783*	c 10	NASA-CASE-XMS-02182 US-PATENT-APPL-SN-516153 US-PATENT-CLASS-317-100 US-PATENT-CLASS-3,317,797
N71-27325*	c 14	NASA-CASE-GSC-10441-1 US-PATENT-APPL-SN-782544 US-PATENT-CLASS-324-43 US-PATENT-CLASS-3,571,700	N71-28465*	c 15	NASA-CASE-ERC-10097 US-PATENT-APPL-SN-797059 US-PATENT-CLASS-308-170 US-PATENT-CLASS-3,583,777	N71-28807*	c 06	NASA-CASE-XMF-08674 US-PATENT-APPL-SN-617775 US-PATENT-CLASS-260-47 US-PATENT-CLASS-3,370,039
N71-27332*	c 12	NASA-CASE-NPO-10416 US-PATENT-APPL-SN-754020 US-PATENT-CLASS-137-81.5 US-PATENT-CLASS-3,570,513	N71-28467*	c 15	NASA-CASE-NPO-10646 US-PATENT-APPL-SN-813488 US-PATENT-CLASS-64-18 US-PATENT-CLASS-3,574,277	N71-28808*	c 06	NASA-CASE-XNP-04023 US-PATENT-APPL-SN-470902 US-PATENT-CLASS-260-429 US-PATENT-CLASS-3,396,184
N71-27334*	c 14	NASA-CASE-ERC-10087 US-PATENT-APPL-SN-738315 US-PATENT-CLASS-29-588 US-PATENT-CLASS-3,566,459	N71-28468*	c 09	NASA-CASE-ARC-10137-1 US-PATENT-APPL-SN-799013 US-PATENT-CLASS-307-265 US-PATENT-CLASS-307-273 US-PATENT-CLASS-307-288 US-PATENT-CLASS-328-207 US-PATENT-CLASS-3,584,311	N71-28809*	c 07	NASA-CASE-XGS-02290 US-PATENT-APPL-SN-544895 US-PATENT-CLASS-343-771 US-PATENT-CLASS-3,417,400
N71-27338*	c 10	NASA-CASE-KSC-10020 US-PATENT-APPL-SN-817482 US-PATENT-CLASS-324-103 US-PATENT-CLASS-324-107 US-PATENT-CLASS-324-133 US-PATENT-CLASS-340-248 US-PATENT-CLASS-3,571,707	N71-28554*	c 16	NASA-CASE-XGS-10518 US-PATENT-APPL-SN-764470 US-PATENT-CLASS-335-216 US-PATENT-CLASS-3,541,486	N71-28810*	c 09	NASA-CASE-XNP-03916 US-PATENT-APPL-SN-535304 US-PATENT-CLASS-331-113 US-PATENT-CLASS-3,325,749
N71-27341*	c 07	NASA-CASE-NPO-10343 US-PATENT-APPL-SN-750786 US-PATENT-CLASS-178-7.1 US-PATENT-CLASS-178-7.3 US-PATENT-CLASS-3,566,027	N71-28579*	c 03	NASA-CASE-LEW-11359 US-PATENT-APPL-SN-787911 US-PATENT-CLASS-136-83 US-PATENT-CLASS-3,573,986	N71-28849*	c 28	NASA-CASE-XMS-04826 US-PATENT-APPL-SN-521755 US-PATENT-CLASS-60-258 US-PATENT-CLASS-3,318,096
N71-27363*	c 06	NASA-CASE-HQN-10364 US-PATENT-APPL-SN-713616 US-PATENT-CLASS-260-2 US-PATENT-CLASS-3,563,918	N71-28582*	c 15	NASA-CASE-LEW-10278-1 US-PATENT-APPL-SN-760928 US-PATENT-CLASS-117-224 US-PATENT-CLASS-3,573,977	N71-28850*	c 28	NASA-CASE-XNP-01954 US-PATENT-APPL-SN-372730 US-PATENT-CLASS-313-230 US-PATENT-CLASS-3,328,624
N71-27364*	c 09	NASA-CASE-ERC-10065 US-PATENT-APPL-SN-777818 US-PATENT-CLASS-321-61 US-PATENT-CLASS-321-64 US-PATENT-CLASS-322-32 US-PATENT-CLASS-3,571,693	N71-28618*	c 09	NASA-CASE-ERC-10098 US-PATENT-APPL-SN-779169 US-PATENT-CLASS-178-5.2R US-PATENT-CLASS-178-54CF US-PATENT-CLASS-178-54PE US-PATENT-CLASS-3,582,960	N71-28851*	c 31	NASA-CASE-XMS-06162 US-PATENT-APPL-SN-610724 US-PATENT-CLASS-244-138 US-PATENT-CLASS-3,330,510
N71-27365*	c 10	NASA-CASE-NPO-10251 US-PATENT-APPL-SN-774265 US-PATENT-CLASS-35-19 US-PATENT-CLASS-3,570,143	N71-28619*	c 05	NASA-CASE-ARC-10153 US-PATENT-APPL-SN-783377 US-PATENT-CLASS-104-1 US-PATENT-CLASS-104-139 US-PATENT-CLASS-119-96 US-PATENT-CLASS-238-1 US-PATENT-CLASS-248-361 US-PATENT-CLASS-272-70 US-PATENT-CLASS-35-29 US-PATENT-CLASS-3,583,322	N71-28852*	c 33	NASA-CASE-XNP-01310 US-PATENT-APPL-SN-379771 US-PATENT-CLASS-60-266 US-PATENT-CLASS-3,279,193
N71-27366*	c 10	NASA-CASE-GSC-10114-1 US-PATENT-APPL-SN-796370 US-PATENT-CLASS-317-33 US-PATENT-CLASS-321-12 US-PATENT-CLASS-3,571,662	N71-28620*	c 06	NASA-CASE-NPO-10701 US-PATENT-APPL-SN-763355 US-PATENT-CLASS-260-47 US-PATENT-CLASS-3,576,786	N71-28859*	c 10	NASA-CASE-XNP-01107 US-PATENT-APPL-SN-384010 US-PATENT-CLASS-330-51 US-PATENT-CLASS-3,389,346
N71-27372*	c 15	NASA-CASE-NPO-10070 US-PATENT-APPL-SN-780064 US-PATENT-CLASS-23-259 US-PATENT-CLASS-3,565,584	N71-28629*	c 11	NASA-CASE-KSC-10198 US-PATENT-APPL-SN-845971 US-PATENT-CLASS-73-15 US-PATENT-CLASS-73-432 US-PATENT-CLASS-3,578,756	N71-28860*	c 10	NASA-CASE-MSC-13492-1 US-PATENT-APPL-SN-53156 US-PATENT-CLASS-307-215 US-PATENT-CLASS-307-265 US-PATENT-CLASS-307-273 US-PATENT-CLASS-328-207 US-PATENT-CLASS-328-92 US-PATENT-CLASS-3,577,014
N71-27397*	c 18	NASA-CASE-XNP-02500 US-PATENT-APPL-SN-508169 US-PATENT-CLASS-324-58.5	N71-28691*	c 09	NASA-CASE-MFS-13687	N71-28863*	c 14	NASA-CASE-ERC-10014 US-PATENT-APPL-SN-815367 US-PATENT-CLASS-250-41.9 US-PATENT-CLASS-250-49.5 US-PATENT-CLASS-3,567,927
						N71-28886*	c 09	NASA-CASE-MFS-14610 US-PATENT-APPL-SN-885571 US-PATENT-CLASS-318-317 US-PATENT-CLASS-318-331 US-PATENT-CLASS-318-345 US-PATENT-CLASS-318-504 US-PATENT-CLASS-3,573,583
						N71-28892*	c 33	NASA-CASE-XMF-05046 US-PATENT-APPL-SN-559350

## N71-28900

## ACCESSION NUMBER INDEX

		US-PATENT-CLASS-62-45	N71-28994*	c 14	NASA-CASE-XER-11203	N71-29129*	c 03	NASA-CASE-XGS-01674
		US-PATENT-3,365,897			US-PATENT-APPL-SN-815366			US-PATENT-APPL-SN-248985
N71-28900*	c 07	NASA-CASE-XNP-02389			US-PATENT-CLASS-250-218			US-PATENT-CLASS-320-13
		US-PATENT-APPL-SN-516162			US-PATENT-CLASS-356-103			US-PATENT-3,118,100
		US-PATENT-CLASS-343-100			US-PATENT-3,578,867	N71-29131*	c 16	NASA-CASE-ERC-10151
		US-PATENT-3,331,071			NASA-CASE-MSC-11277			US-PATENT-APPL-SN-853856
N71-28903*	c 33	NASA-CASE-XLA-01745	N71-29008*	c 09	US-PATENT-APPL-SN-771759			US-PATENT-CLASS-350-3.5
		US-PATENT-APPL-SN-538907			US-PATENT-CLASS-317-155.5			US-PATENT-3,578,838
		US-PATENT-CLASS-244-1			US-PATENT-CLASS-317-33	N71-29132*	c 15	NASA-CASE-NPO-10431
		US-PATENT-3,409,247			US-PATENT-CLASS-317-54			US-PATENT-APPL-SN-865329
N71-28915*	c 28	NASA-CASE-LEW-10286-1			US-PATENT-CLASS-317-60			US-PATENT-CLASS-73-49.8
		US-PATENT-APPL-SN-839994			US-PATENT-3,579,041			US-PATENT-3,583,239
		US-PATENT-CLASS-431-352	N71-29018*	c 15	NASA-CASE-XLA-08916	N71-29133*	c 15	NASA-CASE-MFS-20453
		US-PATENT-CLASS-60-39.36			US-PATENT-APPL-SN-777765			US-PATENT-APPL-SN-885594
		US-PATENT-CLASS-60-39.65			US-PATENT-CLASS-29-421			US-PATENT-CLASS-29-276R
		US-PATENT-3,581,492			US-PATENT-3,583,058			US-PATENT-CLASS-294-15
N71-28925*	c 08	NASA-CASE-XNP-01012	N71-29032*	c 15	NASA-CASE-XMF-05999			US-PATENT-CLASS-339-17R
		US-PATENT-APPL-SN-369338			US-PATENT-APPL-SN-752946			US-PATENT-CLASS-81-3R
		US-PATENT-CLASS-340-174			US-PATENT-CLASS-117-212			US-PATENT-3,583,744
		US-PATENT-3,394,359			US-PATENT-3,576,669	N71-29134*	c 14	NASA-CASE-MFS-11204
N71-28926*	c 09	NASA-CASE-XMS-03542	N71-29033*	c 08	NASA-CASE-GSC-10554-1			US-PATENT-APPL-SN-845991
		US-PATENT-APPL-SN-482952			US-PATENT-APPL-SN-828984			US-PATENT-CLASS-73-1R
		US-PATENT-CLASS-307-263			US-PATENT-CLASS-235-150.1			US-PATENT-CLASS-73-304C
		US-PATENT-3,364,366			US-PATENT-CLASS-235-150.2			US-PATENT-3,578,755
N71-28928*	c 28	NASA-CASE-XNP-00816			US-PATENT-CLASS-235-150.27	N71-29135*	c 10	NASA-CASE-GSC-10564
		US-PATENT-APPL-SN-235588			US-PATENT-CLASS-235-151.1			US-PATENT-APPL-SN-292596
		US-PATENT-CLASS-253-77			US-PATENT-3,578,957			US-PATENT-CLASS-340-174
		US-PATENT-3,202,398	N71-29034*	c 08	NASA-CASE-NPO-11088			US-PATENT-3,348,218
N71-28929*	c 27	NASA-CASE-XNP-00650			US-PATENT-APPL-SN-887701	N71-29136*	c 15	NASA-CASE-XLA-00013
		US-PATENT-APPL-SN-271823			US-PATENT-CLASS-307-207			US-PATENT-APPL-SN-579121
		US-PATENT-CLASS-60-39.48			US-PATENT-CLASS-307-222			US-PATENT-CLASS-308-177
		US-PATENT-3,170,295			US-PATENT-CLASS-328-167			US-PATENT-2,903,307
N71-28933*	c 14	NASA-CASE-XLA-08913			US-PATENT-CLASS-328-44	N71-29137*	c 17	NASA-CASE-XNP-04339
		US-PATENT-APPL-SN-865109			US-PATENT-3,579,122			US-PATENT-APPL-SN-451596
		US-PATENT-CLASS-204-263	N71-29035*	c 09	NASA-CASE-LEW-10155-1			US-PATENT-CLASS-264-111
		US-PATENT-3,574,084			US-PATENT-APPL-SN-889387			US-PATENT-3,413,393
N71-28935*	c 14	NASA-CASE-LAR-10686			US-PATENT-CLASS-337-114	N71-29138*	c 08	NASA-CASE-ERC-10041
		US-PATENT-APPL-SN-280362			US-PATENT-CLASS-337-121			US-PATENT-APPL-SN-889478
		US-PATENT-CLASS-226-58			US-PATENT-3,579,168			US-PATENT-CLASS-307-234
		US-PATENT-3,298,582	N71-29040*	c 18	NASA-CASE-XLE-10910			US-PATENT-CLASS-307-265
N71-28936*	c 15	NASA-CASE-XMS-10993			US-PATENT-APPL-SN-751061			US-PATENT-CLASS-324-106
		US-PATENT-APPL-SN-660573			US-PATENT-CLASS-148-6			US-PATENT-CLASS-328-58
		US-PATENT-CLASS-244-1			US-PATENT-3,573,996			US-PATENT-CLASS-332-10
		US-PATENT-3,389,877	N71-29041*	c 14	NASA-CASE-XLA-10402			US-PATENT-CLASS-332-9R
N71-28937*	c 15	NASA-CASE-XNP-01855			US-PATENT-APPL-SN-762935			US-PATENT-3,579,146
		US-PATENT-APPL-SN-408435			US-PATENT-CLASS-356-76	N71-29139*	c 09	NASA-CASE-XLA-07788
		US-PATENT-CLASS-285-45			US-PATENT-3,574,462			US-PATENT-APPL-SN-874732
		US-PATENT-3,219,365	N71-29044*	c 03	NASA-CASE-XMS-02063			US-PATENT-CLASS-307-215
N71-28951*	c 15	NASA-CASE-XNP-02278			US-PATENT-APPL-SN-422096			US-PATENT-CLASS-307-247
		US-PATENT-APPL-SN-11853			US-PATENT-CLASS-136-86			US-PATENT-CLASS-307-265
		US-PATENT-CLASS-60-35.55			US-PATENT-3,382,105			US-PATENT-CLASS-307-273
		US-PATENT-3,132,479	N71-29046*	c 33	NASA-CASE-XHQ-03673			US-PATENT-CLASS-307-294
N71-28952*	c 15	NASA-CASE-XAC-00001			US-PATENT-APPL-SN-559055			US-PATENT-CLASS-328-207
		US-PATENT-APPL-SN-612568			US-PATENT-CLASS-165-86	N71-29151*	c 33	NASA-CASE-XLE-00035
		US-PATENT-CLASS-318-31			US-PATENT-3,347,309			US-PATENT-APPL-SN-575291
		US-PATENT-2,837,706	N71-29049*	c 23	NASA-CASE-XNP-06503			US-PATENT-CLASS-204-37
N71-28958*	c 14	NASA-CASE-XNP-02792			US-PATENT-APPL-SN-370989			US-PATENT-2,926,123
		US-PATENT-APPL-SN-262596			US-PATENT-CLASS-335-216	N71-29152*	c 33	NASA-CASE-XLE-00027
		US-PATENT-CLASS-219-413			US-PATENT-3,273,094			US-PATENT-APPL-SN-529594
		US-PATENT-3,197,616	N71-29050*	c 31	NASA-CASE-HQN-00936			US-PATENT-CLASS-253-39.1
N71-28959*	c 15	NASA-CASE-XNP-01848			US-PATENT-CLASS-244-1			US-PATENT-2,956,772
		US-PATENT-APPL-SN-359532			US-PATENT-3,396,920	N71-29153*	c 28	NASA-CASE-MFS-20831
		US-PATENT-CLASS-64-27			NASA-CASE-XMF-04208			US-PATENT-APPL-SN-238421
		US-PATENT-3,236,066	N71-29051*	c 33	US-PATENT-APPL-SN-428887			US-PATENT-CLASS-60-35.54
N71-28960*	c 10	NASA-CASE-XNP-00745			US-PATENT-CLASS-73-190			US-PATENT-3,212,259
		US-PATENT-APPL-SN-314570			US-PATENT-3,372,588	N71-29154*	c 28	NASA-CASE-XLE-00155
		US-PATENT-CLASS-328-67			NASA-CASE-MSC-12389			US-PATENT-APPL-SN-348600
		US-PATENT-3,252,100	N71-29052*	c 33	US-PATENT-APPL-SN-229286			US-PATENT-CLASS-253-77
N71-28965* #	c 07	NASA-CASE-GSC-10949-1			US-PATENT-CLASS-165-47			US-PATENT-2,997,274
		US-PATENT-APPL-SN-94369			US-PATENT-3,212,564	N71-29155*	c 27	NASA-CASE-MSC-12390
		NASA-CASE-HQN-00937			NASA-CASE-HQN-00938			US-PATENT-APPL-SN-231520
N71-28979*	c 07	US-PATENT-APPL-SN-343760	N71-29053*	c 33	US-PATENT-APPL-SN-300957			US-PATENT-CLASS-222-61
		US-PATENT-CLASS-343-823			US-PATENT-CLASS-60-267			US-PATENT-3,286,882
		US-PATENT-3,299,431			US-PATENT-3,298,175	N71-29156*	c 26	NASA-CASE-XNP-01961
N71-28980*	c 07	NASA-CASE-XLA-10772			NASA-CASE-ERC-10011			US-PATENT-APPL-SN-442835
		US-PATENT-APPL-SN-887700	N71-29065*	c 07	US-PATENT-APPL-SN-802818			US-PATENT-CLASS-148-174
		US-PATENT-CLASS-343-708			US-PATENT-CLASS-333-81			US-PATENT-3,397,094
		US-PATENT-CLASS-343-784			US-PATENT-CLASS-350-1	N71-29184*	c 25	NASA-CASE-XLA-00327
		US-PATENT-CLASS-343-872			US-PATENT-CLASS-350-286			US-PATENT-APPL-SN-199199
		US-PATENT-3,579,242			US-PATENT-3,574,438			US-PATENT-CLASS-315-111
N71-28991*	c 14	NASA-CASE-XLA-06713	N71-29123*	c 23	NASA-CASE-XNP-08907			US-PATENT-3,238,413
		US-PATENT-APPL-SN-863913			US-PATENT-APPL-SN-824042	N71-30026*	c 14	NASA-CASE-MFS-20096
		US-PATENT-CLASS-324-5			US-PATENT-CLASS-350-102			US-PATENT-APPL-SN-435433
		US-PATENT-CLASS-324-73			US-PATENT-CLASS-350-288			US-PATENT-CLASS-73-432
		US-PATENT-CLASS-340-347AD			US-PATENT-CLASS-350-310			US-PATENT-3,396,584
		US-PATENT-3,579,103			US-PATENT-3,574,448	N71-30027*	c 23	NASA-CASE-GSC-10700
N71-28992*	c 14	NASA-CASE-ERC-10150			NASA-CASE-NPO-11087			US-PATENT-APPL-SN-311387
		US-PATENT-APPL-SN-822519	N71-29125*	c 23	US-PATENT-APPL-SN-840359			US-PATENT-CLASS-350-2
		US-PATENT-CLASS-250-41.95			US-PATENT-CLASS-331-94.5			US-PATENT-3,394,975
		US-PATENT-CLASS-73-40.7			US-PATENT-CLASS-356-153	N71-30028*	c 15	NASA-CASE-MFS-20830
		US-PATENT-3,578,758			US-PATENT-3,574,467			US-PATENT-APPL-SN-288620
N71-28993*	c 14	NASA-CASE-MFS-20044			NASA-CASE-XAC-00048			US-PATENT-3,262,395
		US-PATENT-APPL-SN-838630	N71-29128*	c 02	US-PATENT-APPL-SN-765264	N71-30265*	c 14	NASA-CASE-HQN-10780
		US-PATENT-CLASS-250-219			US-PATENT-CLASS-121-38			US-PATENT-APPL-SN-247136
		US-PATENT-CLASS-356-209			US-PATENT-2,898,889			US-PATENT-CLASS-73-497
		US-PATENT-3,574,470						



## ACCESSION NUMBER INDEX

N72-12408

N71-30292*	c 23	US-PATENT-3,270,565	N71-34044* #	c 03	US-PATENT-CLASS-329-145	N72-11365*	c 14	US-PATENT-CLASS-73-95
		NASA-CASE-HQN-10781			US-PATENT-3,588,705			US-PATENT-3,592,545
N71-33108*	c 07	US-PATENT-APPL-SN-86018	N71-34212* #	c 09	NASA-CASE-NPO-11190	N72-11385*	c 15	NASA-CASE-MFS-20485
		US-PATENT-3,239,660			US-PATENT-APPL-SN-115944			US-PATENT-APPL-SN-22320
N71-33109*	c 09	NASA-CASE-KSC-10164	N71-34389* #	c 14	NASA-CASE-MFS-20935	N72-11386*	c 15	US-PATENT-CLASS-250-43.5FC
		US-PATENT-APPL-SN-782955			US-PATENT-APPL-SN-136007			US-PATENT-CLASS-73-194F
N71-33110*	c 08	US-PATENT-CLASS-179-1R	N72-10138* #	c 06	NASA-CASE-HQN-10683	N72-11387*	c 15	US-PATENT-3,599,489
		US-PATENT-CLASS-179-1VC			US-PATENT-APPL-SN-146217			NASA-CASE-MFS-18495
N71-33129*	c 10	US-PATENT-3,588,359	N72-10375* #	c 14	NASA-CASE-HQN-10537-1	N72-11388*	c 15	US-PATENT-APPL-SN-38814
		NASA-CASE-ARC-10101-1			US-PATENT-APPL-SN-112366			US-PATENT-CLASS-24-211N
N71-33160*	c 31	US-PATENT-APPL-SN-793823	N72-11018* #	c 02	NASA-CASE-GSC-11095-1	N72-11389*	c 15	US-PATENT-CLASS-85-5B
		US-PATENT-CLASS-307-251			US-PATENT-APPL-SN-147940			US-PATENT-3,596,554
N71-33229*	c 23	US-PATENT-CLASS-307-261	N72-11084*	c 05	NASA-CASE-LAR-10557	N72-11390*	c 15	NASA-CASE-MFS-20249
		US-PATENT-CLASS-321-47			US-PATENT-APPL-SN-853746			US-PATENT-APPL-SN-794530
N71-33407*	c 10	US-PATENT-3,588,671	N72-11085*	c 05	US-PATENT-CLASS-416-115	N72-11391*	c 15	US-PATENT-CLASS-248-183
		NASA-CASE-GSC-10186			US-PATENT-CLASS-416-121			US-PATENT-CLASS-248-278
N71-33408*	c 17	US-PATENT-APPL-SN-713188	N72-11148*	c 07	US-PATENT-CLASS-416-127	N72-11392*	c 15	US-PATENT-CLASS-248-487
		US-PATENT-CLASS-235-164			US-PATENT-CLASS-416-130			US-PATENT-CLASS-33-72
N71-33409*	c 03	US-PATENT-CLASS-235-175	N72-11149*	c 07	US-PATENT-CLASS-416-149	N72-11708*	c 28	US-PATENT-CLASS-350-285
		US-PATENT-3,588,483			US-PATENT-CLASS-416-200			US-PATENT-CLASS-350-287
N71-33410*	c 16	NASA-CASE-GSC-10667-1	N72-11150*	c 07	US-PATENT-3,592,559	N72-11709*	c 28	US-PATENT-3,596,863
		US-PATENT-APPL-SN-749548			NASA-CASE-XGS-04047-2			NASA-CASE-XMF-09902
N71-33518*	c 15	US-PATENT-CLASS-330-11	N72-11171*	c 08	US-PATENT-APPL-SN-843251	N72-12080*	c 07	US-PATENT-APPL-SN-769665
		US-PATENT-CLASS-330-16			US-PATENT-CLASS-136-206			US-PATENT-CLASS-75-20F
N71-33519*	c 09	US-PATENT-CLASS-330-24	N72-11172*	c 08	US-PATENT-3,597,281	N72-12081*	c 07	US-PATENT-3,592,628
		US-PATENT-3,585,514			NASA-CASE-NPO-10667			NASA-CASE-MFS-20423
N71-33612*	c 11	NASA-CASE-XLA-04063	N72-11224*	c 09	US-PATENT-APPL-SN-868530	N72-12136*	c 09	US-PATENT-APPL-SN-865298
		US-PATENT-APPL-SN-802948			US-PATENT-CLASS-62-467			US-PATENT-CLASS-212-134
N71-33613*	c 07	US-PATENT-CLASS-179-1	N72-11225*	c 09	US-PATENT-CLASS-62-567	N72-12408*	c 15	US-PATENT-CLASS-308-5
		US-PATENT-CLASS-244-1			US-PATENT-3,599,443			US-PATENT-3,600,046
N71-33696*	c 07	US-PATENT-CLASS-244-83	N72-11256*	c 10	NASA-CASE-MS-13140	N72-12408*	c 15	NASA-CASE-XLA-05056
		US-PATENT-3,586,261			US-PATENT-APPL-SN-796358			US-PATENT-APPL-SN-596733
		NASA-CASE-NPO-10468			US-PATENT-CLASS-285-410			US-PATENT-CLASS-210-445
		US-PATENT-APPL-SN-787846			US-PATENT-CLASS-297-232			US-PATENT-3,592,768
		US-PATENT-CLASS-350-310			US-PATENT-CLASS-297-68			NASA-CASE-MFS-18100
		US-PATENT-CLASS-350-55			US-PATENT-CLASS-5-69			US-PATENT-APPL-SN-784055
		US-PATENT-3,588,220			US-PATENT-3,592,505			US-PATENT-CLASS-15-143
		NASA-CASE-NPO-10342			NASA-CASE-NPO-10301			US-PATENT-CLASS-15-210
		US-PATENT-APPL-SN-704446			US-PATENT-APPL-SN-848810			US-PATENT-3,591,885
		US-PATENT-CLASS-178-89.5			US-PATENT-CLASS-343-771			NASA-CASE-NPO-11012
		US-PATENT-CLASS-179-15BS			US-PATENT-CLASS-343-853			US-PATENT-APPL-SN-845807
		US-PATENT-CLASS-340-347DD			US-PATENT-3,599,216			US-PATENT-CLASS-248-18
		US-PATENT-3,588,883			NASA-CASE-GSC-10390-1			US-PATENT-CLASS-248-20
		NASA-CASE-LEW-10327			US-PATENT-APPL-SN-749121			US-PATENT-3,592,422
		US-PATENT-APPL-SN-772006			US-PATENT-CLASS-325-39			NASA-CASE-MFS-20299
		US-PATENT-CLASS-148-6.3			US-PATENT-CLASS-325-4			US-PATENT-APPL-SN-889437
		US-PATENT-3,591,426			US-PATENT-CLASS-325-58			US-PATENT-CLASS-156-320
		NASA-CASE-ARC-10050			US-PATENT-CLASS-343-179			US-PATENT-CLASS-156-66
		US-PATENT-APPL-SN-797219			US-PATENT-CLASS-343-5DP			US-PATENT-CLASS-219-221
		US-PATENT-CLASS-136-89			US-PATENT-CLASS-343-7.5			US-PATENT-CLASS-219-243
		US-PATENT-3,591,420			US-PATENT-3,593,138			US-PATENT-3,593,001
		NASA-CASE-NPO-10417			NASA-CASE-NPO-11064			NASA-CASE-GSC-11133-1
		US-PATENT-APPL-SN-753974			US-PATENT-APPL-SN-880248			US-PATENT-APPL-SN-121328
		US-PATENT-CLASS-331-94.5			US-PATENT-CLASS-331-10			NASA-CASE-MFS-20095
		US-PATENT-CLASS-352-84			US-PATENT-CLASS-331-34			US-PATENT-APPL-SN-855004
		US-PATENT-CLASS-95-11			US-PATENT-CLASS-331-66			US-PATENT-CLASS-250-49.5B
		US-PATENT-3,587,424			US-PATENT-CLASS-331-7			US-PATENT-CLASS-250-49.5T
		NASA-CASE-XLA-03661			US-PATENT-3,593,180			US-PATENT-CLASS-250-51
		US-PATENT-APPL-SN-751266			NASA-CASE-NPO-10769			US-PATENT-CLASS-250-52
		US-PATENT-CLASS-408-137			US-PATENT-APPL-SN-813494			US-PATENT-3,593,024
		US-PATENT-CLASS-90-11			US-PATENT-CLASS-179-15.5SR			NASA-CASE-MFS-20619
		US-PATENT-3,585,882			US-PATENT-3,598,921			US-PATENT-APPL-SN-18982
		NASA-CASE-ERC-10100			NASA-CASE-GSC-10880-1			US-PATENT-CLASS-139-425R
		US-PATENT-APPL-SN-766697			US-PATENT-APPL-SN-831118			US-PATENT-CLASS-239-265.19
		US-PATENT-CLASS-313-109.5			US-PATENT-CLASS-235-61NV			US-PATENT-CLASS-239-265.43
		US-PATENT-CLASS-313-231			US-PATENT-CLASS-33-15A			US-PATENT-CLASS-60-271
		US-PATENT-CLASS-315-108			US-PATENT-CLASS-33-204C			US-PATENT-3,596,465
		US-PATENT-CLASS-315-111			US-PATENT-3,599,335			NASA-CASE-NPO-10737
		US-PATENT-CLASS-340-324			NASA-CASE-GSC-10614-1			US-PATENT-APPL-SN-760114
		US-PATENT-CLASS-340-336			US-PATENT-APPL-SN-822534			US-PATENT-CLASS-60-202
		US-PATENT-3,588,874			US-PATENT-CLASS-179-100-2CA			US-PATENT-CLASS-60-39-48
		NASA-CASE-NPO-11031			US-PATENT-CLASS-179-100-2MD			US-PATENT-3,591,967
		US-PATENT-APPL-SN-864097			US-PATENT-CLASS-274-4R			NASA-CASE-GSC-10087-3
		US-PATENT-CLASS-333-21A			US-PATENT-3,592,478			US-PATENT-APPL-SN-880885
		US-PATENT-CLASS-333-6			NASA-CASE-KSC-10162			US-PATENT-CLASS-325-4
		US-PATENT-CLASS-333-7			US-PATENT-APPL-SN-817481			US-PATENT-CLASS-343-6.5R
		US-PATENT-3,588,751			US-PATENT-CLASS-324-102			US-PATENT-CLASS-343-6.8R
		NASA-CASE-XLA-09480			US-PATENT-CLASS-324-119			US-PATENT-3,594,790
		US-PATENT-APPL-SN-874435			US-PATENT-CLASS-324-123R			NASA-CASE-GSC-10185-1
		US-PATENT-CLASS-73-147			US-PATENT-3,593,132			US-PATENT-APPL-SN-733039
		US-PATENT-3,587,306			NASA-CASE-ARC-10042-2			US-PATENT-CLASS-178-DIG.12
		NASA-CASE-NPO-10700			US-PATENT-APPL-SN-33159			US-PATENT-CLASS-178-6
		US-PATENT-APPL-SN-840308			US-PATENT-CLASS-330-107			US-PATENT-CLASS-178-7.3
		US-PATENT-CLASS-318-227			US-PATENT-CLASS-330-109			US-PATENT-CLASS-325-10
		US-PATENT-CLASS-318-230			US-PATENT-3,593,175			US-PATENT-CLASS-325-13
		US-PATENT-3,588,648			NASA-CASE-MS-11847-1			US-PATENT-3,588,331
		NASA-CASE-MS-12165-1			US-PATENT-APPL-SN-8497			NASA-CASE-XER-09521
		US-PATENT-APPL-SN-875849			US-PATENT-CLASS-73-149			US-PATENT-APPL-SN-771530
		US-PATENT-CLASS-325-347			US-PATENT-CLASS-73-290B			US-PATENT-CLASS-136-202
		US-PATENT-CLASS-325-348			US-PATENT-3,596,510			US-PATENT-CLASS-136-206
		US-PATENT-CLASS-325-473			NASA-CASE-NPO-10778			US-PATENT-CLASS-136-227
		US-PATENT-CLASS-325-478			US-PATENT-APPL-SN-865909			US-PATENT-CLASS-343-DIG.3
		US-PATENT-CLASS-325-480			US-PATENT-CLASS-250-235			US-PATENT-CLASS-343-720
		US-PATENT-CLASS-325-482			US-PATENT-CLASS-33-125			US-PATENT-CLASS-343-840
		US-PATENT-CLASS-328-164			US-PATENT-CLASS-356-167			US-PATENT-3,594,803
		US-PATENT-CLASS-328-165			US-PATENT-CLASS-356-32			NASA-CASE-XLA-05966

			US-PATENT-APPL-SN-784544	US-PATENT-APPL-SN-887698	N72-17451*	c 15	NASA-CASE-WLP-10002
			US-PATENT-CLASS-140-105	US-PATENT-CLASS-128-2.1A			US-PATENT-APPL-SN-47062
			US-PATENT-CLASS-72-307	US-PATENT-CLASS-307-252F			US-PATENT-CLASS-180-125
			US-PATENT-3,584,660	US-PATENT-CLASS-307-252J			US-PATENT-CLASS-180-127
N72-12409*	c 15		NASA-CASE-NPO-10637	US-PATENT-CLASS-325-492			US-PATENT-CLASS-308-DIG.1
			US-PATENT-APPL-SN-851298	US-PATENT-CLASS-340-177			US-PATENT-CLASS-308-5
			US-PATENT-CLASS-236-68	US-PATENT-3,603,946			US-PATENT-CLASS-308-9
			US-PATENT-CLASS-337-354	N72-17154*	c 09		US-PATENT-3,610,365
			US-PATENT-CLASS-337-359				NASA-CASE-XLA-10322
			US-PATENT-CLASS-337-75	US-PATENT-APPL-SN-889555	N72-17452*	c 15	US-PATENT-APPL-SN-887699
			US-PATENT-CLASS-60-23	US-PATENT-CLASS-321-10			US-PATENT-CLASS-73-88.5R
			US-PATENT-3,591,960	US-PATENT-CLASS-336-178			US-PATENT-3,608,365
N72-12440*	c 16		NASA-CASE-MFS-20180	US-PATENT-3,603,864	N72-17453*	c 15	NASA-CASE-NPO-11177
			US-PATENT-APPL-SN-863276	NASA-CASE-NPO-11023			US-PATENT-APPL-SN-20960
			US-PATENT-CLASS-331-94.5	US-PATENT-APPL-SN-865274			US-PATENT-CLASS-62-51
			US-PATENT-CLASS-350-1	US-PATENT-CLASS-330-18			US-PATENT-3,605,424
			US-PATENT-CLASS-350-312	US-PATENT-CLASS-330-40	N72-17454*	c 15	NASA-CASE-NPO-11059
			US-PATENT-3,593,194	US-PATENT-3,603,892			US-PATENT-APPL-SN-864020
N72-13437*	c 16		NASA-CASE-MFS-20125	NASA-CASE-NPO-10199			US-PATENT-CLASS-248-14
			US-PATENT-APPL-SN-830366	US-PATENT-APPL-SN-739391			US-PATENT-3,606,979
			US-PATENT-CLASS-178-DIG.21	US-PATENT-CLASS-178-7.1	N72-17455*	c 15	NASA-CASE-NPO-11140
			US-PATENT-CLASS-178-6	US-PATENT-CLASS-330-11			US-PATENT-APPL-SN-15019
			US-PATENT-CLASS-250-203X	US-PATENT-CLASS-330-35			US-PATENT-CLASS-174-84
			US-PATENT-CLASS-356-152	US-PATENT-3,609,230			US-PATENT-CLASS-200-64
			US-PATENT-3,603,686	N72-17157*	c 09		US-PATENT-CLASS-339-176M
N72-15098* #	c 05		NASA-CASE-MSC-13917-1				US-PATENT-CLASS-339-278M
			US-PATENT-APPL-SN-198355	NASA-CASE-NPO-11253			US-PATENT-CLASS-339-46
N72-15986*	c 03		NASA-CASE-XGS-10010	US-PATENT-APPL-SN-21906			US-PATENT-CLASS-89-1.811
			US-PATENT-APPL-SN-729299	US-PATENT-CLASS-307-223			US-PATENT-3,611,274
			US-PATENT-CLASS-136-133	US-PATENT-CLASS-307-227	N72-17532*	c 18	NASA-CASE-MFS-13532
			US-PATENT-CLASS-136-135	US-PATENT-CLASS-307-81			US-PATENT-APPL-SN-720546
			US-PATENT-CLASS-136-6	US-PATENT-CLASS-328-186			US-PATENT-CLASS-106-292
			US-PATENT-3,607,401	US-PATENT-3,609,387			US-PATENT-CLASS-106-299
N72-16015*	c 05		NASA-CASE-KSC-10278	N72-17171*	c 10		US-PATENT-3,607,338
			US-PATENT-APPL-SN-856327	NASA-CASE-XAC-05462-2			NASA-CASE-ERC-10089
			US-PATENT-CLASS-324-66	US-PATENT-APPL-SN-28235			US-PATENT-APPL-SN-791267
			US-PATENT-CLASS-340-279	US-PATENT-CLASS-307-295			US-PATENT-CLASS-148-187
			US-PATENT-CLASS-35-8	US-PATENT-CLASS-328-167			US-PATENT-CLASS-29-578
			US-PATENT-3,609,740	US-PATENT-CLASS-330-109	N72-17747*	c 23	US-PATENT-3,607,338
N72-16172*	c 10		NASA-CASE-ARC-10269-1	US-PATENT-CLASS-330-176			US-PATENT-APPL-SN-791267
			US-PATENT-APPL-SN-56791	US-PATENT-CLASS-333-70CR			US-PATENT-CLASS-340-174AG
			US-PATENT-CLASS-307-230	US-PATENT-3,609,567			US-PATENT-CLASS-340-174CT
			US-PATENT-CLASS-307-262	N72-17172*	c 10		US-PATENT-CLASS-340-174GA
			US-PATENT-CLASS-328-155	NASA-CASE-ARC-10020			US-PATENT-CLASS-340-174SC
			US-PATENT-3,614,475	US-PATENT-APPL-SN-31885			US-PATENT-3,611,330
N72-16282*	c 14		NASA-CASE-LAR-10913	US-PATENT-CLASS-330-107	N72-17820*	c 26	NASA-CASE-XER-08476-1
			US-PATENT-APPL-SN-779160	US-PATENT-CLASS-330-109			US-PATENT-APPL-SN-672388
			US-PATENT-CLASS-73-12	US-PATENT-CLASS-330-26			US-PATENT-CLASS-148-187
			US-PATENT-3,605,482	US-PATENT-CLASS-330-31			US-PATENT-CLASS-29-578
N72-16283*	c 14		NASA-CASE-GSC-10780-1	US-PATENT-CLASS-330-94			US-PATENT-CLASS-29-589
			US-PATENT-APPL-SN-860493	US-PATENT-3,605,032	N72-17843*	c 28	US-PATENT-3,602,984
			US-PATENT-CLASS-82-24R	N72-17173*	c 10		NASA-CASE-NPO-10046
			US-PATENT-3,608,409	US-PATENT-APPL-SN-7868			US-PATENT-APPL-SN-860635
N72-16329*	c 15		NASA-CASE-XLA-07829	US-PATENT-CLASS-250-209			US-PATENT-CLASS-60-258
			US-PATENT-APPL-SN-763684	US-PATENT-CLASS-250-83.3UV			US-PATENT-CLASS-60-39.74
			US-PATENT-CLASS-264-DIG.44	US-PATENT-CLASS-340-228.2			US-PATENT-3,603,092
			US-PATENT-CLASS-264-221	US-PATENT-3,609,364	N72-17873*	c 30	NASA-CASE-ARC-10134
			US-PATENT-CLASS-264-225	N72-17183*	c 11		US-PATENT-APPL-SN-819898
			US-PATENT-CLASS-264-227	US-PATENT-APPL-SN-889557			US-PATENT-CLASS-244-3.21
			US-PATENT-3,608,046	US-PATENT-CLASS-73-147			US-PATENT-3,603,532
N72-16330*	c 15		NASA-CASE-LAR-10203-1	US-PATENT-3,602,920	N72-17947*	c 33	NASA-CASE-MSC-12143-1
			US-PATENT-APPL-SN-769592	N72-17323*	c 14		US-PATENT-APPL-SN-791268
			US-PATENT-CLASS-156-84				US-PATENT-CLASS-102-105
			US-PATENT-CLASS-156-86	US-PATENT-APPL-SN-868445			US-PATENT-CLASS-161-67
			US-PATENT-3,607,495	US-PATENT-CLASS-350-162			US-PATENT-CLASS-244-117
N72-17093*	c 06		NASA-CASE-LEW-10794-1	US-PATENT-CLASS-356-113	N72-17948*	c 33	US-PATENT-3,603,260
			US-PATENT-APPL-SN-335353	US-PATENT-CLASS-356-209			NASA-CASE-NPO-10828
			US-PATENT-CLASS-23-55	US-PATENT-CLASS-356-244			US-PATENT-APPL-SN-873260
			US-PATENT-CLASS-23-88	US-PATENT-3,603,690			US-PATENT-CLASS-165-105
			US-PATENT-CLASS-23-97	N72-17324*	c 14		US-PATENT-3,603,382
			US-PATENT-3,607,015				NASA-CASE-NPO-10629
N72-17094*	c 06		NASA-CASE-NPO-10234	US-PATENT-APPL-SN-7867			US-PATENT-APPL-SN-860751
			US-PATENT-APPL-SN-800204	US-PATENT-CLASS-350-3.5			US-PATENT-CLASS-178-50
			US-PATENT-CLASS-23-230R	US-PATENT-3,605,519	N72-18184*	c 08	US-PATENT-CLASS-178-66
			US-PATENT-CLASS-23-232C	N72-17325*	c 14		US-PATENT-CLASS-179-15
			US-PATENT-CLASS-23-253PC	NASA-CASE-MSC-15158-1			US-PATENT-CLASS-235-154
			US-PATENT-CLASS-73-23.1	US-PATENT-APPL-SN-889479			US-PATENT-CLASS-340-347DD
			US-PATENT-3,607,076	US-PATENT-CLASS-324-52			US-PATENT-3,603,976
N72-17095*	c 06		NASA-CASE-NPO-10774	US-PATENT-3,609,535	N72-18411*	c 14	NASA-CASE-KSC-10294
			US-PATENT-APPL-SN-848805	N72-17326*	c 14		US-PATENT-APPL-SN-889556
			US-PATENT-CLASS-23-201	NASA-CASE-XMS-01994-1			US-PATENT-CLASS-307-311
			US-PATENT-CLASS-23-230	US-PATENT-APPL-SN-814212			US-PATENT-CLASS-346-107A
			US-PATENT-CLASS-23-253	US-PATENT-CLASS-356-4			US-PATENT-CLASS-346-23
			US-PATENT-CLASS-73-76	US-PATENT-3,603,683			US-PATENT-CLASS-352-84
			US-PATENT-3,607,080	N72-17327*	c 14		US-PATENT-CLASS-95-1.1
N72-17109*	c 07		NASA-CASE-MSC-12146-1				US-PATENT-3,603,974
			US-PATENT-APPL-SN-50206	NASA-CASE-LEW-10281-1			NASA-CASE-GSC-10566-1
			US-PATENT-CLASS-178-5.2R	US-PATENT-APPL-SN-861649			US-PATENT-APPL-SN-889438
			US-PATENT-CLASS-178-5.4	US-PATENT-CLASS-73-198			US-PATENT-CLASS-242-54
			US-PATENT-CLASS-178-6.7	US-PATENT-3,605,495			US-PATENT-CLASS-52-108
			US-PATENT-3,603,722	N72-17328*	c 14		US-PATENT-3,608,844
N72-17152*	c 09		NASA-CASE-ARC-10178-1				NASA-CASE-GSC-10640-1
			US-PATENT-APPL-SN-47443	US-PATENT-CLASS-73-198			US-PATENT-APPL-SN-17101
			US-PATENT-CLASS-250-211J	US-PATENT-CLASS-346-23			US-PATENT-CLASS-23-288
			US-PATENT-3,603,798	US-PATENT-CLASS-352-84			US-PATENT-CLASS-60-260
N72-17153*	c 09		NASA-CASE-ARC-10105	US-PATENT-CLASS-95-1.1			US-PATENT-3,603,093
				US-PATENT-3,603,974	N72-18477*	c 15	NASA-CASE-MSC-13281
				N72-17329*	c 14		US-PATENT-APPL-SN-7669
							US-PATENT-CLASS-244-15.5
				US-PATENT-CLASS-73-194A			
				US-PATENT-3,611,801			
				N72-17450*	c 15		
				US-PATENT-APPL-SN-24154			
				US-PATENT-CLASS-188-1C			
				US-PATENT-CLASS-188-129			
				US-PATENT-3,603,433			

## ACCESSION NUMBER INDEX

N72-21310

N72-20031*	c 03	US-PATENT-3,606,212 NASA-CASE-GSC-10669-1 US-PATENT-APPL-SN-90595 US-PATENT-CLASS-136-89 US-PATENT-CLASS-244-155 US-PATENT-CLASS-340-210 US-PATENT-3,636,539	N72-20222*	c 10	US-PATENT-CLASS-307-313 US-PATENT-CLASS-328-207 US-PATENT-CLASS-330-30D US-PATENT-3,633,048 NASA-CASE-XLA-11189 US-PATENT-APPL-SN-889375 US-PATENT-CLASS-324-115 US-PATENT-CLASS-324-132 US-PATENT-3,638,114	N72-21094*	c 06	US-PATENT-APPL-SN-10161 US-PATENT-CLASS-122-32 US-PATENT-CLASS-165-133 US-PATENT-CLASS-165-155 US-PATENT-CLASS-165-158 US-PATENT-CLASS-165-161 US-PATENT-CLASS-165-174 US-PATENT-3,630,276
N72-20032*	c 03	NASA-CASE-NPO-11021 US-PATENT-APPL-SN-880250 US-PATENT-CLASS-136-166 US-PATENT-CLASS-136-79 US-PATENT-CLASS-136-81 US-PATENT-3,625,766	N72-20223*	c 10	NASA-CASE-NPO-11133 US-PATENT-APPL-SN-887685 US-PATENT-CLASS-307-295 US-PATENT-CLASS-328-16 US-PATENT-CLASS-328-166 US-PATENT-CLASS-328-20 US-PATENT-CLASS-328-38 US-PATENT-3,626,308	N72-21105* #	c 06	NASA-CASE-ERC-10108 US-PATENT-APPL-SN-833049 US-PATENT-CLASS-156-3 US-PATENT-CLASS-96-36.2 US-PATENT-3,615,465
N72-20033*	c 03	NASA-CASE-NPO-10401 US-PATENT-APPL-SN-15025 US-PATENT-CLASS-210-212 US-PATENT-CLASS-356-222 US-PATENT-3,630,627	N72-20224*	c 10	NASA-CASE-NPO-11203 US-PATENT-APPL-SN-3696 US-PATENT-CLASS-324-83A US-PATENT-CLASS-324-85 US-PATENT-CLASS-328-133 US-PATENT-CLASS-343-12 US-PATENT-3,631,351	N72-21117*	c 07	NASA-CASE-XLA-11154 US-PATENT-APPL-SN-23532 US-PATENT-CLASS-343-706 US-PATENT-CLASS-343-912 US-PATENT-3,623,107
N72-20034*	c 03	NASA-CASE-LEW-11359-2 US-PATENT-APPL-SN-57399 US-PATENT-CLASS-136-100R US-PATENT-CLASS-136-175 US-PATENT-CLASS-136-83R US-PATENT-3,635,765	N72-20225*	c 10	NASA-CASE-MSC-13407-1 US-PATENT-APPL-SN-65840 US-PATENT-CLASS-315-22 US-PATENT-CLASS-315-25 US-PATENT-3,638,066	N72-21118*	c 07	NASA-CASE-NPO-11001 US-PATENT-APPL-SN-856279 US-PATENT-CLASS-343-100ST US-PATENT-CLASS-343-5CM US-PATENT-CLASS-343-6.5R US-PATENT-3,624,650
N72-20096*	c 05	NASA-CASE-MSC-12411-1 US-PATENT-APPL-SN-701244 US-PATENT-CLASS-128-142.5 US-PATENT-CLASS-128-402 US-PATENT-CLASS-2-2.1 US-PATENT-3,635,216	N72-20244*	c 11	NASA-CASE-NPO-11210 US-PATENT-APPL-SN-880831 US-PATENT-CLASS-123-102 US-PATENT-CLASS-180-105E US-PATENT-CLASS-318-308 US-PATENT-CLASS-318-327 US-PATENT-CLASS-318-376 US-PATENT-3,630,304	N72-21119*	c 07	NASA-CASE-ERC-10112 US-PATENT-APPL-SN-796690 US-PATENT-CLASS-179-100.2K US-PATENT-3,614,343
N72-20097*	c 05	NASA-CASE-MFS-20332 US-PATENT-APPL-SN-869260 US-PATENT-CLASS-137-469 US-PATENT-CLASS-137-81 US-PATENT-3,636,966	N72-20379*	c 14	NASA-CASE-GSC-10514-1 US-PATENT-APPL-SN-873045 US-PATENT-CLASS-250-208 US-PATENT-CLASS-356-138 US-PATENT-CLASS-356-152 US-PATENT-3,637,312	N72-21197*	c 08	NASA-CASE-KSC-10326 US-PATENT-APPL-SN-25487 US-PATENT-CLASS-235-155 US-PATENT-CLASS-340-347DD US-PATENT-3,638,002
N72-20098*	c 05	NASA-CASE-MSC-12398 US-PATENT-APPL-SN-785615 US-PATENT-CLASS-2-2.1 US-PATENT-3,624,839	N72-20380*	c 14	NASA-CASE-LAR-10176-1 US-PATENT-APPL-SN-811038 US-PATENT-CLASS-95-18 US-PATENT-3,626,828	N72-21198*	c 08	NASA-CASE-ERC-10307 US-PATENT-APPL-SN-39755 US-PATENT-CLASS-307-299 US-PATENT-CLASS-307-303 US-PATENT-CLASS-307-311 US-PATENT-CLASS-340-173.2 US-PATENT-CLASS-340-173LS US-PATENT-3,623,030
N72-20121*	c 06	NASA-CASE-NPO-10765 US-PATENT-APPL-SN-770425 US-PATENT-CLASS-260-544F US-PATENT-3,637,842	N72-20381*	c 14	NASA-CASE-GSC-10503-1 US-PATENT-APPL-SN-789044 US-PATENT-CLASS-250-83.6R US-PATENT-3,626,189	N72-21199*	c 08	NASA-CASE-NPO-10743 US-PATENT-APPL-SN-850587 US-PATENT-CLASS-340-174CS US-PATENT-CLASS-340-174LC US-PATENT-CLASS-340-174M US-PATENT-CLASS-340-174SR US-PATENT-3,613,110
N72-20140*	c 07	NASA-CASE-NPO-10844 US-PATENT-APPL-SN-839934 US-PATENT-CLASS-178-69.5R US-PATENT-CLASS-179-15BS US-PATENT-CLASS-325-321 US-PATENT-CLASS-325-38 US-PATENT-CLASS-325-4 US-PATENT-CLASS-325-58 US-PATENT-3,626,298	N72-20442*	c 15	NASA-CASE-GSC-10607-1 US-PATENT-APPL-SN-27340 US-PATENT-CLASS-251-129 US-PATENT-CLASS-251-333 US-PATENT-3,632,081	N72-21200*	c 08	NASA-CASE-NPO-11018 US-PATENT-APPL-SN-873259 US-PATENT-CLASS-340-347AD US-PATENT-3,613,111
N72-20141*	c 07	NASA-CASE-ERC-10179 US-PATENT-APPL-SN-50207 US-PATENT-CLASS-325-445 US-PATENT-CLASS-329-161 US-PATENT-CLASS-329-162 US-PATENT-CLASS-332-51W US-PATENT-CLASS-333-73W US-PATENT-CLASS-343-772 US-PATENT-CLASS-343-773 US-PATENT-CLASS-343-786 US-PATENT-3,633,110	N72-20443*	c 15	NASA-CASE-NPO-10671 US-PATENT-APPL-SN-857967 US-PATENT-CLASS-188-1B US-PATENT-CLASS-188-1C US-PATENT-CLASS-188-268 US-PATENT-3,637,051	N72-21243*	c 09	NASA-CASE-LEW-11005-1 US-PATENT-APPL-SN-86548 US-PATENT-CLASS-323-DIG.1 US-PATENT-CLASS-323-22T US-PATENT-CLASS-323-38 US-PATENT-3,638,103
N72-20154* #	c 07	NASA-CASE-NPO-11243 US-PATENT-APPL-SN-177753	N72-20444*	c 15	NASA-CASE-FRC-10038 US-PATENT-APPL-SN-889554 US-PATENT-CLASS-29-412 US-PATENT-CLASS-29-426 US-PATENT-CLASS-29-527.2 US-PATENT-CLASS-29-624 US-PATENT-CLASS-51-216 US-PATENT-CLASS-51-320 US-PATENT-CLASS-51-323 US-PATENT-3,636,623	N72-21244*	c 09	NASA-CASE-LAR-10545-1 US-PATENT-APPL-SN-31703 US-PATENT-CLASS-343-771 US-PATENT-CLASS-343-893 US-PATENT-3,638,224
N72-20176*	c 08	NASA-CASE-NPO-11130 US-PATENT-APPL-SN-21508 US-PATENT-CLASS-235-152 US-PATENT-CLASS-235-92CC US-PATENT-CLASS-235-92DE US-PATENT-CLASS-235-92DM US-PATENT-CLASS-235-92LG US-PATENT-CLASS-235-92R US-PATENT-CLASS-340-347DA US-PATENT-CLASS-340-347DD US-PATENT-3,632,996	N72-20445*	c 15	NASA-CASE-NPO-10704 US-PATENT-APPL-SN-59895 US-PATENT-CLASS-138-178 US-PATENT-CLASS-285-18 US-PATENT-CLASS-285-345 US-PATENT-3,632,140	N72-21245*	c 09	NASA-CASE-ARC-10192 US-PATENT-APPL-SN-15024 US-PATENT-CLASS-307-230 US-PATENT-CLASS-307-295 US-PATENT-CLASS-328-142 US-PATENT-CLASS-328-167 US-PATENT-CLASS-330-70R US-PATENT-CLASS-330-85 US-PATENT-CLASS-333-80 US-PATENT-3,621,407
N72-20177*	c 08	NASA-CASE-NPO-10748 US-PATENT-APPL-SN-63383 US-PATENT-CLASS-324-77G US-PATENT-3,631,339	N72-20446*	c 15	NASA-CASE-MFS-20698 US-PATENT-APPL-SN-3418 US-PATENT-CLASS-100-299 US-PATENT-CLASS-23-209.1 US-PATENT-CLASS-264-22 US-PATENT-CLASS-425-77 US-PATENT-3,632,242	N72-21246*	c 09	NASA-CASE-NPO-11134 US-PATENT-APPL-SN-883524 US-PATENT-CLASS-318-576 US-PATENT-CLASS-324-71R US-PATENT-CLASS-346-1 US-PATENT-CLASS-346-29 US-PATENT-3,624,659
N72-20199*	c 09	NASA-CASE-NPO-10722 US-PATENT-APPL-SN-860492 US-PATENT-CLASS-200-81.9M US-PATENT-CLASS-335-205 US-PATENT-3,632,923	N72-20597*	c 22	NASA-CASE-XLE-04599 US-PATENT-APPL-SN-751215 US-PATENT-CLASS-176-86G US-PATENT-3,629,068	N72-21247*	c 09	NASA-CASE-KSC-10393 US-PATENT-APPL-SN-71047 US-PATENT-CLASS-307-257 US-PATENT-CLASS-307-259 US-PATENT-CLASS-331-111 US-PATENT-CLASS-331-14 US-PATENT-CLASS-331-23 US-PATENT-CLASS-331-30 US-PATENT-3,614,648
N72-20200*	c 09	NASA-CASE-NPO-10694 US-PATENT-APPL-SN-24224 US-PATENT-CLASS-339-275T US-PATENT-CLASS-339-276T US-PATENT-3,631,382	N72-20758*	c 28	NASA-CASE-KXP-03282 US-PATENT-APPL-SN-745337 US-PATENT-CLASS-60-254 US-PATENT-3,636,711	N72-21248* #	c 09	NASA-CASE-LAR-10503-1 US-PATENT-APPL-SN-229143
N72-20206* #	c 09	NASA-CASE-ERC-10468 US-PATENT-APPL-SN-144958	N72-20840* #	c 31	NASA-CASE-MFS-20922 US-PATENT-APPL-SN-220274	N72-21310*	c 12	NASA-CASE-MFS-20829 US-PATENT-APPL-SN-61894 US-PATENT-CLASS-169-28
N72-20221*	c 10	NASA-CASE-GSC-10082-1 US-PATENT-APPL-SN-41430 US-PATENT-CLASS-307-273 US-PATENT-CLASS-307-288	N72-20915*	c 33	NASA-CASE-NPO-10831			

		US-PATENT-CLASS-169-36				US-PATENT-APPL-SN-78065				US-PATENT-CLASS-325-29
		US-PATENT-3,613,794				US-PATENT-CLASS-178-52				US-PATENT-CLASS-325-492
N72-21405*	c 14	NASA-CASE-NPO-10832				US-PATENT-CLASS-179-15A				US-PATENT-CLASS-340-171
		US-PATENT-APPL-SN-22265				US-PATENT-CLASS-179-15BL				US-PATENT-CLASS-340-203
		US-PATENT-CLASS-73-141A				US-PATENT-CLASS-307-243				US-PATENT-3,621,290
N72-21407*	c 14	US-PATENT-3,623,360				US-PATENT-CLASS-307-251		N72-22203*	c 09	NASA-CASE-XER-11046
		NASA-CASE-MFS-20642				US-PATENT-CLASS-328-104				US-PATENT-APPL-SN-810579
		US-PATENT-APPL-SN-873793				US-PATENT-CLASS-328-154				US-PATENT-CLASS-321-15
		US-PATENT-CLASS-73-147				US-PATENT-3,614,327				US-PATENT-CLASS-321-18
N72-21408*	c 14	US-PATENT-3,623,361	N72-22163*	c 08	NASA-CASE-MSC-13110-1	US-PATENT-APPL-SN-878730		N72-22204*	c 09	NASA-CASE-LAR-10137-1
		NASA-CASE-MSC-13332-1			US-PATENT-APPL-SN-23132	US-PATENT-CLASS-340-347AD				US-PATENT-APPL-SN-881041
		US-PATENT-APPL-SN-77169			US-PATENT-CLASS-340-347AD	US-PATENT-3,614,772				US-PATENT-CLASS-200-81R
		US-PATENT-CLASS-250-43.5R			US-PATENT-CLASS-178-DIG.36	US-PATENT-CLASS-178-DIG.36				US-PATENT-CLASS-200-82C
		US-PATENT-CLASS-250-83.3H	N72-22164*	c 08	NASA-CASE-NPO-10745	US-PATENT-CLASS-178-6.8				US-PATENT-3,609,271
		US-PATENT-3,614,431			US-PATENT-APPL-SN-878730	US-PATENT-CLASS-178-7.2R		N72-22235*	c 10	NASA-CASE-GSC-10064-1
N72-21409*	c 14	NASA-CASE-MSC-12105-1			US-PATENT-CLASS-235-150.52	US-PATENT-3,621,130				US-PATENT-APPL-SN-802812
		US-PATENT-APPL-SN-763743			US-PATENT-CLASS-235-150.53	NASA-CASE-NPO-11104				US-PATENT-CLASS-343-16M
		US-PATENT-CLASS-356-17			US-PATENT-CLASS-235-183	US-PATENT-APPL-SN-860750				US-PATENT-CLASS-343-7.4
		US-PATENT-CLASS-356-18			US-PATENT-CLASS-235-194	US-PATENT-CLASS-235-150.52				US-PATENT-CLASS-343-779
N72-21462*	c 15	US-PATENT-3,614,228	N72-22165*	c 08	NASA-CASE-NPO-11104	US-PATENT-CLASS-235-197				US-PATENT-CLASS-343-786
		NASA-CASE-NPO-10679			US-PATENT-APPL-SN-860750	US-PATENT-CLASS-340-347R		N72-22236*	c 10	NASA-CASE-GSC-10078-1
		US-PATENT-APPL-SN-848282			US-PATENT-CLASS-235-150.52	US-PATENT-3,621,228				US-PATENT-APPL-SN-889423
		US-PATENT-CLASS-74-89.15			US-PATENT-CLASS-235-150.53	NASA-CASE-NPO-10560				US-PATENT-CLASS-307-206
		US-PATENT-3,614,898			US-PATENT-CLASS-235-183	US-PATENT-APPL-SN-856282				US-PATENT-CLASS-307-215
N72-21463*	c 15	NASA-CASE-MFS-20413			US-PATENT-CLASS-235-153	US-PATENT-CLASS-324-73AT				US-PATENT-CLASS-307-322
		US-PATENT-APPL-SN-69209			US-PATENT-CLASS-324-73AT	US-PATENT-CLASS-340-347AD				US-PATENT-CLASS-307-323
		US-PATENT-CLASS-74-469			US-PATENT-CLASS-340-347AD	US-PATENT-3,603,772		N72-22245*	c 11	NASA-CASE-NPO-12109
		US-PATENT-3,620,095			US-PATENT-CLASS-340-347R	NASA-CASE-NPO-11082				US-PATENT-APPL-SN-690172
N72-21464*	c 15	NASA-CASE-ARC-10176-1	N72-22166*	c 08	NASA-CASE-NPO-10560	US-PATENT-APPL-SN-868529				US-PATENT-CLASS-230-221
		US-PATENT-APPL-SN-889583			US-PATENT-CLASS-235-152	US-PATENT-CLASS-235-152				US-PATENT-CLASS-230-54
		US-PATENT-CLASS-324-57R			US-PATENT-CLASS-340-146.1	US-PATENT-CLASS-340-146.1		N72-22246*	c 11	NASA-CASE-XLA-07430
		US-PATENT-CLASS-324-64			US-PATENT-CLASS-340-348	US-PATENT-3,609,327				US-PATENT-APPL-SN-867841
		US-PATENT-CLASS-324-71R			US-PATENT-CLASS-340-348	NASA-CASE-MFS-14710				US-PATENT-CLASS-73-147
		US-PATENT-3,624,496			US-PATENT-APPL-SN-852843	US-PATENT-CLASS-74-105		N72-22247*	c 11	NASA-CASE-NPO-11013
N72-21465*	c 15	NASA-CASE-GSC-10218-1	N72-22167*	c 08	NASA-CASE-NPO-11082	US-PATENT-CLASS-74-105				US-PATENT-APPL-SN-858695
		US-PATENT-APPL-SN-15022			US-PATENT-APPL-SN-868529	US-PATENT-3,614,899				US-PATENT-CLASS-42-1F
		US-PATENT-CLASS-141-23			US-PATENT-CLASS-235-152	NASA-CASE-ERC-10075-2		N72-22437*	c 14	NASA-CASE-LAR-10496-1
		US-PATENT-CLASS-195-127			US-PATENT-CLASS-340-146.1	US-PATENT-APPL-SN-775870				US-PATENT-APPL-SN-12661
		US-PATENT-CLASS-222-135			US-PATENT-CLASS-321-14	US-PATENT-CLASS-321-14				US-PATENT-CLASS-73-141A
		US-PATENT-CLASS-222-309			US-PATENT-CLASS-321-19	US-PATENT-CLASS-321-19				US-PATENT-3,611,798
		US-PATENT-CLASS-222-71			US-PATENT-CLASS-321-2	US-PATENT-CLASS-321-25		N72-22438*	c 14	NASA-CASE-ARC-10263-1
		US-PATENT-CLASS-23-253R			US-PATENT-CLASS-321-25	US-PATENT-CLASS-323-56				US-PATENT-APPL-SN-882122
		US-PATENT-CLASS-23-259			US-PATENT-CLASS-323-56	US-PATENT-CLASS-323-56				US-PATENT-CLASS-73-398C
		US-PATENT-CLASS-73-425.6			US-PATENT-CLASS-323-56	US-PATENT-3,614,587		N72-22439*	c 14	US-PATENT-3,620,083
		US-PATENT-3,615,241			US-PATENT-CLASS-323-56	NASA-CASE-LEW-10433-1				NASA-CASE-MFS-20890
N72-21466*	c 15	NASA-CASE-NPO-10440	N72-22196*	c 09	NASA-CASE-ERC-10075-2	US-PATENT-APPL-SN-849106				US-PATENT-APPL-SN-103229
		US-PATENT-APPL-SN-756834			US-PATENT-APPL-SN-775870	US-PATENT-CLASS-307-262				US-PATENT-CLASS-264-22
		US-PATENT-CLASS-204-130			US-PATENT-CLASS-321-14	US-PATENT-CLASS-307-262				US-PATENT-CLASS-29-421
		US-PATENT-CLASS-204-59			US-PATENT-CLASS-321-19	US-PATENT-CLASS-307-88MP				US-PATENT-CLASS-310-11
		US-PATENT-3,616,338			US-PATENT-CLASS-321-2	US-PATENT-3,612,895				US-PATENT-CLASS-310-42
N72-21489* #	c 15	NASA-CASE-XLA-10470			US-PATENT-CLASS-321-25	NASA-CASE-MFS-13687-2		N72-22440*	c 14	US-PATENT-3,626,218
		US-PATENT-APPL-SN-219436			US-PATENT-CLASS-323-56	US-PATENT-APPL-SN-80369				NASA-CASE-ARC-10154-1
N72-21624*	c 21	NASA-CASE-HON-10439			US-PATENT-CLASS-323-56	US-PATENT-CLASS-174-106R				US-PATENT-APPL-SN-793771
		US-PATENT-APPL-SN-889551			US-PATENT-CLASS-323-56	US-PATENT-CLASS-174-117FF				US-PATENT-CLASS-73-67.2
		US-PATENT-CLASS-244-1SA			US-PATENT-CLASS-323-56	US-PATENT-CLASS-174-36		N72-22441*	c 14	US-PATENT-3,620,069
		US-PATENT-3,637,170	N72-22197*	c 09	NASA-CASE-LEW-10433-1	US-PATENT-3,612,743				NASA-CASE-NPO-11002
N72-21701*	c 26	NASA-CASE-ERC-10119			US-PATENT-APPL-SN-849106	NASA-CASE-ERC-10222				US-PATENT-APPL-SN-856328
		US-PATENT-APPL-SN-825258			US-PATENT-CLASS-307-262	US-PATENT-APPL-SN-832603				US-PATENT-CLASS-350-19
		US-PATENT-CLASS-307-299			US-PATENT-CLASS-307-262	US-PATENT-CLASS-29-590				US-PATENT-CLASS-350-23
		US-PATENT-CLASS-317-234V			US-PATENT-CLASS-307-88MP	US-PATENT-3,621,565				US-PATENT-CLASS-350-26
		US-PATENT-CLASS-317-235R			US-PATENT-3,612,895	NASA-CASE-FRC-10036				US-PATENT-CLASS-350-35
		US-PATENT-CLASS-331-107	N72-22198*	c 09	NASA-CASE-MFS-13687-2	US-PATENT-APPL-SN-872602				US-PATENT-CLASS-350-36
		US-PATENT-CLASS-332-31			US-PATENT-APPL-SN-80369	US-PATENT-CLASS-307-237				US-PATENT-CLASS-350-36
		US-PATENT-3,614,557			US-PATENT-CLASS-174-106R	US-PATENT-CLASS-307-254				US-PATENT-CLASS-350-49
N72-21893* #	c 31	NASA-CASE-KSC-10622-1			US-PATENT-CLASS-174-117FF	US-PATENT-CLASS-328-1		N72-22442*	c 14	US-PATENT-3,612,645
		US-PATENT-APPL-SN-149983			US-PATENT-CLASS-174-36	US-PATENT-CLASS-328-151				NASA-CASE-MFS-21629
N72-22041*	c 03	NASA-CASE-NPO-10591	N72-22199*	c 09	NASA-CASE-ERC-10222	US-PATENT-CLASS-73-88.5				US-PATENT-CLASS-324-61
		US-PATENT-APPL-SN-776185			US-PATENT-APPL-SN-832603	US-PATENT-3,621,285				US-PATENT-CLASS-73-304
		US-PATENT-CLASS-29-572			US-PATENT-CLASS-29-590	NASA-CASE-LEW-10387		N72-22443*	c 14	US-PATENT-3,639,835
		US-PATENT-3,616,528			US-PATENT-3,621,565	US-PATENT-APPL-SN-76899				NASA-CASE-XGS-03736
N72-22042*	c 03	NASA-CASE-NPO-10747	N72-22200*	c 09	NASA-CASE-FRC-10036	US-PATENT-CLASS-307-223B				US-PATENT-APPL-SN-749320
		US-PATENT-APPL-SN-6616			US-PATENT-APPL-SN-872602	US-PATENT-CLASS-307-241				US-PATENT-CLASS-252-300
		US-PATENT-CLASS-136-89			US-PATENT-CLASS-307-237	US-PATENT-CLASS-307-252J				US-PATENT-CLASS-96-90PC
		US-PATENT-3,615,853			US-PATENT-CLASS-307-317	US-PATENT-CLASS-307-252K		N72-22444*	c 14	US-PATENT-3,639,250
N72-22092*	c 05	NASA-CASE-ARC-10275-1			US-PATENT-CLASS-328-1	US-PATENT-CLASS-307-284				NASA-CASE-LAR-10523-1
		US-PATENT-APPL-SN-21644			US-PATENT-CLASS-328-151	US-PATENT-CLASS-307-304				US-PATENT-APPL-SN-32665
		US-PATENT-CLASS-2-2.1A			US-PATENT-CLASS-73-88.5	US-PATENT-CLASS-307-317				US-PATENT-CLASS-250-203
		US-PATENT-3,636,564			US-PATENT-3,621,285	US-PATENT-CLASS-328-106				US-PATENT-CLASS-350-16
N72-22093*	c 05	NASA-CASE-MSC-12324-1	N72-22201*	c 09	NASA-CASE-LEW-10387	US-PATENT-3,621,287				US-PATENT-CLASS-350-52
		US-PATENT-APPL-SN-63384			US-PATENT-APPL-SN-76899	NASA-CASE-ARC-10136-1				US-PATENT-CLASS-356-248
		US-PATENT-CLASS-128-295			US-PATENT-CLASS-307-223B	US-PATENT-APPL-SN-865106		N72-22445*	c 14	US-PATENT-3,647,276
		US-PATENT-CLASS-4-110			US-PATENT-CLASS-307-241	US-PATENT-CLASS-128-2.1A				NASA-CASE-LAR-10184
		US-PATENT-CLASS-4-99			US-PATENT-CLASS-307-252J	US-PATENT-CLASS-128-2R				US-PATENT-APPL-SN-16808
		US-PATENT-3,602,923			US-PATENT-CLASS-307-252K	US-PATENT-CLASS-307-231				US-PATENT-CLASS-33-174S
N72-22107*	c 06	NASA-CASE-NPO-10862			US-PATENT-CLASS-307-284	US-PATENT-CLASS-307-247				US-PATENT-CLASS-350-595
		US-PATENT-APPL-SN-810815			US-PATENT-CLASS-307-304					
		US-PATENT-CLASS-260-877			US-PATENT-CLASS-307-317					
		US-PATENT-3,639,510			US-PATENT-CLASS-328-106					
N72-22127*	c 07	NASA-CASE-NPO-10303	N72-22202*	c 09	NASA-CASE-ARC-10136-1					
		US-PATENT-APPL-SN-848776			US-PATENT-APPL-SN-865106					
		US-PATENT-CLASS-343-771			US-PATENT-CLASS-128-2.1A					
		US-PATENT-CLASS-343-797			US-PATENT-CLASS-128-2R					
		US-PATENT-CLASS-343-853			US-PATENT-CLASS-307-231					
		US-PATENT-CLASS-343-912			US-PATENT-CLASS-307-247					
		US-PATENT-3,623,114			US-PATENT-CLASS-307-288					
N72-22162*	c 08	NASA-CASE-NPO-11333								

## ACCESSION NUMBER INDEX

N72-25171

N72-22482*	c 15	NASA-CASE-XLA-04897 US-PATENT-APPL-SN-880249 US-PATENT-CLASS-73-133 US-PATENT-3,613,457	N72-22772*	c 28	NASA-CASE-NPO-12072 US-PATENT-APPL-SN-82647 US-PATENT-CLASS-123-122AB US-PATENT-CLASS-137-81.5 US-PATENT-CLASS-261-145 US-PATENT-3,640,256	US-PATENT-CLASS-313-224 US-PATENT-CLASS-313-231 US-PATENT-CLASS-315-111 US-PATENT-CLASS-315-326 US-PATENT-CLASS-315-358 US-PATENT-CLASS-331-94.5 US-PATENT-3,617,804		
N72-22483*	c 15	NASA-CASE-XNP-09770-2 US-PATENT-APPL-SN-864039 US-PATENT-CLASS-209-349 US-PATENT-3,615,021	N72-22874*	c 31	NASA-CASE-NPO-10883 US-PATENT-APPL-SN-26573 US-PATENT-CLASS-136-89 US-PATENT-CLASS-312-257 US-PATENT-3,620,846	N72-25019*	c 03	NASA-CASE-NPO-10575 US-PATENT-APPL-SN-6615 US-PATENT-CLASS-156-250 US-PATENT-CLASS-156-510 US-PATENT-3,654,036
N72-22484*	c 15	NASA-CASE-LAR-10031 US-PATENT-APPL-SN-867851 US-PATENT-CLASS-62-55.5 US-PATENT-3,625,018	N72-23048*	c 03	NASA-CASE-NPO-11388 US-PATENT-APPL-SN-119282 US-PATENT-CLASS-310-2 US-PATENT-CLASS-321-2 US-PATENT-CLASS-322-2 US-PATENT-3,648,152	N72-25020*	c 03	NASA-CASE-GSC-11211-1 US-PATENT-APPL-SN-139528 US-PATENT-CLASS-235-92T US-PATENT-CLASS-307-141.8 US-PATENT-CLASS-320-48 US-PATENT-CLASS-324-29.5 US-PATENT-3,663,938
N72-22485*	c 15	NASA-CASE-MSC-13512-1 US-PATENT-APPL-SN-73932 US-PATENT-CLASS-74-501R US-PATENT-3,625,084	N72-23085*	c 05	NASA-CASE-LAR-10102-1 US-PATENT-APPL-SN-13266 US-PATENT-CLASS-224-25A US-PATENT-3,649,921	N72-25021*	c 03	NASA-CASE-NPO-11118 US-PATENT-APPL-SN-8650 US-PATENT-CLASS-214-90R US-PATENT-3,666,120
N72-22486*	c 15	NASA-CASE-KSC-10031 US-PATENT-APPL-SN-98773 US-PATENT-CLASS-220-5R US-PATENT-CLASS-317-101DH US-PATENT-CLASS-317-117 US-PATENT-CLASS-317-120 US-PATENT-3,639,809	N72-23171*	c 09	NASA-CASE-GSC-10221-1 US-PATENT-APPL-SN-779025 US-PATENT-CLASS-307-252N US-PATENT-CLASS-307-252R US-PATENT-CLASS-307-259 US-PATENT-CLASS-307-305 US-PATENT-3,621,294	N72-25119*	c 05	NASA-CASE-MSC-12397-1 US-PATENT-APPL-SN-785613 US-PATENT-CLASS-2-115 US-PATENT-CLASS-2-1 US-PATENT-3,660,851
N72-22487*	c 15	NASA-CASE-GSC-10303 US-PATENT-APPL-SN-802813 US-PATENT-CLASS-29-473.1 US-PATENT-3,619,896	N72-23172*	c 09	NASA-CASE-LAR-10320-1 US-PATENT-APPL-SN-18427 US-PATENT-CLASS-324-20R US-PATENT-3,649,907	N72-25120*	c 05	NASA-CASE-MSC-90153-2 US-PATENT-APPL-SN-844225 US-PATENT-CLASS-106-209 US-PATENT-CLASS-128-2.1 US-PATENT-CLASS-128-417 US-PATENT-CLASS-252-514 US-PATENT-CLASS-264-104 US-PATENT-3,665,064
N72-22488*	c 15	NASA-CASE-MSC-11849-1 US-PATENT-APPL-SN-6617 US-PATENT-CLASS-85-1 US-PATENT-3,623,394	N72-23173*	c 09	NASA-CASE-ERC-10267 US-PATENT-APPL-SN-41348 US-PATENT-CLASS-235-197 US-PATENT-CLASS-307-229 US-PATENT-CLASS-328-145 US-PATENT-3,648,043	N72-25121*	c 05	NASA-CASE-FRC-10029-2 US-PATENT-APPL-SN-78704 US-PATENT-CLASS-156-264 US-PATENT-CLASS-156-308 US-PATENT-CLASS-29-25.14 US-PATENT-CLASS-29-25.18 US-PATENT-CLASS-29-482 US-PATENT-CLASS-29-630A US-PATENT-3,662,441
N72-22490*	c 15	NASA-CASE-LEW-10856-1 US-PATENT-APPL-SN-3417 US-PATENT-CLASS-308-195 US-PATENT-3,620,585	N72-23215*	c 11	NASA-CASE-MFS-2071b US-PATENT-APPL-SN-114848 US-PATENT-CLASS-13-20 US-PATENT-CLASS-13-31 US-PATENT-3,647,924	N72-25122*	c 05	NASA-CASE-MSC-13609-1 US-PATENT-APPL-SN-94347 US-PATENT-CLASS-128-2N US-PATENT-3,662,744
N72-22491*	c 15	NASA-CASE-GSC-10913 US-PATENT-APPL-SN-889558 US-PATENT-CLASS-219-158 US-PATENT-CLASS-219-234 US-PATENT-CLASS-219-85 US-PATENT-CLASS-228-57 US-PATENT-CLASS-29-628 US-PATENT-3,621,194	N72-23457*	c 14	NASA-CASE-MSC-12297 US-PATENT-APPL-SN-792623 US-PATENT-CLASS-55-493 US-PATENT-CLASS-55-498 US-PATENT-CLASS-55-502 US-PATENT-CLASS-55-521 US-PATENT-3,650,095	N72-25146*	c 06	NASA-CASE-NPO-11322 US-PATENT-APPL-SN-87550 US-PATENT-CLASS-250-43.5R US-PATENT-CLASS-73-23.1 US-PATENT-3,666,942
N72-22492*	c 15	NASA-CASE-MFS-20482 US-PATENT-APPL-SN-6610 US-PATENT-CLASS-29-472.9 US-PATENT-CLASS-29-473.1 US-PATENT-3,602,979	N72-23497*	c 15	NASA-CASE-KSC-10242 US-PATENT-APPL-SN-73834 US-PATENT-CLASS-219-109 US-PATENT-CLASS-219-234 US-PATENT-CLASS-219-85 US-PATENT-CLASS-324-65R US-PATENT-3,621,193	N72-25147*	c 06	NASA-CASE-ARC-10325 US-PATENT-APPL-SN-63610 US-PATENT-CLASS-260-2.5FP US-PATENT-3,663,464
N72-22520* #	c 16	NASA-CASE-LAR-10815-1 US-PATENT-APPL-SN-233587	N72-23581*	c 18	NASA-CASE-GSC-10361-1 US-PATENT-APPL-SN-700040 US-PATENT-CLASS-106-84 US-PATENT-3,620,784	N72-25148*	c 06	NASA-CASE-MFS-13994-2 US-PATENT-APPL-SN-870689 US-PATENT-CLASS-260-348SC US-PATENT-3,660,434
N72-22530*	c 17	NASA-CASE-XLE-06461 US-PATENT-APPL-SN-853855 US-PATENT-CLASS-75-58 US-PATENT-3,623,861	N72-23695*	c 23	NASA-CASE-HQN-10541-3 US-PATENT-APPL-SN-822089 US-PATENT-CLASS-350-171 US-PATENT-3,606,522	N72-25149*	c 06	NASA-CASE-GSC-10565-1 US-PATENT-APPL-SN-822039 US-PATENT-CLASS-195-103.5R US-PATENT-CLASS-195-28N US-PATENT-CLASS-260-211.5 US-PATENT-3,660,240
N72-22535*	c 17	NASA-CASE-LEW-10874-1 US-PATENT-APPL-SN-68024 US-PATENT-CLASS-148-32.5 US-PATENT-CLASS-75-170 US-PATENT-3,620,718	N72-23809*	c 28	NASA-CASE-XNP-09461 US-PATENT-APPL-SN-670829 US-PATENT-CLASS-239-418 US-PATENT-CLASS-239-433 US-PATENT-CLASS-239-543 US-PATENT-3,650,474	N72-25150*	c 06	NASA-CASE-XLE-06774-2 US-PATENT-APPL-SN-5114 US-PATENT-CLASS-117-132 US-PATENT-CLASS-117-161 US-PATENT-CLASS-260-2.5 US-PATENT-CLASS-260-92.1 US-PATENT-3,666,741
N72-22566*	c 18	NASA-CASE-MFS-20011 US-PATENT-APPL-SN-813338 US-PATENT-CLASS-106-286 US-PATENT-CLASS-106-288B US-PATENT-CLASS-106-84 US-PATENT-3,620,791	N72-23810*	c 28	NASA-CASE-NPO-11458 US-PATENT-APPL-SN-36926 US-PATENT-CLASS-60-266 US-PATENT-CLASS-60-271 US-PATENT-3,648,461	N72-25151*	c 06	NASA-CASE-MFS-20979 US-PATENT-APPL-SN-100774 US-PATENT-CLASS-260-18S US-PATENT-CLASS-260-448.2D US-PATENT-CLASS-260-46.5E US-PATENT-CLASS-260-46.5G US-PATENT-CLASS-260-46.5P US-PATENT-3,666,718
N72-22567*	c 18	NASA-CASE-NPO-11091 US-PATENT-APPL-SN-860781 US-PATENT-CLASS-260-2.1E US-PATENT-3,629,161	N72-24037*	c 03	NASA-CASE-GSC-11514-1 US-PATENT-APPL-SN-820453 US-PATENT-CLASS-117-201 US-PATENT-CLASS-136-89 US-PATENT-3,653,970	N72-25152*	c 06	NASA-CASE-NPO-10863-2 US-PATENT-APPL-SN-145026 US-PATENT-CLASS-260-92.1 US-PATENT-3,663,521
N72-22619*	c 21	NASA-CASE-ARC-10179-1 US-PATENT-APPL-SN-835058 US-PATENT-CLASS-244-114 US-PATENT-CLASS-340-26 US-PATENT-3,624,598	N72-24477*	c 14	NASA-CASE-ARC-10138-1 US-PATENT-APPL-SN-774733 US-PATENT-CLASS-250-83.3H US-PATENT-CLASS-317-247 US-PATENT-CLASS-324-61R US-PATENT-CLASS-73-355R US-PATENT-3,657,644	N72-25170*	c 07	NASA-CASE-LAR-10513-1 US-PATENT-APPL-SN-64723 US-PATENT-CLASS-333-7 US-PATENT-CLASS-333-81R US-PATENT-CLASS-333-98P US-PATENT-CLASS-333-98R US-PATENT-CLASS-333-98S US-PATENT-3,649,935
N72-22673*	c 23	NASA-CASE-XER-07896-2 US-PATENT-APPL-SN-36819 US-PATENT-CLASS-350-310 US-PATENT-3,620,606	N72-24522*	c 15	NASA-CASE-NPO-11036 US-PATENT-APPL-SN-41346 US-PATENT-CLASS-264-92 US-PATENT-3,658,974	N72-25171*	c 07	NASA-CASE-MFS-21042
N72-22769*	c 28	NASA-CASE-ARC-10106-1 US-PATENT-APPL-SN-812998 US-PATENT-CLASS-244-3.22 US-PATENT-3,612,442	N72-24753*	c 25	NASA-CASE-XNP-04167-2 US-PATENT-APPL-SN-866442 US-PATENT-CLASS-313-186 US-PATENT-CLASS-313-212			
N72-22770*	c 28	NASA-CASE-LEW-10770-1 US-PATENT-APPL-SN-880246 US-PATENT-CLASS-60-202 US-PATENT-3,613,370						
N72-22771*	c 28	NASA-CASE-LEW-10835-1 US-PATENT-APPL-SN-67815 US-PATENT-CLASS-60-202 US-PATENT-3,620,018						

		US-PATENT-APPL-SN-86417			US-PATENT-CLASS-321-18			US-PATENT-CLASS-250-209
		US-PATENT-CLASS-102-34.4			US-PATENT-CLASS-321-19			US-PATENT-CLASS-250-226
		US-PATENT-CLASS-325-114			US-PATENT-CLASS-321-2			US-PATENT-CLASS-250-83.3UV
		US-PATENT-CLASS-325-4			US-PATENT-CLASS-321-45ER			US-PATENT-CLASS-350-203
		US-PATENT-CLASS-343-6.5R			US-PATENT-CLASS-321-45R			US-PATENT-3.657,549
		US-PATENT-3.667,044			US-PATENT-3.663,940	N72-25410*	c 14	NASA-CASE-ERC-10292
N72-25172*	c 07	NASA-CASE-NPO-11358	N72-25253*	c 09	NASA-CASE-GSC-11126-1			US-PATENT-APPL-SN-45519
		US-PATENT-APPL-SN-116786			US-PATENT-APPL-SN-98640			US-PATENT-CLASS-350-160R
		US-PATENT-CLASS-179-15BV			US-PATENT-CLASS-321-2			US-PATENT-CLASS-73-515
		US-PATENT-CLASS-340-172.5			US-PATENT-CLASS-321-47			US-PATENT-CLASS-73-521
		US-PATENT-3.665,417			US-PATENT-CLASS-331-113A			US-PATENT-3.657,928
N72-25173*	c 07	NASA-CASE-ERC-10324	N72-25254*	c 09	US-PATENT-3.663,941	N72-25411*	c 14	NASA-CASE-MS-15626-1
		US-PATENT-APPL-SN-54270			NASA-CASE-NPO-10760			US-PATENT-APPL-SN-94374
		US-PATENT-CLASS-178-69.5			US-PATENT-APPL-SN-129071			US-PATENT-CLASS-116-114AH
		US-PATENT-CLASS-325-141			US-PATENT-CLASS-321-2			US-PATENT-CLASS-73-12
		US-PATENT-CLASS-325-302			US-PATENT-CLASS-321-45R			US-PATENT-CLASS-73-492
		US-PATENT-CLASS-325-325			US-PATENT-CLASS-331-113A			US-PATENT-3.656,352
		US-PATENT-CLASS-325-38			US-PATENT-3.663,944	N72-25412*	c 14	NASA-CASE-MFS-15063
		US-PATENT-CLASS-325-51	N72-25255*	c 09	NASA-CASE-LAR-10620-1			US-PATENT-APPL-SN-51477
		US-PATENT-CLASS-325-55			US-PATENT-APPL-SN-125979			US-PATENT-CLASS-178-DIG.8
		US-PATENT-CLASS-325-58			US-PATENT-CLASS-310-10			US-PATENT-CLASS-178-6.8
		US-PATENT-CLASS-325-64			US-PATENT-CLASS-310-15			US-PATENT-CLASS-340-227R
		US-PATENT-CLASS-340-167			US-PATENT-3.663,843			US-PATENT-3.659,043
		US-PATENT-3.665,313	N72-25256*	c 09	NASA-CASE-XLA-02609	N72-25413*	c 14	NASA-CASE-GSC-10879-1
N72-25174*	c 07	NASA-CASE-NPO-11264			US-PATENT-APPL-SN-41347			US-PATENT-APPL-SN-889420
		US-PATENT-APPL-SN-36531			US-PATENT-CLASS-333-79			US-PATENT-CLASS-195-127
		US-PATENT-CLASS-343-762			US-PATENT-CLASS-339-143R			US-PATENT-3.666,631
		US-PATENT-CLASS-343-777			US-PATENT-CLASS-339-147R	N72-25414*	c 14	NASA-CASE-NPO-11311
		US-PATENT-CLASS-343-779			US-PATENT-3.663,929			US-PATENT-NPL-SN-57252
		US-PATENT-CLASS-343-786	N72-25257*	c 09	NASA-CASE-MS-12395			US-PATENT-CLASS-178-7.92
		US-PATENT-CLASS-343-853			US-PATENT-APPL-SN-134573			US-PATENT-CLASS-350-175FS
		US-PATENT-3.665,481			US-PATENT-CLASS-307-233			US-PATENT-3.663,753
N72-25206*	c 08	NASA-CASE-KSC-10397			US-PATENT-CLASS-324-186	N72-25428* #	c 14	NASA-CASE-HQN-10756-1
		US-PATENT-APPL-SN-25488			US-PATENT-CLASS-324-78D			US-PATENT-APPL-SN-236052
		US-PATENT-CLASS-235-154			US-PATENT-CLASS-328-136	N72-25447*	c 15	NASA-CASE-LEW-10489-1
		US-PATENT-CLASS-340-347DA			US-PATENT-CLASS-328-140			US-PATENT-APPL-SN-889682
		US-PATENT-3.648,275			US-PATENT-3.663,885			US-PATENT-CLASS-117-107
N72-25207*	c 08	NASA-CASE-NPO-11161	N72-25258*	c 09	NASA-CASE-LAR-10253-1			US-PATENT-CLASS-117-211
		US-PATENT-APPL-SN-889374			US-PATENT-APPL-SN-99175			US-PATENT-CLASS-117-217
		US-PATENT-CLASS-340-146.1			US-PATENT-CLASS-307-88.3			US-PATENT-CLASS-117-62
		US-PATENT-CLASS-340-172.5			US-PATENT-CLASS-330-4.5			US-PATENT-CLASS-117-93.16D
		US-PATENT-3.648,256			US-PATENT-3.663,886			US-PATENT-CLASS-29-599
N72-25208*	c 08	NASA-CASE-NPO-11338	N72-25259*	c 09	NASA-CASE-GSC-10695-1			US-PATENT-3.649,356
		US-PATENT-APPL-SN-89212			US-PATENT-APPL-SN-889422	N72-25448*	c 15	NASA-CASE-LEW-10450-1
		US-PATENT-CLASS-178-50			US-PATENT-CLASS-117-200			US-PATENT-APPL-SN-880271
		US-PATENT-CLASS-179-158C			US-PATENT-CLASS-136-89			US-PATENT-CLASS-75-0.5BB
		US-PATENT-CLASS-179-15FD			US-PATENT-CLASS-29-198			US-PATENT-CLASS-75-206
		US-PATENT-CLASS-325-62			US-PATENT-3.664,874			US-PATENT-CLASS-75-213
		US-PATENT-CLASS-332-21	N72-25260*	c 09	NASA-CASE-NPO-11283			US-PATENT-3.649,242
		US-PATENT-3.659,053			US-PATENT-APPL-SN-118270	N72-25450*	c 15	NASA-CASE-NPO-11202
N72-25209*	c 08	NASA-CASE-NPO-11194			US-PATENT-CLASS-310-4			US-PATENT-APPL-SN-66004
		US-PATENT-APPL-SN-63532			US-PATENT-3.663,839			US-PATENT-CLASS-285-DIG.21
		US-PATENT-CLASS-343-12R	N72-25261*	c 09	NASA-CASE-ERC-10224			US-PATENT-CLASS-285-3
		US-PATENT-CLASS-343-14			US-PATENT-APPL-SN-868775			US-PATENT-CLASS-285-316
		US-PATENT-CLASS-343-6.5R			US-PATENT-CLASS-29-492			US-PATENT-CLASS-285-33
		US-PATENT-3.659,292			US-PATENT-CLASS-29-497			US-PATENT-CLASS-339-45M
N72-25210*	c 08	NASA-CASE-NPO-10636			US-PATENT-CLASS-29-498			US-PATENT-CLASS-339-91B
		US-PATENT-APPL-SN-77221			US-PATENT-CLASS-29-502			US-PATENT-3.656,781
		US-PATENT-CLASS-235-152			US-PATENT-CLASS-29-589	N72-25451*	c 15	NASA-CASE-NPO-10606
		US-PATENT-CLASS-340-146.1AL			US-PATENT-CLASS-29-628			US-PATENT-APPL-SN-8636
		US-PATENT-3.662,337			US-PATENT-3.665,589			US-PATENT-CLASS-251-360
N72-25247*	c 09	NASA-CASE-LAR-10163-1	N72-25262*	c 09	NASA-CASE-NPO-11078			US-PATENT-3.658,295
		US-PATENT-APPL-SN-73310			US-PATENT-APPL-SN-82280	N72-25452*	c 15	NASA-CASE-LEW-10965-1
		US-PATENT-CLASS-343-708			US-PATENT-CLASS-307-103			US-PATENT-APPL-SN-876588
		US-PATENT-CLASS-343-771			US-PATENT-CLASS-307-83			US-PATENT-CLASS-117-124C
		US-PATENT-CLASS-343-873			US-PATENT-CLASS-323-48			US-PATENT-CLASS-117-152
		US-PATENT-3.653,052			US-PATENT-CLASS-323-82			US-PATENT-CLASS-117-16R
N72-25248*	c 09	NASA-CASE-NPO-11342	N72-25284*	c 11	US-PATENT-3.663,828			US-PATENT-CLASS-117-37
		US-PATENT-APPL-SN-89209			NASA-CASE-LAR-10507-1			US-PATENT-CLASS-117-47R
		US-PATENT-CLASS-340-172.5			US-PATENT-APPL-SN-874177			US-PATENT-CLASS-117-62
		US-PATENT-CLASS-340-324A			US-PATENT-CLASS-195-127			US-PATENT-CLASS-117-93.3
		US-PATENT-3.648,250			US-PATENT-3.649,462			US-PATENT-CLASS-204-157.18AG
N72-25249*	c 09	NASA-CASE-GSC-10656-1	N72-25287*	c 11	NASA-CASE-LAR-10546-1			US-PATENT-CLASS-204-49
		US-PATENT-APPL-SN-59969			US-PATENT-APPL-SN-32664			US-PATENT-CLASS-250-65F
		US-PATENT-CLASS-321-2			US-PATENT-CLASS-287-54A			US-PATENT-CLASS-96-36.2
		US-PATENT-CLASS-323-DIG.1			US-PATENT-CLASS-52-648			US-PATENT-3.658,569
		US-PATENT-CLASS-323-17			US-PATENT-CLASS-52-655	N72-25453*	c 15	NASA-CASE-KSC-10513
		US-PATENT-CLASS-323-22T			US-PATENT-3.665,670			US-PATENT-APPL-SN-61535
		US-PATENT-3.621,372	N72-25288*	c 11	NASA-CASE-MFS-20434			US-PATENT-CLASS-187-1
N72-25250*	c 09	NASA-CASE-KSC-10565			US-PATENT-APPL-SN-55534			US-PATENT-CLASS-187-20
		US-PATENT-APPL-SN-98517			US-PATENT-CLASS-73-140			US-PATENT-CLASS-187-95
		US-PATENT-CLASS-315-135			US-PATENT-CLASS-73-161			US-PATENT-CLASS-254-190
		US-PATENT-CLASS-315-349			US-PATENT-3.665,758			US-PATENT-3.666,051
		US-PATENT-CLASS-330-2	N72-25292*	c 12	NASA-CASE-NPO-11556	N72-25454*	c 15	NASA-CASE-MS-12233-1
		US-PATENT-CLASS-330-59			US-PATENT-APPL-SN-82648			US-PATENT-APPL-SN-73422
		US-PATENT-CLASS-340-332			US-PATENT-CLASS-210-188			US-PATENT-CLASS-52-169
		US-PATENT-3.659,148			US-PATENT-CLASS-310-11			US-PATENT-CLASS-52-173
N72-25251*	c 09	NASA-CASE-ERC-10048			US-PATENT-3.648,083			US-PATENT-CLASS-52-594
		US-PATENT-APPL-SN-10329	N72-25323*	c 13	NASA-CASE-NPO-11373			US-PATENT-3.665,669
		US-PATENT-CLASS-307-261			US-PATENT-APPL-SN-81095	N72-25455*	c 15	NASA-CASE-NPO-11095
		US-PATENT-CLASS-321-18			US-PATENT-CLASS-73-421.5R			US-PATENT-APPL-SN-19585
		US-PATENT-CLASS-321-2			US-PATENT-CLASS-73-422GC			US-PATENT-CLASS-239-424
		US-PATENT-3.659,184			US-PATENT-CLASS-73-422TC			US-PATENT-CLASS-60-258
N72-25252*	c 09	NASA-CASE-ERC-10268			US-PATENT-3.662,604			US-PATENT-CLASS-60-39.74A
		US-PATENT-APPL-SN-39342	N72-25409*	c 14	NASA-CASE-ERC-10174			US-PATENT-3.662,547
		US-PATENT-CLASS-321-11			US-PATENT-APPL-SN-39344	N72-25456*	c 15	NASA-CASE-NPO-11222



## ACCESSION NUMBER INDEX

**N72-28762**

N72-25457*	c 15	US-PATENT-APPL-SN-59893 US-PATENT-CLASS-310-68 US-PATENT-CLASS-310-80 US-PATENT-CLASS-310-83 US-PATENT-3.660.704 NASA-CASE-ERC-10325 US-PATENT-APPL-SN-43884 US-PATENT-CLASS-324-158D US-PATENT-CLASS-324-158T US-PATENT-3.665.307 NASA-CASE-ERC-10283 US-PATENT-APPL-SN-39185 US-PATENT-CLASS-331-94.5 US-PATENT-CLASS-332-7.51 US-PATENT-3.659.225	N72-26371*	c 15	US-PATENT-CLASS-136-202 NASA-CASE-3.666.566 NASA-CASE-NPO-10244 US-PATENT-APPL-SN-43327 US-PATENT-CLASS-308-2A US-PATENT-CLASS-73-136R US-PATENT-3.664.185 NASA-CASE-GSC-10344-1 US-PATENT-APPL-SN-785078 US-PATENT-CLASS-136-89 US-PATENT-3.672.999 NASA-CASE-LAR-10365-1 US-PATENT-APPL-SN-3151 US-PATENT-CLASS-210-103 US-PATENT-CLASS-210-104 US-PATENT-CLASS-210-110 US-PATENT-CLASS-210-137 US-PATENT-3.670.890 NASA-CASE-MSC-13648 US-PATENT-APPL-SN-87222 US-PATENT-CLASS-128-DIG.4 US-PATENT-CLASS-128-2.1E US-PATENT-CLASS-128-417 US-PATENT-3.669.110 NASA-CASE-NPO-10768-2 US-PATENT-APPL-SN-770398 US-PATENT-APPL-SN-99524 US-PATENT-CLASS-260-535H US-PATENT-CLASS-260-77.5AP US-PATENT-3.671.497 NASA-CASE-NPO-10767-2 US-PATENT-APPL-SN-241061 NASA-CASE-LEW-10330-1 US-PATENT-APPL-SN-110402 US-PATENT-CLASS-336-198 US-PATENT-CLASS-336-220 US-PATENT-CLASS-336-60 US-PATENT-3.648.209 NASA-CASE-KSC-10644 US-PATENT-APPL-SN-114849 US-PATENT-CLASS-307-118 US-PATENT-CLASS-307-92 US-PATENT-CLASS-340-240 US-PATENT-3.673.424 NASA-CASE-NPO-10542 US-PATENT-APPL-SN-767741 US-PATENT-CLASS-310-4 US-PATENT-3.673.440 NASA-CASE-ERC-10015-2 US-PATENT-APPL-SN-763744 US-PATENT-APPL-SN-97343 US-PATENT-CLASS-313-309 US-PATENT-CLASS-313-336 US-PATENT-CLASS-313-351 US-PATENT-CLASS-313-356 US-PATENT-3.671.798 NASA-CASE-MFS-20620 US-PATENT-APPL-SN-154935 US-PATENT-CLASS-73-117.1 US-PATENT-CLASS-73-432SD US-PATENT-3.670.564 NASA-CASE-NPO-11147 US-PATENT-APPL-SN-63195 US-PATENT-CLASS-324-79R US-PATENT-CLASS-328-189 US-PATENT-CLASS-331-44 US-PATENT-3.670.241 NASA-CASE-NPO-11201 US-PATENT-APPL-SN-77220 US-PATENT-CLASS-250-203R US-PATENT-CLASS-250-225 US-PATENT-CLASS-350-147 US-PATENT-CLASS-356-141 US-PATENT-CLASS-356-152 US-PATENT-3.670.168 NASA-CASE-XLE-05230 US-PATENT-APPL-SN-877717 US-PATENT-CLASS-136-233 US-PATENT-3.671.329 NASA-CASE-MSC-12293-1 US-PATENT-APPL-SN-59956 US-PATENT-CLASS-250-205 US-PATENT-CLASS-315-151 US-PATENT-CLASS-315-156 US-PATENT-CLASS-315-158 US-PATENT-CLASS-315-297 US-PATENT-CLASS-315-307 US-PATENT-CLASS-315-310 US-PATENT-CLASS-315-311 US-PATENT-3.670.202 NASA-CASE-MFS-20523 US-PATENT-APPL-SN-77786 US-PATENT-CLASS-73-103 US-PATENT-CLASS-73-71.6 US-PATENT-3.670.563 NASA-CASE-NPO-10761 US-PATENT-APPL-SN-844355	N72-27484*	c 15	US-PATENT-CLASS-248-188.4 US-PATENT-3.669.393 NASA-CASE-XLA-09843 US-PATENT-APPL-SN-60876 US-PATENT-CLASS-83-522 US-PATENT-CLASS-83-562 US-PATENT-CLASS-83-563 US-PATENT-CLASS-83-588 US-PATENT-CLASS-83-8 US-PATENT-3.668.956 NASA-CASE-ARC-10160-1 US-PATENT-APPL-SN-867842 US-PATENT-CLASS-178-DIG.20 US-PATENT-CLASS-178-6.5 US-PATENT-CLASS-350-138 US-PATENT-3.670.097 NASA-CASE-LAR-10836-1 US-PATENT-APPL-SN-138227 US-PATENT-CLASS-350-161 US-PATENT-3.671.105 NASA-CASE-LAR-10800-1 US-PATENT-APPL-SN-154094 US-PATENT-CLASS-73-35 US-PATENT-3.670.559 NASA-CASE-NPO-10633 US-PATENT-APPL-SN-885521 US-PATENT-CLASS-165-20 US-PATENT-CLASS-165-3 US-PATENT-CLASS-62-93 US-PATENT-3.675.712 NASA-CASE-MFS-20757 US-PATENT-APPL-SN-136006 US-PATENT-CLASS-339-176MF US-PATENT-CLASS-339-218M US-PATENT-CLASS-339-75MP US-PATENT-CLASS-339-94M US-PATENT-3.670.290 NASA-CASE-ARC-10265-1 US-PATENT-APPL-SN-64709 US-PATENT-CLASS-324-41 US-PATENT-CLASS-340-258 US-PATENT-3.676.772 NASA-CASE-GSC-10786-1 US-PATENT-APPL-SN-773072 US-PATENT-CLASS-330-29 US-PATENT-3.533.006 NASA-CASE-XLA-06683 US-PATENT-APPL-SN-10827 US-PATENT-CLASS-33-1SA US-PATENT-CLASS-33-75R US-PATENT-3.675.332 NASA-CASE-ERC-10081 US-PATENT-APPL-SN-877990 US-PATENT-CLASS-325-363 US-PATENT-CLASS-343-100ME US-PATENT-CLASS-343-112D US-PATENT-CLASS-73-355 US-PATENT-3.665.467 NASA-CASE-XLA-04980-2 US-PATENT-APPL-SN-577548 US-PATENT-APPL-SN-763040 US-PATENT-CLASS-148-187 US-PATENT-3.549.435 NASA-CASE-MFS-14405 US-PATENT-APPL-SN-73283 US-PATENT-CLASS-214-1CM US-PATENT-CLASS-74-469 US-PATENT-3.631.737 NASA-CASE-MFS-20433 US-PATENT-APPL-SN-114847 US-PATENT-CLASS-52-1 US-PATENT-CLASS-52-573 US-PATENT-3.675.376 NASA-CASE-NPO-11437 US-PATENT-APPL-SN-63144 US-PATENT-CLASS-330-4 US-PATENT-CLASS-331-94 US-PATENT-3.676.787 NASA-CASE-XLE-06461-2 US-PATENT-APPL-SN-156778 US-PATENT-APPL-SN-853855 US-PATENT-CLASS-266-24 US-PATENT-3.675.910 NASA-CASE-XLE-03940-2 US-PATENT-APPL-SN-539255 US-PATENT-APPL-SN-793657 US-PATENT-CLASS-29-182.5 US-PATENT-3.676.084 NASA-CASE-NPO-11775 US-PATENT-APPL-SN-162230 US-PATENT-CLASS-29-570 US-PATENT-CLASS-317-230 US-PATENT-CLASS-317-261 US-PATENT-3.676.754 NASA-CASE-LAR-10294-1	N72-28762*	c 26
N72-25485*	c 16	US-PATENT-CLASS-331-94.5 US-PATENT-CLASS-332-7.51 US-PATENT-3.659.225 NASA-CASE-LEW-10424-2-2 US-PATENT-APPL-SN-15222 US-PATENT-CLASS-75-DIG.1 US-PATENT-CLASS-75-208 US-PATENT-CLASS-75-211 US-PATENT-CLASS-75-226 US-PATENT-3.653.882 NASA-CASE-ERC-10364 US-PATENT-APPL-SN-55537 US-PATENT-CLASS-161-127 US-PATENT-CLASS-161-68 US-PATENT-CLASS-161-7 US-PATENT-CLASS-52-DIG.10 US-PATENT-CLASS-52-80 US-PATENT-3.663.347 NASA-CASE-ERC-10363 US-PATENT-APPL-SN-57253 US-PATENT-CLASS-161-127 US-PATENT-CLASS-161-68 US-PATENT-CLASS-161-7 US-PATENT-CLASS-52-DIG.10 US-PATENT-CLASS-52-80 US-PATENT-3.663.346 NASA-CASE-MSC-13397-1 US-PATENT-APPL-SN-59966 US-PATENT-CLASS-244-1SA US-PATENT-CLASS-244-23A US-PATENT-3.662.973 NASA-CASE-NPO-10634 US-PATENT-APPL-SN-112999 US-PATENT-CLASS-62-475 US-PATENT-CLASS-62-6 US-PATENT-CLASS-62-80 US-PATENT-CLASS-62-85 US-PATENT-3.656.313 NASA-CASE-XER-07895 US-PATENT-APPL-SN-651627 US-PATENT-CLASS-317-234J US-PATENT-CLASS-317-235A US-PATENT-CLASS-317-235AJ US-PATENT-CLASS-31								

		US-PATENT-APPL-SN-796685				US-PATENT-3,690,291			US-PATENT-CLASS-325-480
		US-PATENT-CLASS-106-39	N72-32688*	c 25		NASA-CASE-MFS-20589			US-PATENT-3,700,812
		US-PATENT-CLASS-106-46				US-PATENT-APPL-SN-103077	N73-12264*	c 11	NASA-CASE-LAR-10348-1
		US-PATENT-CLASS-117-212				US-PATENT-CLASS-313-231			US-PATENT-APPL-SN-70032
		US-PATENT-CLASS-117-217				US-PATENT-CLASS-315-111			US-PATENT-CLASS-73-147
		US-PATENT-CLASS-29-25.42				US-PATENT-3,693,002			US-PATENT-3,695,101
N72-29172*	c 09	US-PATENT-3,649,353	N72-33072*	c 04		NASA-CASE-ERC-10338	N73-12265*	c 11	NASA-CASE-NPO-10890
		NASA-CASE-LAR-10511-1				US-PATENT-APPL-SN-50339			US-PATENT-APPL-SN-99903
		US-PATENT-APPL-SN-41345				US-PATENT-CLASS-23-109			US-PATENT-CLASS-137-559
		US-PATENT-CLASS-333-24R				US-PATENT-3,679,360			US-PATENT-CLASS-219-203
		US-PATENT-CLASS-333-98P	N72-33096*	c 05		NASA-CASE-MSC-13540-1			US-PATENT-CLASS-219-522
		US-PATENT-CLASS-333-98R				US-PATENT-APPL-SN-68023			US-PATENT-CLASS-52-171
		US-PATENT-3,676,809				US-PATENT-CLASS-99-80PS			US-PATENT-3,696,833
N72-29464*	c 14	NASA-CASE-ARC-10017-1	N72-33146*	c 07		US-PATENT-3,692,533	N73-12444*	c 14	NASA-CASE-GSC-10903-1
		US-PATENT-APPL-SN-55536				NASA-CASE-MSC-12259-2			US-PATENT-APPL-SN-114846
		US-PATENT-CLASS-250-41.9D				US-PATENT-APPL-SN-61895			US-PATENT-CLASS-250-41.9G
		US-PATENT-CLASS-250-71.5R				US-PATENT-APPL-SN-853763			US-PATENT-CLASS-250-41.9S
		US-PATENT-CLASS-313-356				US-PATENT-CLASS-325-373			US-PATENT-CLASS-73-421.5
		US-PATENT-3,676,674				US-PATENT-3,694,753			US-PATENT-3,700,893
N72-29488*	c 15	NASA-CASE-XLE-10326-2	N72-33172*	c 08		NASA-CASE-NPO-11630	N73-12445*	c 14	NASA-CASE-LAR-10728-1
		US-PATENT-APPL-SN-54540				US-PATENT-APPL-SN-143078			US-PATENT-APPL-SN-112998
		US-PATENT-APPL-SN-723465				US-PATENT-CLASS-179-15.55R			US-PATENT-CLASS-250-83.3H
		US-PATENT-CLASS-277-25				US-PATENT-3,694,581			US-PATENT-CLASS-250-83.3R
		US-PATENT-CLASS-277-27	N72-33204*	c 09		NASA-CASE-NPO-11129			US-PATENT-CLASS-250-83R
		US-PATENT-CLASS-277-74				US-PATENT-APPL-SN-883523			US-PATENT-3,700,897
		US-PATENT-3,675,935				US-PATENT-CLASS-307-262	N73-12446*	c 14	NASA-CASE-NPO-11239
N72-31140*	c 06	NASA-CASE-MSC-13335-1				US-PATENT-CLASS-307-295			US-PATENT-APPL-SN-89211
		US-PATENT-APPL-SN-55806				US-PATENT-CLASS-328-155			US-PATENT-CLASS-356-106
		US-PATENT-CLASS-55-16				US-PATENT-CLASS-328-24			US-PATENT-CLASS-356-114
		US-PATENT-CLASS-55-55				US-PATENT-3,621,406			US-PATENT-3,700,334
		US-PATENT-3,678,654	N72-33205*	c 09		NASA-CASE-GSC-10835-1	N73-12447*	c 14	NASA-CASE-NPO-11493
N72-31141*	c 06	NASA-CASE-ARC-10308-1				US-PATENT-APPL-SN-116778			US-PATENT-APPL-SN-151413
		US-PATENT-APPL-SN-134568				US-PATENT-CLASS-317-101A			US-PATENT-CLASS-136-224
		US-PATENT-CLASS-250-43.5R				US-PATENT-CLASS-317-235			US-PATENT-3,700,503
		US-PATENT-CLASS-356-51				US-PATENT-CLASS-317-235A	N73-12486*	c 15	NASA-CASE-KSC-10615
		US-PATENT-3,679,899				US-PATENT-CLASS-317-235AJ			US-PATENT-APPL-SN-103078
N72-31226*	c 08	NASA-CASE-NPO-11016				US-PATENT-3,694,700			US-PATENT-CLASS-244-1SB
		US-PATENT-APPL-SN-889584	N72-33230*	c 10		NASA-CASE-GSC-11340-1			US-PATENT-CLASS-244-135
		US-PATENT-CLASS-235-150.1				US-PATENT-APPL-SN-107379			US-PATENT-CLASS-62-45
		US-PATENT-CLASS-235-151.1				US-PATENT-CLASS-330-12			US-PATENT-CLASS-62-7
		US-PATENT-CLASS-235-92MT				US-PATENT-CLASS-331-115			US-PATENT-3,697,021
		US-PATENT-CLASS-323-19				US-PATENT-CLASS-331-116R	N73-12487*	c 15	NASA-CASE-FRC-10019
		US-PATENT-CLASS-340-347AD				US-PATENT-CLASS-333-80T			US-PATENT-APPL-SN-880398
		US-PATENT-3,681,581				US-PATENT-3,693,105			US-PATENT-CLASS-204-192
N72-31235*	c 09	NASA-CASE-ERC-10214	N72-33377*	c 14		NASA-CASE-MFS-20760			US-PATENT-3,700,575
		US-PATENT-APPL-SN-863914				US-PATENT-APPL-SN-99174	N73-12488*	c 15	NASA-CASE-ARC-10345-1
		US-PATENT-CLASS-343-770				US-PATENT-CLASS-73-141AB			US-PATENT-APPL-SN-193671
		US-PATENT-CLASS-343-771				US-PATENT-CLASS-73-85			US-PATENT-CLASS-287-85R
		US-PATENT-CLASS-343-786				US-PATENT-3,693,418			US-PATENT-CLASS-308-2A
		US-PATENT-CLASS-343-797	N72-33476*	c 15		NASA-CASE-XGS-07805			US-PATENT-CLASS-74-5F
		US-PATENT-CLASS-343-853				US-PATENT-APPL-SN-104884			US-PATENT-3,700,291
		US-PATENT-3,680,142				US-PATENT-CLASS-308-10	N73-12489*	c 15	NASA-CASE-MSC-12357
N72-31273*	c 10	NASA-CASE-KSC-10647-1				US-PATENT-3,694,041			US-PATENT-APPL-SN-662763
		US-PATENT-APPL-SN-774691	N72-33477*	c 15		NASA-CASE-NPO-11340			US-PATENT-CLASS-264-102
		US-PATENT-CLASS-178-7.5E				US-PATENT-APPL-SN-147997			US-PATENT-CLASS-264-28
		US-PATENT-CLASS-315-22R				US-PATENT-CLASS-137-13			US-PATENT-CLASS-264-36
		US-PATENT-CLASS-315-30R				US-PATENT-CLASS-137-81.5			US-PATENT-CLASS-264-40
		US-PATENT-CLASS-330-27R				US-PATENT-CLASS-60-1			US-PATENT-3,697,630
		US-PATENT-3,678,191				US-PATENT-CLASS-60-36	N73-12492* #	c 15	NASA-CASE-XLA-08914
N72-31446*	c 14	NASA-CASE-ERC-10087-2				US-PATENT-3,693,346			US-PATENT-APPL-SN-810576
		US-PATENT-APPL-SN-738315	N72-33681*	c 24		NASA-CASE-LEW-10518-1	N73-12495* #	c 15	NASA-CASE-NPO-13086-1
		US-PATENT-APPL-SN-91642				US-PATENT-APPL-SN-863280			US-PATENT-APPL-SN-292477
		US-PATENT-CLASS-29-588				US-PATENT-CLASS-176-11	N73-12547*	c 17	NASA-CASE-LAR-10539-1
		US-PATENT-CLASS-317-234D				US-PATENT-3,694,313			US-PATENT-APPL-SN-136085
		US-PATENT-CLASS-317-234G	N72-33696*	c 25		NASA-CASE-GSC-11291-1			US-PATENT-CLASS-23-230R
		US-PATENT-CLASS-317-235M				US-PATENT-APPL-SN-102412			US-PATENT-3,701,631
		US-PATENT-CLASS-317-235R				US-PATENT-CLASS-250-83.6R			US-PATENT-3,700,631
		US-PATENT-3,686,542				US-PATENT-3,694,655	N73-12604*	c 18	NASA-CASE-MFS-20408
N72-31483*	c 15	NASA-CASE-LAR-10061-1				NASA-CASE-NPO-11406			US-PATENT-APPL-SN-71048
		US-PATENT-APPL-SN-104047				US-PATENT-APPL-SN-95183			US-PATENT-CLASS-161-93
		US-PATENT-CLASS-251-331				US-PATENT-CLASS-235-152	N73-12884*	c 30	NASA-CASE-MSC-12391
		US-PATENT-CLASS-251-86				US-PATENT-CLASS-331-78			US-PATENT-APPL-SN-106465
		US-PATENT-3,680,830				US-PATENT-CLASS-340-146.1AL			US-PATENT-CLASS-244-155
N72-31637*	c 21	NASA-CASE-GSC-10945-1				US-PATENT-3,700,869			US-PATENT-3,700,193
		US-PATENT-APPL-SN-75431	N73-12176*	c 08		NASA-CASE-KSC-10595	N73-13008*	c 02	NASA-CASE-GSC-11077-1
		US-PATENT-CLASS-60-23				US-PATENT-APPL-SN-98772			US-PATENT-APPL-SN-127618
		US-PATENT-CLASS-60-26				US-PATENT-CLASS-235-155			US-PATENT-CLASS-244-32
		US-PATENT-3,678,685				US-PATENT-CLASS-340-347DD			US-PATENT-3,698,667
N72-32169*	c 07	NASA-CASE-NPO-11361				US-PATENT-3,697,733	N73-13114*	c 05	NASA-CASE-MSC-13604-1
		US-PATENT-APPL-SN-112988				US-PATENT-3,697,1371			US-PATENT-APPL-SN-78717
		US-PATENT-CLASS-343-781	N73-12177*	c 08		NASA-CASE-NPO-11371			US-PATENT-CLASS-128-2N
		US-PATENT-CLASS-343-837				US-PATENT-APPL-SN-117575			US-PATENT-CLASS-273-1E
		US-PATENT-CLASS-343-840				US-PATENT-CLASS-340-146.1AQ			US-PATENT-CLASS-35-22R
		US-PATENT-CLASS-343-915				US-PATENT-3,697,950			US-PATENT-3,698,385
		US-PATENT-3,680,144	N73-12211*	c 09		NASA-CASE-ERC-10412-1	N73-13128*	c 06	NASA-CASE-GSC-11214-1
N72-32452*	c 14	NASA-CASE-MFS-15162				US-PATENT-APPL-SN-72024			US-PATENT-APPL-SN-115134
		US-PATENT-APPL-SN-100639				US-PATENT-CLASS-343-11R			US-PATENT-CLASS-117-35R
		US-PATENT-CLASS-350-79				US-PATENT-CLASS-343-11VB			US-PATENT-3,702,775
		US-PATENT-CLASS-356-241				US-PATENT-CLASS-343-SDP	N73-13129*	c 06	NASA-CASE-XNP-08124-2
		US-PATENT-3,694,094				US-PATENT-3,696,418			US-PATENT-APPL-SN-97629
N72-32487*	c 15	NASA-CASE-LAR-10541-1	N73-12214* #	c 09		NASA-CASE-NPO-13091-1			US-PATENT-CLASS-75-66
		US-PATENT-APPL-SN-138229				US-PATENT-APPL-SN-290022			US-PATENT-3,702,762
		US-PATENT-CLASS-118-49.1	N73-12244*	c 10		NASA-CASE-NPO-11631	N73-13149*	c 07	NASA-CASE-NPO-11302-1
		US-PATENT-CLASS-204-298				US-PATENT-APPL-SN-123253			US-PATENT-APPL-SN-70967
		US-PATENT-CLASS-219-121P				US-PATENT-CLASS-179-1P			US-PATENT-CLASS-178-69.5
		US-PATENT-CLASS-219-273				US-PATENT-CLASS-325-473			US-PATENT-CLASS-235-150.55

## ACCESSION NUMBER INDEX

N73-16918

				US-PATENT-CLASS-235-181				US-PATENT-CLASS-60-37					US-PATENT-CLASS-174-52S
				US-PATENT-CLASS-325-325				US-PATENT-3,702,532					US-PATENT-CLASS-29-589
				US-PATENT-CLASS-340-146.1				NASA-CASE-HQN-10654-1					US-PATENT-CLASS-29-591
				US-PATENT-3,701,894		N73-13489*	c 16	US-PATENT-APPL-SN-182978					US-PATENT-CLASS-317-234A
N73-13187*	c 08			NASA-CASE-GSC-10975-1				US-PATENT-CLASS-324-5R					US-PATENT-CLASS-317-234G
				US-PATENT-APPL-SN-100996				US-PATENT-CLASS-331-94					US-PATENT-3,705,255
				US-PATENT-CLASS-340-172.5				US-PATENT-3,702,972		N73-14584*	c 18		NASA-CASE-LAR-10894-1
				US-PATENT-3,702,463		N73-13562*	c 18	NASA-CASE-ARC-10196-1					US-PATENT-APPL-SN-189375
N73-13208*	c 09			NASA-CASE-LEW-11192-1				US-PATENT-APPL-SN-115082					US-PATENT-CLASS-106-39R
				US-PATENT-APPL-SN-198285				US-PATENT-CLASS-260-2.5F					US-PATENT-CLASS-106-55
				US-PATENT-CLASS-315-3.5				US-PATENT-3,702,841					US-PATENT-CLASS-106-58
				US-PATENT-CLASS-315-5.38		N73-13643*	c 21	NASA-CASE-HQN-10703					US-PATENT-CLASS-106-63
				US-PATENT-3,702,951				US-PATENT-APPL-SN-156724					US-PATENT-CLASS-264-DIG.36
N73-13209*	c 09			NASA-CASE-XLA-05099				US-PATENT-CLASS-340-27NA					US-PATENT-CLASS-264-65
				US-PATENT-APPL-SN-98798				US-PATENT-CLASS-340-33					US-PATENT-3,706,583
				US-PATENT-CLASS-235-152				US-PATENT-CLASS-340-97		N73-14692*	c 21		NASA-CASE-ERC-10392
				US-PATENT-CLASS-307-207				US-PATENT-CLASS-343-112CA					US-PATENT-APPL-SN-36534
				US-PATENT-CLASS-307-215				US-PATENT-3,699,511					US-PATENT-CLASS-340-27AT
				US-PATENT-3,700,868		N73-13644*	c 21	NASA-CASE-NPO-11481					US-PATENT-3,706,970
N73-13235*	c 10			NASA-CASE-KSC-10003				US-PATENT-APPL-SN-134571		N73-14853*	c 31		NASA-CASE-GSC-10590-1
				US-PATENT-APPL-SN-60883				US-PATENT-CLASS-179-100.2A					US-PATENT-APPL-SN-130353
				US-PATENT-CLASS-178-DIG.6				US-PATENT-CLASS-340-174.1R					US-PATENT-CLASS-102-49.5
				US-PATENT-CLASS-178-6				US-PATENT-CLASS-346-138					US-PATENT-3,706,281
				US-PATENT-CLASS-307-242				US-PATENT-CLASS-346-74MD		N73-14854*	c 31		NASA-CASE-MS-12433
				US-PATENT-CLASS-307-259				US-PATENT-CLASS-74-5.22					US-PATENT-APPL-SN-103551
				US-PATENT-CLASS-328-104				US-PATENT-3,697,968					US-PATENT-CLASS-244-155
				US-PATENT-CLASS-328-154		N73-13660*	c 23	NASA-CASE-MFS-20809					US-PATENT-3,702,688
				US-PATENT-3,702,898				US-PATENT-APPL-SN-173185		N73-14855*	c 31		NASA-CASE-NPO-10680
N73-13257*	c 11			NASA-CASE-LAR-10574-1				US-PATENT-CLASS-315-169R					US-PATENT-APPL-SN-104048
				US-PATENT-APPL-SN-66206				US-PATENT-CLASS-315-169TV					US-PATENT-CLASS-74-2
				US-PATENT-CLASS-244-1SS				US-PATENT-CLASS-317-101A					US-PATENT-3,706,230
				US-PATENT-3,698,659				US-PATENT-3,700,961		N73-15235*	c 09		NASA-CASE-NPO-12106
N73-13415*	c 14			NASA-CASE-LAR-10855-1		N73-13661*	c 23	NASA-CASE-MS-12404-1					US-PATENT-APPL-SN-175881
				US-PATENT-APPL-SN-166541				US-PATENT-APPL-SN-142662					US-PATENT-CLASS-317-234V
				US-PATENT-CLASS-73-147				US-PATENT-CLASS-356-106S					US-PATENT-CLASS-317-235AG
				US-PATENT-CLASS-73-182				US-PATENT-3,702,735					US-PATENT-CLASS-317-235K
				US-PATENT-CLASS-73-189		N73-13662*	c 23	NASA-CASE-MFS-20243					US-PATENT-CLASS-331-107G
				US-PATENT-CLASS-73-212				US-PATENT-APPL-SN-59894					US-PATENT-CLASS-331-177R
				US-PATENT-3,699,811				US-PATENT-CLASS-250-51.5					US-PATENT-CLASS-331-90
N73-13416*	c 14			NASA-CASE-GSC-11302-1				US-PATENT-CLASS-250-52					US-PATENT-3,694,771
				US-PATENT-APPL-SN-168650				US-PATENT-3,702,933		N73-16106*	c 06		NASA-CASE-LAR-10668-1
				US-PATENT-CLASS-73-71.6				US-PATENT-3,702,932					US-PATENT-APPL-SN-172459
				US-PATENT-3,699,807		N73-13773*	c 28	NASA-CASE-LEW-10374-1					US-PATENT-CLASS-23-232E
N73-13417*	c 14			NASA-CASE-XLE-05230-2				US-PATENT-APPL-SN-107380					US-PATENT-CLASS-23-232R
				US-PATENT-APPL-SN-147099				US-PATENT-CLASS-137-81.5					US-PATENT-CLASS-23-254E
				US-PATENT-APPL-SN-67717				US-PATENT-CLASS-60-211					US-PATENT-CLASS-23-254R
				US-PATENT-CLASS-136-253				US-PATENT-CLASS-60-240					US-PATENT-CLASS-23-254R
				US-PATENT-CLASS-29-573				US-PATENT-CLASS-60-243					US-PATENT-CLASS-250-71R
				US-PATENT-CLASS-29-624				US-PATENT-3,702,536					US-PATENT-CLASS-250-83.3UV
				US-PATENT-3,699,645		N73-13898*	c 31	NASA-CASE-LAR-10549-1					US-PATENT-3,709,663
N73-13418*	c 14			NASA-CASE-MFS-14216				US-PATENT-APPL-SN-108824		N73-16121*	c 07		NASA-CASE-NPO-11572
				US-PATENT-APPL-SN-50208				US-PATENT-CLASS-244-139					US-PATENT-APPL-SN-125234
				US-PATENT-CLASS-137-487.5				US-PATENT-CLASS-60-291					US-PATENT-CLASS-179-15AN
				US-PATENT-CLASS-137-81				US-PATENT-3,700,192					US-PATENT-CLASS-179-15BC
				US-PATENT-CLASS-92-49		N73-13921*	c 32	NASA-CASE-MS-12233-2					US-PATENT-CLASS-325-60
				US-PATENT-3,698,412				US-PATENT-APPL-SN-107298					US-PATENT-CLASS-343-200
N73-13420*	c 14			NASA-CASE-NPO-11418-1				US-PATENT-CLASS-229-DIG.11					US-PATENT-3,710,257
				US-PATENT-APPL-SN-193947				US-PATENT-CLASS-52-284		N73-16205*	c 10		NASA-CASE-NPO-11282
				US-PATENT-CLASS-333-81B				US-PATENT-CLASS-52-594					US-PATENT-APPL-SN-101354
				US-PATENT-CLASS-333-98R				US-PATENT-3,702,520					US-PATENT-CLASS-325-346
				US-PATENT-3,702,979		N73-14130*	c 07	NASA-CASE-NPO-11661					US-PATENT-CLASS-325-419
N73-13435* #	c 14			NASA-CASE-GSC-11533-1				US-PATENT-APPL-SN-200682					US-PATENT-3,710,261
				US-PATENT-APPL-SN-305013				US-PATENT-CLASS-343-782		N73-16206*	c 10		NASA-CASE-ERC-10285
N73-13462*	c 15			NASA-CASE-NPO-11479				US-PATENT-CLASS-343-837					US-PATENT-APPL-SN-55333
				US-PATENT-APPL-SN-170440				US-PATENT-CLASS-343-915					US-PATENT-CLASS-331-45
				US-PATENT-CLASS-137-608				US-PATENT-3,705,406					US-PATENT-CLASS-343-100R
				US-PATENT-CLASS-137-81.5		N73-14214*	c 09	NASA-CASE-ARC-10467-1					US-PATENT-CLASS-343-100SA
				US-PATENT-CLASS-138-45				US-PATENT-APPL-SN-212028					US-PATENT-CLASS-343-853
				US-PATENT-CLASS-251-122				US-PATENT-CLASS-250-205					US-PATENT-3,710,329
				US-PATENT-3,700,005				US-PATENT-CLASS-250-211J		N73-16483*	c 14		NASA-CASE-ERC-10226-1
N73-13463*	c 15			NASA-CASE-MFS-20317				US-PATENT-CLASS-250-217SS					US-PATENT-APPL-SN-124909
				US-PATENT-APPL-SN-67730				US-PATENT-CLASS-307-310					US-PATENT-APPL-SN-808822
				US-PATENT-CLASS-173-131				US-PATENT-CLASS-307-311					US-PATENT-CLASS-250-209
				US-PATENT-CLASS-72-447				US-PATENT-3,705,316					US-PATENT-CLASS-250-215
				US-PATENT-CLASS-72-476		N73-14427*	c 14	NASA-CASE-NPO-10758					US-PATENT-CLASS-250-217
				US-PATENT-3,699,799				US-PATENT-APPL-SN-81096					US-PATENT-CLASS-315-153
N73-13464*	c 15			NASA-CASE-NPO-10812				US-PATENT-CLASS-352-169					US-PATENT-CLASS-340-25
				US-PATENT-APPL-SN-129073				US-PATENT-CLASS-95-12.5					US-PATENT-CLASS-340-27R
				US-PATENT-CLASS-425-113				US-PATENT-CLASS-95-59					US-PATENT-3,708,671
				US-PATENT-CLASS-425-133				US-PATENT-3,704,659		N73-16484*	c 14		NASA-CASE-LAR-10739-1
				US-PATENT-CLASS-425-176		N73-14428*	c 14	NASA-CASE-NPO-10764-1					US-PATENT-APPL-SN-134567
				US-PATENT-CLASS-72-258				US-PATENT-APPL-SN-836280					US-PATENT-CLASS-250-217F
				US-PATENT-3,698,848				US-PATENT-CLASS-252-408					US-PATENT-CLASS-340-228S
N73-13465*	c 15			NASA-CASE-LEW-10805-1				US-PATENT-3,700,603					US-PATENT-CLASS-340-418
				US-PATENT-APPL-SN-29917		N73-14429*	c 14	NASA-CASE-NPO-11387					US-PATENT-3,708,674
				US-PATENT-CLASS-148-11.5R				US-PATENT-APPL-SN-142719		N73-16536*	c 16		NASA-CASE-LAR-10311-1
				US-PATENT-3,702,791				US-PATENT-CLASS-73-57					US-PATENT-APPL-SN-31702
N73-13466*	c 15			NASA-CASE-MFS-20944				US-PATENT-CLASS-73-60					US-PATENT-CLASS-250-199
				US-PATENT-APPL-SN-148756				US-PATENT-3,706,221					US-PATENT-CLASS-340-171
				US-PATENT-CLASS-91-363A		N73-14468*	c 15	NASA-CASE-LAR-10103-1					US-PATENT-CLASS-350-293
				US-PATENT-CLASS-91-448				US-PATENT-APPL-SN-103230					US-PATENT-3,710,122
				US-PATENT-3,702,575				US-PATENT-CLASS-219-101		N73-16764*	c 27		NASA-CASE-NPO-12015
N73-13467*	c 15			NASA-CASE-NPO-11369				US-PATENT-CLASS-219-119					US-PATENT-APPL-SN-74862
				US-PATENT-APPL-SN-129072				US-PATENT-CLASS-29-203V					US-PATENT-CLASS-149-19
				US-PATENT-CLASS-60-1				US-PATENT-3,705,288					US-PATENT-CLASS-149-36
				US-PATENT-CLASS-60-23		N73-14469*	c 15	NASA-CASE-GSC-10791-1					US-PATENT-3,708,359
								US-PATENT-APPL-SN-84289		N73-16918*	c 33		NASA-CASE-MS-15567-1

			US-PATENT-APPL-SN-87551				US-PATENT-CLASS-340-163				US-PATENT-CLASS-128-206F
			US-PATENT-CLASS-204-324				US-PATENT-3,715,723				US-PATENT-CLASS-324-78E
			US-PATENT-CLASS-204-325				NASA-CASE-LAR-10128-1				US-PATENT-3,729,676
			US-PATENT-CLASS-204-328				US-PATENT-APPL-SN-84002				NASA-CASE-NPO-11417
			US-PATENT-3,708,419				US-PATENT-CLASS-235-92FQ				US-PATENT-APPL-SN-120241
N73-19004*	c 02		NASA-CASE-ERC-10439				US-PATENT-CLASS-235-92R				US-PATENT-CLASS-417-391
			US-PATENT-APPL-SN-54271				US-PATENT-CLASS-235-92T				US-PATENT-CLASS-60-25
			US-PATENT-CLASS-244-17.13				US-PATENT-CLASS-340-347AD				US-PATENT-3,732,040
			US-PATENT-CLASS-244-77D				US-PATENT-3,714,645				NASA-CASE-LEW-10920-1
			US-PATENT-CLASS-318-489				NASA-CASE-ARC-10264-1				US-PATENT-APPL-SN-106424
			US-PATENT-3,711,042				US-PATENT-APPL-SN-80368				US-PATENT-CLASS-204-192
N73-19234*	c 09		NASA-CASE-GSC-11013-1				US-PATENT-CLASS-328-167				US-PATENT-3,732,158
			US-PATENT-APPL-SN-200717				US-PATENT-CLASS-330-109				NASA-CASE-NPO-11880
			US-PATENT-CLASS-343-754				US-PATENT-CLASS-330-86				US-PATENT-APPL-SN-209535
			US-PATENT-CLASS-343-839				US-PATENT-3,714,588				US-PATENT-CLASS-313-DIG.8
			US-PATENT-CLASS-343-854				NASA-CASE-MFS-21433				US-PATENT-CLASS-313-231
			US-PATENT-CLASS-343-895				US-PATENT-APPL-SN-236281				US-PATENT-CLASS-313-63
			US-PATENT-3,713,163				US-PATENT-CLASS-307-230				US-PATENT-CLASS-60-202
N73-19235*	c 09		NASA-CASE-MFS-20407				US-PATENT-CLASS-307-304				US-PATENT-3,313,204
			US-PATENT-APPL-SN-116777				US-PATENT-CLASS-330-20				US-PATENT-3,728,861
			US-PATENT-CLASS-317-235AM				US-PATENT-CLASS-330-22				NASA-CASE-NPO-11559
			US-PATENT-CLASS-317-235N				US-PATENT-CLASS-330-30D				US-PATENT-APPL-SN-147996
			US-PATENT-CLASS-317-235R				US-PATENT-CLASS-330-35				US-PATENT-CLASS-102-49.7
			US-PATENT-CLASS-317-235T				US-PATENT-CLASS-330-40				US-PATENT-CLASS-102-49.8
			US-PATENT-CLASS-317-235UA				US-PATENT-CLASS-330-80T				US-PATENT-CLASS-60-254
			US-PATENT-3,714,526				US-PATENT-3,715,693				US-PATENT-CLASS-60-256
N73-19419*	c 14		NASA-CASE-LAR-10226-1				NASA-CASE-LAR-10310-1				US-PATENT-3,729,935
			US-PATENT-APPL-SN-98774				US-PATENT-APPL-SN-147103				NASA-CASE-MFS-20332-2
			US-PATENT-CLASS-250-217R				US-PATENT-CLASS-235-197				US-PATENT-APPL-SN-195061
			US-PATENT-CLASS-95-11.5R				US-PATENT-3,714,405				US-PATENT-APPL-SN-869260
			US-PATENT-CLASS-95-11R				NASA-CASE-NPO-11868				US-PATENT-CLASS-128-142.5
			US-PATENT-3,712,195				US-PATENT-APPL-SN-192101				US-PATENT-CLASS-137-538
N73-19420*	c 14		NASA-CASE-MFS-20774				US-PATENT-CLASS-307-221R				US-PATENT-CLASS-2-2.1A
			US-PATENT-APPL-SN-161028				US-PATENT-CLASS-328-187				US-PATENT-3,720,208
			US-PATENT-CLASS-73-84				US-PATENT-CLASS-328-37				NASA-CASE-ARC-10097-2
			US-PATENT-3,712,121				US-PATENT-CLASS-328-61				US-PATENT-APPL-SN-115083
N73-19421*	c 14		NASA-CASE-MFS-20242				US-PATENT-3,718,863				US-PATENT-APPL-SN-768662
			US-PATENT-APPL-SN-213004				NASA-CASE-MFS-21362				US-PATENT-CLASS-325-113
			US-PATENT-CLASS-73-71.6				US-PATENT-APPL-SN-211411				US-PATENT-CLASS-325-139
			US-PATENT-3,712,120				US-PATENT-CLASS-73-432SD				US-PATENT-CLASS-325-45
N73-19457*	c 15		NASA-CASE-MFS-20698-2				US-PATENT-3,714,833				US-PATENT-CLASS-325-61
			US-PATENT-APPL-SN-136086				NASA-CASE-ERC-10350				US-PATENT-CLASS-340-207
			US-PATENT-APPL-SN-3418				US-PATENT-APPL-SN-55535				US-PATENT-CLASS-340-258R
			US-PATENT-CLASS-423-446				US-PATENT-CLASS-340-27R				US-PATENT-3,719,891
			US-PATENT-CLASS-423-625				US-PATENT-3,714,624				NASA-CASE-NPO-11707
			US-PATENT-3,714,332				NASA-CASE-LAR-10726-1				US-PATENT-APPL-SN-196399
N73-19458*	c 15		NASA-CASE-LAR-10195-1				US-PATENT-APPL-SN-146935				US-PATENT-CLASS-343-6.5R
			US-PATENT-APPL-SN-201782				US-PATENT-CLASS-250-231				US-PATENT-CLASS-343-6.8R
			US-PATENT-CLASS-259-4				US-PATENT-CLASS-250-83.3H				US-PATENT-3,729,736
			US-PATENT-3,712,591				US-PATENT-3,714,432				NASA-CASE-NPO-11497
N73-19630* #	c 21		NASA-CASE-GSC-11188-2				NASA-CASE-MFS-20673				US-PATENT-APPL-SN-155565
			US-PATENT-APPL-SN-244440				US-PATENT-APPL-SN-94049				US-PATENT-CLASS-235-10.2
N73-19793*	c 28		NASA-CASE-LEW-11187-1				US-PATENT-CLASS-73-90				US-PATENT-CLASS-235-151.27
			US-PATENT-APPL-SN-147922				US-PATENT-CLASS-73-91				US-PATENT-CLASS-235-92CV
			US-PATENT-CLASS-60-39.28R				US-PATENT-3,714,821				US-PATENT-CLASS-235-92DN
			US-PATENT-3,713,290				NASA-CASE-ARC-10443-1				US-PATENT-CLASS-235-92EA
N73-20039*	c 03		NASA-CASE-GSC-10814-1				US-PATENT-APPL-SN-128419				US-PATENT-CLASS-235-92EV
			US-PATENT-APPL-SN-41404				US-PATENT-CLASS-250-83.3R				US-PATENT-CLASS-235-92R
			US-PATENT-CLASS-244-1SA				US-PATENT-CLASS-250-83R				US-PATENT-3,729,129
			US-PATENT-CLASS-244-1SS				US-PATENT-3,715,590				NASA-CASE-MSC-12428-1
			US-PATENT-3,715,092				NASA-CASE-NPO-10985				US-PATENT-APPL-SN-170681
N73-20040*	c 03		NASA-CASE-NPO-11771				US-PATENT-APPL-SN-74759				US-PATENT-CLASS-179-15A
			US-PATENT-APPL-SN-200762				US-PATENT-CLASS-324-30R				US-PATENT-CLASS-235-151.31
			US-PATENT-CLASS-244-1.55				US-PATENT-CLASS-324-65P				US-PATENT-CLASS-324-77R
			US-PATENT-CLASS-250-212				US-PATENT-CLASS-73-194E				US-PATENT-CLASS-324-78J
			US-PATENT-CLASS-250-234				US-PATENT-3,712,132				US-PATENT-3,732,405
			US-PATENT-CLASS-60-26				NASA-CASE-NPO-11213				NASA-CASE-GSC-11239-1
			US-PATENT-3,715,600				US-PATENT-APPL-SN-78703				US-PATENT-APPL-SN-180683
N73-20137*	c 05		NASA-CASE-LAR-10076-1				US-PATENT-CLASS-195-127				US-PATENT-CLASS-325-363
			US-PATENT-APPL-SN-84290				US-PATENT-3,713,987				US-PATENT-CLASS-325-67
			US-PATENT-CLASS-165-46				NASA-CASE-LAR-10765-1				US-PATENT-3,737,781
			US-PATENT-CLASS-312-1				US-PATENT-APPL-SN-138230				NASA-CASE-MFS-21919-1
			US-PATENT-CLASS-62-259				US-PATENT-CLASS-356-32				US-PATENT-APPL-SN-193456
			US-PATENT-3,713,480				US-PATENT-CLASS-73-88A				US-PATENT-CLASS-317-100
N73-20174*	c 07		NASA-CASE-GSC-10087-4				US-PATENT-3,715,915				US-PATENT-CLASS-317-101DH
			US-PATENT-APPL-SN-47440				NASA-CASE-ARC-10194-1				US-PATENT-3,735,206
			US-PATENT-APPL-SN-701679				US-PATENT-APPL-SN-107659				NASA-CASE-LAR-10578-1
			US-PATENT-CLASS-325-12				US-PATENT-CLASS-350-202				US-PATENT-APPL-SN-233098
			US-PATENT-CLASS-325-17				US-PATENT-3,715,152				US-PATENT-CLASS-73-147
			US-PATENT-CLASS-325-4				NASA-CASE-NPO-10166-1				US-PATENT-3,731,528
			US-PATENT-CLASS-325-5				US-PATENT-APPL-SN-192803				NASA-CASE-MFS-20916
			US-PATENT-CLASS-325-63				NASA-CASE-NPO-10893				US-PATENT-APPL-SN-212165
			US-PATENT-CLASS-325-7				US-PATENT-APPL-SN-845584				US-PATENT-CLASS-73-189
			US-PATENT-CLASS-325-8				US-PATENT-CLASS-260-94.8				US-PATENT-3,731,531
			US-PATENT-CLASS-325-9				US-PATENT-3,634,383				NASA-CASE-KSC-10108
			US-PATENT-CLASS-343-179				NASA-CASE-NPO-11751				US-PATENT-APPL-SN-73922
			US-PATENT-3,715,663				US-PATENT-APPL-SN-192141				US-PATENT-CLASS-343-14
N73-20175*	c 07		NASA-CASE-KSC-10698				US-PATENT-CLASS-343-DIG.2				US-PATENT-CLASS-343-17.5
			US-PATENT-APPL-SN-213949				US-PATENT-CLASS-343-915				US-PATENT-CLASS-343-6.8R
			US-PATENT-CLASS-324-72				US-PATENT-3,729,743				US-PATENT-3,732,567
			US-PATENT-CLASS-73-170R				NASA-CASE-LEW-11072-1				NASA-CASE-NPO-11686
			US-PATENT-3,715,660				US-PATENT-APPL-SN-104885				US-PATENT-APPL-SN-212900
N73-20176*	c 07		NASA-CASE-KSC-10521				US-PATENT-CLASS-136-225				US-PATENT-CLASS-250-203R
			US-PATENT-APPL-SN-212921				US-PATENT-3,729,343				US-PATENT-CLASS-250-214
			US-PATENT-CLASS-340-146.1C				NASA-CASE-MFS-20418				US-PATENT-CLASS-250-214
			US-PATENT-CLASS-340-147R				US-PATENT-APPL-SN-162101				US-PATENT-CLASS-250-83.3H

**N73-27941**

F-33

F-34



**N73-33383**

## F-35

N73-33397*	c 16	US-PATENT-3,748,722	US-PATENT-CLASS-178-6.6DD	US-PATENT-CLASS-317-234R
		NASA-CASE-ARC-10444-1	US-PATENT-CLASS-179-100.2MD	US-PATENT-3,778,685
N74-10034*	c 02	US-PATENT-APPL-SN-167719	US-PATENT-CLASS-179-100.2T	NASA-CASE-MSC-12408-1
		US-PATENT-CLASS-331-94.5A	US-PATENT-CLASS-340-174.1L	US-PATENT-APPL-SN-229916
N74-10132*	c 32	US-PATENT-CLASS-350-285	US-PATENT-3,770,903	US-PATENT-CLASS-423-579
		US-PATENT-CLASS-356-138	NASA-CASE-NPO-11919-1	US-PATENT-3,773,913
N74-10194*	c 33	US-PATENT-CLASS-356-148	US-PATENT-APPL-SN-237694	NASA-CASE-FRC-10051-1
		US-PATENT-CLASS-356-153	US-PATENT-CLASS-250-343	US-PATENT-APPL-SN-253725
N74-10195*	c 33	US-PATENT-CLASS-356-172	US-PATENT-3,766,380	US-PATENT-CLASS-254-93R
		US-PATENT-3,764,220	NASA-CASE-LEW-10533-2	US-PATENT-CLASS-73-88R
N74-10415*	c 35	NASA-CASE-LAR-10776-1	US-PATENT-APPL-SN-247055	US-PATENT-3,776,028
		US-PATENT-APPL-SN-211332	US-PATENT-CLASS-219-101	NASA-CASE-NPO-12127-1
N74-10474*	c 37	US-PATENT-CLASS-244-145	US-PATENT-CLASS-219-107	US-PATENT-APPL-SN-106106
		US-PATENT-3,764,097	US-PATENT-CLASS-219-78	US-PATENT-CLASS-250-219DF
N74-10521*	c 26	NASA-CASE-NPO-11302-2	US-PATENT-CLASS-29-497.5	US-PATENT-CLASS-250-83CD
		US-PATENT-APPL-SN-266822	US-PATENT-3,770,933	US-PATENT-3,752,996
N74-10907*	c 05	US-PATENT-APPL-SN-70967	NASA-CASE-LAR-10170-1	NASA-CASE-MFS-20730-1
		US-PATENT-CLASS-178-69.4R	US-PATENT-APPL-SN-217213	US-PATENT-APPL-SN-182977
N74-10942*	c 08	US-PATENT-3,766,315	US-PATENT-CLASS-117-105.2	US-PATENT-CLASS-269-48.1
		NASA-CASE-NPO-11962-1	US-PATENT-CLASS-29-460	US-PATENT-CLASS-83-452
N74-10975*	c 52	US-PATENT-APPL-SN-292681	US-PATENT-CLASS-29-498	US-PATENT-CLASS-83-602
		US-PATENT-CLASS-331-1A	US-PATENT-CLASS-29-503	US-PATENT-CLASS-83-917
N74-11000*	c 32	US-PATENT-CLASS-331-14	US-PATENT-CLASS-29-527.2	US-PATENT-3,777,605
		US-PATENT-CLASS-331-17	US-PATENT-3,769,689	NASA-CASE-LAR-10910-1
N74-11049*	c 33	US-PATENT-CLASS-331-178	NASA-CASE-HQN-10790-1	US-PATENT-APPL-SN-239577
		US-PATENT-CLASS-331-18	US-PATENT-APPL-SN-235962	US-PATENT-CLASS-73-4R
N74-11050*	c 33	US-PATENT-CLASS-331-4	US-PATENT-CLASS-333-83R	US-PATENT-CLASS-73-420
		US-PATENT-3,764,933	US-PATENT-CLASS-333-97R	US-PATENT-3,777,546
N74-11283*	c 35	NASA-CASE-LEW-11617-1	US-PATENT-3,771,074	NASA-CASE-LAR-10547-1
		US-PATENT-APPL-SN-266832	NASA-CASE-MFS-20284-1	US-PATENT-APPL-SN-193980
N74-11284*	c 35	US-PATENT-CLASS-315-5.35	US-PATENT-APPL-SN-242027	US-PATENT-CLASS-264-294
		US-PATENT-CLASS-315-5.38	US-PATENT-CLASS-128-2.05T	US-PATENT-3,772,418
N74-12778*	c 52	US-PATENT-3,764,850	US-PATENT-CLASS-128-2.06F	NASA-CASE-LAR-10544-1
		NASA-CASE-LAR-10730-1	US-PATENT-CLASS-324-186	US-PATENT-APPL-SN-188928
N74-12779*	c 54	US-PATENT-APPL-SN-239573	US-PATENT-CLASS-324-78D	US-PATENT-CLASS-222-193
		US-PATENT-CLASS-235-150.3	US-PATENT-3,773,038	US-PATENT-3,776,432
N74-12812*	c 27	US-PATENT-CLASS-235-92CA	NASA-CASE-MFS-21115-1	NASA-CASE-LEW-10805-2
		US-PATENT-CLASS-235-92DM	US-PATENT-APPL-SN-266930	US-PATENT-APPL-SN-233743
N74-12814*	c 27	US-PATENT-CLASS-307-225R	US-PATENT-CLASS-222-309	US-PATENT-APPL-SN-29917
		US-PATENT-CLASS-328-48	US-PATENT-CLASS-222-340	US-PATENT-CLASS-29-182
N74-12818*	c 25	US-PATENT-3,764,790	US-PATENT-CLASS-222-387	US-PATENT-CLASS-29-420.5
		NASA-CASE-MFS-20335-1	US-PATENT-CLASS-222-514	US-PATENT-CLASS-75-200
N74-12887*	c 33	US-PATENT-APPL-SN-238263	US-PATENT-3,777,942	US-PATENT-CLASS-75-213
		US-PATENT-CLASS-73-67.8S	NASA-CASE-ARC-10464-1	US-PATENT-CLASS-75-214
N74-12912*	c 32	US-PATENT-3,765,229	US-PATENT-APPL-SN-198472	US-PATENT-CLASS-75-226
		NASA-CASE-LEW-10326-3	US-PATENT-CLASS-260-2.5AM	US-PATENT-3,775,101
N74-12913*	c 33	US-PATENT-APPL-SN-99901	US-PATENT-3,772,216	NASA-CASE-NPO-11317-2
		US-PATENT-CLASS-277-25	NASA-CASE-LAR-10551-1	US-PATENT-APPL-SN-187143
N74-12951*	c 33	US-PATENT-CLASS-277-27	US-PATENT-APPL-SN-191301	US-PATENT-APPL-SN-34989
		US-PATENT-CLASS-277-96	US-PATENT-CLASS-128-191R	US-PATENT-CLASS-179-100.2CH
N74-12951*	c 33	US-PATENT-3,767,212	US-PATENT-CLASS-23-252R	US-PATENT-CLASS-250-205
		NASA-CASE-LEW-10805-3	US-PATENT-CLASS-23-281	US-PATENT-CLASS-250-217
N74-13011*	c 46	US-PATENT-APPL-SN-266928	US-PATENT-CLASS-23-288F	US-PATENT-CLASS-340-174.1M
		US-PATENT-APPL-SN-29917	US-PATENT-CLASS-23-288J	US-PATENT-CLASS-340-174YC
N74-13129*	c 35	US-PATENT-CLASS-148-126	US-PATENT-CLASS-423-231	US-PATENT-CLASS-350-151
		US-PATENT-CLASS-29-420.5	US-PATENT-CLASS-55-510	US-PATENT-3,778,791
N74-13130*	c 91	US-PATENT-CLASS-75-200	US-PATENT-CLASS-55-518	NASA-CASE-LEW-11262-1
		US-PATENT-CLASS-75-213	US-PATENT-3,771,959	US-PATENT-APPL-SN-136008
N74-13131*	c 39	US-PATENT-CLASS-75-214	NASA-CASE-ARC-10180-1	US-PATENT-CLASS-204-192
		US-PATENT-CLASS-75-226	US-PATENT-APPL-SN-136253	US-PATENT-3,772,174
N74-13132*	c 35	US-PATENT-3,775,101	US-PATENT-CLASS-260-2.5L	NASA-CASE-FRC-10049-1
		NASA-CASE-LAR-10910-1	US-PATENT-3,772,220	US-PATENT-APPL-SN-232021
N74-13177*	c 31	NASA-CASE-NPO-11317-2	NASA-CASE-NPO-11905-1	US-PATENT-CLASS-235-150.27
		US-PATENT-APPL-SN-187143	US-PATENT-APPL-SN-290030	US-PATENT-CLASS-235-150.26
N74-13178*	c 37	US-PATENT-CLASS-29-182	US-PATENT-CLASS-178-88	US-PATENT-CLASS-244-77A
		US-PATENT-CLASS-29-420.5	US-PATENT-CLASS-325-320	US-PATENT-CLASS-244-77B
N74-13179*	c 37	US-PATENT-CLASS-75-200	US-PATENT-CLASS-329-104	US-PATENT-CLASS-343-108R
		US-PATENT-CLASS-75-213	US-PATENT-CLASS-329-122	US-PATENT-3,776,455
N74-13205*	c 36	US-PATENT-CLASS-75-214	US-PATENT-CLASS-329-126	NASA-CASE-LAR-10385-2
		US-PATENT-CLASS-75-226	US-PATENT-3,772,272	US-PATENT-APPL-SN-239803
N74-13270*	c 27	US-PATENT-3,775,101	NASA-CASE-MSC-14053-1	US-PATENT-APPL-SN-38816
		NASA-CASE-LEW-11262-1	US-PATENT-APPL-SN-266899	US-PATENT-CLASS-117-106A
N74-13420*	c 04	US-PATENT-APPL-SN-136008	US-PATENT-CLASS-328-123	US-PATENT-CLASS-117-33.3
		US-PATENT-CLASS-204-192	US-PATENT-CLASS-340-173CR	US-PATENT-3,779,788
N74-13436*	c 70	US-PATENT-3,772,174	US-PATENT-CLASS-340-173LM	NASA-CASE-LEW-11058-1
		NASA-CASE-FRC-10049-1	US-PATENT-3,778,786	US-PATENT-APPL-SN-233519
N74-14133*	c 31	US-PATENT-APPL-SN-232021	NASA-CASE-NPO-11850-1	US-PATENT-CLASS-60-258
		US-PATENT-CLASS-235-150.27	US-PATENT-APPL-SN-186700	US-PATENT-CLASS-60-259
N74-14784*	c 44	US-PATENT-CLASS-235-150.26	US-PATENT-CLASS-343-18B	US-PATENT-3,777,490
		US-PATENT-CLASS-244-77A	US-PATENT-CLASS-343-6.5R	NASA-CASE-LAR-10782-1
N74-14845*	c 54	US-PATENT-CLASS-244-77B	US-PATENT-CLASS-343-6.5SS	US-PATENT-APPL-SN-197689
		US-PATENT-CLASS-343-108R	US-PATENT-3,772,691	US-PATENT-CLASS-264-102
N74-14920*	c 62	US-PATENT-3,778,791	NASA-CASE-LEW-11162-1	US-PATENT-3,780,151
		NASA-CASE-LEW-11262-1	US-PATENT-APPL-SN-143508	NASA-CASE-LEW-11069-1
		US-PATENT-APPL-SN-136008	US-PATENT-CLASS-313-153	US-PATENT-APPL-SN-83816
		US-PATENT-CLASS-204-192	US-PATENT-CLASS-313-209	US-PATENT-CLASS-138-89
		US-PATENT-3,772,174	US-PATENT-CLASS-313-217	US-PATENT-CLASS-29-572
		NASA-CASE-FRC-10049-1	US-PATENT-CLASS-313-224	US-PATENT-CLASS-29-588
		US-PATENT-APPL-SN-232021	US-PATENT-CLASS-313-32	US-PATENT-3,780,424
		US-PATENT-CLASS-235-150.27	US-PATENT-3,777,200	NASA-CASE-LAR-10241-1
		US-PATENT-CLASS-235-150.26	NASA-CASE-MFS-21374-1	US-PATENT-APPL-SN-193672
		US-PATENT-CLASS-244-77A	US-PATENT-APPL-SN-238047	US-PATENT-CLASS-9-11A
		US-PATENT-CLASS-244-77B	US-PATENT-CLASS-317-234E	US-PATENT-3,781,933
		US-PATENT-CLASS-343-108R	US-PATENT-CLASS-317-234M	NASA-CASE-MSC-13932-1
		US-PATENT-3,776,455	US-PATENT-CLASS-317-234N	US-PATENT-APPL-SN-229354

N74-14935*	c 33	US-PATENT-CLASS-235-153AK	N74-15145*	c 36	US-PATENT-CLASS-73-67.8S	N74-17955*	c 09	US-PATENT-APPL-SN-201700
		US-PATENT-3,783,250			US-PATENT-3,777,552			US-PATENT-CLASS-324-102
N74-14939*	c 33	NASA-CASE-MFS-21462-1	N74-15146*	c 35	NASA-CASE-NPO-11856-1	N74-18088*	c 35	US-PATENT-CLASS-324-118
		US-PATENT-APPL-SN-239576			US-PATENT-APPL-SN-235268			US-PATENT-CLASS-329-50
N74-14956*	c 33	US-PATENT-CLASS-219-477	N74-15395*	c 38	US-PATENT-CLASS-250-217SS	N74-18089*	c 31	US-PATENT-CLASS-329-50
		US-PATENT-CLASS-219-539			US-PATENT-CLASS-331-94.5K			US-PATENT-CLASS-329-50
N74-15089*	c 19	US-PATENT-CLASS-338-320	N74-15453*	c 07	US-PATENT-CLASS-331-94.5S	N74-18123*	c 37	US-PATENT-CLASS-329-50
		US-PATENT-3,732,397			US-PATENT-CLASS-350-6			US-PATENT-CLASS-329-50
N74-15090*	c 35	NASA-CASE-FRC-10072-1	N74-15562*	c 34	US-PATENT-CLASS-350-6	N74-18124*	c 31	US-PATENT-CLASS-329-50
		US-PATENT-APPL-SN-162100			US-PATENT-CLASS-356-152			US-PATENT-CLASS-329-50
N74-15091*	c 35	US-PATENT-CLASS-330-10	N74-15778*	c 51	US-PATENT-CLASS-356-4	N74-18125*	c 37	US-PATENT-CLASS-329-50
		US-PATENT-CLASS-330-35			US-PATENT-CLASS-3781.111			US-PATENT-CLASS-329-50
N74-15092*	c 35	US-PATENT-CLASS-330-9	N74-15831*	c 35	NASA-CASE-MFS-21455-1	N74-18126*	c 37	US-PATENT-CLASS-329-50
		US-PATENT-3,783,399			US-PATENT-APPL-SN-281877			US-PATENT-CLASS-329-50
N74-15093*	c 35	NASA-CASE-MSC-17832-1	N74-16135*	c 35	US-PATENT-CLASS-350-3.5	N74-18127*	c 37	US-PATENT-CLASS-329-50
		US-PATENT-APPL-SN-293727			US-PATENT-CLASS-356-106			US-PATENT-CLASS-329-50
N74-15094*	c 35	US-PATENT-CLASS-307-127	N74-17153*	c 35	US-PATENT-CLASS-373.71.3	N74-18128*	c 37	US-PATENT-CLASS-329-50
		US-PATENT-CLASS-317-33SC			US-PATENT-3,782,825			US-PATENT-CLASS-329-50
N74-15095*	c 74	US-PATENT-CLASS-317-43	N74-17283*	c 27	NASA-CASE-MFS-21233-1	N74-18323*	c 35	US-PATENT-CLASS-329-50
		US-PATENT-CLASS-317-46			US-PATENT-APPL-SN-246056			US-PATENT-CLASS-329-50
N74-15125*	c 37	US-PATENT-CLASS-317-47	N74-17853*	c 54	US-PATENT-CLASS-324-40	N74-18551*	c 25	US-PATENT-CLASS-329-50
		US-PATENT-CLASS-317-48			US-PATENT-CLASS-73-67.5R			US-PATENT-CLASS-329-50
N74-15126*	c 35	US-PATENT-3,783,354	N74-17885*	c 35	US-PATENT-CLASS-73-71.5U	N74-18552*	c 34	US-PATENT-CLASS-329-50
		NASA-CASE-LAR-10586-1			US-PATENT-3,782,177			US-PATENT-CLASS-329-50
N74-15127*	c 35	US-PATENT-APPL-SN-289049	N74-17927*	c 33	NASA-CASE-LEW-11569-1	N74-19310*	c 72	US-PATENT-CLASS-329-50
		US-PATENT-CLASS-102-70.2R			US-PATENT-APPL-SN-316618			US-PATENT-CLASS-329-50
N74-15128*	c 37	US-PATENT-CLASS-244-1SA	N74-17929*	c 33	US-PATENT-CLASS-181-43	N74-19528*	c 09	US-PATENT-CLASS-329-50
		US-PATENT-CLASS-244-3.16			US-PATENT-3,780,827			US-PATENT-CLASS-329-50
N74-15130*	c 38	US-PATENT-CLASS-250-203R	N74-17930*	c 33	NASA-CASE-LAR-10105-1			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-250-237R			US-PATENT-APPL-SN-170680			US-PATENT-CLASS-329-50
		US-PATENT-3,780,966			US-PATENT-CLASS-73-86			US-PATENT-CLASS-329-50
		NASA-CASE-NPO-11432-2			US-PATENT-3,782,181			US-PATENT-CLASS-329-50
		US-PATENT-APPL-SN-258152			NASA-CASE-ARC-10302-1			US-PATENT-CLASS-329-50
		US-PATENT-APPL-SN-88435			US-PATENT-APPL-SN-203271			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-250-211J			US-PATENT-CLASS-119-51.13			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-250-214			US-PATENT-CLASS-119-51.5			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-317-235N			US-PATENT-CLASS-119-51R			US-PATENT-CLASS-329-50
		US-PATENT-3,781,549			US-PATENT-CLASS-119-52AF			US-PATENT-CLASS-329-50
		NASA-CASE-LAR-11155-1			US-PATENT-CLASS-119-54			US-PATENT-CLASS-329-50
		US-PATENT-APPL-SN-313381			US-PATENT-CLASS-221-265			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-250-360			US-PATENT-3,782,334			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-250-361			NASA-CASE-GSC-11553-1			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-250-369			US-PATENT-APPL-SN-177985			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-250-492			US-PATENT-CLASS-178-6.7R			US-PATENT-CLASS-329-50
		US-PATENT-3,781,562			US-PATENT-CLASS-219-388			US-PATENT-CLASS-329-50
		NASA-CASE-LAR-10862-1			US-PATENT-CLASS-34-162			US-PATENT-CLASS-329-50
		US-PATENT-APPL-SN-271951			US-PATENT-CLASS-346-108			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-73-4V			US-PATENT-CLASS-346-138			US-PATENT-CLASS-329-50
		US-PATENT-3,780,563			US-PATENT-CLASS-346-24			US-PATENT-CLASS-329-50
		NASA-CASE-ARC-10442-1			US-PATENT-CLASS-95-89R			US-PATENT-CLASS-329-50
		US-PATENT-APPL-SN-280032			US-PATENT-3,781,902			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-165-109			NASA-CASE-LAR-10595-1			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-165-2			US-PATENT-APPL-SN-273240			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-259-DIG.18			US-PATENT-CLASS-340-12R			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-259-60			US-PATENT-CLASS-340-5R			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-62-45			US-PATENT-CLASS-340-8R			US-PATENT-CLASS-329-50
		US-PATENT-3,782,698			US-PATENT-3,783,443			US-PATENT-CLASS-329-50
		NASA-CASE-NPO-13044-1			NASA-CASE-MFS-21087-1			US-PATENT-CLASS-329-50
		US-PATENT-APPL-SN-305012			US-PATENT-APPL-SN-149283			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-73-497			US-PATENT-CLASS-350-3.5			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-73-517B			US-PATENT-3,752,556			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-74-5.6			NASA-CASE-MFS-20486-2			US-PATENT-CLASS-329-50
		US-PATENT-3,782,205			US-PATENT-APPL-SN-292382			US-PATENT-CLASS-329-50
		NASA-CASE-MSC-14096-1			US-PATENT-APPL-SN-84212			US-PATENT-CLASS-329-50
		US-PATENT-APPL-SN-242662			US-PATENT-CLASS-260-29.6S			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-350-236			US-PATENT-3,784,499			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-350-285			NASA-CASE-MFS-21163-1			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-350-7			US-PATENT-APPL-SN-266925			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-356-216			US-PATENT-CLASS-222-324			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-356-43			US-PATENT-CLASS-224-444			US-PATENT-CLASS-329-50
		US-PATENT-3,782,835			US-PATENT-3,790,037			US-PATENT-CLASS-329-50
		NASA-CASE-XLE-10326-4			NASA-CASE-MSC-13855-1			US-PATENT-CLASS-329-50
		US-PATENT-APPL-SN-220251			US-PATENT-APPL-SN-196931			US-PATENT-CLASS-329-50
		US-PATENT-APPL-SN-54540			US-PATENT-CLASS-325-388			US-PATENT-CLASS-329-50
		US-PATENT-APPL-SN-723465			US-PATENT-CLASS-332-11D			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-277-27			US-PATENT-CLASS-340-347AD			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-277-91			US-PATENT-3,795,900			US-PATENT-CLASS-329-50
		US-PATENT-3,782,737			NASA-CASE-NPO-13138-1			US-PATENT-CLASS-329-50
		NASA-CASE-ARC-10441-1			US-PATENT-APPL-SN-335201			US-PATENT-CLASS-329-50
		US-PATENT-APPL-SN-280029			US-PATENT-CLASS-328-155			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-259-98			US-PATENT-CLASS-333-16			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-417-470			US-PATENT-CLASS-333-18			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-417-471			US-PATENT-3,790,906			US-PATENT-CLASS-329-50
		US-PATENT-3,782,699			NASA-CASE-NPO-11966-1			US-PATENT-CLASS-329-50
		NASA-CASE-NPO-11682-1			NASA-CASE-NPO-13159-1			US-PATENT-CLASS-329-50
		US-PATENT-APPL-SN-187365			US-PATENT-APPL-SN-284245			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-23-284			US-PATENT-CLASS-100-8			US-PATENT-CLASS-329-50
		US-PATENT-3,782,904			US-PATENT-CLASS-336-210			US-PATENT-CLASS-329-50
		NASA-CASE-LEW-11087-2			US-PATENT-3,792,399			US-PATENT-CLASS-329-50
		US-PATENT-APPL-SN-201904			NASA-CASE-ARC-10197-1			US-PATENT-CLASS-329-50
		US-PATENT-APPL-SN-280390			US-PATENT-APPL-SN-310624			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-29-148.4A			US-PATENT-CLASS-317-16			US-PATENT-CLASS-329-50
		US-PATENT-CLASS-29-148.4B			US-PATENT-CLASS-317-31			US-PATENT-CLASS-329-50
		US-PATENT-3,781,958			US-PATENT-3,795,840			US-PATENT-CLASS-329-50
		NASA-CASE-MFS-20767-1			NASA-CASE-NUC-10107-1			US-PATENT-CLASS-329-50
		US-PATENT-APPL-SN-196898						US-PATENT-CLASS-329-50

### ACCESSION NUMBER INDEX

## F-38

## ACCESSION NUMBER INDEX

**N74-27901**

N74-22864*	c 33	US-PATENT-APPL-SN-345372	US-PATENT-CLASS-178-67	US-PATENT-APPL-SN-326327
		US-PATENT-CLASS-307-215	US-PATENT-CLASS-325-30	US-PATENT-CLASS-136-182
		US-PATENT-CLASS-307-243	US-PATENT-3,816,657	US-PATENT-CLASS-324-29.5
		US-PATENT-CLASS-307-290	NASA-CASE-MFS-21698-1	US-PATENT-CLASS-324-72.5
		US-PATENT-CLASS-328-154	US-PATENT-APPL-SN-37050	US-PATENT-3,818,325
N74-22865*	c 33	US-PATENT-3,808,464	US-PATENT-CLASS-331-109	NASA-CASE-GSC-11531-1
		NASA-CASE-XER-11046-2	US-PATENT-CLASS-331-117R	US-PATENT-APPL-SN-291845
		US-PATENT-APPL-SN-810579	US-PATENT-CLASS-331-183	US-PATENT-CLASS-128-2.05E
		US-PATENT-APPL-SN-87597	US-PATENT-3,815,048	US-PATENT-CLASS-73-398AR
		US-PATENT-CLASS-321-45R	NASA-CASE-NPO-13112-1	US-PATENT-3,811,429
N74-22885*	c 33	US-PATENT-3,808,511	US-PATENT-APPL-SN-267572	NASA-CASE-MS-C-14219-1
		NASA-CASE-LAR-10168-1	US-PATENT-CLASS-250-499	US-PATENT-APPL-SN-324029
		US-PATENT-APPL-SN-354407	US-PATENT-CLASS-313-61S	US-PATENT-CLASS-117-2R
		US-PATENT-CLASS-174-DIG.8	US-PATENT-3,816,785	US-PATENT-CLASS-156-94
		US-PATENT-CLASS-174-69	NASA-CASE-MFS-21556-1	US-PATENT-CLASS-179-100.2A
N74-22885*	c 33	US-PATENT-CLASS-174-70R	US-PATENT-APPL-SN-340791	US-PATENT-CLASS-179-100.2B
		US-PATENT-CLASS-244-151R	US-PATENT-CLASS-177-200	US-PATENT-CLASS-264-36
		US-PATENT-3,809,800	US-PATENT-CLASS-177-211	US-PATENT-3,819,440
		NASA-CASE-MFS-21671-1	US-PATENT-CLASS-177-246	NASA-CASE-ARC-10593-1
		US-PATENT-APPL-SN-329958	US-PATENT-CLASS-73-141A	US-PATENT-APPL-SN-310193
N74-23039*	c 34	US-PATENT-CLASS-323-106	US-PATENT-3,812,924	US-PATENT-CLASS-250-207
		US-PATENT-CLASS-323-122	NASA-CASE-MFS-22040-1	US-PATENT-CLASS-307-252L
		US-PATENT-CLASS-323-128	US-PATENT-APPL-SN-365644	US-PATENT-CLASS-307-252Q
		US-PATENT-3,808,517	US-PATENT-CLASS-350-3.5	US-PATENT-3,821,546
		NASA-CASE-GSC-11620-1	US-PATENT-CLASS-96-38.3	NASA-CASE-LEW-10950-1
N74-23040*	c 35	US-PATENT-APPL-SN-280305	US-PATENT-CLASS-96-79	US-PATENT-APPL-SN-273222
		US-PATENT-CLASS-126-270	US-PATENT-3,815,969	US-PATENT-CLASS-174-111
		US-PATENT-CLASS-244-127	NASA-CASE-ARC-10633-1	US-PATENT-CLASS-174-15C
		US-PATENT-CLASS-244-31	US-PATENT-APPL-SN-354611	US-PATENT-CLASS-174-28
		US-PATENT-3,807,384	US-PATENT-CLASS-250-304	US-PATENT-CLASS-310-4R
N74-23064*	c 37	NASA-CASE-NPO-11932-1	US-PATENT-CLASS-250-343	US-PATENT-3,821,462
		NASA-CASE-NPO-13127-1	US-PATENT-CLASS-250-373	NASA-CASE-MS-C-14066-1
		US-PATENT-APPL-SN-311234	US-PATENT-3,814,939	US-PATENT-APPL-SN-297127
		US-PATENT-CLASS-356-1065	NASA-CASE-MFS-21395-1	US-PATENT-CLASS-178-88
		US-PATENT-CLASS-356-113	US-PATENT-APPL-SN-260093	US-PATENT-CLASS-325-320
N74-23064*	c 37	US-PATENT-3,809,481	US-PATENT-CLASS-204-180R	US-PATENT-3,818,346
		NASA-CASE-LAR-10900-1	US-PATENT-3,814,678	NASA-CASE-MFS-21424-1
		US-PATENT-APPL-SN-290021	NASA-CASE-GSC-11492-1	US-PATENT-APPL-SN-315048
		US-PATENT-CLASS-161-116	US-PATENT-APPL-SN-372148	US-PATENT-CLASS-73-147
		US-PATENT-3,809,601	US-PATENT-CLASS-250-374	US-PATENT-CLASS-73-3
N74-23065*	c 31	NASA-CASE-NPO-11758-1	US-PATENT-CLASS-250-385	US-PATENT-3,817,082
		US-PATENT-APPL-SN-266913	US-PATENT-CLASS-313-93	NASA-CASE-MFS-21394-1
		US-PATENT-CLASS-204-222	US-PATENT-3,812,358	US-PATENT-APPL-SN-258171
		US-PATENT-3,810,829	NASA-CASE-MFS-21846-1	US-PATENT-CLASS-204-180R
		NASA-CASE-LAR-10089-1	US-PATENT-APPL-SN-359958	US-PATENT-CLASS-204-299
N74-23066*	c 34	US-PATENT-APPL-SN-305638	US-PATENT-CLASS-188-163	US-PATENT-3,821,102
		US-PATENT-CLASS-240-47	US-PATENT-CLASS-188-171	NASA-CASE-GSC-11434-1
		US-PATENT-CLASS-353-54	US-PATENT-3,812,936	US-PATENT-APPL-SN-263498

## N74-27902

N74-27902\* c 31 ..... NASA-CASE-GSC-11445-1  
US-PATENT-APPL-SN-248471  
US-PATENT-CLASS-236-49  
US-PATENT-CLASS-98-39  
US-PATENT-3,818,814

N74-27903\* c 37 ..... NASA-CASE-MSC-12549-1  
US-PATENT-APPL-SN-301039  
US-PATENT-CLASS-244-1SD  
US-PATENT-3,820,741

N74-27904\* c 37 ..... NASA-CASE-LEW-11672-1  
US-PATENT-APPL-SN-305639  
US-PATENT-CLASS-417-52  
US-PATENT-3,819,299

N74-27905\* c 37 ..... NASA-CASE-LAR-10450-1  
US-PATENT-APPL-SN-289017  
US-PATENT-CLASS-51-225  
US-PATENT-CLASS-51-234  
US-PATENT-CLASS-51-97R  
US-PATENT-3,820,286

N74-28097\* c 35 ..... NASA-CASE-GSC-11479-1  
US-PATENT-APPL-SN-293739  
US-PATENT-CLASS-244-1SA  
US-PATENT-CLASS-74-5.5  
US-PATENT-3,818,767

N74-28226\* c 07 ..... NASA-CASE-LEW-11402-1  
US-PATENT-APPL-SN-219806  
US-PATENT-CLASS-415-181  
US-PATENT-CLASS-416-223  
US-PATENT-CLASS-416-237  
US-PATENT-3,820,918

N74-29410\* c 19 ..... NASA-CASE-MFS-21577-1  
US-PATENT-APPL-SN-343308  
US-PATENT-CLASS-250-372  
US-PATENT-CLASS-250-394  
US-PATENT-3,825,760

N74-29556\* c 33 ..... NASA-CASE-KSC-10769-1  
US-PATENT-APPL-SN-374583  
US-PATENT-CLASS-318-602  
US-PATENT-CLASS-318-603  
US-PATENT-CLASS-318-664  
US-PATENT-3,826,964

N74-30001\* c 24 ..... NASA-CASE-LAR-10416-1  
US-PATENT-APPL-SN-251752  
US-PATENT-CLASS-156-94  
US-PATENT-3,814,645

N74-30156\* c 75 ..... NASA-CASE-ARC-10598-1  
US-PATENT-APPL-SN-318151  
US-PATENT-CLASS-356-201  
US-PATENT-CLASS-356-43  
US-PATENT-CLASS-356-73  
US-PATENT-CLASS-356-85  
US-PATENT-CLASS-356-87  
US-PATENT-3,817,622

N74-30421\* c 08 ..... NASA-CASE-LAR-10753-1  
US-PATENT-APPL-SN-289018  
US-PATENT-CLASS-244-327  
US-PATENT-CLASS-244-90R  
US-PATENT-CLASS-244-91  
US-PATENT-3,826,448

N74-30502\* c 25 ..... NASA-CASE-LEW-10906-1  
US-PATENT-APPL-SN-245279  
US-PATENT-APPL-SN-876588  
US-PATENT-CLASS-204-157.1H  
US-PATENT-3,826,726

N74-30523\* c 32 ..... NASA-CASE-NPO-11921-1  
US-PATENT-APPL-SN-359039  
US-PATENT-CLASS-179-15BC  
US-PATENT-CLASS-325-346  
US-PATENT-3,828,138

N74-30524\* c 32 ..... NASA-CASE-MSC-13912-1  
US-PATENT-APPL-SN-310034  
US-PATENT-CLASS-179-15AT  
US-PATENT-CLASS-179-15BY  
US-PATENT-3,828,137

N74-30597\* c 09 ..... NASA-CASE-LEW-10550-1  
US-PATENT-APPL-SN-261183  
US-PATENT-CLASS-35-12E  
US-PATENT-3,824,707

N74-30608\* c 34 ..... NASA-CASE-LAR-10194-1  
US-PATENT-APPL-SN-169962  
US-PATENT-CLASS-55-159  
US-PATENT-CLASS-55-199  
US-PATENT-CLASS-55-43  
US-PATENT-3,828,524

N74-30886\* c 89 ..... NASA-CASE-GSC-11569-1  
US-PATENT-APPL-SN-293725  
US-PATENT-CLASS-250-203R  
US-PATENT-CLASS-33-268  
US-PATENT-CLASS-356-141  
US-PATENT-CLASS-356-147  
US-PATENT-3,827,807

N74-31148\* c 71 ..... NASA-CASE-NPO-11623-1  
US-PATENT-APPL-SN-235338  
US-PATENT-CLASS-181.5R  
US-PATENT-CLASS-73-69  
US-PATENT-CLASS-73-71.5R

N74-31269\* c 20 ..... NASA-CASE-LEW-11646-1  
US-PATENT-APPL-SN-292686  
US-PATENT-CLASS-204-192  
US-PATENT-3,826,729

N74-31270\* c 07 ..... NASA-CASE-LAR-10642-1  
US-PATENT-APPL-SN-266820  
US-PATENT-CLASS-137-15.1  
US-PATENT-CLASS-415-181  
US-PATENT-3,829,237

N74-32418\* c 07 ..... NASA-CASE-LAR-11141-1  
US-PATENT-APPL-SN-359957  
US-PATENT-CLASS-181-33C  
US-PATENT-CLASS-181-33F  
US-PATENT-CLASS-181-33H  
US-PATENT-CLASS-181-33L  
US-PATENT-CLASS-181-42  
US-PATENT-3,830,335

N74-32546\* c 54 ..... NASA-CASE-MSC-11072  
US-PATENT-APPL-SN-689455  
US-PATENT-CLASS-156-218  
US-PATENT-CLASS-2-2.1A  
US-PATENT-CLASS-2-82  
US-PATENT-3,832,735

N74-32598\* c 32 ..... NASA-CASE-MSC-14070-1  
US-PATENT-APPL-SN-266940  
US-PATENT-CLASS-340-146.1AQ  
US-PATENT-3,831,142

N74-32660\* c 33 ..... NASA-CASE-GSC-11617-1  
US-PATENT-APPL-SN-402865  
US-PATENT-CLASS-330-4.9  
US-PATENT-CLASS-330-53  
US-PATENT-3,833,857

N74-32711\* c 33 ..... NASA-CASE-MSC-14130-1  
US-PATENT-APPL-SN-373587  
US-PATENT-CLASS-307-267  
US-PATENT-CLASS-328-58  
US-PATENT-3,831,098

N74-32712\* c 33 ..... NASA-CASE-NPO-11948-1  
US-PATENT-APPL-SN-306652  
US-PATENT-CLASS-307-230  
US-PATENT-CLASS-330-69  
US-PATENT-CLASS-333-80R  
US-PATENT-3,831,117

N74-32877\* c 35 ..... NASA-CASE-LAR-10806-1  
US-PATENT-APPL-SN-322998  
US-PATENT-CLASS-33-1M  
US-PATENT-CLASS-33-23R  
US-PATENT-CLASS-338-89  
US-PATENT-CLASS-340-347AD  
US-PATENT-CLASS-346-33R  
US-PATENT-3,832,781

N74-32878\* c 35 ..... NASA-CASE-LAR-11139-1  
US-PATENT-APPL-SN-287149  
US-PATENT-CLASS-73-182  
US-PATENT-CLASS-73-388  
US-PATENT-3,832,903

N74-32879\* c 35 ..... NASA-CASE-MSC-14187-1  
US-PATENT-APPL-SN-326326  
US-PATENT-CLASS-23-230L  
US-PATENT-CLASS-73-104  
US-PATENT-CLASS-73-15.4  
US-PATENT-CLASS-73-40.7  
US-PATENT-3,830,094

N74-32917\* c 31 ..... NASA-CASE-NPO-13205-1  
US-PATENT-APPL-SN-393525  
US-PATENT-CLASS-425-28B  
US-PATENT-CLASS-425-35  
US-PATENT-3,833,322

N74-32918\* c 37 ..... NASA-CASE-NPO-13157-1  
US-PATENT-APPL-SN-370872  
US-PATENT-CLASS-29-203H  
US-PATENT-CLASS-29-268  
US-PATENT-3,832,764

N74-32919\* c 20 ..... NASA-CASE-LEW-11118-1  
US-PATENT-APPL-SN-289050  
US-PATENT-CLASS-204-9  
US-PATENT-3,832,290

N74-32920\* c 31 ..... NASA-CASE-LAR-10489-2  
US-PATENT-APPL-SN-198763  
US-PATENT-APPL-SN-350300  
US-PATENT-CLASS-249-145  
US-PATENT-CLASS-249-184  
US-PATENT-CLASS-249-83  
US-PATENT-CLASS-249-95  
US-PATENT-CLASS-425-128  
US-PATENT-CLASS-425-415  
US-PATENT-3,830,609

N74-32921\* c 37 ..... NASA-CASE-LEW-11076-2  
US-PATENT-APPL-SN-238264  
US-PATENT-APPL-SN-346483  
US-PATENT-CLASS-308-121  
US-PATENT-3,830,552

N74-33209\* c 28 ..... NASA-CASE-NPO-11975-1  
US-PATENT-APPL-SN-329243  
US-PATENT-CLASS-149-17

N74-33218\* c 07 ..... NASA-CASE-ARC-10712-1  
US-PATENT-APPL-SN-344410  
US-PATENT-CLASS-181-33HC  
US-PATENT-CLASS-239-265.11  
US-PATENT-3,830,431

N74-33378\* c 25 ..... NASA-CASE-MFS-21675-1  
US-PATENT-APPL-SN-392823  
US-PATENT-CLASS-23-277C  
US-PATENT-CLASS-431-202  
US-PATENT-3,833,336

N74-33379\* c 44 ..... NASA-CASE-ARC-10461-1  
US-PATENT-APPL-SN-336319  
US-PATENT-CLASS-60-527  
US-PATENT-3,830,060

N74-34638\* c 33 ..... NASA-CASE-MFS-22343-1  
US-PATENT-APPL-SN-329237  
US-PATENT-CLASS-307-18  
US-PATENT-CLASS-307-295  
US-PATENT-CLASS-307-304  
US-PATENT-CLASS-307-35  
US-PATENT-3,840,829

N74-34672\* c 85 ..... NASA-CASE-LAR-10256-1  
US-PATENT-APPL-SN-220785  
US-PATENT-CLASS-104-138R  
US-PATENT-CLASS-104-23FS  
US-PATENT-CLASS-238-134  
US-PATENT-3,837,285

N74-34857\* c 35 ..... NASA-CASE-LAR-11428-1  
US-PATENT-APPL-SN-188836  
US-PATENT-APPL-SN-357126  
US-PATENT-CLASS-250-281  
US-PATENT-CLASS-250-295  
US-PATENT-3,835,318

N75-12086\* c 25 ..... NASA-CASE-ARC-10469-1  
US-PATENT-APPL-SN-281908  
US-PATENT-CLASS-195-103.5F  
US-PATENT-3,846,243

N75-12087\* c 25 ..... NASA-CASE-ARC-10643-1  
US-PATENT-APPL-SN-513389  
US-PATENT-CLASS-117-161UA  
US-PATENT-CLASS-117-161UN  
US-PATENT-CLASS-117-161UZ  
US-PATENT-CLASS-117-93.1GD  
US-PATENT-CLASS-204-177  
US-PATENT-CLASS-210-500  
US-PATENT-CLASS-264-217  
US-PATENT-CLASS-264-22  
US-PATENT-3,847,652

N75-12161\* c 31 ..... NASA-CASE-MFS-20775-1  
US-PATENT-APPL-SN-356664  
US-PATENT-CLASS-118-49.1  
US-PATENT-3,847,115

N75-12222\* c 34 ..... NASA-CASE-GSC-11619-1  
US-PATENT-APPL-SN-397476  
US-PATENT-CLASS-138-113  
US-PATENT-CLASS-138-114  
US-PATENT-CLASS-138-148  
US-PATENT-CLASS-165-1  
US-PATENT-CLASS-165-105  
US-PATENT-CLASS-165-47  
US-PATENT-CLASS-220-15  
US-PATENT-CLASS-244-15C  
US-PATENT-3,847,208

N75-12270\* c 35 ..... NASA-CASE-KSC-10750-1  
US-PATENT-APPL-SN-346372  
US-PATENT-CLASS-324-158T  
US-PATENT-CLASS-324-60C  
US-PATENT-3,848,190

N75-12271\* c 35 ..... NASA-CASE-MFS-20994-1  
US-PATENT-APPL-SN-386789  
US-PATENT-CLASS-128-2V  
US-PATENT-CLASS-73-67.1  
US-PATENT-3,847,141

N75-12272\* c 35 ..... NASA-CASE-LAR-11069-1  
US-PATENT-APPL-SN-326198  
US-PATENT-CLASS-195-127  
US-PATENT-3,841,973

N75-12273\* c 35 ..... NASA-CASE-MFS-20506-1  
US-PATENT-APPL-SN-328792  
US-PATENT-CLASS-33-DIG.13  
US-PATENT-CLASS-33-180R  
US-PATENT-CLASS-350-292  
US-PATENT-3,842,509

N75-12326\* c 37 ..... NASA-CASE-LAR-11211-1  
US-PATENT-APPL-SN-302681  
US-PATENT-CLASS-29-470.1  
US-PATENT-CLASS-29-475  
US-PATENT-3,842,485

N75-12616\* c 54 ..... NASA-CASE-MFS-21611-1  
US-PATENT-APPL-SN-403694  
US-PATENT-CLASS-214-1CM  
US-PATENT-CLASS-307-149  
US-PATENT-CLASS-308-174

## ACCESSION NUMBER INDEX



## ACCESSION NUMBER INDEX

N75-19521

N75-12732*	c 74	US-PATENT-3,849,668 NASA-CASE-ARC-10448-2 US-PATENT-APPL-SN-374424 US-PATENT-CLASS-156-16 US-PATENT-CLASS-156-18 US-PATENT-CLASS-156-7 US-PATENT-CLASS-250-495 US-PATENT-3,847,689	N75-13539*	c 60	US-PATENT-3,850,169 NASA-CASE-ARC-10466-1 US-PATENT-APPL-SN-352382 US-PATENT-CLASS-235-156 US-PATENT-CLASS-235-197 US-PATENT-CLASS-324-77B US-PATENT-3,851,162	US-PATENT-CLASS-117-93.3 US-PATENT-CLASS-156-89 US-PATENT-CLASS-156-99 US-PATENT-CLASS-29-472.7 US-PATENT-CLASS-29-473.1 US-PATENT-CLASS-65-43 US-PATENT-3,859,714		
N75-12810*	c 76	NASA-CASE-LAR-11059-1 US-PATENT-APPL-SN-367294 US-PATENT-CLASS-73-32R US-PATENT-CLASS-73-432PS US-PATENT-3,842,656	N75-13625*	c 75	NASA-CASE-MFS-22145-1 US-PATENT-APPL-SN-367606 US-PATENT-CLASS-176-3 US-PATENT-CLASS-313-63 US-PATENT-CLASS-315-111 US-PATENT-CLASS-328-233 US-PATENT-3,854,097	N75-16783*	c 35	NASA-CASE-ARC-10637-1 US-PATENT-APPL-SN-352383 US-PATENT-CLASS-356-28 US-PATENT-3,860,342
N75-12930*	c 05	NASA-CASE-ARC-10456-1 US-PATENT-APPL-SN-237491 US-PATENT-CLASS-244-75R US-PATENT-CLASS-244-83R US-PATENT-CLASS-416-25 US-PATENT-CLASS-74-480R US-PATENT-3,850,388	N75-14834*	c 23	NASA-CASE-MSC-13530-2 US-PATENT-APPL-SN-178771 US-PATENT-APPL-SN-69488 US-PATENT-CLASS-106-13 US-PATENT-CLASS-106-15R US-PATENT-CLASS-106-287SB US-PATENT-CLASS-117-124F US-PATENT-CLASS-117-135.5 US-PATENT-CLASS-252-549 US-PATENT-CLASS-252-70	N75-18310*	c 20	NASA-CASE-LEW-11694-1 US-PATENT-APPL-SN-352381 US-PATENT-CLASS-29-25.18 US-PATENT-CLASS-72-63 US-PATENT-3,864,797
N75-12968*	c 09	NASA-CASE-MFS-22039-1 US-PATENT-APPL-SN-386790 US-PATENT-CLASS-108-136 US-PATENT-3,853,075	N75-14844*	c 25	NASA-CASE-NPO-12130-1 US-PATENT-APPL-SN-750235 US-PATENT-CLASS-23-230B US-PATENT-CLASS-23-253R US-PATENT-3,856,471	N75-18477*	c 33	NASA-CASE-MFS-22129-1 US-PATENT-APPL-SN-370255 US-PATENT-CLASS-324-32 US-PATENT-CLASS-324-54 US-PATENT-3,866,114
N75-12969*	c 09	NASA-CASE-ARC-10710-1 US-PATENT-APPL-SN-379019 US-PATENT-CLASS-73-147 US-PATENT-3,853,003	N75-14957*	c 33	NASA-CASE-MSC-14240-1 US-PATENT-APPL-SN-351929 US-PATENT-CLASS-307-205 US-PATENT-CLASS-307-208 US-PATENT-3,857,045	N75-18479*	c 33	NASA-CASE-MSC-14129-1 US-PATENT-APPL-SN-362146 US-PATENT-CLASS-307-229 US-PATENT-CLASS-307-235R US-PATENT-CLASS-307-267 US-PATENT-CLASS-328-115 US-PATENT-CLASS-328-151 US-PATENT-CLASS-328-58 US-PATENT-3,869,624
N75-13007*	c 15	NASA-CASE-GSC-11182-1 US-PATENT-APPL-SN-393527 US-PATENT-CLASS-325-4 US-PATENT-3,851,250	N75-15014*	c 35	NASA-CASE-LAR-11213-1 US-PATENT-APPL-SN-406715 US-PATENT-CLASS-250-201 US-PATENT-CLASS-356-4 US-PATENT-3,857,031	N75-18573*	c 37	NASA-CASE-NPO-13253-1 US-PATENT-APPL-SN-395687 US-PATENT-CLASS-248-358R US-PATENT-3,863,881
N75-13032*	c 24	NASA-CASE-LAR-10994-1 US-PATENT-APPL-SN-390466 US-PATENT-CLASS-29-420 US-PATENT-CLASS-29-604 US-PATENT-CLASS-340-174MA US-PATENT-CLASS-75-200 US-PATENT-3,849,877	N75-15028*	c 36	NASA-CASE-MFS-21244-1 US-PATENT-APPL-SN-350249 US-PATENT-CLASS-356-103 US-PATENT-CLASS-356-28 US-PATENT-CLASS-356-5 US-PATENT-3,856,402	N75-18574*	c 37	NASA-CASE-GSC-11079-1 US-PATENT-APPL-SN-100637 US-PATENT-CLASS-308-10 US-PATENT-3,865,442
N75-13111*	c 31	NASA-CASE-LAR-10782-2 US-PATENT-APPL-SN-197689 US-PATENT-APPL-SN-379049 US-PATENT-CLASS-249-144 US-PATENT-CLASS-249-145 US-PATENT-CLASS-249-59 US-PATENT-CLASS-425-DIG.43 US-PATENT-CLASS-425-405R US-PATENT-CLASS-425-438 US-PATENT-CLASS-425-468 US-PATENT-3,850,567	N75-15029*	c 36	NASA-CASE-NPO-13050-1 US-PATENT-APPL-SN-317567 US-PATENT-CLASS-117-95 US-PATENT-CLASS-117-97 US-PATENT-CLASS-330-4 US-PATENT-CLASS-332-7.5 US-PATENT-3,859,119	N75-19329*	c 18	NASA-CASE-MFS-22734-1 US-PATENT-APPL-SN-453232 US-PATENT-CLASS-244-162 US-PATENT-3,866,863
N75-13139*	c 33	NASA-CASE-MFS-22073-1 US-PATENT-APPL-SN-409991 US-PATENT-CLASS-318-608 US-PATENT-CLASS-318-640 US-PATENT-CLASS-318-649 US-PATENT-CLASS-318-675 US-PATENT-3,851,238	N75-15050*	c 37	NASA-CASE-NPO-13201-1 US-PATENT-APPL-SN-372149 US-PATENT-CLASS-137-505.38 US-PATENT-CLASS-137-505.42 US-PATENT-CLASS-74-424.8VA US-PATENT-3,856,042	N75-19408*	c 26	NASA-CASE-LEW-11696-2 US-PATENT-APPL-SN-298156 US-PATENT-APPL-SN-436315 US-PATENT-CLASS-29-194 US-PATENT-CLASS-29-196.2 US-PATENT-CLASS-29-196.6 US-PATENT-CLASS-29-197 US-PATENT-3,869,779
N75-13213*	c 35	NASA-CASE-LEW-11632-2 US-PATENT-APPL-SN-254173 US-PATENT-APPL-SN-327969 US-PATENT-CLASS-29-571 US-PATENT-CLASS-29-592 US-PATENT-CLASS-307-309 US-PATENT-CLASS-317-235H US-PATENT-CLASS-330-6 US-PATENT-3,849,875	N75-15270*	c 52	NASA-CASE-NPO-12119-1 US-PATENT-APPL-SN-847815 US-PATENT-CLASS-424-18C US-PATENT-3,849,554	N75-19515*	c 33	NASA-CASE-MSC-14131-1 US-PATENT-APPL-SN-373588 US-PATENT-CLASS-307-260 US-PATENT-CLASS-324-78J US-PATENT-CLASS-328-59 US-PATENT-CLASS-331-78 US-PATENT-3,866,128
N75-13261*	c 37	NASA-CASE-LEW-11696-1 US-PATENT-APPL-SN-298156 US-PATENT-CLASS-29-196.6 US-PATENT-CLASS-29-197 US-PATENT-CLASS-29-460 US-PATENT-CLASS-29-494 US-PATENT-CLASS-29-497.5 US-PATENT-CLASS-29-504 US-PATENT-3,849,865	N75-15662*	c 09	NASA-CASE-LAR-10276-1 US-PATENT-APPL-SN-29979 US-PATENT-CLASS-272-1R US-PATENT-CLASS-272-57A US-PATENT-CLASS-35-12C US-PATENT-3,859,736	N75-19516*	c 33	NASA-CASE-GSC-11760-1 NASA-CASE-GSC-11783-1 US-PATENT-APPL-SN-395868 US-PATENT-CLASS-343-761 US-PATENT-CLASS-343-781 US-PATENT-CLASS-343-837 US-PATENT-3,866,233
N75-13265*	c 37	NASA-CASE-KSC-10723-1 US-PATENT-APPL-SN-347952 US-PATENT-CLASS-338-162 US-PATENT-CLASS-338-75 US-PATENT-CLASS-338-97 US-PATENT-3,854,113	N75-15854*	c 32	NASA-CASE-NPO-13292-1 US-PATENT-APPL-SN-416135 US-PATENT-CLASS-343-100ST US-PATENT-CLASS-343-17.5 US-PATENT-CLASS-343-6.5R US-PATENT-CLASS-343-9 US-PATENT-3,860,921	N75-19517*	c 33	NASA-CASE-GSC-11582-1 US-PATENT-APPL-SN-397477 US-PATENT-CLASS-178-15 US-PATENT-CLASS-315-18 US-PATENT-CLASS-340-324AD US-PATENT-3,866,210
N75-13266*	c 37	NASA-CASE-NPO-13281-1 US-PATENT-APPL-SN-412079 US-PATENT-CLASS-74-436 US-PATENT-CLASS-74-820 US-PATENT-3,855,873	N75-15874*	c 33	NASA-CASE-MFS-22088-1 US-PATENT-APPL-SN-426155 US-PATENT-CLASS-318-227 US-PATENT-CLASS-318-230 US-PATENT-CLASS-318-231 US-PATENT-3,860,858	N75-19518*	c 33	NASA-CASE-ARC-10348-1 US-PATENT-APPL-SN-140439 US-PATENT-CLASS-330-69 US-PATENT-CLASS-330-86 US-PATENT-3,872,395
N75-13265*	c 37	NASA-CASE-KSC-10723-1 US-PATENT-APPL-SN-347952 US-PATENT-CLASS-338-162 US-PATENT-CLASS-338-75 US-PATENT-CLASS-338-97 US-PATENT-3,854,113	N75-15931*	c 35	NASA-CASE-MFS-21761-1 US-PATENT-APPL-SN-337816 US-PATENT-CLASS-200-83N US-PATENT-CLASS-73-40.2 US-PATENT-3,859,845	N75-19519*	c 33	NASA-CASE-NPO-13125-1 US-PATENT-APPL-SN-319150 US-PATENT-CLASS-235-92DM US-PATENT-CLASS-235-92LG US-PATENT-CLASS-235-32R US-PATENT-CLASS-235-92T US-PATENT-CLASS-235-92VA US-PATENT-3,866,022
N75-13266*	c 37	NASA-CASE-NPO-13281-1 US-PATENT-APPL-SN-412079 US-PATENT-CLASS-74-436 US-PATENT-CLASS-74-820 US-PATENT-3,855,873	N75-15932*	c 35	NASA-CASE-MFS-21045-1 US-PATENT-APPL-SN-411572 US-PATENT-CLASS-73-1R US-PATENT-CLASS-73-379 US-PATENT-3,859,840	N75-19520*	c 33	NASA-CASE-ARC-10364-3 US-PATENT-APPL-SN-209618 US-PATENT-APPL-SN-462844 US-PATENT-CLASS-307-321 US-PATENT-CLASS-324-DIG.1 US-PATENT-CLASS-329-166 US-PATENT-CLASS-329-204 US-PATENT-CLASS-332-47 US-PATENT-3,869,676
N75-13502*	c 51	NASA-CASE-LAR-11074-1 US-PATENT-APPL-SN-326364 US-PATENT-CLASS-115-103.5 US-PATENT-CLASS-195-120 US-PATENT-CLASS-195-127 US-PATENT-3,850,754	N75-15992*	c 37	NASA-CASE-GSC-11577-1 US-PATENT-APPL-SN-322997 US-PATENT-CLASS-117-106A	N75-19521*	c 33	NASA-CASE-KSC-10736-1 US-PATENT-APPL-SN-348787 US-PATENT-CLASS-324-102 US-PATENT-CLASS-324-113

N75-19522*	c 33	US-PATENT-3,869,667	US-PATENT-CLASS-165-111	US-PATENT-CLASS-331-25
		NASA-CASE-GSC-11844-1	US-PATENT-CLASS-62-285	US-PATENT-3,883,817
N75-19524*	c 33	US-PATENT-APPL-SN-452761	US-PATENT-CLASS-62-288	NASA-CASE-ARC-10364-2
		US-PATENT-CLASS-307-227	US-PATENT-CLASS-62-289	US-PATENT-APPL-SN-209618
N75-19611*	c 35	US-PATENT-CLASS-321-15	US-PATENT-CLASS-62-290	US-PATENT-APPL-SN-433968
		US-PATENT-CLASS-324-32	US-PATENT-CLASS-62-317	US-PATENT-CLASS-307-321
N75-19612*	c 35	US-PATENT-3,869,659	US-PATENT-CLASS-62-93	US-PATENT-CLASS-324-DIG.1
		NASA-CASE-NPO-13374-1	US-PATENT-3,868,830	US-PATENT-CLASS-329-166
N75-19613*	c 35	US-PATENT-APPL-SN-449118	NASA-CASE-GSC-11752-1	US-PATENT-CLASS-329-204
		US-PATENT-CLASS-318-137	US-PATENT-APPL-SN-446569	US-PATENT-3,883,812
N75-19614*	c 35	US-PATENT-CLASS-318-167	US-PATENT-CLASS-219-497	NASA-CASE-NPO-10764-2
		US-PATENT-CLASS-318-176	US-PATENT-CLASS-219-501	US-PATENT-APPL-SN-273519
N75-19615*	c 35	US-PATENT-CLASS-318-183	US-PATENT-CLASS-219-505	US-PATENT-APPL-SN-836280
		US-PATENT-3,867,677	US-PATENT-3,869,597	US-PATENT-CLASS-116-114.5
N75-19616*	c 35	NASA-CASE-LAR-11071-1	NASA-CASE-MSC-12607-1	US-PATENT-CLASS-117-72
		US-PATENT-APPL-SN-334349	US-PATENT-APPL-SN-407323	US-PATENT-CLASS-73-356
N75-19617*	c 35	US-PATENT-CLASS-417-138	US-PATENT-CLASS-178-DIG.12	US-PATENT-3,874,240
		US-PATENT-CLASS-417-36	US-PATENT-CLASS-358-36	NASA-CASE-NPO-13214-1
N75-19618*	c 35	US-PATENT-CLASS-417-395	US-PATENT-3,875,584	NASA-CASE-NPO-13215-1
		US-PATENT-CLASS-73-221	NASA-CASE-MSC-14558-1	US-PATENT-APPL-SN-394149
N75-19619*	c 35	US-PATENT-3,864,060	US-PATENT-APPL-SN-428994	US-PATENT-CLASS-178-DIG.2
		NASA-CASE-LAR-11237-1	US-PATENT-CLASS-178-58A	US-PATENT-CLASS-178-7.2
N75-19620*	c 35	US-PATENT-APPL-SN-402868	US-PATENT-CLASS-178-79	US-PATENT-3,883,689
		US-PATENT-CLASS-340-242	US-PATENT-3,875,332	NASA-CASE-MFS-21704-1
N75-19621*	c 35	US-PATENT-CLASS-73-46	NASA-CASE-MFS-22671-1	US-PATENT-APPL-SN-386793
		US-PATENT-CLASS-73-49.2	US-PATENT-APPL-SN-419831	US-PATENT-CLASS-350-3.5
N75-19622*	c 35	US-PATENT-3,864,960	US-PATENT-CLASS-178-69A	US-PATENT-3,883,215
		NASA-CASE-LAR-11207-1	US-PATENT-CLASS-235-181	NASA-CASE-NPO-13360-1
N75-19623*	c 35	US-PATENT-APPL-SN-385013	US-PATENT-CLASS-324-57PS	US-PATENT-APPL-SN-401920
		US-PATENT-CLASS-178-DIG.20	US-PATENT-CLASS-324-77H	US-PATENT-CLASS-228-1
N75-19624*	c 35	US-PATENT-CLASS-250-332	US-PATENT-CLASS-325-67	US-PATENT-CLASS-251-333
		US-PATENT-CLASS-356-186	US-PATENT-3,875,500	US-PATENT-3,874,635
N75-19625*	c 35	US-PATENT-CLASS-356-189	NASA-CASE-LEW-11274-1	NASA-CASE-MFS-22649-1
		US-PATENT-CLASS-356-83	US-PATENT-APPL-SN-380630	US-PATENT-APPL-SN-398901
N75-19626*	c 35	US-PATENT-CLASS-356-96	US-PATENT-CLASS-277-134	US-PATENT-CLASS-408-112
		US-PATENT-3,869,212	US-PATENT-CLASS-277-27	US-PATENT-CLASS-408-186
N75-19627*	c 35	NASA-CASE-LAR-11173-1	US-PATENT-CLASS-277-40	US-PATENT-CLASS-408-193
		US-PATENT-APPL-SN-354408	US-PATENT-3,874,677	US-PATENT-CLASS-408-195
N75-19628*	c 35	US-PATENT-CLASS-332-2	NASA-CASE-NPO-13327-1	US-PATENT-3,877,833
		US-PATENT-CLASS-73-557	US-PATENT-APPL-SN-429437	NASA-CASE-ARC-10722-1
N75-19629*	c 35	US-PATENT-3,868,856	US-PATENT-CLASS-247-171	US-PATENT-APPL-SN-428995
		NASA-CASE-MFS-22189-1	US-PATENT-CLASS-250-203	US-PATENT-CLASS-47-1.2
N75-19630*	c 35	US-PATENT-APPL-SN-405342	US-PATENT-CLASS-250-211R	US-PATENT-CLASS-47-39
		US-PATENT-CLASS-33-148D	US-PATENT-3,875,404	US-PATENT-CLASS-47-58
N75-19631*	c 35	US-PATENT-CLASS-73-143	NASA-CASE-MSC-14339-1	US-PATENT-3,882,634
		US-PATENT-3,864,953	US-PATENT-APPL-SN-347953	NASA-CASE-HQN-10542-1
N75-19632*	c 35	NASA-CASE-MFS-20932-1	US-PATENT-CLASS-128-2.06E	US-PATENT-APPL-SN-163151
		US-PATENT-APPL-SN-374441	US-PATENT-CLASS-128-DIG.4	US-PATENT-CLASS-178-DIG.25
N75-19633*	c 35	US-PATENT-CLASS-250-505	US-PATENT-CLASS-128-2.06B	US-PATENT-CLASS-250-566
		US-PATENT-CLASS-250-508	US-PATENT-3,882,846	US-PATENT-CLASS-350-311
N75-19634*	c 35	US-PATENT-CLASS-250-510	NASA-CASE-ARC-10754-1	US-PATENT-3,883,436
		US-PATENT-3,869,615	US-PATENT-APPL-SN-398886	NASA-CASE-GSC-11425-2
N75-19635*	c 36	NASA-CASE-NPO-13131-1	US-PATENT-CLASS-137-15.1	US-PATENT-APPL-SN-206266
		US-PATENT-APPL-SN-390468	US-PATENT-CLASS-244-53B	US-PATENT-APPL-SN-394206
N75-19636*	c 36	US-PATENT-CLASS-178-7.1	US-PATENT-3,883,095	US-PATENT-CLASS-357-23
		US-PATENT-CLASS-250-211R	NASA-CASE-GSC-11127-1	US-PATENT-CLASS-357-29
N75-19637*	c 36	US-PATENT-CLASS-250-578	US-PATENT-APPL-SN-401466	US-PATENT-CLASS-357-42
		US-PATENT-CLASS-315-169R	US-PATENT-CLASS-318-314	US-PATENT-CLASS-357-52
N75-19638*	c 36	US-PATENT-CLASS-340-173LS	US-PATENT-CLASS-318-318	US-PATENT-CLASS-357-54
		US-PATENT-3,865,975	US-PATENT-CLASS-318-341	US-PATENT-CLASS-357-91
N75-19639*	c 36	NASA-CASE-HQN-10844-1	US-PATENT-3,883,785	US-PATENT-3,882,530
		US-PATENT-APPL-SN-412080	NASA-CASE-NPO-13263-1	NASA-CASE-LAR-11252-1
N75-19640*	c 36	US-PATENT-CLASS-356-106LR	US-PATENT-APPL-SN-393523	US-PATENT-APPL-SN-367268
		US-PATENT-3,869,210	US-PATENT-CLASS-73-505	US-PATENT-CLASS-D12-76
N75-19641*	c 36	NASA-CASE-GSC-11746-1	US-PATENT-3,882,732	US-PATENT-CLASS-244-13
		US-PATENT-APPL-SN-393528	NASA-CASE-MFS-21488-1	US-PATENT-CLASS-244-15
N75-19642*	c 36	US-PATENT-CLASS-331-94.5M	US-PATENT-APPL-SN-359156	US-PATENT-CLASS-244-42DA
		US-PATENT-3,869,680	US-PATENT-CLASS-73-143	US-PATENT-CLASS-244-55
N75-19643*	c 36	NASA-CASE-LAR-11341-1	US-PATENT-3,882,719	US-PATENT-3,884,432
		US-PATENT-APPL-SN-367293	NASA-CASE-NPO-13303-1	NASA-CASE-ARC-10519-2
N75-19644*	c 36	US-PATENT-CLASS-330-4.3	US-PATENT-APPL-SN-457295	US-PATENT-APPL-SN-452767
		US-PATENT-CLASS-331-94.5P	US-PATENT-CLASS-310-10	US-PATENT-CLASS-280-150SB
N75-19645*	c 37	US-PATENT-3,868,591	US-PATENT-CLASS-310-4	US-PATENT-CLASS-297-385
		NASA-CASE-MSC-19095-1	US-PATENT-CLASS-310-40	US-PATENT-CLASS-297-388
N75-19646*	c 37	US-PATENT-APPL-SN-415486	US-PATENT-CLASS-310-52	US-PATENT-CLASS-297-389
		US-PATENT-CLASS-219-137	US-PATENT-CLASS-335-216	US-PATENT-3,887,233
N75-19647*	c 37	US-PATENT-3,864,542	US-PATENT-CLASS-60-516	NASA-CASE-LAR-11144-1
		NASA-CASE-NPO-13345-1	US-PATENT-CLASS-60-530	US-PATENT-APPL-SN-426405
N75-19648*	c 37	US-PATENT-APPL-SN-462705	US-PATENT-CLASS-62-3	US-PATENT-CLASS-117-106A
		US-PATENT-CLASS-204-192	US-PATENT-CLASS-62-467	US-PATENT-CLASS-117-107.2
N75-19649*	c 37	US-PATENT-CLASS-204-298	US-PATENT-3,875,435	US-PATENT-CLASS-117-201
		US-PATENT-3,864,239	NASA-CASE-GSC-11743-1	US-PATENT-CLASS-118-48
N75-19650*	c 37	NASA-CASE-MFS-21606-1	US-PATENT-APPL-SN-370271	US-PATENT-CLASS-118-49.1
		US-PATENT-APPL-SN-356555	US-PATENT-CLASS-178-66R	US-PATENT-CLASS-148-175
N75-19651*	c 37	US-PATENT-CLASS-292-DIG.14	US-PATENT-CLASS-325-30	US-PATENT-CLASS-252-62.3GA
		US-PATENT-CLASS-292-108	US-PATENT-CLASS-325-60	US-PATENT-3,888,705
N75-19652*	c 37	US-PATENT-CLASS-292-122	US-PATENT-3,878,464	NASA-CASE-NPO-13217-1
		US-PATENT-3,869,160	NASA-CASE-NPO-13140-1	US-PATENT-APPL-SN-362145
N75-19653*	c 37	NASA-CASE-MFS-19193-1	US-PATENT-APPL-SN-374422	US-PATENT-CLASS-343-105R
		US-PATENT-APPL-SN-461477	US-PATENT-CLASS-343-100PE	US-PATENT-CLASS-343-112D
N75-19654*	c 37	US-PATENT-CLASS-285-114	US-PATENT-CLASS-343-5GC	US-PATENT-3,889,264
		US-PATENT-CLASS-285-226	US-PATENT-3,883,872	NASA-CASE-NPO-13321-1
N75-19655*	c 37	US-PATENT-3,869,151	NASA-CASE-GSC-11623-1	US-PATENT-APPL-SN-455163
		NASA-CASE-MSC-14143-1	US-PATENT-APPL-SN-389929	US-PATENT-CLASS-178-69.5R
N75-19656*	c 37	US-PATENT-APPL-SN-393526	US-PATENT-CLASS-331-1A	US-PATENT-CLASS-179-15BS
		US-PATENT-CLASS-165-110	US-PATENT-CLASS-331-18	US-PATENT-CLASS-325-4

N75-26243*	c 33	US-PATENT-3,889,064	N75-27251*	c 33	US-PATENT-3,189,784	N75-29381*	c 35	US-PATENT-CLASS-311-37
		NASA-CASE-GSC-11744-1			NASA-CASE-HQN-10069			US-PATENT-CLASS-331-65
		US-PATENT-APPL-SN-353162			US-PATENT-APPL-SN-739072			US-PATENT-CLASS-73-23
		US-PATENT-CLASS-179-158C			US-PATENT-CLASS-330-5			US-PATENT-3,895,912
		US-PATENT-CLASS-235-150.53			US-PATENT-3,551,831			NASA-CASE-ARC-10806-1
N75-26244*	c 33	US-PATENT-CLASS-235-181	N75-27252*	c 33	NASA-CASE-LAR-11042-1	N75-29382*	c 35	US-PATENT-APPL-SN-478802
		US-PATENT-CLASS-324-830			US-PATENT-APPL-SN-440916			US-PATENT-CLASS-73-178R
		US-PATENT-CLASS-328-133			US-PATENT-CLASS-204-242			US-PATENT-3,895,521
		US-PATENT-3,875,394			US-PATENT-CLASS-204-267			NASA-CASE-XMS-05731
		NASA-CASE-MFS-22208-1			US-PATENT-CLASS-204-279			US-PATENT-APPL-SN-441279
N75-26245*	c 33	US-PATENT-APPL-SN-448325	N75-27328*	c 35	US-PATENT-CLASS-204-286	N75-29426*	c 37	US-PATENT-CLASS-73-117.4
		US-PATENT-CLASS-315-10			US-PATENT-CLASS-204-290R			US-PATENT-3,375,712
		US-PATENT-CLASS-315-367			US-PATENT-3,891,533			NASA-CASE-XLE-10717
		US-PATENT-CLASS-315-369			NASA-CASE-MFS-22537-1			US-PATENT-APPL-SN-844243
		US-PATENT-CLASS-315-387			US-PATENT-APPL-SN-387266			US-PATENT-CLASS-315-111
N75-26246*	c 33	US-PATENT-3,889,155	N75-27329*	c 35	US-PATENT-CLASS-350-3.5	N75-30132*	c 03	US-PATENT-3,004,189
		NASA-CASE-LAR-11352-1			US-PATENT-3,888,561			NASA-CASE-ERC-10419-1
		US-PATENT-APPL-SN-459736			NASA-CASE-XMF-05882			US-PATENT-APPL-SN-219722
		US-PATENT-CLASS-23-254E			US-PATENT-APPL-SN-533650			US-PATENT-CLASS-343-112CA
		US-PATENT-CLASS-324-58.5A			US-PATENT-CLASS-250-83.3			US-PATENT-CLASS-343-6.5R
N75-26246*	c 33	US-PATENT-CLASS-324-58.5C	N75-27330*	c 35	US-PATENT-3,454,766	N75-30256*	c 23	US-PATENT-3,900,847
		US-PATENT-3,889,182			NASA-CASE-LAR-11354-1			NASA-CASE-MFS-22356-1
		NASA-CASE-KSC-10807-1			US-PATENT-APPL-SN-409990			US-PATENT-APPL-SN-489008
		US-PATENT-APPL-SN-461073			US-PATENT-CLASS-195-103.5R			US-PATENT-CLASS-260-346.3
		US-PATENT-CLASS-324-72			US-PATENT-CLASS-195-120			US-PATENT-CLASS-260-520
N75-26282*	c 34	US-PATENT-3,889,185	N75-27331*	c 35	US-PATENT-CLASS-195-127	N75-30260*	c 24	US-PATENT-CLASS-260-78TF
		NASA-CASE-LAR-11110-1			US-PATENT-CLASS-195-141			US-PATENT-3,899,517
		US-PATENT-APPL-SN-420424			US-PATENT-3,884,765			NASA-CASE-LAR-10337-1
		US-PATENT-CLASS-233-DIG.1			NASA-CASE-GSC-11829-1			US-PATENT-APPL-SN-424038
		US-PATENT-CLASS-233-20RP			US-PATENT-APPL-SN-502136			US-PATENT-CLASS-29-610
N75-26334*	c 35	US-PATENT-CLASS-233-25	N75-27364*	c 36	US-PATENT-CLASS-250-385	N75-30428*	c 33	US-PATENT-CLASS-29-613
		US-PATENT-CLASS-233-46			US-PATENT-3,891,851			US-PATENT-CLASS-338-13
		US-PATENT-CLASS-233-6			NASA-CASE-XLE-2529-2			US-PATENT-CLASS-338-283
		US-PATENT-3,888,410			US-PATENT-APPL-SN-848403			US-PATENT-3,898,730
		NASA-CASE-ARC-10344-2			US-PATENT-CLASS-240-41B			NASA-CASE-MFS-22342-1
N75-26371*	c 37	US-PATENT-APPL-SN-446564	N75-27376*	c 37	US-PATENT-CLASS-330-4.3	N75-30430*	c 33	US-PATENT-APPL-SN-361666
		US-PATENT-CLASS-55-386			US-PATENT-CLASS-331-94.5A			US-PATENT-CLASS-330-13
		US-PATENT-3,887,345			US-PATENT-3,894,289			US-PATENT-CLASS-330-18
		NASA-CASE-GSC-10984-1			NASA-CASE-XMS-01330			US-PATENT-CLASS-330-40
		US-PATENT-APPL-SN-127480			US-PATENT-APPL-SN-153624			US-PATENT-CLASS-330-63
N75-26372*	c 37	US-PATENT-CLASS-117-126GM	N75-27585*	c 45	US-PATENT-APPL-SN-322565	N75-30429*	c 33	US-PATENT-3,898,578
		US-PATENT-CLASS-117-126R			US-PATENT-CLASS-219-125			NASA-CASE-MFS-21616-1
		US-PATENT-CLASS-161-92			US-PATENT-3,275,794			US-PATENT-APPL-SN-464723
		US-PATENT-CLASS-161-93			NASA-CASE-NPO-13231-1			US-PATENT-CLASS-330-207A
		US-PATENT-CLASS-29-182.2			US-PATENT-APPL-SN-428993			US-PATENT-CLASS-330-24
N75-26789* #	c 70	US-PATENT-CLASS-29-182.5	N75-27586*	c 45	US-PATENT-CLASS-250-343	N75-30430*	c 33	US-PATENT-3,899,745
		US-PATENT-CLASS-29-420.5			US-PATENT-CLASS-250-345			NASA-CASE-NPO-13504-1
		US-PATENT-CLASS-65-3			US-PATENT-CLASS-250-432			US-PATENT-APPL-SN-483852
		US-PATENT-CLASS-75-DIG.1			US-PATENT-3,891,848			US-PATENT-CLASS-33-96
		US-PATENT-CLASS-75-200			NASA-CASE-NPO-13386-1			US-PATENT-CLASS-333-21R
N75-27040*	c 18	US-PATENT-CLASS-75-208R	N75-27758*	c 54	US-PATENT-APPL-SN-475336	N75-30431*	c 33	US-PATENT-CLASS-333-83BT
		US-PATENT-CLASS-75-212			US-PATENT-CLASS-214-1B			US-PATENT-CLASS-333-98R
		US-PATENT-CLASS-75-214			US-PATENT-CLASS-214-1CM			US-PATENT-3,902,143
		US-PATENT-CLASS-75-222			US-PATENT-CLASS-318-640			NASA-CASE-KSC-10782-1
		US-PATENT-3,887,365			US-PATENT-3,888,362			US-PATENT-APPL-SN-400467
N75-26789* #	c 70	NASA-CASE-MFS-21931-1	N75-27759*	c 54	NASA-CASE-MSC-13601-2	N75-30431*	c 33	US-PATENT-CLASS-178-DIG.1
		US-PATENT-APPL-SN-464721			US-PATENT-APPL-SN-395495			US-PATENT-CLASS-178-6.8
		US-PATENT-CLASS-250-359			US-PATENT-CLASS-351-38			US-PATENT-3,900,705
		US-PATENT-CLASS-250-460			US-PATENT-3,891,311			NASA-CASE-ARC-10802-1
		US-PATENT-CLASS-250-492			NASA-CASE-ARC-10753-1			US-PATENT-APPL-SN-484208
N75-27040*	c 18	US-PATENT-3,889,122	N75-27760*	c 54	US-PATENT-APPL-SN-427395	N75-30503*	c 35	US-PATENT-CLASS-205-343
		NASA-CASE-MFS-22758-1			US-PATENT-CLASS-128-2.05Z			US-PATENT-CLASS-250-351
		US-PATENT-APPL-SN-581514			US-PATENT-CLASS-128-2V			US-PATENT-CLASS-250-373
		NASA-CASE-XHQ-02146			US-PATENT-CLASS-128-24A			US-PATENT-CLASS-356-51
		US-PATENT-APPL-SN-290043			US-PATENT-CLASS-74-471XY			US-PATENT-3,899,252
N75-27041*	c 18	US-PATENT-CLASS-52-71	N75-27761*	c 54	US-PATENT-3,893,449	N75-30503*	c 35	NASA-CASE-LEW-12078-1
		US-PATENT-3,206,897			NASA-CASE-NPO-13313-1			US-PATENT-APPL-SN-447124
		NASA-CASE-MSC-14245-1			US-PATENT-APPL-SN-449153			US-PATENT-CLASS-73-194M
		US-PATENT-APPL-SN-389916			US-PATENT-CLASS-128-145.8			US-PATENT-CLASS-73-195
		US-PATENT-CLASS-214-1CM			US-PATENT-CLASS-55-DIG.35			US-PATENT-3,898,882
N75-27125*	c 26	US-PATENT-3,893,573	N75-28135*	c 24	US-PATENT-3,893,458	N75-30504*	c 35	NASA-CASE-MSC-12531-1
		NASA-CASE-XMF-05868			NASA-CASE-MFS-21077-1			US-PATENT-APPL-SN-354612
		US-PATENT-APPL-SN-512509			US-PATENT-APPL-SN-127481			US-PATENT-CLASS-307-204
		US-PATENT-CLASS-260-29.6			US-PATENT-CLASS-228-190			US-PATENT-CLASS-307-211
		US-PATENT-3,475,442			US-PATENT-CLASS-228-193			US-PATENT-CLASS-307-219
N75-27126*	c 26	US-PATENT-CLASS-29-419	N75-27762* #	c 27	US-PATENT-CLASS-29-419	N75-30504*	c 35	US-PATENT-CLASS-328-61
		NASA-CASE-XMF-06053			US-PATENT-3,894,677			US-PATENT-CLASS-328-62
		US-PATENT-APPL-SN-542192			NASA-CASE-HQN-10462			US-PATENT-3,900,741
		US-PATENT-CLASS-75-173			US-PATENT-APPL-SN-773530			NASA-CASE-NPO-13308-1
		US-PATENT-3,411,900			US-PATENT-CLASS-118-43			US-PATENT-APPL-SN-455165
N75-27127*	c 26	NASA-CASE-XNP-03878	N75-29236*	c 26	US-PATENT-3,603,285	N75-30524*	c 36	US-PATENT-CLASS-310-4
		US-PATENT-APPL-SN-488745			NASA-CASE-XNP-01311			US-PATENT-CLASS-331-DIG.1
		US-PATENT-CLASS-75-173			US-PATENT-APPL-SN-430496			US-PATENT-3,899,966
		US-PATENT-3,373,016			US-PATENT-CLASS-148-127			NASA-CASE-LEW-11078-3
		NASA-CASE-MFS-22324-1			US-PATENT-3,390,023			US-PATENT-APPL-SN-405346
N75-27160*	c 27	US-PATENT-APPL-SN-350250	N75-29263* #	c 27	NASA-CASE-LAR-11397-1	N75-30562*	c 37	US-PATENT-CLASS-308-121
		US-PATENT-CLASS-106-48			US-PATENT-APPL-SN-532784			US-PATENT-CLASS-308-73
		US-PATENT-CLASS-106-54			NASA-CASE-ARC-10266-1			US-PATENT-3,899,224
		US-PATENT-CLASS-117-129			US-PATENT-APPL-SN-453241			NASA-CASE-LEW-11227-1
		US-PATENT-3,891,452			US-PATENT-APPL-SN-585988			US-PATENT-APPL-SN-146939
N75-27249*	c 33	NASA-CASE-XMS-02744	N75-29318*	c 33	US-PATENT-CLASS-315-111	N75-30876*	c 73	US-PATENT-CLASS-244-1SS
		US-PATENT-APPL-SN-351950			US-PATENT-3,469,143			US-PATENT-CLASS-250-493
		US-PATENT-CLASS-200-129			NASA-CASE-MFS-22060-1			US-PATENT-CLASS-250-496
		US-PATENT-3,281,558			US-PATENT-APPL-SN-521603			US-PATENT-3,899,680
		NASA-CASE-XNP-01296			US-PATENT-CLASS-23-254E			NASA-CASE-NPO-13423-1
N75-27250*	c 33	US-PATENT-APPL-SN-127984	N75-29380*	c 35	US-PATENT-CLASS-23-255E	N75-31329*	c 33	US-PATENT-APPL-SN-470429
		US-PATENT-CLASS-315-30						

### ACCESSION NUMBER INDEX

**F-44**

## ACCESSION NUMBER INDEX

N76-18427

N76-15189*	c 12	NASA-CASE-MSC-12611-1 US-PATENT-APPL-SN-446560 US-PATENT-CLASS-350-288 US-PATENT-CLASS-350-293 US-PATENT-CLASS-427-162 US-PATENT-CLASS-427-250 US-PATENT-3,927,227	US-PATENT-APPL-SN-500980 US-PATENT-CLASS-250-499 US-PATENT-CLASS-250-500 US-PATENT-3,924,137	US-PATENT-CLASS-244-172 US-PATENT-3,929,306
N76-15268*	c 23	NASA-CASE-MFS-22355-1 US-PATENT-APPL-SN-487852 US-PATENT-CLASS-260-32.6N US-PATENT-CLASS-260-32.8N US-PATENT-CLASS-260-346.3 US-PATENT-CLASS-260-47CP US-PATENT-CLASS-260-571 US-PATENT-CLASS-260-78TF US-PATENT-3,925,312	N76-16014* c 02 NASA-CASE-LAR-11575-1 US-PATENT-APPL-SN-527727 US-PATENT-CLASS-244-139 US-PATENT-3,930,628	N76-17317* c 34 NASA-CASE-LAR-10799-2 US-PATENT-APPL-SN-301419 US-PATENT-APPL-SN-419319 US-PATENT-CLASS-165-105 US-PATENT-CLASS-165-106 US-PATENT-CLASS-237-60 US-PATENT-CLASS-244-117A US-PATENT-CLASS-244-135R US-PATENT-CLASS-417-209 US-PATENT-3,929,305
N76-15310*	c 27	NASA-CASE-ARC-10714-1 US-PATENT-APPL-SN-398885 US-PATENT-CLASS-260-2.5AK US-PATENT-CLASS-427-196 US-PATENT-CLASS-427-426 US-PATENT-CLASS-428-303 US-PATENT-3,916,060	N76-16228* c 27 NASA-CASE-NPO-12061-1 US-PATENT-APPL-SN-45549 US-PATENT-CLASS-260-879 US-PATENT-CLASS-260-900 US-PATENT-CLASS-260-92.1 US-PATENT-3,931,132	N76-17656* c 45 NASA-CASE-LAR-11675-1 US-PATENT-APPL-SN-557448 US-PATENT-CLASS-178-DIG.1 US-PATENT-CLASS-178-DIG.8 US-PATENT-CLASS-178-6.8 US-PATENT-CLASS-250-373 US-PATENT-CLASS-340-237S US-PATENT-CLASS-356-207 US-PATENT-3,931,462
N76-15311*	c 27	NASA-CASE-NPO-13120-1 US-PATENT-APPL-SN-348422 US-PATENT-CLASS-29-182.5 US-PATENT-3,926,567	N76-16229* c 27 NASA-CASE-LEW-11179-1 US-PATENT-APPL-SN-357312 US-PATENT-CLASS-29-195A US-PATENT-CLASS-427-203 US-PATENT-CLASS-427-204 US-PATENT-CLASS-427-205 US-PATENT-CLASS-427-270 US-PATENT-CLASS-427-275 US-PATENT-CLASS-427-287 US-PATENT-CLASS-428-450 US-PATENT-CLASS-428-457 US-PATENT-CLASS-428-469 US-PATENT-CLASS-428-539 US-PATENT-3,931,447	N76-17951* c 75 NASA-CASE-MFS-22145-2 US-PATENT-APPL-SN-367606 US-PATENT-APPL-SN-500982 US-PATENT-CLASS-124-1 US-PATENT-CLASS-124-11R US-PATENT-CLASS-89-8 US-PATENT-3,929,119
N76-15329*	c 32	NASA-CASE-GSC-11968-1 US-PATENT-APPL-SN-512825 US-PATENT-CLASS-343-779 US-PATENT-CLASS-343-837 US-PATENT-CLASS-343-876 US-PATENT-3,927,408	N76-16230* c 27 NASA-CASE-ARC-10813-1 US-PATENT-APPL-SN-437556 US-PATENT-CLASS-264-331 US-PATENT-CLASS-428-412 US-PATENT-CLASS-428-413 US-PATENT-CLASS-428-447 US-PATENT-CLASS-428-911 US-PATENT-CLASS-428-920 US-PATENT-CLASS-428-921 US-PATENT-3,928,708	N76-18117* c 07 NASA-CASE-LAR-11674-1 US-PATENT-APPL-SN-331759 US-PATENT-APPL-SN-488616 US-PATENT-CLASS-181-33HC US-PATENT-CLASS-239-265.11 US-PATENT-3,938,742
N76-15330*	c 32	NASA-CASE-LAR-11112-1 US-PATENT-APPL-SN-491419 US-PATENT-CLASS-343-786 US-PATENT-3,924,237	N76-16249* c 32 NASA-CASE-MSC-14557-1 US-PATENT-APPL-SN-428994 US-PATENT-APPL-SN-464720 US-PATENT-CLASS-178-69C US-PATENT-CLASS-178-88 US-PATENT-CLASS-325-321 US-PATENT-3,924,068	N76-18245* c 25 NASA-CASE-NPO-13063-1 US-PATENT-APPL-SN-227977 US-PATENT-CLASS-23-230M US-PATENT-CLASS-23-230R US-PATENT-CLASS-23-232C US-PATENT-CLASS-23-253R US-PATENT-CLASS-23-254R US-PATENT-CLASS-23-255R US-PATENT-CLASS-235-151.13 US-PATENT-CLASS-73-23.1 US-PATENT-3,860,393
N76-15373*	c 33	NASA-CASE-LEW-11938-1 US-PATENT-APPL-SN-544611 US-PATENT-CLASS-317-258 US-PATENT-CLASS-317-261 US-PATENT-3,924,164	N76-16331* c 33 NASA-CASE-MSC-14649-1 US-PATENT-APPL-SN-505819 US-PATENT-CLASS-324-79D US-PATENT-CLASS-328-134 US-PATENT-3,924,183	N76-18257* c 26 NASA-CASE-MFS-22907-1 US-PATENT-APPL-SN-518546 US-PATENT-CLASS-324-34R US-PATENT-3,938,037
N76-15431*	c 35	NASA-CASE-MSC-13802-2 US-PATENT-APPL-SN-189438 US-PATENT-APPL-SN-475338 US-PATENT-CLASS-250-251 US-PATENT-CLASS-250-287 US-PATENT-CLASS-250-423 US-PATENT-3,916,187	N76-16332* c 33 NASA-CASE-GSC-11849-1 US-PATENT-APPL-SN-470428 US-PATENT-CLASS-174-145 US-PATENT-CLASS-174-148 US-PATENT-CLASS-339-143C US-PATENT-CLASS-339-198R US-PATENT-CLASS-339-242 US-PATENT-CLASS-339-275R US-PATENT-3,931,456	N76-18295* c 32 NASA-CASE-GSC-11862-1 US-PATENT-APPL-SN-500979 US-PATENT-CLASS-343-837 US-PATENT-CLASS-343-840 US-PATENT-CLASS-343-912 US-PATENT-CLASS-343-915 US-PATENT-3,938,162
N76-15432*	c 35	NASA-CASE-LAR-11435-1 US-PATENT-APPL-SN-522556 US-PATENT-CLASS-310-8.2 US-PATENT-CLASS-73-1R US-PATENT-3,924,444	N76-16390* c 35 NASA-CASE-NPO-13388-1 US-PATENT-APPL-SN-522552 US-PATENT-CLASS-324-43R US-PATENT-3,924,176	N76-18345* c 33 NASA-CASE-NPO-13385-1 US-PATENT-APPL-SN-501011 US-PATENT-CLASS-340-347AD US-PATENT-3,938,188
N76-15433*	c 35	NASA-CASE-GSC-11892-1 US-PATENT-APPL-SN-502135 US-PATENT-CLASS-250-336 US-PATENT-CLASS-250-385 US-PATENT-CLASS-250-489 US-PATENT-3,927,324	N76-16391* c 35 NASA-CASE-NPO-10166-2 US-PATENT-APPL-SN-192803 US-PATENT-APPL-SN-668116 US-PATENT-CLASS-360-10 US-PATENT-CLASS-360-101 US-PATENT-CLASS-360-35 US-PATENT-CLASS-360-9 US-PATENT-3,924,267	N76-18353* c 33 NASA-CASE-GSC-11925-1 US-PATENT-APPL-SN-538983 US-PATENT-CLASS-360-26 US-PATENT-CLASS-360-51 US-PATENT-3,938,182
N76-15434*	c 35	NASA-CASE-LEW-11072-2 US-PATENT-APPL-SN-254323 US-PATENT-CLASS-136-211 US-PATENT-CLASS-136-212 US-PATENT-CLASS-136-225 US-PATENT-3,925,104	N76-16392* c 35 NASA-CASE-LAR-11458-1 US-PATENT-APPL-SN-504225 US-PATENT-CLASS-294-1R US-PATENT-CLASS-294-19R US-PATENT-3,929,364	N76-18364* c 34 NASA-CASE-LAR-11570-1 US-PATENT-APPL-SN-482967 US-PATENT-CLASS-244-23D US-PATENT-CLASS-60-316 US-PATENT-3,940,097
N76-15435*	c 35	NASA-CASE-NPO-13506-1 US-PATENT-APPL-SN-483851 US-PATENT-CLASS-343-909 US-PATENT-3,924,239	N76-16393* c 35 NASA-CASE-GSC-11889-1 US-PATENT-APPL-SN-502124 US-PATENT-CLASS-250-281 US-PATENT-CLASS-250-287 US-PATENT-CLASS-250-288 US-PATENT-CLASS-250-385 US-PATENT-CLASS-250-423 US-PATENT-3,931,516	N76-18374* c 34 NASA-CASE-MFS-22938-1 US-PATENT-APPL-SN-542754 US-PATENT-CLASS-250-335 US-PATENT-3,940,621
N76-15436*	c 35	NASA-CASE-GSC-11895-1 US-PATENT-APPL-SN-511887 US-PATENT-CLASS-331-3 US-PATENT-CLASS-331-94 US-PATENT-3,924,200	N76-16446* # c 37 NASA-CASE-NPO-13342-1 US-PATENT-APPL-SN-390049	N76-18400* c 35 NASA-CASE-LAR-10208-1 US-PATENT-APPL-SN-483858 US-PATENT-CLASS-73-103 US-PATENT-CLASS-73-95 US-PATENT-3,938,373
N76-15457*	c 37	NASA-CASE-MFS-22707-1 US-PATENT-APPL-SN-535410 US-PATENT-CLASS-214-1R US-PATENT-CLASS-74-384 US-PATENT-CLASS-74-665B US-PATENT-3,922,930	N76-16612* c 44 NASA-CASE-MFS-22002-1 US-PATENT-APPL-SN-452769 US-PATENT-CLASS-136-202 US-PATENT-CLASS-136-210 US-PATENT-CLASS-165-105 US-PATENT-CLASS-310-4 US-PATENT-3,931,532	N76-18401* c 35 NASA-CASE-NPO-13396-1 US-PATENT-APPL-SN-563283 US-PATENT-CLASS-55-261 US-PATENT-CLASS-73-28 US-PATENT-CLASS-73-421.5R US-PATENT-3,938,367
N76-15460*	c 37	NASA-CASE-MFS-22022-1 US-PATENT-APPL-SN-405341 US-PATENT-CLASS-214-1CM US-PATENT-3,923,166	N76-17185* c 18 NASA-CASE-MSC-12561-1 US-PATENT-APPL-SN-448323 US-PATENT-CLASS-244-162	N76-18402* c 35 NASA-CASE-MFS-22517-1 US-PATENT-APPL-SN-506804 US-PATENT-CLASS-350-3.5 US-PATENT-3,937,555
N76-15461*	c 37	NASA-CASE-LEW-11076-4 US-PATENT-APPL-SN-238264 US-PATENT-APPL-SN-346483 US-PATENT-APPL-SN-445178 US-PATENT-CLASS-308-122 US-PATENT-CLASS-308-160 US-PATENT-CLASS-308-72 US-PATENT-CLASS-308-73 US-PATENT-CLASS-308-9 US-PATENT-3,926,482	N76-18403* c 35 NASA-CASE-ARC-10322-1 US-PATENT-APPL-SN-484209 US-PATENT-CLASS-23-254EF US-PATENT-3,938,956	N76-18427* c 36 NASA-CASE-NPO-11945-1 US-PATENT-APPL-SN-269450 US-PATENT-CLASS-331-94.5
N76-15860*	c 72	NASA-CASE-LEW-11866-1		

		US-PATENT-CLASS-332-7.51	N76-19436*	c 37	NASA-CASE-MFS-20607-1	US-PATENT-CLASS-33-1G
		US-PATENT-CLASS-350-150			US-PATENT-APPL-SN-478800	US-PATENT-CLASS-33-174B
		US-PATENT-CLASS-350-160			US-PATENT-CLASS-222-145	US-PATENT-3,945,879
		US-PATENT-CLASS-423-352			US-PATENT-CLASS-259-4AC	N76-21742*
		US-PATENT-CLASS-423-644			US-PATENT-3,941,355	c 45
		US-PATENT-3,806,834	N76-19437*	c 37	NASA-CASE-MSC-12615-1	NASA-CASE-NPO-13474-1
N76-18428*	c 36	NASA-CASE-NPO-13544-1			US-PATENT-APPL-SN-491417	US-PATENT-APPL-SN-521817
		US-PATENT-APPL-SN-533555			US-PATENT-CLASS-244-117A	US-PATENT-CLASS-23-254E
		US-PATENT-CLASS-331-94.5C			US-PATENT-CLASS-244-163	US-PATENT-CLASS-250-574
		US-PATENT-CLASS-350-96WG			US-PATENT-CLASS-29-432	US-PATENT-CLASS-356-37
		US-PATENT-3,939,439			US-PATENT-CLASS-29-433	US-PATENT-3,945,801
N76-18454*	c 37	NASA-CASE-MFS-23047-1			US-PATENT-CLASS-29-526	N76-21914*
		US-PATENT-APPL-SN-521602			US-PATENT-CLASS-52-705	c 60
		US-PATENT-CLASS-173-132			US-PATENT-CLASS-52-758F	NASA-CASE-NPO-13139-1
		US-PATENT-CLASS-29-81D			US-PATENT-3,936,927	US-PATENT-APPL-SN-393524
		US-PATENT-CLASS-72-453	N76-19785*	c 52	NASA-CASE-LAR-11667-1	US-PATENT-CLASS-235-153AE
		US-PATENT-CLASS-73-399			US-PATENT-APPL-SN-583487	US-PATENT-CLASS-340-172.5
		US-PATENT-3,937,055			US-PATENT-CLASS-128-DIG.20	US-PATENT-3,950,729
N76-18455*	c 37	NASA-CASE-MSC-14435-1			US-PATENT-CLASS-128-26	N76-22154*
		US-PATENT-APPL-SN-450500			US-PATENT-3,937,215	c 02
		US-PATENT-CLASS-228-193	N76-19888*	c 66	NASA-CASE-MFS-22631-1	NASA-CASE-LAR-10585-1
		US-PATENT-CLASS-228-206			US-PATENT-APPL-SN-531572	US-PATENT-APPL-SN-197183
		US-PATENT-CLASS-228-214			US-PATENT-CLASS-340-38P	US-PATENT-CLASS-244-35R
		US-PATENT-CLASS-228-238			US-PATENT-CLASS-356-162	US-PATENT-CLASS-244-40R
		US-PATENT-3,937,387			US-PATENT-CLASS-356-167	US-PATENT-3,952,971
N76-18456*	c 37	NASA-CASE-LAR-11224-1			US-PATENT-CLASS-356-71	N76-22245*
		US-PATENT-APPL-SN-450502			US-PATENT-3,930,735	c 17
		US-PATENT-CLASS-134-21	N76-19935*	c 74	NASA-CASE-MFS-21672-1	NASA-CASE-GSC-11868-1
		US-PATENT-CLASS-134-37			US-PATENT-APPL-SN-354060	US-PATENT-APPL-SN-565290
		US-PATENT-CLASS-19-205			US-PATENT-CLASS-356-123	US-PATENT-CLASS-178-69.5
		US-PATENT-CLASS-209-250			US-PATENT-CLASS-356-124	US-PATENT-CLASS-328-155
		US-PATENT-CLASS-209-300			US-PATENT-3,938,892	US-PATENT-CLASS-340-147SY
		US-PATENT-CLASS-209-305	N76-20114*	c 04	NASA-CASE-LAR-11387-1	US-PATENT-CLASS-340-207P
		US-PATENT-3,937,661			US-PATENT-APPL-SN-531647	US-PATENT-3,953,674
N76-18457*	c 37	NASA-CASE-NPO-13402-1			US-PATENT-CLASS-33-356	N76-22284*
		US-PATENT-APPL-SN-387342			US-PATENT-CLASS-75-178R	c 19
		US-PATENT-CLASS-123-DIG.12			US-PATENT-3,943,763	NASA-CASE-MFS-22905-1
		US-PATENT-CLASS-123-119E	N76-20480*	c 37	NASA-CASE-NPO-13059-1	US-PATENT-APPL-SN-518545
		US-PATENT-CLASS-123-120			NASA-CASE-NPO-13436-1	US-PATENT-CLASS-188-1B
		US-PATENT-CLASS-123-121			US-PATENT-APPL-SN-513690	US-PATENT-CLASS-248-22
		US-PATENT-CLASS-123-89A			US-PATENT-CLASS-81-56	US-PATENT-CLASS-248-358R
		US-PATENT-3,906,913			US-PATENT-CLASS-81-57.31	US-PATENT-3,952,980
N76-18458*	c 37	NASA-CASE-LEW-11860-1			US-PATENT-3,942,398	N76-22296*
		US-PATENT-APPL-SN-527728	N76-20958*	c 74	NASA-CASE-ARC-10631-1	c 20
		US-PATENT-CLASS-204-157.1H			US-PATENT-APPL-SN-514546	NASA-CASE-MFS-19220-1
		US-PATENT-CLASS-250-527			US-PATENT-CLASS-250-343	US-PATENT-APPL-SN-571821
		US-PATENT-3,939,048			US-PATENT-CLASS-250-73R	US-PATENT-CLASS-254-124
N76-18459*	c 37	NASA-CASE-GSC-11551-1			US-PATENT-3,943,368	US-PATENT-CLASS-254-93R
		US-PATENT-APPL-SN-440917	N76-20994*	c 76	NASA-CASE-NPO-13443-1	US-PATENT-CLASS-89-1.801
		US-PATENT-CLASS-308-10			US-PATENT-APPL-SN-522551	US-PATENT-3,952,998
		US-PATENT-3,937,533			US-PATENT-CLASS-324-158D	N76-22309*
N76-18641*	c 44	NASA-CASE-NPO-13237-1			US-PATENT-CLASS-324-158R	c 24
		US-PATENT-APPL-SN-378127			US-PATENT-CLASS-324-158T	NASA-CASE-LEW-11930-1
		US-PATENT-CLASS-136-83R			US-PATENT-CLASS-324-60C	US-PATENT-APPL-SN-513611
		US-PATENT-CLASS-136-86S			US-PATENT-3,943,442	US-PATENT-CLASS-252-12
		US-PATENT-3,894,887	N76-21250*	c 17	NASA-CASE-MSC-12593-1	US-PATENT-3,953,343
N76-18642*	c 44	NASA-CASE-NPO-13464-1			US-PATENT-APPL-SN-419747	N76-22323*
		US-PATENT-APPL-SN-428444			US-PATENT-CLASS-325-14	c 25
		US-PATENT-CLASS-123-3			US-PATENT-CLASS-343-100SA	NASA-CASE-ARC-10760-1
		US-PATENT-CLASS-23-281			US-PATENT-CLASS-343-100ST	US-PATENT-APPL-SN-526438
		US-PATENT-CLASS-423-650			US-PATENT-CLASS-343-112TC	US-PATENT-CLASS-250-343
		US-PATENT-CLASS-48-116			US-PATENT-3,949,400	US-PATENT-CLASS-250-344
		US-PATENT-CLASS-48-117	N76-21275*	c 20	NASA-CASE-MFS-21311-1	US-PATENT-CLASS-250-432R
		US-PATENT-CLASS-48-63			US-PATENT-APPL-SN-493359	US-PATENT-3,953,734
		US-PATENT-CLASS-48-75			US-PATENT-CLASS-244-3.22	N76-22376*
		US-PATENT-CLASS-48-95			US-PATENT-3,948,470	c 27
		US-PATENT-3,920,416	N76-21276*	c 20	NASA-CASE-LEW-11876-1	NASA-CASE-ARC-10721-1
N76-18643*	c 44	NASA-CASE-NPO-11961-1			US-PATENT-APPL-SN-542157	US-PATENT-APPL-SN-427775
		US-PATENT-APPL-SN-378126			US-PATENT-CLASS-29-25.18	US-PATENT-CLASS-264-60
		US-PATENT-CLASS-136-30			US-PATENT-3,947,933	US-PATENT-CLASS-264-63
		US-PATENT-CLASS-136-6LF	N76-21365*	c 32	NASA-CASE-NPO-13568-1	US-PATENT-CLASS-264-66
		US-PATENT-CLASS-320-21			US-PATENT-APPL-SN-534265	US-PATENT-3,952,083
		US-PATENT-CLASS-320-22			US-PATENT-CLASS-343-761	N76-22377*
		US-PATENT-3,912,999			US-PATENT-CLASS-343-781	c 27
N76-18800*	c 60	NASA-CASE-NPO-13067-1			US-PATENT-CLASS-343-786	NASA-CASE-MSC-14270-1
		US-PATENT-APPL-SN-274348			US-PATENT-3,949,404	US-PATENT-APPL-SN-482104
		US-PATENT-CLASS-340-172.5	N76-21366*	c 32	NASA-CASE-MFS-22729-1	US-PATENT-CLASS-106-54
		US-PATENT-3,829,839			US-PATENT-APPL-SN-533608	US-PATENT-CLASS-427-376
N76-18913*	c 74	NASA-CASE-GSC-11877-1			US-PATENT-CLASS-235-156	US-PATENT-CLASS-427-379
		US-PATENT-APPL-SN-482953			US-PATENT-CLASS-325-42	US-PATENT-CLASS-427-402
		US-PATENT-CLASS-235-184			US-PATENT-CLASS-333-18	US-PATENT-CLASS-428-332
		US-PATENT-CLASS-250-199			US-PATENT-3,949,206	US-PATENT-CLASS-428-428
		US-PATENT-3,937,945	N76-21390*	c 33	NASA-CASE-ARC-10711-2	US-PATENT-CLASS-428-450
N76-19338*	c 33	NASA-CASE-NPO-13519-1			US-PATENT-APPL-SN-493363	US-PATENT-CLASS-428-538
		US-PATENT-APPL-SN-536761			US-PATENT-APPL-SN-596788	US-PATENT-CLASS-428-920
		US-PATENT-CLASS-128-2S			US-PATENT-CLASS-317-246	US-PATENT-3,953,646
		US-PATENT-CLASS-33-155R			US-PATENT-CLASS-73-398C	N76-22509*
		US-PATENT-CLASS-33-174D			US-PATENT-3,948,102	c 35
		US-PATENT-CLASS-73-88.5SD	N76-21554*	c 37	NASA-CASE-LAR-11465-1	NASA-CASE-LAR-11434-1
		US-PATENT-3,937,212			US-PATENT-APPL-SN-502137	US-PATENT-APPL-SN-464722
N76-19339*	c 33	NASA-CASE-ARC-10810-1			US-PATENT-CLASS-156-286	US-PATENT-CLASS-209-127R
		US-PATENT-APPL-SN-489009			US-PATENT-CLASS-156-382	US-PATENT-CLASS-317-246
		US-PATENT-CLASS-204-195R			US-PATENT-CLASS-156-556	US-PATENT-CLASS-324-61R
		US-PATENT-CLASS-215-247			US-PATENT-CLASS-248-362	US-PATENT-CLASS-324-71CP
		US-PATENT-CLASS-324-30B			US-PATENT-CLASS-248-363	US-PATENT-3,953,792
		US-PATENT-3,938,035			US-PATENT-CLASS-269-21	N76-22540*



## ACCESSION NUMBER INDEX

N76-29895

N76-23273*	c 09	NASA-CASE-MFS-23099-1 US-PATENT-APPL-SN-607969 US-PATENT-CLASS-73-147 US-PATENT-3,952,590	N76-25049*	c 76	NASA-CASE-LEW-12094-1 US-PATENT-APPL-SN-508784 US-PATENT-CLASS-148-175 US-PATENT-CLASS-156-610 US-PATENT-CLASS-156-612 US-PATENT-CLASS-156-613 US-PATENT-CLASS-252-62.3 US-PATENT-CLASS-423-345 US-PATENT-CLASS-423-346 US-PATENT-3,956,032	N76-29347*	c 17	NASA-CASE-ARC-10849-1 US-PATENT-APPL-SN-563049 US-PATENT-CLASS-340-189M US-PATENT-CLASS-340-206 US-PATENT-CLASS-73-493 US-PATENT-CLASS-73-517R US-PATENT-3,972,038
N76-23426*	c 27	NASA-CASE-MS-14270-2 US-PATENT-APPL-SN-482105 US-PATENT-CLASS-106-54 US-PATENT-CLASS-427-376 US-PATENT-CLASS-427-379 US-PATENT-CLASS-427-380 US-PATENT-CLASS-427-402 US-PATENT-CLASS-428-332 US-PATENT-CLASS-428-428 US-PATENT-CLASS-428-450 US-PATENT-CLASS-428-538 US-PATENT-CLASS-428-920 US-PATENT-3,955,034	N76-26175*	c 04	NASA-CASE-MFS-23551-1 US-PATENT-APPL-SN-114772 US-PATENT-CLASS-244-79 US-PATENT-CLASS-74-5.34 US-PATENT-3,739,646	N76-29379*	c 25	NASA-CASE-LEW-11390-3 US-PATENT-APPL-SN-247434 US-PATENT-APPL-SN-380046 US-PATENT-CLASS-176-11 US-PATENT-CLASS-176-14 US-PATENT-CLASS-176-16 US-PATENT-CLASS-250-400 US-PATENT-CLASS-250-429 US-PATENT-CLASS-250-492R US-PATENT-3,971,697
N76-23570*	c 37	NASA-CASE-LEW-11169-1 US-PATENT-APPL-SN-446568 US-PATENT-CLASS-164-132 US-PATENT-3,957,104	N76-27232*	c 07	NASA-CASE-LAR-11476-1 US-PATENT-APPL-SN-592159 US-PATENT-CLASS-73-557 US-PATENT-3,964,319	N76-29551*	c 35	NASA-CASE-LAR-10907-1 US-PATENT-APPL-SN-559845 US-PATENT-CLASS-250-340 US-PATENT-CLASS-250-353 US-PATENT-3,971,940
N76-23675*	c 44	NASA-CASE-MFS-21628-2 US-PATENT-APPL-SN-421702 US-PATENT-APPL-SN-561020 US-PATENT-CLASS-126-270 US-PATENT-CLASS-165-133 US-PATENT-3,957,030	N76-27383*	c 25	NASA-CASE-LEW-11390-2 US-PATENT-APPL-SN-247434 US-PATENT-CLASS-176-11 US-PATENT-CLASS-176-16 US-PATENT-CLASS-423-249 US-PATENT-3,966,547	N76-29552*	c 35	NASA-CASE-MS-12617-1 US-PATENT-APPL-SN-513576 US-PATENT-CLASS-235-61NV US-PATENT-CLASS-235-78M US-PATENT-CLASS-235-88M US-PATENT-3,971,915
N76-23850*	c 60	NASA-CASE-MS-14082-1 US-PATENT-APPL-SN-315070 US-PATENT-CLASS-340-347DD US-PATENT-CLASS-340-347P US-PATENT-3,958,238	N76-27472*	c 33	NASA-CASE-GSC-11924-1 US-PATENT-APPL-SN-582318 US-PATENT-CLASS-343-755 US-PATENT-CLASS-343-779 US-PATENT-CLASS-343-854 US-PATENT-3,965,475	N76-29575*	c 36	NASA-CASE-NPO-13346-1 US-PATENT-APPL-SN-533556 US-PATENT-CLASS-330-4.3 US-PATENT-CLASS-331-94.5C US-PATENT-3,972,008
N76-24280*	c 09	NASA-CASE-ARC-10808-1 US-PATENT-APPL-SN-505881 US-PATENT-CLASS-178-DIG.35 US-PATENT-CLASS-178-7.89 US-PATENT-CLASS-35-12N US-PATENT-3,956,833	N76-27473*	c 33	NASA-CASE-HQN-10876-1 US-PATENT-APPL-SN-555336 US-PATENT-CLASS-250-336 US-PATENT-CLASS-250-372 US-PATENT-3,965,354	N76-29588*	c 37	NASA-CASE-LEW-11949-1 US-PATENT-APPL-SN-590182 US-PATENT-CLASS-308-160 US-PATENT-CLASS-308-163 US-PATENT-CLASS-308-170 US-PATENT-3,971,602
N76-24363*	c 24	NASA-CASE-GSC-11786-1 US-PATENT-APPL-SN-401919 US-PATENT-CLASS-106-306 US-PATENT-CLASS-250-372 US-PATENT-CLASS-252-300 US-PATENT-CLASS-350-1 US-PATENT-3,957,675	N76-27515*	c 34	NASA-CASE-NPO-13391-1 US-PATENT-APPL-SN-446567 US-PATENT-CLASS-165-105 US-PATENT-CLASS-29-182 US-PATENT-CLASS-29-193 US-PATENT-CLASS-55-523 US-PATENT-CLASS-55-526 US-PATENT-CLASS-75-225 US-PATENT-3,964,902	N76-29590*	c 37	NASA-CASE-NPO-13613-1 US-PATENT-APPL-SN-574208 US-PATENT-CLASS-62-6 US-PATENT-3,971,230
N76-24405*	c 27	NASA-CASE-MS-14331-1 US-PATENT-APPL-SN-374421 US-PATENT-CLASS-106-15FP US-PATENT-CLASS-260-DIG.24 US-PATENT-CLASS-260-33.8F US-PATENT-CLASS-260-45.7 US-PATENT-CLASS-260-92.1 US-PATENT-CLASS-526-1 US-PATENT-CLASS-526-255 US-PATENT-3,956,233	N76-27517*	c 34	NASA-CASE-ARC-10755-2 US-PATENT-APPL-SN-424013 US-PATENT-APPL-SN-545284 US-PATENT-CLASS-73-147 US-PATENT-CLASS-73-189 US-PATENT-CLASS-73-194R US-PATENT-3,964,306	N76-29699*	c 44	NASA-CASE-HQN-10862-1 US-PATENT-APPL-SN-604374 US-PATENT-CLASS-136-143 US-PATENT-CLASS-136-30 US-PATENT-3,972,727
N76-24523*	c 35	NASA-CASE-LAR-11500-1 US-PATENT-APPL-SN-534266 US-PATENT-CLASS-73-1B US-PATENT-CLASS-73-15.6 US-PATENT-3,956,919	N76-27567*	c 37	NASA-CASE-LAR-11709-1 US-PATENT-APPL-SN-548468 US-PATENT-CLASS-339-17M US-PATENT-CLASS-339-18C US-PATENT-3,964,813	N76-29700*	c 44	NASA-CASE-NPO-13342-2 US-PATENT-APPL-SN-390049 US-PATENT-APPL-SN-548559 US-PATENT-CLASS-123-1A US-PATENT-CLASS-123-3 US-PATENT-CLASS-23-281 US-PATENT-CLASS-423-650 US-PATENT-CLASS-48-215 US-PATENT-CLASS-48-95 US-PATENT-3,955,941
N76-24524*	c 35	NASA-CASE-NPO-13462-1 US-PATENT-APPL-SN-545282 US-PATENT-CLASS-73-189 US-PATENT-CLASS-73-204 US-PATENT-3,956,932	N76-27568*	c 37	NASA-CASE-LAR-11726-1 US-PATENT-APPL-SN-538047 US-PATENT-CLASS-219-118 US-PATENT-CLASS-219-92 US-PATENT-3,967,091	N76-29701*	c 44	NASA-CASE-NPO-13567-1 US-PATENT-APPL-SN-566493 US-PATENT-CLASS-417-141 US-PATENT-CLASS-417-207 US-PATENT-CLASS-417-209 US-PATENT-CLASS-417-379 US-PATENT-CLASS-60-517 US-PATENT-CLASS-62-6 US-PATENT-3,972,651
N76-24525*	c 35	NASA-CASE-ARC-10816-1 US-PATENT-APPL-SN-552454 US-PATENT-CLASS-128-DIG.4 US-PATENT-CLASS-128-2.05V US-PATENT-CLASS-128-2.1E US-PATENT-CLASS-128-2.1Z US-PATENT-3,957,037	N76-27664*	c 44	NASA-CASE-MFS-23059-1 US-PATENT-APPL-SN-537024 US-PATENT-CLASS-136-86A US-PATENT-3,964,928	N76-29704*	c 44	NASA-CASE-NPO-13464-2 US-PATENT-APPL-SN-428444 US-PATENT-APPL-SN-553687 US-PATENT-CLASS-252-373 US-PATENT-CLASS-42-215 US-PATENT-CLASS-423-650 US-PATENT-CLASS-431-163 US-PATENT-CLASS-431-210 US-PATENT-CLASS-431-4 US-PATENT-CLASS-48-197R US-PATENT-3,971,847
N76-24553*	c 36	NASA-CASE-NPO-13531-1 US-PATENT-APPL-SN-531565 US-PATENT-CLASS-331-94.5C US-PATENT-CLASS-350-96WG US-PATENT-3,958,188	N76-28563*	c 38	NASA-CASE-NPO-12142-1 US-PATENT-APPL-SN-637249 US-PATENT-CLASS-73-88.5 US-PATENT-3,545,262	N76-29891*	c 51	NASA-CASE-GSC-11917-2 US-PATENT-APPL-SN-475337 US-PATENT-APPL-SN-555641 US-PATENT-CLASS-195-103.5R US-PATENT-3,971,703
N76-24575*	c 37	NASA-CASE-LAR-10073-1 US-PATENT-APPL-SN-436317 US-PATENT-CLASS-156-242 US-PATENT-CLASS-156-286 US-PATENT-CLASS-264-102 US-PATENT-CLASS-264-267 US-PATENT-CLASS-428-117 US-PATENT-3,956,050	N76-28635*	c 44	NASA-CASE-GSC-12022-1 NASA-CASE-GSC-12023-1 US-PATENT-APPL-SN-576488 US-PATENT-CLASS-136-89 US-PATENT-CLASS-148-174 US-PATENT-CLASS-148-175 US-PATENT-CLASS-156-612 US-PATENT-CLASS-156-613 US-PATENT-CLASS-156-614 US-PATENT-CLASS-29-572 US-PATENT-CLASS-357-30 US-PATENT-CLASS-357-59 US-PATENT-CLASS-427-113 US-PATENT-CLASS-427-248 US-PATENT-CLASS-427-249 US-PATENT-CLASS-427-250 US-PATENT-CLASS-427-86 US-PATENT-3,961,997	N76-29894*	c 52	NASA-CASE-ARC-10583-1 US-PATENT-APPL-SN-301418 US-PATENT-CLASS-128-2.1A US-PATENT-CLASS-128-2H US-PATENT-CLASS-128-2P US-PATENT-3,971,362
N76-24696*	c 44	NASA-CASE-MFS-22744-1 US-PATENT-APPL-SN-518544 US-PATENT-CLASS-126-270 US-PATENT-CLASS-126-271 US-PATENT-CLASS-350-293 US-PATENT-CLASS-350-299 US-PATENT-3,958,553	N76-29217*	c 05	NASA-CASE-ARC-10470-3 US-PATENT-APPL-SN-206279 US-PATENT-APPL-SN-321180	N76-29895*	c 52	NASA-CASE-NPO-13644-1 US-PATENT-APPL-SN-574218 US-PATENT-CLASS-128-2.05R US-PATENT-CLASS-128-2S
N76-24900*	c 54	NASA-CASE-MS-14733-1 NASA-CASE-MS-14735-1 US-PATENT-APPL-SN-522971 US-PATENT-CLASS-128-142.2						

N76-29896*	c 52	US-PATENT-CLASS-338-6	US-PATENT-CLASS-23-230R	N77-10463*	c 34	US-PATENT-CLASS-324-72
		US-PATENT-3,971,363	US-PATENT-CLASS-23-232E			US-PATENT-3,984,730
N76-31946*	c 62	NASA-CASE-NPO-13643-1	US-PATENT-CLASS-23-232R	N77-10492*	c 35	NASA-CASE-MFS-22991-1
		US-PATENT-APPL-SN-578241	US-PATENT-CLASS-23-232R			US-PATENT-APPL-SN-521006
N76-30053*	c 74	US-PATENT-CLASS-128-2.05E	US-PATENT-3,977,831	N77-10493*	c 35	US-PATENT-CLASS-165-164
		US-PATENT-CLASS-128-2.06E	NASA-CASE-GSC-12115-1			US-PATENT-CLASS-165-170
N76-30131*	c 91	US-PATENT-CLASS-128-25	US-PATENT-APPL-SN-262596	N77-10584*	c 43	US-PATENT-3,983,933
		US-PATENT-CLASS-128-418	US-PATENT-CLASS-340-347SY			NASA-CASE-NPO-13479-1
N76-30793*	c 52	US-PATENT-CLASS-128-419P	US-PATENT-3,976,997	N77-10635*	c 44	US-PATENT-APPL-SN-500981
		US-PATENT-CLASS-73-398AR	NASA-CASE-MSC-12640-1			US-PATENT-CLASS-250-290
N76-31365*	c 31	US-PATENT-3,971,364	US-PATENT-APPL-SN-591568	N77-10636*	c 44	US-PATENT-CLASS-250-291
		NASA-CASE-GSC-11782-1	US-PATENT-CLASS-350-162SF			US-PATENT-3,984,681
N76-31372*	c 32	US-PATENT-APPL-SN-463925	US-PATENT-3,977,771	N77-10753*	c 47	NASA-CASE-MFS-23178-1
		US-PATENT-CLASS-250-199	NASA-CASE-MFS-16609-3			US-PATENT-APPL-SN-637247
N76-31409*	c 33	US-PATENT-3,971,930	US-PATENT-APPL-SN-307714	N77-10780*	c 52	US-PATENT-CLASS-250-338
		NASA-CASE-MSC-12423-1	US-PATENT-APPL-SN-511894			US-PATENT-CLASS-250-339
N76-31489*	c 35	US-PATENT-APPL-SN-448320	US-PATENT-APPL-SN-82279	N77-10899*	c 74	US-PATENT-CLASS-250-347
		US-PATENT-CLASS-73-170R	US-PATENT-CLASS-325-114			US-PATENT-CLASS-356-106R
N76-31490*	c 35	US-PATENT-CLASS-73-425.2	US-PATENT-CLASS-325-115	N77-11397*	c 37	US-PATENT-3,984,686
		US-PATENT-CLASS-73-432R	US-PATENT-CLASS-325-186			NASA-CASE-MSC-14472-1
N76-31512*	c 36	US-PATENT-3,971,256	US-PATENT-CLASS-343-705	N77-11397*	c 37	US-PATENT-APPL-SN-502138
		US-PATENT-APPL-SN-452768	US-PATENT-3,978,410			US-PATENT-CLASS-235-181
N76-31524*	c 37	US-PATENT-CLASS-351-23	NASA-CASE-ARC-10592-2	N77-12239*	c 32	US-PATENT-CLASS-340-146.3P
		US-PATENT-CLASS-351-30	US-PATENT-APPL-SN-414043			US-PATENT-CLASS-340-146.3Q
N76-31524*	c 37	US-PATENT-CLASS-351-36	US-PATENT-CLASS-260-240G	N77-12240*	c 32	US-PATENT-3,984,671
		US-PATENT-RE-28,921	US-PATENT-CLASS-260-566B			NASA-CASE-MFS-22458-1
N76-31562*	c 39	NASA-CASE-ARC-10445-1	US-PATENT-3,965,096	N77-12402*	c 37	US-PATENT-APPL-SN-571458
		US-PATENT-APPL-SN-491418	NASA-CASE-NPO-13553-1			US-PATENT-CLASS-136-89
N76-31666*	c 44	US-PATENT-CLASS-313-250	US-PATENT-APPL-SN-616333	N77-12721*	c 60	US-PATENT-CLASS-29-572
		US-PATENT-CLASS-313-306	US-PATENT-CLASS-343-882			US-PATENT-CLASS-60-527
N76-31667*	c 44	US-PATENT-CLASS-313-309	US-PATENT-CLASS-343-915	N77-13217*	c 27	US-PATENT-3,987,630
		US-PATENT-CLASS-313-338	US-PATENT-3,978,490			NASA-CASE-NPO-13428-1
N76-31714*	c 45	US-PATENT-3,978,364	NASA-CASE-ARC-10994-1	N77-13217*	c 27	NASA-CASE-NPO-13447-1
		NASA-CASE-NPO-13465-1	US-PATENT-APPL-SN-728369			US-PATENT-APPL-SN-495022
		US-PATENT-APPL-SN-531575	NASA-CASE-LAR-11645-1			US-PATENT-CLASS-179-158A
		US-PATENT-CLASS-179-15A	US-PATENT-APPL-SN-473973			US-PATENT-CLASS-328-111
		US-PATENT-3,978,287	US-PATENT-CLASS-244-113			US-PATENT-CLASS-340-172.5
		NASA-CASE-NPO-12134-1	US-PATENT-CLASS-244-130			US-PATENT-3,988,716
		US-PATENT-APPL-SN-536785	US-PATENT-3,984,070			NASA-CASE-NPO-13666-1
		US-PATENT-CLASS-313-94	NASA-CASE-NPO-13528-1			US-PATENT-APPL-SN-633877
		US-PATENT-CLASS-357-63	US-PATENT-APPL-SN-521620			US-PATENT-CLASS-29-182.5
		US-PATENT-3,978,360	US-PATENT-CLASS-73-147			
		NASA-CASE-GSC-11893-1	US-PATENT-3,983,749			
		US-PATENT-APPL-SN-585420	NASA-CASE-MFS-20855-1			
		US-PATENT-CLASS-73-9	US-PATENT-APPL-SN-243374			
		US-PATENT-3,977,231	US-PATENT-CLASS-244-1SD			
		NASA-CASE-NPO-13604-1	US-PATENT-3,744,739			
		US-PATENT-APPL-SN-574219	NASA-CASE-MFS-22787-1			
		US-PATENT-CLASS-356-106S	US-PATENT-APPL-SN-511346			
		US-PATENT-CLASS-356-114	US-PATENT-CLASS-244-169			
		US-PATENT-CLASS-356-209	US-PATENT-CLASS-244-171			
		US-PATENT-CLASS-356-244	US-PATENT-CLASS-244-3.21			
		US-PATENT-3,977,787	US-PATENT-3,984,072			
		NASA-CASE-NPO-13490-1	NASA-CASE-LEW-12082-1			
		US-PATENT-APPL-SN-549418	US-PATENT-APPL-SN-612964			
		US-PATENT-CLASS-330-4	US-PATENT-CLASS-313-231.4			
		US-PATENT-CLASS-331-94	US-PATENT-CLASS-313-240			
		US-PATENT-3,978,417	US-PATENT-CLASS-313-361			
		NASA-CASE-NPO-13535-1	US-PATENT-CLASS-315-111.3			
		US-PATENT-APPL-SN-563050	US-PATENT-CLASS-60-202			
		US-PATENT-CLASS-264-129	US-PATENT-3,983,695			
		US-PATENT-CLASS-264-161	NASA-CASE-LAR-11995-1			
		US-PATENT-CLASS-264-219	US-PATENT-APPL-SN-238826			
		US-PATENT-CLASS-264-304	US-PATENT-CLASS-102-99			
		US-PATENT-CLASS-264-305	US-PATENT-CLASS-264-3R			
		US-PATENT-CLASS-264-308	US-PATENT-CLASS-86-1R			
		US-PATENT-CLASS-264-310	US-PATENT-3,983,780			
		US-PATENT-CLASS-264-318	NASA-CASE-NPO-13459-1			
		US-PATENT-CLASS-264-334	US-PATENT-APPL-SN-598967			
		US-PATENT-CLASS-427-230	US-PATENT-CLASS-62-217			
		US-PATENT-3,978,187	US-PATENT-CLASS-62-514JT			
		NASA-CASE-MSC-19372-1	US-PATENT-3,983,714			
		US-PATENT-APPL-SN-517995	NASA-CASE-LAR-11827-1			
		US-PATENT-CLASS-182-178	US-PATENT-APPL-SN-412379			
		US-PATENT-CLASS-29-467	US-PATENT-APPL-SN-561764			
		US-PATENT-CLASS-29-526	US-PATENT-CLASS-178-88			
		US-PATENT-CLASS-52-236	US-PATENT-CLASS-235-150.1			
		US-PATENT-CLASS-52-637	US-PATENT-CLASS-235-156			
		US-PATENT-CLASS-52-648	US-PATENT-CLASS-325-323			
		US-PATENT-CLASS-52-651	US-PATENT-CLASS-325-349			
		US-PATENT-CLASS-52-726	US-PATENT-CLASS-325-476			
		US-PATENT-CLASS-52-745	US-PATENT-3,984,634			
		US-PATENT-CLASS-52-749	NASA-CASE-NPO-13512-1			
		US-PATENT-3,977,147	US-PATENT-APPL-SN-533734			
		NASA-CASE-NPO-13087-2	US-PATENT-CLASS-321-19			
		US-PATENT-APPL-SN-296622	US-PATENT-CLASS-321-2			
		US-PATENT-APPL-SN-462341	US-PATENT-CLASS-323-DIG.1			
		US-PATENT-CLASS-136-206	US-PATENT-CLASS-323-7			
		US-PATENT-CLASS-136-89	US-PATENT-CLASS-323-22T			
		US-PATENT-3,966,499	US-PATENT-CLASS-323-23			
		NASA-CASE-MFS-23167-1	US-PATENT-3,984,799			
		US-PATENT-APPL-SN-602618	NASA-CASE-GSC-11963-1			
		US-PATENT-CLASS-165-10	US-PATENT-APPL-SN-595197			
		US-PATENT-CLASS-60-659	US-PATENT-CLASS-244-1A			
		US-PATENT-3,977,197	US-PATENT-CLASS-244-42CG			
		NASA-CASE-LAR-11405-1	US-PATENT-CLASS-317-2D			

## ACCESSION NUMBER INDEX

N77-19458

N77-13315*	c 33	US-PATENT-3,990,860 NASA-CASE-NPO-11515-1 US-PATENT-APPL-SN-139596 US-PATENT-CLASS-307-233 US-PATENT-CLASS-307-295 US-PATENT-CLASS-328-133 US-PATENT-3,750,035	N77-14581*	c 44	US-PATENT-3,996,067 NASA-CASE-LEW-12220-1 US-PATENT-APPL-SN-606891 US-PATENT-CLASS-320-2 US-PATENT-CLASS-429-23 US-PATENT-CLASS-429-34 US-PATENT-3,996,064	N77-18154*	c 07	US-PATENT-APPL-SN-565289 US-PATENT-CLASS-235-92CA US-PATENT-CLASS-235-92CT US-PATENT-CLASS-235-92DN US-PATENT-CLASS-235-92R US-PATENT-4,001,552
N77-13418*	c 37	NASA-CASE-ARC-10905-1 US-PATENT-APPL-SN-618594 US-PATENT-CLASS-219-300 US-PATENT-CLASS-219-304 US-PATENT-CLASS-239-171 US-PATENT-CLASS-252-359A US-PATENT-3,990,987	N77-14735*	c 52	NASA-CASE-MFS-23225-1 US-PATENT-APPL-SN-612965 US-PATENT-CLASS-3-1.2 US-PATENT-CLASS-3-14 US-PATENT-3,995,324	N77-18307*	c 32	NASA-CASE-ARC-10761-1 US-PATENT-APPL-SN-612899 US-PATENT-CLASS-137-15.1 US-PATENT-CLASS-244-53B US-PATENT-4,007,891
N77-14025*	c 07	NASA-CASE-LEW-12419-1 US-PATENT-APPL-SN-579375 US-PATENT-CLASS-416-153 US-PATENT-CLASS-416-160 US-PATENT-CLASS-416-162 US-PATENT-CLASS-416-165 US-PATENT-CLASS-416-167 US-PATENT-CLASS-60-226R US-PATENT-3,994,128	N77-14736*	c 52	NASA-CASE-ARC-11007-1 US-PATENT-APPL-SN-652948 US-PATENT-CLASS-128-2H US-PATENT-CLASS-128-379 US-PATENT-CLASS-128-400 US-PATENT-CLASS-128-402 US-PATENT-3,995,621	N77-18382*	c 34	NASA-CASE-LAR-10805-2 US-PATENT-APPL-SN-428992 US-PATENT-APPL-SN-578240 US-PATENT-CLASS-244-117A US-PATENT-CLASS-427-160 US-PATENT-CLASS-427-322 US-PATENT-CLASS-428-35 US-PATENT-CLASS-428-421 US-PATENT-CLASS-428-461 US-PATENT-CLASS-428-474 US-PATENT-4,008,348
N77-14292*	c 32	NASA-CASE-LAR-11607-1 US-PATENT-APPL-SN-617895 US-PATENT-CLASS-325-145 US-PATENT-CLASS-332-22 US-PATENT-CLASS-332-23R US-PATENT-3,996,532	N77-14737*	c 52	NASA-CASE-MS-14276-1 US-PATENT-APPL-SN-557430 US-PATENT-CLASS-250-363R US-PATENT-CLASS-250-444 US-PATENT-CLASS-250-498 US-PATENT-3,996,471	N77-18417*	c 35	NASA-CASE-ARC-10898-1 US-PATENT-APPL-SN-625732 US-PATENT-CLASS-73-12 US-PATENT-CLASS-73-432SD US-PATENT-CLASS-73-71.6 US-PATENT-4,007,623
N77-14333*	c 33	NASA-CASE-GSC-11789-1 US-PATENT-APPL-SN-538982 US-PATENT-CLASS-317-31 US-PATENT-CLASS-321-13 US-PATENT-3,996,506	N77-14738*	c 52	NASA-CASE-KSC-10849-1 US-PATENT-APPL-SN-613734 US-PATENT-CLASS-128-418 US-PATENT-CLASS-3-1.1 US-PATENT-CLASS-339-252R US-PATENT-3,995,644	N77-18891*	c 73	NASA-CASE-NPO-13121-1 US-PATENT-APPL-SN-294727 US-PATENT-CLASS-310-4R US-PATENT-CLASS-313-311 US-PATENT-CLASS-346R US-PATENT-4,008,407
N77-14334*	c 33	NASA-CASE-GSC-12018-1 US-PATENT-APPL-SN-635531 US-PATENT-CLASS-329-122 US-PATENT-CLASS-329-124 US-PATENT-CLASS-331-23 US-PATENT-CLASS-331-36C US-PATENT-CLASS-332-30V US-PATENT-3,997,848	N77-17029*	c 05	NASA-CASE-ARC-10807-1 US-PATENT-APPL-SN-513612 US-PATENT-CLASS-416-104 US-PATENT-CLASS-416-138 US-PATENT-CLASS-416-141 US-PATENT-3,999,886	N77-18893*	c 74	NASA-CASE-MS-14683-1 US-PATENT-APPL-SN-612967 US-PATENT-CLASS-358-44 US-PATENT-4,004,292
N77-14335*	c 33	NASA-CASE-MFS-22560-1 US-PATENT-APPL-SN-589233 US-PATENT-CLASS-250-214A US-PATENT-CLASS-330-14 US-PATENT-CLASS-330-28 US-PATENT-CLASS-330-59 US-PATENT-3,996,462	N77-17059*	c 07	NASA-CASE-LEW-12760-1 US-PATENT-APPL-SN-569925 US-PATENT-CLASS-60-226A US-PATENT-CLASS-60-228 US-PATENT-4,005,574	N77-19056*	c 04	NASA-CASE-LAR-11387-2 US-PATENT-APPL-SN-531647 US-PATENT-APPL-SN-623156 US-PATENT-CLASS-33-356 US-PATENT-CLASS-73-178R US-PATENT-4,006,631
N77-14406*	c 35	NASA-CASE-NPO-13663-1 US-PATENT-APPL-SN-634205 US-PATENT-CLASS-250-289 US-PATENT-CLASS-250-298 US-PATENT-3,996,464	N77-17143*	c 20	NASA-CASE-XLA-01349 US-PATENT-APPL-SN-256493 US-PATENT-APPL-SN-54552 US-PATENT-CLASS-102-49.3 US-PATENT-CLASS-264-3R US-PATENT-CLASS-86-1R US-PATENT-CLASS-86-20R US-PATENT-4,000,682	N77-19076*	c 09	NASA-CASE-ARC-10979-1 US-PATENT-APPL-SN-608483 US-PATENT-CLASS-124-6 US-PATENT-CLASS-244-63 US-PATENT-3,989,206
N77-14407*	c 35	NASA-CASE-LAR-11648-1 US-PATENT-APPL-SN-645571 US-PATENT-CLASS-73-133R US-PATENT-3,995,476	N77-17161*	c 23	NASA-CASE-MS-14428-1 US-PATENT-APPL-SN-450504 US-PATENT-CLASS-23-230B US-PATENT-CLASS-23-230M US-PATENT-CLASS-23-230R US-PATENT-CLASS-23-231 US-PATENT-CLASS-23-232C US-PATENT-CLASS-23-232R US-PATENT-CLASS-23-254R US-PATENT-CLASS-55-197 US-PATENT-CLASS-55-67 US-PATENT-CLASS-55-74 US-PATENT-CLASS-73-23.1 US-PATENT-CLASS-73-61.1C US-PATENT-4,003,257	N77-19170*	c 24	NASA-CASE-LEW-12550-1 US-PATENT-APPL-SN-596905 US-PATENT-CLASS-416-224 US-PATENT-CLASS-416-230 US-PATENT-4,006,999
N77-14408*	c 35	NASA-CASE-ARC-10448-3 US-PATENT-APPL-SN-221670 US-PATENT-APPL-SN-318848 US-PATENT-CLASS-250-396 US-PATENT-3,996,468	N77-17351*	c 33	NASA-CASE-MFS-23181-1 US-PATENT-APPL-SN-566495 US-PATENT-CLASS-331-114 US-PATENT-CLASS-331-177V US-PATENT-CLASS-332-18 US-PATENT-CLASS-332-30V US-PATENT-4,003,004	N77-19171*	c 24	NASA-CASE-LEW-12619-1 US-PATENT-APPL-SN-462424 US-PATENT-CLASS-204-16 US-PATENT-CLASS-204-40 US-PATENT-CLASS-204-9 US-PATENT-CLASS-29-527.2 US-PATENT-3,989,602
N77-14409*	c 35	NASA-CASE-NPO-13540-1 US-PATENT-APPL-SN-526450 US-PATENT-CLASS-136-232 US-PATENT-CLASS-136-233 US-PATENT-3,996,070	N77-17354*	c 33	NASA-CASE-LEW-11881-1 US-PATENT-APPL-SN-598968 US-PATENT-CLASS-307-229 US-PATENT-CLASS-307-230 US-PATENT-CLASS-328-161 US-PATENT-4,001,602	N77-19353*	c 34	NASA-CASE-ARC-10912-1 US-PATENT-APPL-SN-623187 US-PATENT-CLASS-62-100 US-PATENT-CLASS-62-121 US-PATENT-CLASS-62-269 US-PATENT-CLASS-62-315 US-PATENT-4,007,601
N77-14411*	c 35	NASA-CASE-NPO-13683-1 US-PATENT-APPL-SN-599284 US-PATENT-CLASS-250-343 US-PATENT-CLASS-356-201 US-PATENT-CLASS-356-204 US-PATENT-CLASS-356-97 US-PATENT-3,995,960	N77-17464*	c 37	NASA-CASE-GSC-11978-1 US-PATENT-APPL-SN-593142 US-PATENT-CLASS-308-10 US-PATENT-4,000,929	N77-19385*	c 35	NASA-CASE-MS-14653-1 US-PATENT-APPL-SN-521816 US-PATENT-CLASS-177-1 US-PATENT-CLASS-177-208 US-PATENT-CLASS-73-432R US-PATENT-3,988,933
N77-14477*	c 37	NASA-CASE-FRC-10081-1 US-PATENT-APPL-SN-598504 US-PATENT-CLASS-280-432 US-PATENT-3,995,877	N77-17476*	c 35	NASA-CASE-MFS-22671-2 US-PATENT-APPL-SN-419831 US-PATENT-APPL-SN-561956 US-PATENT-CLASS-360-25 US-PATENT-CLASS-360-31 US-PATENT-4,003,084	N77-19416*	c 36	NASA-CASE-XNP-04167-3 US-PATENT-APPL-SN-170544 US-PATENT-APPL-SN-479357 US-PATENT-CLASS-331-94.5D US-PATENT-CLASS-331-94.5E US-PATENT-CLASS-331-94.5P US-PATENT-4,007,430
N77-14478*	c 37	NASA-CASE-LAR-11658-1 US-PATENT-APPL-SN-625759 US-PATENT-CLASS-83-451 US-PATENT-CLASS-83-467R US-PATENT-3,995,522	N77-17495*	c 38	NASA-CASE-GSC-11902-1	N77-19457*	c 37	NASA-CASE-MFS-15218-1 US-PATENT-APPL-SN-387094 US-PATENT-CLASS-197-188 US-PATENT-CLASS-197-190 US-PATENT-3,989,136
N77-14479*	c 37	NASA-CASE-GSC-11960-1 US-PATENT-APPL-SN-629456 US-PATENT-CLASS-242-187 US-PATENT-CLASS-242-193 US-PATENT-CLASS-242-204 US-PATENT-CLASS-242-210 US-PATENT-CLASS-242-57 US-PATENT-3,995,789				N77-19458*	c 37	NASA-CASE-GSC-11883-1 NASA-CASE-GSC-11974-1 NASA-CASE-GSC-11975-1
N77-14580*	c 44	NASA-CASE-LEW-11496-1 US-PATENT-APPL-SN-645508 US-PATENT-CLASS-136-89 US-PATENT-CLASS-204-192						

				US-PATENT-APPL-SN-596787				US-PATENT-APPL-SN-841278					US-PATENT-CLASS-60-39.28R
				US-PATENT-CLASS-310-4A				US-PATENT-CLASS-313-175					US-PATENT-CLASS-60-39.66
				US-PATENT-CLASS-337-334				US-PATENT-CLASS-313-180					US-PATENT-4,020,632
				US-PATENT-CLASS-340-224				US-PATENT-CLASS-313-184		N77-23482*	c 37		NASA-CASE-LAR-11563-1
				US-PATENT-CLASS-60-527				US-PATENT-CLASS-315-108					US-PATENT-APPL-SN-672815
				US-PATENT-CLASS-75-122.7				US-PATENT-CLASS-315-110					US-PATENT-CLASS-29-DIG.35
				US-PATENT-CLASS-75-170				US-PATENT-3,621,330					US-PATENT-CLASS-29-447
				US-PATENT-4,010,455		N77-21392*	c 35	NASA-CASE-NPO-10711-1					US-PATENT-CLASS-403-273
N77-19571*	c 44			NASA-CASE-LEW-11549-1				US-PATENT-APPL-SN-844315					US-PATENT-CLASS-53-9
				US-PATENT-APPL-SN-510677				US-PATENT-CLASS-179-100.2C					US-PATENT-4,017,959
				US-PATENT-CLASS-136-89				US-PATENT-3,697,705		N77-23483*	c 37		NASA-CASE-MFS-23088-1
				US-PATENT-3,989,541		N77-21393*	c 35	NASA-CASE-NPO-10619-1					US-PATENT-APPL-SN-602617
N77-19760*	c 60			NASA-CASE-ARC-10899-1				US-PATENT-APPL-SN-757017					US-PATENT-CLASS-213-81
				US-PATENT-APPL-SN-576774				US-PATENT-CLASS-338-25					US-PATENT-CLASS-214-1CM
				US-PATENT-CLASS-178-69.5R				US-PATENT-3,555,483					US-PATENT-CLASS-244-161
				US-PATENT-CLASS-179-15BS		N77-21844*	c 54	NASA-CASE-MFS-23074-1					US-PATENT-4,018,409
				US-PATENT-CLASS-340-172.5				US-PATENT-APPL-SN-623188		N77-24328*	c 32		NASA-CASE-ARC-10984-1
				US-PATENT-3,990,049				US-PATENT-CLASS-188-291					US-PATENT-APPL-SN-690815
N77-20162*	c 20			NASA-CASE-LEW-12048-1				US-PATENT-CLASS-254-158					US-PATENT-CLASS-358-133
				US-PATENT-APPL-SN-665033				US-PATENT-4,018,423					US-PATENT-CLASS-358-138
				US-PATENT-CLASS-313-230		N77-21941*	c 74	NASA-CASE-NPO-11429-1					US-PATENT-4,025,950
				US-PATENT-CLASS-313-231.3				US-PATENT-APPL-SN-95189		N77-24331*	c 32		NASA-CASE-MSC-14840-1
				US-PATENT-CLASS-313-360				US-PATENT-CLASS-240-41.35R					US-PATENT-APPL-SN-692414
				US-PATENT-CLASS-315-111.3				US-PATENT-CLASS-240-41R					US-PATENT-CLASS-178-88
				US-PATENT-CLASS-315-111.6				US-PATENT-CLASS-240-46.13					US-PATENT-CLASS-325-346
				US-PATENT-CLASS-60-202				US-PATENT-CLASS-356-236					US-PATENT-CLASS-329-104
				US-PATENT-4,011,719				US-PATENT-3,711,701					US-PATENT-CLASS-329-122
N77-20201*	c 26			NASA-CASE-LEW-12245-1		N77-22386*	c 33	NASA-CASE-NPO-10870-1					US-PATENT-4,027,265
				US-PATENT-APPL-SN-584094				NASA-CASE-NPO-11191-1		N77-24375*	c 33		NASA-CASE-MSC-12709-1
				US-PATENT-CLASS-148-12.7N				NASA-CASE-NPO-11403-1					US-PATENT-APPL-SN-630583
				US-PATENT-CLASS-148-162				US-PATENT-APPL-SN-108810					US-PATENT-CLASS-307-225R
				US-PATENT-CLASS-148-2				US-PATENT-CLASS-313-146					US-PATENT-CLASS-328-38
				US-PATENT-CLASS-148-20.3				US-PATENT-CLASS-313-182					US-PATENT-CLASS-328-39
				US-PATENT-CLASS-148-32.5				US-PATENT-CLASS-313-60					US-PATENT-CLASS-328-4-8
				US-PATENT-CLASS-75-170				US-PATENT-3,736,453					US-PATENT-CLASS-328-63
				US-PATENT-4,012,237		N77-22449*	c 35	NASA-CASE-LAR-11825-1					US-PATENT-4,025,866
N77-20289*	c 32			NASA-CASE-NPO-13753-1				US-PATENT-APPL-SN-632112		N77-24423*	c 34		NASA-CASE-LAR-12045-1
				US-PATENT-APPL-SN-658449				US-PATENT-CLASS-73-88R					US-PATENT-APPL-SN-682416
				US-PATENT-CLASS-325-4				US-PATENT-4,018,085					US-PATENT-CLASS-259/4R
				US-PATENT-CLASS-343-100ST		N77-22450*	c 35	NASA-CASE-MFS-23281-1					US-PATENT-CLASS-261-DIG.75
				US-PATENT-CLASS-343-6.BR				US-PATENT-APPL-SN-657995					US-PATENT-CLASS-261-123
				US-PATENT-CLASS-343-6.5R				US-PATENT-CLASS-73-15.6					US-PATENT-4,026,527
				US-PATENT-4,012,696				US-PATENT-CLASS-73-95		N77-24454*	c 35		NASA-CASE-ARC-10900-1
N77-20399*	c 35			NASA-CASE-ARC-10716-1				US-PATENT-4,018,080					US-PATENT-APPL-SN-630579
				US-PATENT-APPL-SN-403695		N77-22479*	c 37	NASA-CASE-NPO-10316-1					US-PATENT-CLASS-338-229
				US-PATENT-CLASS-235-150.2				US-PATENT-APPL-SN-703107					US-PATENT-CLASS-338-28
				US-PATENT-CLASS-235-150.25				US-PATENT-CLASS-60-53					US-PATENT-4,025,891
				US-PATENT-CLASS-244-165				US-PATENT-3,478,514		N77-24455*	c 35		NASA-CASE-GSC-12077-1
				US-PATENT-CLASS-244-171		N77-22480*	c 37	NASA-CASE-NPO-13058-1					US-PATENT-APPL-SN-635519
				US-PATENT-CLASS-244-3.21				NASA-CASE-NPO-13096-1					US-PATENT-CLASS-65-108
				US-PATENT-4,012,018				US-PATENT-APPL-SN-403154					US-PATENT-CLASS-65-59A
N77-20400*	c 35			NASA-CASE-ARC-10911-1				US-PATENT-CLASS-214-16.1CB					US-PATENT-CLASS-65-59A
				US-PATENT-APPL-SN-610802				US-PATENT-3,896,955					US-PATENT-CLASS-65-54
				US-PATENT-CLASS-338-28		N77-22482*	c 37	NASA-CASE-MSC-19536-1					US-PATENT-CLASS-65-64
				US-PATENT-CLASS-73-204				US-PATENT-APPL-SN-658450					US-PATENT-CLASS-65-64
				US-PATENT-4,011,756				US-PATENT-CLASS-74-96		N77-25499*	c 36		NASA-CASE-GSC-11571-1
N77-20401*	c 35			NASA-CASE-MFS-23267-1				US-PATENT-4,018,092					US-PATENT-APPL-SN-646704
				US-PATENT-APPL-SN-653422		N77-22606*	c 44	NASA-CASE-LEW-12364-1					US-PATENT-CLASS-331-94.5S
				US-PATENT-CLASS-126-270				US-PATENT-APPL-SN-707124					US-PATENT-4,025,875
				US-PATENT-CLASS-126-271				US-PATENT-CLASS-253-317		N77-25501*	c 36		NASA-CASE-ARC-10970-1
				US-PATENT-CLASS-250-203R				US-PATENT-CLASS-429-105					US-PATENT-APPL-SN-691046
				US-PATENT-4,011,854				US-PATENT-CLASS-429-107					US-PATENT-CLASS-250-574
N77-20882*	c 74			NASA-CASE-LAR-11782-1				US-PATENT-CLASS-429-190					US-PATENT-CLASS-350-100
				US-PATENT-APPL-SN-608482				US-PATENT-4,018,971					US-PATENT-CLASS-350-102
				US-PATENT-CLASS-350-145		N77-22607*	c 44	NASA-CASE-LAR-11361-1					US-PATENT-CLASS-356-28
				US-PATENT-CLASS-350-174				US-PATENT-APPL-SN-669928					US-PATENT-4,026,655
				US-PATENT-4,012,123				US-PATENT-CLASS-23-277R		N77-25502*	c 36		NASA-CASE-NPO-13147-1
N77-21267*	c 32			NASA-CASE-LAR-11390-1				US-PATENT-CLASS-23-281					US-PATENT-APPL-SN-317310
				US-PATENT-APPL-SN-662176				US-PATENT-CLASS-423-648R					US-PATENT-CLASS-330-4.3
				US-PATENT-CLASS-340-5H				US-PATENT-CLASS-55-158					US-PATENT-CLASS-331-94.5D
				US-PATENT-CLASS-343-18B				US-PATENT-4,019,868					US-PATENT-CLASS-331-94.5P
				US-PATENT-CLASS-343-5CM		N77-22794*	c 51	NASA-CASE-GSC-12039-1					US-PATENT-4,027,273
				US-PATENT-CLASS-343-5MM				US-PATENT-APPL-SN-572991		N77-25769*	c 51		NASA-CASE-LAR-10773-3
				US-PATENT-4,019,179				US-PATENT-CLASS-195-103.5K					US-PATENT-APPL-SN-125235
N77-21314*	c 33			NASA-CASE-NPO-10189-1				US-PATENT-CLASS-195-103.5R					US-PATENT-APPL-SN-314656
				NASA-CASE-NPO-10781-1				US-PATENT-4,014,745					US-PATENT-APPL-SN-623238
				US-PATENT-APPL-SN-744522		N77-22950*	c 74	NASA-CASE-ARC-10976-1					US-PATENT-CLASS-195-1.8
				US-PATENT-CLASS-307-232				US-PATENT-APPL-SN-665032					US-PATENT-4,018,649
				US-PATENT-CLASS-307-238				US-PATENT-CLASS-356-171		N77-25772*	c 52		NASA-CASE-KSC-11030-1
				US-PATENT-CLASS-307-280				US-PATENT-4,018,533					US-PATENT-APPL-SN-709849
				US-PATENT-CLASS-329-119				NASA-CASE-NPO-13722-1					US-PATENT-CLASS-128-1R
				US-PATENT-CLASS-329-205		N77-22951*	c 74	US-PATENT-APPL-SN-616472					US-PATENT-CLASS-3-1
				US-PATENT-CLASS-332-16				US-PATENT-CLASS-250-203R					US-PATENT-CLASS-339-12R
				US-PATENT-CLASS-332-30				US-PATENT-CLASS-250-211K					US-PATENT-4,025,964
				US-PATENT-CLASS-332-52				US-PATENT-CLASS-356-141		N77-26385*	c 33		NASA-CASE-LEW-11978-1
				US-PATENT-3,582,828				US-PATENT-CLASS-356-152					US-PATENT-APPL-SN-708658
N77-21315*	c 33			NASA-CASE-NPO-11510-1				US-PATENT-CLASS-356-172					US-PATENT-CLASS-204-32A
				US-PATENT-APPL-SN-173178				US-PATENT-4,018,532					US-PATENT-CLASS-29-597
				US-PATENT-APPL-SN-385059		N77-23106*	c 07	NASA-CASE-LEW-12830-1					US-PATENT-CLASS-29-628
				US-PATENT-CLASS-313-161				US-PATENT-APPL-SN-596641					US-PATENT-CLASS-29-630E
				US-PATENT-CLASS-313-184				US-PATENT-APPL-SN-655149					US-PATENT-4,023,266
				US-PATENT-CLASS-313-224				US-PATENT-CLASS-123-122E		N77-26386*	c 33		NASA-CASE-GSC-11824-1
				US-PATENT-CLASS-313-32				US-PATENT-CLASS-123-41.33					US-PATENT-APPL-SN-583486
				US-PATENT-CLASS-315-344				US-PATENT-CLASS-137-101					US-PATENT-CLASS-318-138
				US-PATENT-3,881,132				US-PATENT-CLASS-415-180					US-PATENT-CLASS-318-227
N77-21316*	c 33			NASA-CASE-NPO-10790-1				US-PATENT-CLASS-60-39.03					US-PATENT-CLASS-318-254

## ACCESSION NUMBER INDEX

N77-32280

N77-26387*	c 33	US-PATENT-4,027,212	N77-28225*	c 24	US-PATENT-4,033,119	N77-30309*	c 32	NASA-CASE-GSC-11898-1
		NASA-CASE-LAR-11389-1			NASA-CASE-MS-C-12631-1			US-PATENT-APPL-SN-566494
N77-26477*	c 36	US-PATENT-APPL-SN-229143	N77-28265*	c 26	US-PATENT-APPL-SN-568541	N77-30365*	c 33	US-PATENT-CLASS-179-1SA
		US-PATENT-APPL-SN-340862			US-PATENT-CLASS-156-229			US-PATENT-CLASS-179-1SP
N77-26919*	c 71	US-PATENT-CLASS-310-111	N77-28346*	c 32	US-PATENT-CLASS-244-123	N77-30436*	c 35	US-PATENT-4,039,754
		US-PATENT-CLASS-310-168			US-PATENT-CLASS-428-141			NASA-CASE-NPO-13812-1
N77-26942*	c 74	US-PATENT-CLASS-322-96	N77-28385*	c 33	US-PATENT-CLASS-428-161	N77-30749*	c 54	US-PATENT-APPL-SN-694855
		US-PATENT-3,849,720			US-PATENT-CLASS-428-425			US-PATENT-CLASS-307-64
N77-27116*	c 07	US-PATENT-CLASS-250-283	N77-28486*	c 37	US-PATENT-CLASS-428-457	N77-31308*	c 27	US-PATENT-CLASS-363-53
		NASA-CASE-NPO-13550-1			US-PATENT-CLASS-428-458			US-PATENT-CLASS-363-70
N77-27131*	c 09	US-PATENT-APPL-SN-483301	N77-28511*	c 39	US-PATENT-4,032,089	N77-31350*	c 32	US-PATENT-4,039,925
		US-PATENT-CLASS-250-281			NASA-CASE-LEW-11573-1			NASA-CASE-MFS-19287-1
N77-27178*	c 24	US-PATENT-CLASS-250-282	N77-28716*	c 52	US-PATENT-APPL-SN-625733	N77-31404*	c 33	US-PATENT-APPL-SN-641802
		US-PATENT-CLASS-250-283			US-PATENT-CLASS-228-190			US-PATENT-CLASS-137-207
N77-27345*	c 34	US-PATENT-CLASS-250-423P	N77-28717*	c 52	US-PATENT-CLASS-228-194	N77-31465*	c 35	US-PATENT-CLASS-137-209
		US-PATENT-4,031,389			US-PATENT-CLASS-228-232			US-PATENT-CLASS-60-259
N77-27366*	c 35	NASA-CASE-NPO-13673-1	N77-28932*	c 74	US-PATENT-4,033,504	N77-31497*	c 37	US-PATENT-CLASS-62-55
		US-PATENT-APPL-SN-613004			NASA-CASE-GSC-12053-1			US-PATENT-4,039,000
N77-27367*	c 35	US-PATENT-CLASS-330-5.5	N77-28933*	c 74	US-PATENT-APPL-SN-667930	N77-31601*	c 44	NASA-CASE-MFS-23175-1
		US-PATENT-CLASS-331-107A			US-PATENT-CLASS-250-199			US-PATENT-APPL-SN-667928
N77-27368*	c 35	US-PATENT-CLASS-333-72	N77-30236*	c 27	US-PATENT-CLASS-250-238	N77-32255*	c 25	US-PATENT-CLASS-324-163
		US-PATENT-4,025,876			US-PATENT-4,033,882			US-PATENT-CLASS-324-165
N77-27400*	c 37	NASA-CASE-GSC-12058-1	N77-30237*	c 27	NASA-CASE-LEW-12444-1	N77-32279*	c 26	US-PATENT-CLASS-324-174
		US-PATENT-APPL-SN-680938			US-PATENT-APPL-SN-583485			US-PATENT-CLASS-340-271
N77-27677*	c 51	US-PATENT-CLASS-250-199	N77-30308*	c 32	US-PATENT-CLASS-123-148CB	N77-32280*	c 26	US-PATENT-CLASS-340-347P
		US-PATENT-4,025,783			US-PATENT-CLASS-123-148E			US-PATENT-CLASS-340-347SY
N77-28118*	c 07	NASA-CASE-LEW-12608-1	N77-30309*	c 32	US-PATENT-CLASS-315-176	N77-32280*	c 26	US-PATENT-4,039,946
		US-PATENT-APPL-SN-680067			US-PATENT-4,033,316			NASA-CASE-KSC-11004-1
N77-28118*	c 07	US-PATENT-CLASS-416-220R	N77-30309*	c 32	US-PATENT-4,033,316	N77-32280*	c 26	US-PATENT-APPL-SN-710032
		US-PATENT-CLASS-416-221			NASA-CASE-LEW-11158-1			US-PATENT-CLASS-3-2
N77-28118*	c 07	US-PATENT-4,033,705	N77-30309*	c 32	US-PATENT-APPL-SN-663008	N77-32280*	c 26	US-PATENT-CLASS-3-21
		NASA-CASE-LAR-11883-1			US-PATENT-CLASS-308-5R			US-PATENT-4,038,705
N77-28118*	c 07	US-PATENT-APPL-SN-662175	N77-30309*	c 32	US-PATENT-CLASS-308-73	N77-32280*	c 26	NASA-CASE-NPO-11609-2
		US-PATENT-CLASS-73-15R			US-PATENT-CLASS-308-9			US-PATENT-APPL-SN-228229
N77-28118*	c 07	US-PATENT-4,027,524	N77-30309*	c 32	US-PATENT-4,035,037	N77-32280*	c 26	US-PATENT-APPL-SN-674700
		NASA-CASE-MFS-22926-1			NASA-CASE-MS-C-14905-1			US-PATENT-CLASS-210-DIG.27
N77-28118*	c 07	US-PATENT-APPL-SN-557565	N77-30309*	c 32	US-PATENT-APPL-SN-708795	N77-32280*	c 26	US-PATENT-CLASS-210-40
		US-PATENT-CLASS-164-60			US-PATENT-CLASS-128-DIG.12			US-PATENT-CLASS-260-2.5A
N77-28118*	c 07	US-PATENT-CLASS-75-135	N77-30309*	c 32	US-PATENT-CLASS-128-214F	N77-32280*	c 26	US-PATENT-CLASS-260-2.5AM
		US-PATENT-CLASS-75-139			US-PATENT-CLASS-222-61			US-PATENT-CLASS-260-2.5AY
N77-28118*	c 07	US-PATENT-CLASS-75-65R	N77-30309*	c 32	US-PATENT-CLASS-222-95	N77-32280*	c 26	US-PATENT-CLASS-260-77.5AP
		US-PATENT-4,029,500			US-PATENT-4,033,479			US-PATENT-4,039,489
N77-28118*	c 07	NASA-CASE-LEW-12118-1	N77-30309*	c 32	NASA-CASE-MFS-23295-1	N77-32280*	c 26	NASA-CASE-GSC-12075-1
		US-PATENT-APPL-SN-616332			US-PATENT-APPL-SN-700673			US-PATENT-APPL-SN-562499
N77-28118*	c 07	US-PATENT-CLASS-428-301	N77-30309*	c 32	US-PATENT-CLASS-73-67.7	N77-32280*	c 26	US-PATENT-CLASS-343-17.7
		US-PATENT-CLASS-428-328			US-PATENT-CLASS-73-88R			US-PATENT-4,042,926
N77-28118*	c 07	US-PATENT-CLASS-428-368	N77-30309*	c 32	US-PATENT-4,033,182	N77-32280*	c 26	NASA-CASE-ARC-10897-1
		US-PATENT-CLASS-428-418			NASA-CASE-LEW-12258-1			US-PATENT-APPL-SN-625781
N77-28118*	c 07	US-PATENT-CLASS-428-457	N77-30309*	c 32	US-PATENT-APPL-SN-676433	N77-32280*	c 26	US-PATENT-CLASS-323-93
		US-PATENT-CLASS-428-902			US-PATENT-CLASS-128-1R			US-PATENT-CLASS-324-60
N77-28118*	c 07	US-PATENT-CLASS-428-911	N77-30309*	c 32	US-PATENT-CLASS-128-303R	N77-32280*	c 26	US-PATENT-CLASS-340-200
		US-PATENT-4,029,838			US-PATENT-4,033,349			US-PATENT-CLASS-340-347SH
N77-28118*	c 07	NASA-CASE-ARC-10974-1	N77-30309*	c 32	NASA-CASE-MS-C-14623-1	N77-32280*	c 26	US-PATENT-4,040,041
		US-PATENT-APPL-SN-667010			US-PATENT-APPL-SN-637269			NASA-CASE-MFS-23118-1
N77-28118*	c 07	US-PATENT-CLASS-73-189	N77-30309*	c 32	US-PATENT-CLASS-128-DIG.4	N77-32280*	c 26	US-PATENT-APPL-SN-691256
		US-PATENT-CLASS-73-228			US-PATENT-CLASS-128-2.1E			US-PATENT-CLASS-356-212
N77-28118*	c 07	US-PATENT-4,028,939	N77-30309*	c 32	US-PATENT-CLASS-128-410	N77-32280*	c 26	US-PATENT-4,040,750
		NASA-CASE-GSC-12059-1			US-PATENT-4,033,334			NASA-CASE-NPO-13671-1
N77-28118*	c 07	US-PATENT-APPL-SN-680957	N77-30309*	c 32	NASA-CASE-GSC-11989-1	N77-32280*	c 26	US-PATENT-APPL-SN-564622
		US-PATENT-CLASS-331-94.5D			US-PATENT-APPL-SN-645500			US-PATENT-CLASS-123-DIG.8
N77-28118*	c 07	US-PATENT-CLASS-331-94.5T	N77-30309*	c 32	US-PATENT-CLASS-350-162SF	N77-32280*	c 26	US-PATENT-CLASS-123-119A
		US-PATENT-CLASS-350-253			US-PATENT-CLASS-350-202			US-PATENT-CLASS-123-122AB
N77-28118*	c 07	US-PATENT-4,030,047	N77-30309*	c 32	US-PATENT-CLASS-350-299	N77-32280*	c 26	US-PATENT-CLASS-123-3
		NASA-CASE-NPO-11103-1			US-PATENT-4,035,062			US-PATENT-CLASS-123-37
N77-28118*	c 07	US-PATENT-APPL-SN-3654	N77-30309*	c 32	NASA-CASE-NPO-13707-1	N77-32280*	c 26	US-PATENT-CLASS-123-59E
		US-PATENT-CLASS-73-84			US-PATENT-APPL-SN-617202			US-PATENT-4,041,910
N77-28118*	c 07	US-PATENT-3,623,359	N77-30309*	c 32	US-PATENT-CLASS-350-288	N77-32280*	c 26	NASA-CASE-LEW-12587-1
		NASA-CASE-MS-C-12327-1			US-PATENT-CLASS-350-310			US-PATENT-APPL-SN-717319
N77-28118*	c 07	US-PATENT-APPL-SN-19572	N77-30309*	c 32	US-PATENT-CLASS-350-320	N77-32280*	c 26	US-PATENT-CLASS-136-89AC
		US-PATENT-CLASS-73-362AR			US-PATENT-4,035,065			US-PATENT-CLASS-136-89P
N77-28118*	c 07	US-PATENT-3,613,454	N77-30309*	c 32	NASA-CASE-MFS-23405-1	N77-32280*	c 26	US-PATENT-CLASS-52-173R
		NASA-CASE-GSC-11063-1			US-PATENT-APPL-SN-718267			US-PATENT-CLASS-52-51
N77-28118*	c 07	US-PATENT-APPL-SN-41431	N77-30309*	c 32	US-PATENT-CLASS-228-124	N77-32280*	c 26	US-PATENT-4,040,867
		US-PATENT-CLASS-318-267			US-PATENT-CLASS-228-263			NASA-CASE-LEW-12312-1
N77-28118*	c 07	US-PATENT-CLASS-318-468	N77-30309*	c 32	US-PATENT-4,033,503	N77-32280*	c 26	US-PATENT-APPL-SN-654787
		US-PATENT-CLASS-318-470			NASA-CASE-NPO-13620-1			US-PATENT-CLASS-416-135
N77-28118*	c 07	US-PATENT-CLASS-318-675	N77-30309*	c 32	US-PATENT-APPL-SN-666992	N77-32280*	c 26	US-PATENT-CLASS-416-190
		US-PATENT-3,628,113			US-PATENT-CLASS-210-24			US-PATENT-CLASS-416-193A
N77-28118*	c 07	NASA-CASE-LAR-11649-1	N77-30309*	c 32	US-PATENT-CLASS-536-105	N77-32280*	c 26	US-PATENT-CLASS-416-241A
		US-PATENT-APPL-SN-626942			US-PATENT-CLASS-536-105			US-PATENT-4,045,149
N77-28118*	c 07	US-PATENT-CLASS-118-313	N77-30309*	c 32	US-PATENT-CLASS-536-58	N77-32280*	c 26	NASA-CASE-NPO-13566-1
		US-PATENT-CLASS-118-7			US-PATENT-CLASS-536-58			US-PATENT-APPL-SN-653316

N77-32308*	c 27	US-PATENT-CLASS-75-170	US-PATENT-CLASS-340-347AD	US-PATENT-CLASS-3-1.2
		US-PATENT-4,046,560	US-PATENT-CLASS-350-96R	US-PATENT-CLASS-3-15
N77-32342*	c 32	NASA-CASE-GSC-12110-1	US-PATENT-4,045,792	US-PATENT-CLASS-3-29
		US-PATENT-APPL-SN-682435	NASA-CASE-MFS-23001-1	US-PATENT-4,051,558
N77-32413*	c 34	US-PATENT-CLASS-156-645	US-PATENT-APPL-SN-610801	NASA-CASE-GSC-11839-2
		US-PATENT-CLASS-156-663	US-PATENT-CLASS-156-DIG.62	US-PATENT-APPL-SN-468614
N77-32454*	c 35	US-PATENT-4,046,619	US-PATENT-CLASS-156-601	US-PATENT-APPL-SN-657996
		NASA-CASE-NPO-13587-1	US-PATENT-CLASS-156-619	US-PATENT-CLASS-340-173LM
N77-32455*	c 35	US-PATENT-APPL-SN-589119	US-PATENT-CLASS-156-620	US-PATENT-CLASS-350-96R
		US-PATENT-CLASS-343-10	US-PATENT-4,046,617	US-PATENT-CLASS-356-169
N77-32456*	c 35	US-PATENT-CLASS-343-100CL	NASA-CASE-LAR-11898-1	US-PATENT-4,052,705
		US-PATENT-CLASS-343-5CM	US-PATENT-APPL-SN-723264	NASA-CASE-NPO-13802-1
N77-32478*	c 36	US-PATENT-CLASS-343-5DP	US-PATENT-CLASS-428-116	US-PATENT-APPL-SN-658133
		US-PATENT-4,045,795	US-PATENT-CLASS-428-138	US-PATENT-CLASS-264-23
N77-32499*	c 37	NASA-CASE-GSC-11998-1	US-PATENT-CLASS-428-73	US-PATENT-CLASS-264-345
		US-PATENT-APPL-SN-579989	US-PATENT-CLASS-428-902	US-PATENT-CLASS-65-DIG.4
N77-32500*	c 37	US-PATENT-CLASS-165-105	US-PATENT-4,052,523	US-PATENT-CLASS-65-DIG.7
		US-PATENT-4,046,190	NASA-CASE-LEW-12137-1	US-PATENT-CLASS-65-102
N77-32501*	c 37	NASA-CASE-LEW-12050-1	US-PATENT-APPL-SN-672210	US-PATENT-CLASS-65-2
		US-PATENT-APPL-SN-629457	US-PATENT-CLASS-165-105	US-PATENT-CLASS-65-32
N77-32580*	c 44	US-PATENT-CLASS-136-202	US-PATENT-CLASS-431-158	US-PATENT-CLASS-65-4B
		US-PATENT-CLASS-136-236R	US-PATENT-CLASS-431-352	US-PATENT-CLASS-65-87
N77-32581*	c 44	US-PATENT-CLASS-136-240	US-PATENT-CLASS-60-39.51R	US-PATENT-CLASS-73-505
		US-PATENT-4,045,247	US-PATENT-4,052,144	US-PATENT-4,052,181
N77-32582*	c 44	NASA-CASE-NPO-13792-1	NASA-CASE-MSC-14831-1	NASA-CASE-MSC-14773-1
		US-PATENT-APPL-SN-677351	US-PATENT-APPL-SN-685027	US-PATENT-APPL-SN-612966
N77-32583*	c 44	US-PATENT-CLASS-324-57H	US-PATENT-CLASS-204-292	US-PATENT-CLASS-137-197
		US-PATENT-CLASS-324-59	US-PATENT-CLASS-210-63R	US-PATENT-CLASS-210-222
N77-32721*	c 54	US-PATENT-4,045,728	US-PATENT-CLASS-210-71	US-PATENT-CLASS-55-100
		NASA-CASE-GSC-12143-1	US-PATENT-CLASS-252-472	US-PATENT-CLASS-55-26-9
N77-32722*	c 54	US-PATENT-APPL-SN-743249	US-PATENT-CLASS-427-229	US-PATENT-CLASS-55-3
		US-PATENT-CLASS-250-288	US-PATENT-4,052,302	US-PATENT-CLASS-62-50
N77-32731*	c 60	US-PATENT-CLASS-73-421.5R	NASA-CASE-MSC-14916-1	US-PATENT-CLASS-62-514R
		US-PATENT-4,046,012	US-PATENT-APPL-SN-739914	US-PATENT-4,027,494
N77-32732*	c 60	NASA-CASE-LEW-12164-1	US-PATENT-CLASS-179-107R	NASA-CASE-MFS-23274-1
		US-PATENT-APPL-SN-511334	US-PATENT-CLASS-179-175.1A	US-PATENT-APPL-SN-714158
N77-32733*	c 60	US-PATENT-CLASS-350-162SF	US-PATENT-CLASS-330-2	US-PATENT-CLASS-307-306
		US-PATENT-4,043,674	US-PATENT-4,049,930	US-PATENT-CLASS-338-32S
N77-32734*	c 60	NASA-CASE-MSC-19535-1	NASA-CASE-MFS-23280-1	US-PATENT-CLASS-357-4
		US-PATENT-APPL-SN-641784	US-PATENT-APPL-SN-706425	US-PATENT-CLASS-357-5
N77-32735*	c 60	US-PATENT-CLASS-292-110	US-PATENT-CLASS-318-200	US-PATENT-CLASS-357-73
		US-PATENT-4,045,063	US-PATENT-CLASS-318-227	US-PATENT-4,055,847
N77-32736*	c 60	NASA-CASE-LEW-12527-1	US-PATENT-CLASS-318-230	NASA-CASE-ARC-10639-1
		US-PATENT-APPL-SN-595747	US-PATENT-4,052,648	US-PATENT-APPL-SN-643043
N77-32737*	c 60	US-PATENT-CLASS-290-52	NASA-CASE-NPO-13872-1	US-PATENT-CLASS-250-336
		US-PATENT-CLASS-308-195	US-PATENT-APPL-SN-742034	US-PATENT-CLASS-250-343
N77-32738*	c 60	US-PATENT-CLASS-308-72	US-PATENT-CLASS-363-57	US-PATENT-CLASS-250-351
		US-PATENT-4,046,434	US-PATENT-CLASS-363-89	US-PATENT-4,055,764
N77-32739*	c 60	NASA-CASE-LEW-12477-1	US-PATENT-4,052,659	NASA-CASE-LEW-12083-1
		US-PATENT-APPL-SN-595745	NASA-CASE-MSC-14757-1	US-PATENT-APPL-SN-659882
N77-32740*	c 60	US-PATENT-CLASS-290-52	US-PATENT-APPL-SN-625734	US-PATENT-CLASS-250-499
		US-PATENT-CLASS-308-195	US-PATENT-CLASS-141-197	US-PATENT-CLASS-313-61S
N77-32741*	c 60	US-PATENT-4,046,435	US-PATENT-CLASS-141-4	US-PATENT-CLASS-427-124
		NASA-CASE-NPO-13675-1	US-PATENT-CLASS-417-225	US-PATENT-CLASS-427-126
N77-32742*	c 60	US-PATENT-APPL-SN-658132	US-PATENT-CLASS-400-560	US-PATENT-CLASS-427-248E
		US-PATENT-CLASS-204-157.1R	US-PATENT-CLASS-60-574	US-PATENT-CLASS-427-250
N77-32743*	c 60	US-PATENT-CLASS-250-527	US-PATENT-4,051,877	US-PATENT-CLASS-427-255
		US-PATENT-4,045,315	NASA-CASE-NPO-13772-1	US-PATENT-4,055,686
N77-32744*	c 60	NASA-CASE-NPO-13510-1	US-PATENT-APPL-SN-675351	NASA-CASE-NPO-13482-1
		US-PATENT-APPL-SN-536786	US-PATENT-CLASS-250-310	US-PATENT-APPL-SN-495021
N77-32745*	c 60	US-PATENT-CLASS-126-263	US-PATENT-CLASS-250-398	US-PATENT-CLASS-136-89SJ
		US-PATENT-CLASS-165-107	US-PATENT-4,052,614	US-PATENT-CLASS-357-15
N77-32746*	c 60	US-PATENT-CLASS-165-2	NASA-CASE-LEW-12321-1	US-PATENT-CLASS-357-16
		US-PATENT-CLASS-62-4	US-PATENT-APPL-SN-596641	US-PATENT-CLASS-357-30
N77-32747*	c 60	US-PATENT-4,044,821	US-PATENT-CLASS-123-122E	US-PATENT-4,053,918
		NASA-CASE-NPO-13810-1	US-PATENT-CLASS-123-41.33	NASA-CASE-GSC-12088-1
N77-32748*	c 60	US-PATENT-APPL-SN-681096	US-PATENT-CLASS-137-104	US-PATENT-APPL-SN-648700
		US-PATENT-CLASS-126-270	US-PATENT-CLASS-415-180	US-PATENT-CLASS-356-103
N77-32749*	c 60	US-PATENT-CLASS-126-271	US-PATENT-CLASS-60-39.28R	US-PATENT-CLASS-356-104
		US-PATENT-CLASS-52-117	US-PATENT-CLASS-60-39.66	US-PATENT-4,053,229
N77-32750*	c 60	US-PATENT-CLASS-60-641	US-PATENT-4,041,697	NASA-CASE-ARC-11042-1
		US-PATENT-4,044,753	NASA-CASE-LEW-12313-1	US-PATENT-APPL-SN-734902
N77-32751*	c 60	NASA-CASE-NPO-13736-1	US-PATENT-APPL-SN-581751	US-PATENT-CLASS-252-8.1
		US-PATENT-APPL-SN-681017	US-PATENT-CLASS-416-135	US-PATENT-CLASS-60-836
N77-32752*	c 60	US-PATENT-CLASS-350-295	US-PATENT-CLASS-416-141	US-PATENT-4,061,579
		US-PATENT-CLASS-350-320	US-PATENT-CLASS-416-220R	NASA-CASE-ARC-10991-1
N77-32753*	c 60	US-PATENT-CLASS-427-130	US-PATENT-CLASS-416-248	US-PATENT-APPL-SN-744574
		US-PATENT-CLASS-427-47	US-PATENT-4,047,840	US-PATENT-CLASS-204-180G
N77-32754*	c 60	US-PATENT-CLASS-52-2	NASA-CASE-NPO-13731-1	US-PATENT-CLASS-204-299R
		US-PATENT-4,046,462	US-PATENT-APPL-SN-653682	US-PATENT-4,061,561
N77-32755*	c 60	NASA-CASE-ARC-10756-1	US-PATENT-CLASS-73-15.6	NASA-CASE-NPO-13867-1
		US-PATENT-APPL-SN-436313	US-PATENT-CLASS-73-91	US-PATENT-APPL-SN-692284
N77-32756*	c 60	US-PATENT-CLASS-2-2.1A	US-PATENT-4,030,348	US-PATENT-CLASS-260-DIG.15
		US-PATENT-CLASS-214-1BC	NASA-CASE-GSC-11976-1	US-PATENT-CLASS-427-164
N77-32757*	c 60	US-PATENT-CLASS-214-1CM	US-PATENT-APPL-SN-677352	US-PATENT-CLASS-428-411
		US-PATENT-4,046,262	US-PATENT-CLASS-324-58.5B	US-PATENT-CLASS-428-522
N77-32758*	c 60	NASA-CASE-MSC-14771-1	US-PATENT-4,052,666	US-PATENT-CLASS-428-922
		US-PATENT-APPL-SN-688854	NASA-CASE-NPO-13734-1	US-PATENT-CLASS-96-87A
N77-32759*	c 60	US-PATENT-CLASS-165-166	US-PATENT-APPL-SN-680939	US-PATENT-4,061,834
		US-PATENT-CLASS-55-179	US-PATENT-CLASS-126-271	NASA-CASE-ARC-11046-1
N77-32760*	c 60	US-PATENT-CLASS-55-269	US-PATENT-CLASS-237-1A	US-PATENT-APPL-SN-712419
		US-PATENT-4,046,529	US-PATENT-CLASS-350-293	US-PATENT-CLASS-340-27SS
N77-32761*	c 60	NASA-CASE-GSC-11839-3	US-PATENT-CLASS-350-299	US-PATENT-CLASS-73-180
		US-PATENT-APPL-SN-468614	US-PATENT-4,051,834	US-PATENT-4,061,029
N77-32762*	c 60	US-PATENT-APPL-SN-657997	NASA-CASE-ARC-10916-1	NASA-CASE-MFS-19259-1
		US-PATENT-CLASS-250-199	US-PATENT-APPL-SN-701448	US-PATENT-APPL-SN-732630



## ACCESSION NUMBER INDEX

N78-17384

				US-PATENT-CLASS-250-571				US-PATENT-CLASS-428-428					US-PATENT-APPL-SN-759220
				US-PATENT-CLASS-356-159				US-PATENT-4,062,996					US-PATENT-CLASS-260-67
				US-PATENT-CLASS-356-160				NASA-CASE-MFS-22409-2					US-PATENT-3,538,053
				US-PATENT-CLASS-356-199				US-PATENT-APPL-SN-445398					NASA-CASE-NPO-13764-1
				US-PATENT-4,061,427				US-PATENT-APPL-SN-636193					US-PATENT-APPL-SN-674194
N78-14452*	c 43			NASA-CASE-LEW-12217-1				US-PATENT-CLASS-250-272					US-PATENT-CLASS-128-92C
				US-PATENT-APPL-SN-763753				US-PATENT-CLASS-250-320					US-PATENT-CLASS-128-92G
				US-PATENT-CLASS-166-248				US-PATENT-4,063,088					US-PATENT-CLASS-260-42.17
				US-PATENT-CLASS-166-259				NASA-CASE-NPO-13619-1					US-PATENT-CLASS-3-1.9
				US-PATENT-4,061,190				US-PATENT-APPL-SN-572990					US-PATENT-4,064,566
N78-14625*	c 44			NASA-CASE-LEW-12039-1				US-PATENT-CLASS-185-38					NASA-CASE-LEW-11981-1
				US-PATENT-APPL-SN-687822				US-PATENT-CLASS-74-81					US-PATENT-APPL-SN-672220
				US-PATENT-CLASS-320-15				US-PATENT-CLASS-74-83					US-PATENT-CLASS-313-22
				US-PATENT-CLASS-320-18				US-PATENT-4,062,245					US-PATENT-CLASS-62-376
				US-PATENT-CLASS-320-40				NASA-CASE-LAR-11490-1					US-PATENT-CLASS-62-514R
				US-PATENT-CLASS-320-6				US-PATENT-APPL-SN-707125					US-PATENT-4,068,495
				US-PATENT-4,061,955				US-PATENT-CLASS-358-106					NASA-CASE-NPO-11978
N78-14773*	c 52			NASA-CASE-LEW-12668-1				US-PATENT-4,063,282					US-PATENT-APPL-SN-264268
				US-PATENT-APPL-SN-677353				NASA-CASE-XNP-01458					US-PATENT-CLASS-313-175
				US-PATENT-CLASS-128-305				US-PATENT-APPL-SN-160093					US-PATENT-CLASS-313-176
				US-PATENT-4,061,146				US-PATENT-CLASS-235-70					US-PATENT-CLASS-313-180
N78-14784*	c 54			NASA-CASE-MSC-14632-1				US-PATENT-3,229,905					US-PATENT-CLASS-313-184
				US-PATENT-APPL-SN-571459				NASA-CASE-LEW-12317-1					US-PATENT-CLASS-313-224
				US-PATENT-CLASS-204-180P				US-PATENT-APPL-SN-581750					US-PATENT-3,769,544
				US-PATENT-CLASS-204-301				US-PATENT-CLASS-60-204					NASA-CASE-XLE-06094
				US-PATENT-CLASS-210-192				US-PATENT-CLASS-60-226R					US-PATENT-APPL-SN-523632
				US-PATENT-CLASS-210-96M				US-PATENT-CLASS-60-271					US-PATENT-CLASS-315-22
				US-PATENT-CLASS-23-253A				US-PATENT-4,068,469					US-PATENT-3,423,627
				US-PATENT-4,061,570				NASA-CASE-LEW-12390-1					NASA-CASE-MSC-11235
N78-14867*	c 71			NASA-CASE-LAR-12106-1				US-PATENT-APPL-SN-522109					US-PATENT-APPL-SN-698239
				US-PATENT-APPL-SN-740156				US-PATENT-CLASS-60-226R					US-PATENT-CLASS-307-270
				US-PATENT-CLASS-330-52				US-PATENT-CLASS-74-385					US-PATENT-CLASS-307-297
				US-PATENT-CLASS-73-646				US-PATENT-CLASS-74-417					US-PATENT-CLASS-323-4
				US-PATENT-4,061,041				US-PATENT-4,068,470					US-PATENT-CLASS-328-172
N78-14889*	c 74			NASA-CASE-KSC-11047-1				NASA-CASE-HON-10880-1					US-PATENT-3,573,504
				US-PATENT-APPL-SN-715485				US-PATENT-APPL-SN-595254					NASA-CASE-XGS-09186
				US-PATENT-CLASS-179-91R				US-PATENT-CLASS-325-118					US-PATENT-APPL-SN-669911
				US-PATENT-CLASS-250-199				US-PATENT-CLASS-325-66					US-PATENT-CLASS-323-18
				US-PATENT-CLASS-358-142				US-PATENT-CLASS-343-112R					US-PATENT-3,475,675
				US-PATENT-4,061,577				US-PATENT-CLASS-343-225					NASA-CASE-GSC-10135
N78-15180*	c 24			NASA-CASE-ARC-10913-1				US-PATENT-CLASS-362-269					US-PATENT-APPL-SN-764823
				US-PATENT-APPL-SN-698646				US-PATENT-4,067,015					US-PATENT-CLASS-307-53
				US-PATENT-CLASS-106-15FP				NASA-CASE-LAR-11898-2					US-PATENT-CLASS-307-69
				US-PATENT-CLASS-260-2.5N				US-PATENT-APPL-SN-723264					US-PATENT-CLASS-320-53
				US-PATENT-CLASS-260-2.5R				US-PATENT-APPL-SN-799024					US-PATENT-CLASS-323-19
				US-PATENT-CLASS-428-117				US-PATENT-CLASS-156-245					US-PATENT-3,600,599
				US-PATENT-CLASS-428-290				US-PATENT-CLASS-156-285					NASA-CASE-LEW-12508-1
				US-PATENT-CLASS-428-71				US-PATENT-CLASS-156-289					US-PATENT-APPL-SN-746580
				US-PATENT-CLASS-428-73				US-PATENT-CLASS-428-116					US-PATENT-CLASS-62-3
				US-PATENT-CLASS-428-920				US-PATENT-CLASS-428-902					US-PATENT-4,069,028
				US-PATENT-4,061,812				US-PATENT-4,063,981					NASA-CASE-ARC-10198
N78-15210*	c 25			NASA-CASE-LAR-12046-1				NASA-CASE-LAR-12019-1					US-PATENT-APPL-SN-42088
				US-PATENT-APPL-SN-755310				US-PATENT-APPL-SN-792067					US-PATENT-CLASS-165-105
				US-PATENT-CLASS-23-230PC				US-PATENT-CLASS-156-154					US-PATENT-CLASS-165-134
				US-PATENT-CLASS-23-232E				US-PATENT-CLASS-156-264					US-PATENT-3,777,811
				US-PATENT-CLASS-23-232R				US-PATENT-CLASS-156-285					NASA-CASE-ARC-10199
				US-PATENT-CLASS-73-23				US-PATENT-CLASS-156-286					US-PATENT-APPL-SN-824628
				US-PATENT-4,062,650				US-PATENT-CLASS-156-289					US-PATENT-CLASS-165-105
N78-15276*	c 27			NASA-CASE-LEW-12053-1				US-PATENT-CLASS-156-300					US-PATENT-CLASS-165-32
				US-PATENT-APPL-SN-513613				US-PATENT-CLASS-156-306					US-PATENT-CLASS-165-96
				US-PATENT-CLASS-260-2R				US-PATENT-CLASS-156-311					US-PATENT-CLASS-2-2.1
				US-PATENT-CLASS-526-193				US-PATENT-CLASS-264-157					US-PATENT-3,543,839
				US-PATENT-CLASS-526-225				US-PATENT-CLASS-264-90					NASA-CASE-MFS-23194-1
				US-PATENT-CLASS-544-193				US-PATENT-CLASS-428-294					US-PATENT-APPL-SN-629458
				US-PATENT-4,061,856				US-PATENT-CLASS-428-302					US-PATENT-CLASS-350-3.5
N78-15323*	c 32			NASA-CASE-NPO-13836-1				US-PATENT-4,065,340					US-PATENT-4,065,202
				US-PATENT-APPL-SN-699002				NASA-CASE-LAR-12181-1					NASA-CASE-MSC-11242
				US-PATENT-CLASS-178-69.1				US-PATENT-APPL-SN-532784					US-PATENT-APPL-SN-636796
				US-PATENT-CLASS-325-58				US-PATENT-APPL-SN-734901					US-PATENT-CLASS-73-67.2
				US-PATENT-CLASS-325-63				US-PATENT-CLASS-156-309					US-PATENT-3,492,858
				US-PATENT-CLASS-343-179				US-PATENT-CLASS-156-331					NASA-CASE-NPO-11150
				US-PATENT-4,061,974				US-PATENT-CLASS-260-30.4N					US-PATENT-APPL-SN-858950
N78-15461*	c 35			NASA-CASE-NPO-13808-1				US-PATENT-CLASS-260-32.2R					US-PATENT-CLASS-338-100
				US-PATENT-APPL-SN-675328				US-PATENT-CLASS-260-32.6N					US-PATENT-CLASS-338-36
				US-PATENT-CLASS-250-322				US-PATENT-CLASS-260-33.4R					US-PATENT-CLASS-338-99
				US-PATENT-CLASS-250-416TV				US-PATENT-4,065,345					US-PATENT-3,641,470
				US-PATENT-4,063,092				NASA-CASE-LAR-11902-1					NASA-CASE-MFS-22597
N78-15512*	c 39			NASA-CASE-LAR-12016-1				US-PATENT-APPL-SN-672695					US-PATENT-APPL-SN-395895
				US-PATENT-APPL-SN-754066				US-PATENT-CLASS-106-43					US-PATENT-CLASS-315-108
				US-PATENT-CLASS-73-579				US-PATENT-CLASS-60-200A					US-PATENT-CLASS-331-94.5G
				US-PATENT-CLASS-73-630				US-PATENT-CLASS-75-229					US-PATENT-CLASS-331-94.5T
				US-PATENT-CLASS-73-88F				US-PATENT-CLASS-75-239					US-PATENT-3,882,417
				US-PATENT-4,062,227				US-PATENT-CLASS-75-241					NASA-CASE-MSC-19666-1
N78-15560*	c 44			NASA-CASE-LAR-12009-1				US-PATENT-4,067,742					US-PATENT-APPL-SN-721150
				US-PATENT-APPL-SN-717320				NASA-CASE-MSC-14331-2					US-PATENT-CLASS-118-50
				US-PATENT-CLASS-126-270				US-PATENT-APPL-SN-657907					US-PATENT-CLASS-118-500
				US-PATENT-CLASS-126-400				US-PATENT-CLASS-260-75NH					US-PATENT-CLASS-248-36.3
				US-PATENT-CLASS-237-1A				US-PATENT-CLASS-260-75NK					US-PATENT-CLASS-269-21
				US-PATENT-4,062,347				US-PATENT-CLASS-260-75NT					US-PATENT-CLASS-279-3
N78-15879*	c 74			NASA-CASE-LAR-10385-3				US-PATENT-CLASS-260-77.5AM					US-PATENT-CLASS-51-235
				US-PATENT-APPL-SN-370999				US-PATENT-CLASS-260-77.5AN					US-PATENT-4,066,039
				US-PATENT-APPL-SN-38816				US-PATENT-CLASS-260-77.5AP					NASA-CASE-LEW-12916-1
				US-PATENT-CLASS-350-1				US-PATENT-CLASS-260-77.5AT					US-PATENT-APPL-SN-583056
				US-PATENT-CLASS-428-334				US-PATENT-CLASS-260-77.55P					US-PATENT-CLASS-60-261
				US-PATENT-CLASS-428-336				US-PATENT-4,069,212					US-PATENT-CLASS-60-262
				US-PATENT-CLASS-428-426				NASA-CASE-NPO-10557					US-PATENT-CLASS-60-271
N78-15880*	c 74												
N78-16369*	c 37												
N78-16387*	c 39												
N78-17031*	c 04												
N78-17055*	c 07												
N78-17056*	c 07												
N78-17140*	c 17												
N78-17149*	c 24												
N78-17150*	c 24												
N78-17205*	c 27												
N78-17206*	c 27												
N78-17213*	c 27												
N78-17214*	c 27												
N78-17215*	c 27												
N78-17237*	c 31												
N78-17238*	c 31												
N78-17293*	c 33												
N78-17294*	c 33												
N78-17295*	c 33												
N78-17296*	c 33												
N78-17335*	c 34												
N78-17336*	c 34												
N78-17337*	c 34												
N78-17357*	c 35												
N78-17358*	c 35												

N78-17385*	c 37	US-PATENT-4,064,692 NASA-CASE-WOO-00625 US-PATENT-APPL-SN-362278 US-PATENT-CLASS-74-800 US-PATENT-3,306,134	N78-18083*	c 09	US-PATENT-CLASS-60-262 US-PATENT-4,069,661 NASA-CASE-ARC-10903-1 US-PATENT-APPL-SN-623536 US-PATENT-CLASS-35-12N US-PATENT-CLASS-358-104 US-PATENT-4,055,004	N78-24275*	c 20	NASA-CASE-LAR-12018-1 US-PATENT-APPL-SN-678520 US-PATENT-CLASS-102-39 US-PATENT-CLASS-102-49.7 US-PATENT-CLASS-102-70R US-PATENT-CLASS-285-192 US-PATENT-CLASS-60-39.82E US-PATENT-4,080,901
N78-17386*	c 37	NASA-CASE-NPO-10151 US-PATENT-APPL-SN-365244 US-PATENT-CLASS-328-233 US-PATENT-3,387,218	N78-18182*	c 26	NASA-CASE-LEW-12095-1 US-PATENT-APPL-SN-651009 US-PATENT-CLASS-75-124 US-PATENT-CLASS-75-126D US-PATENT-CLASS-75-126F US-PATENT-CLASS-75-128G US-PATENT-CLASS-75-128T US-PATENT-4,055,416	N78-24290*	c 24	NASA-CASE-MFS-23506-1 US-PATENT-APPL-SN-760809 US-PATENT-CLASS-260-2.5AK US-PATENT-CLASS-260-2.5AP US-PATENT-CLASS-260-2.5B US-PATENT-CLASS-260-2.5BE US-PATENT-CLASS-260-2.5EP US-PATENT-CLASS-260-2.5FP US-PATENT-CLASS-260-29.1R US-PATENT-CLASS-260-37EP US-PATENT-CLASS-427-427 US-PATENT-4,077,921
N78-17395*	c 38	NASA-CASE-NPO-13283 US-PATENT-APPL-SN-401225 US-PATENT-CLASS-235-151.3 US-PATENT-CLASS-235-156 US-PATENT-CLASS-235-181 US-PATENT-CLASS-250-572 US-PATENT-CLASS-356-237 US-PATENT-3,908,118	N78-18183*	c 26	NASA-CASE-LEW-12905-1 US-PATENT-APPL-SN-684171 US-PATENT-CLASS-148-32 US-PATENT-CLASS-148-32.5 US-PATENT-CLASS-75-170 US-PATENT-4,055,447	N78-24333*	c 26	NASA-CASE-MSC-19693-1 US-PATENT-APPL-SN-708771 US-PATENT-CLASS-148-12.7A US-PATENT-CLASS-148-125 US-PATENT-4,077,813
N78-17396*	c 38	NASA-CASE-NPO-13282 US-PATENT-APPL-SN-401224 US-PATENT-CLASS-235-151.3 US-PATENT-CLASS-235-156 US-PATENT-CLASS-250-563 US-PATENT-CLASS-250-572 US-PATENT-CLASS-356-165 US-PATENT-CLASS-356-237 US-PATENT-3,909,602	N78-18308*	c 33	NASA-CASE-FRC-10090-1 US-PATENT-APPL-SN-737974 US-PATENT-CLASS-307-265 US-PATENT-CLASS-307-350 US-PATENT-CLASS-307-360 US-PATENT-CLASS-328-150 US-PATENT-4,055,777	N78-24365*	c 28	NASA-CASE-LEW-12081-1 US-PATENT-APPL-SN-676432 US-PATENT-CLASS-250-492R US-PATENT-CLASS-34-15 US-PATENT-CLASS-423-648R US-PATENT-CLASS-62-100 US-PATENT-CLASS-62-48 US-PATENT-4,077,788
N78-17460*	c 44	NASA-CASE-NPO-13579-1 US-PATENT-APPL-SN-598969 US-PATENT-CLASS-126-263 US-PATENT-CLASS-126-271 US-PATENT-CLASS-165-2 US-PATENT-CLASS-237-1A US-PATENT-CLASS-60-641 US-PATENT-CLASS-62-4 US-PATENT-4,065,053	N78-18355*	c 34	NASA-CASE-LEW-12554-1 US-PATENT-APPL-SN-686449 US-PATENT-CLASS-427-34 US-PATENT-CLASS-427-405 US-PATENT-CLASS-427-419A US-PATENT-CLASS-427-423 US-PATENT-CLASS-428-633 US-PATENT-CLASS-428-652 US-PATENT-CLASS-428-667 US-PATENT-4,055,705	N78-24391*	c 32	NASA-CASE-NPO-13886-1 US-PATENT-APPL-SN-730045 US-PATENT-CLASS-307-151 US-PATENT-CLASS-343-700MS US-PATENT-CLASS-361-395 US-PATENT-4,079,268
N78-17675*	c 54	NASA-CASE-ARC-11101-1 US-PATENT-APPL-SN-753976 US-PATENT-CLASS-2-2.1A US-PATENT-CLASS-36-119 US-PATENT-CLASS-36-92 US-PATENT-4,064,642	N78-18390*	c 35	NASA-CASE-MFS-23008-1 US-PATENT-APPL-SN-665734 US-PATENT-CLASS-73-DIG.11 US-PATENT-CLASS-73-28 US-PATENT-CLASS-73-432PS US-PATENT-CLASS-73-432R US-PATENT-4,055,089	N78-24515*	c 35	NASA-CASE-LAR-11201-1 US-PATENT-APPL-SN-788705 US-PATENT-CLASS-416-144 US-PATENT-CLASS-416-61 US-PATENT-CLASS-73-456 US-PATENT-CLASS-73-756 US-PATENT-4,082,001
N78-17676*	c 54	NASA-CASE-MFS-23311-1 US-PATENT-APPL-SN-708800 US-PATENT-CLASS-214-1CM US-PATENT-CLASS-3-12.5 US-PATENT-CLASS-74-515E US-PATENT-4,068,763	N78-18391*	c 35	NASA-CASE-NPO-13687-1 US-PATENT-APPL-SN-641803 US-PATENT-CLASS-356-106S US-PATENT-CLASS-356-110 US-PATENT-4,053,231	N78-24544*	c 37	NASA-CASE-MSC-16000-1 US-PATENT-APPL-SN-739915 US-PATENT-CLASS-29-156.8R US-PATENT-CLASS-29-23.5 US-PATENT-CLASS-29-244 US-PATENT-CLASS-29-252 US-PATENT-4,078,290
N78-17677*	c 54	NASA-CASE-MSC-13054 US-PATENT-APPL-SN-585217 US-PATENT-CLASS-2-161 US-PATENT-3,490,074	N78-18395* #	c 35	NASA-CASE-NPO-13999-1 US-PATENT-APPL-SN-858596	N78-24545*	c 37	NASA-CASE-LEW-12785-1 US-PATENT-APPL-SN-739909 US-PATENT-CLASS-60-39.28R US-PATENT-4,078,378
N78-17678*	c 54	NASA-CASE-XMS-04670 US-PATENT-APPL-SN-535169 US-PATENT-CLASS-2-2.1 US-PATENT-3,488,771	N78-18410*	c 36	NASA-CASE-NPO-13801-1 US-PATENT-APPL-SN-708796 US-PATENT-CLASS-330-4 US-PATENT-CLASS-332-7.5 US-PATENT-4,055,810	N78-24608*	c 44	NASA-CASE-GSC-12030-1 US-PATENT-APPL-SN-710035 US-PATENT-CLASS-308-10 US-PATENT-CLASS-310-153 US-PATENT-CLASS-310-154 US-PATENT-CLASS-310-178 US-PATENT-CLASS-310-269 US-PATENT-4,077,678
N78-17679*	c 54	NASA-CASE-XMS-04928 US-PATENT-APPL-SN-584914 US-PATENT-CLASS-98-1 US-PATENT-3,487,765	N78-18761*	c 54	NASA-CASE-MSC-10954-1 US-PATENT-APPL-SN-529884 US-PATENT-CLASS-2-2.1 US-PATENT-3,514,785	N78-24609*	c 44	NASA-CASE-GSC-12022-2 US-PATENT-APPL-SN-693074 US-PATENT-CLASS-136-895G US-PATENT-CLASS-148-174 US-PATENT-CLASS-29-572 US-PATENT-CLASS-357-30 US-PATENT-CLASS-357-59 US-PATENT-CLASS-427-113 US-PATENT-CLASS-427-248J US-PATENT-CLASS-427-249 US-PATENT-CLASS-427-86 US-PATENT-4,077,818
N78-17680*	c 54	NASA-CASE-XMS-09653 US-PATENT-APPL-SN-538863 US-PATENT-CLASS-2-6 US-PATENT-3,359,568	N78-18905*	c 74	NASA-CASE-GSC-12010-1 US-PATENT-APPL-SN-680958 US-PATENT-CLASS-250-213VT US-PATENT-CLASS-313-442 US-PATENT-CLASS-313-94 US-PATENT-4,070,574	N78-24950*	c 76	NASA-CASE-MFS-23315-1 US-PATENT-APPL-SN-724874 US-PATENT-CLASS-250-277CH US-PATENT-CLASS-250-280 US-PATENT-4,078,175
N78-17691*	c 60	NASA-CASE-GSC-12044-1 US-PATENT-APPL-SN-631341 US-PATENT-CLASS-340-347DD US-PATENT-4,069,478	N78-19302*	c 27	NASA-CASE-NPO-13690-1 US-PATENT-APPL-SN-633876 US-PATENT-CLASS-106-39.5 US-PATENT-CLASS-106-65 US-PATENT-CLASS-106-73.5 US-PATENT-4,072,532	N78-25089*	c 07	NASA-CASE-LEW-12452-1 US-PATENT-APPL-SN-695513 US-PATENT-CLASS-60-226R US-PATENT-CLASS-60-39.52 US-PATENT-4,083,181
N78-17865*	c 74	NASA-CASE-MSC-12618-1 US-PATENT-APPL-SN-651007 US-PATENT-CLASS-350-159 US-PATENT-CLASS-358-225 US-PATENT-CLASS-358-41 US-PATENT-CLASS-358-55 US-PATENT-4,067,043	N78-19465*	c 35	NASA-CASE-ARC-10896-1 US-PATENT-APPL-SN-615030 US-PATENT-CLASS-73-23 US-PATENT-4,055,072	N78-25090*	c 07	NASA-CASE-LEW-11855-1 US-PATENT-APPL-SN-672222 US-PATENT-CLASS-277-134 US-PATENT-CLASS-277-25 US-PATENT-4,084,825
N78-17866*	c 74	NASA-CASE-LAR-11711-1 US-PATENT-APPL-SN-674195 US-PATENT-CLASS-250-201 US-PATENT-CLASS-350-204 US-PATENT-CLASS-356-28 US-PATENT-4,063,814	N78-19466*	c 35	NASA-CASE-ARC-10820-1 US-PATENT-APPL-SN-620675 US-PATENT-CLASS-119-51.11 US-PATENT-CLASS-119-72.5 US-PATENT-CLASS-137-624.11 US-PATENT-4,055,147	N78-25119*	c 15	NASA-CASE-MFS-23564-1 US-PATENT-APPL-SN-739908 US-PATENT-CLASS-244-161 US-PATENT-CLASS-244-167
N78-17867*	c 74	NASA-CASE-NPO-13759-1 US-PATENT-APPL-SN-718266 US-PATENT-CLASS-250-344 US-PATENT-CLASS-356-204 US-PATENT-CLASS-356-246 US-PATENT-4,067,653	N78-19599*	c 44	NASA-CASE-LEW-12159-1 US-PATENT-APPL-SN-643041 US-PATENT-CLASS-126-270 US-PATENT-CLASS-427-160 US-PATENT-CLASS-428-652 US-PATENT-CLASS-428-667 US-PATENT-CLASS-428-679 US-PATENT-4,055,707			
N78-18066*	c 07	NASA-CASE-LEW-12389-2 US-PATENT-APPL-SN-628221 US-PATENT-CLASS-244-53A US-PATENT-CLASS-244-54 US-PATENT-CLASS-60-226R US-PATENT-CLASS-60-39.31 US-PATENT-4,055,041	N78-19920*	c 73	NASA-CASE-HQN-10841-1 US-PATENT-APPL-SN-560891 US-PATENT-CLASS-176-39 US-PATENT-CLASS-330-4.3 US-PATENT-4,075,057			
N78-18067*	c 07	NASA-CASE-LEW-12917-1 US-PATENT-APPL-SN-583055 US-PATENT-CLASS-60-204						

## ACCESSION NUMBER INDEX

N78-31736

N78-25148*	c 25	US-PATENT-4,083,520 NASA-CASE-LEW-12465-1 US-PATENT-APPL-SN-692413 US-PATENT-CLASS-250-423P US-PATENT-CLASS-250-528 US-PATENT-CLASS-250-531 US-PATENT-CLASS-55-100 US-PATENT-CLASS-55-101 US-PATENT-CLASS-55-2 US-PATENT-4,085,332	N78-27176* #	c 20	NASA-CASE-MFS-23642-2 US-PATENT-APPL-SN-923758	N78-28594*	c 44	US-PATENT-4,088,951 NASA-CASE-NPO-13821-1 US-PATENT-APPL-SN-688852 US-PATENT-CLASS-343-113R US-PATENT-CLASS-343-119 US-PATENT-CLASS-343-16M US-PATENT-4,088,999
N78-25256*	c 31	US-PATENT-4,085,332 NASA-CASE-NPO-13839-1 US-PATENT-APPL-SN-712981 US-PATENT-CLASS-250-332 US-PATENT-CLASS-313-22 US-PATENT-CLASS-62-514R US-PATENT-4,077,231	N78-27180*	c 24	US-PATENT-CLASS-260-33.6EP US-PATENT-CLASS-260-33.6PO US-PATENT-CLASS-260-33.8EP US-PATENT-CLASS-260-33.8UA US-PATENT-CLASS-260-37EP US-PATENT-CLASS-260-42.43 US-PATENT-CLASS-260-45.7R US-PATENT-CLASS-260-45.75W US-PATENT-CLASS-260-45.85N US-PATENT-CLASS-260-45.9R US-PATENT-CLASS-427-386 US-PATENT-CLASS-427-388A US-PATENT-CLASS-428-313 US-PATENT-CLASS-428-332 US-PATENT-CLASS-428-921 US-PATENT-4,088,806	N78-28913*	c 73	NASA-CASE-NPO-13114-2 US-PATENT-APPL-SN-294738 US-PATENT-APPL-SN-634214 US-PATENT-CLASS-176-22 US-PATENT-CLASS-176-33 US-PATENT-CLASS-176-39 US-PATENT-4,085,004
N78-25319*	c 33	US-PATENT-4,077,231 NASA-CASE-NPO-13909-1 US-PATENT-APPL-SN-744477 US-PATENT-CLASS-324-57DE US-PATENT-CLASS-324-57SS US-PATENT-CLASS-324-58A US-PATENT-4,084,132	N78-27184* #	c 24	NASA-CASE-ARC-11040-2 US-PATENT-APPL-SN-920878	N78-29421*	c 35	NASA-CASE-NPO-11954-1 US-PATENT-APPL-SN-229287 US-PATENT-CLASS-179-100.2CH US-PATENT-CLASS-340-174.1M US-PATENT-CLASS-340-174YC US-PATENT-CLASS-350-151 US-PATENT-3,775,570
N78-25350*	c 34	NASA-CASE-MS-C-19568-1 US-PATENT-APPL-SN-681000 US-PATENT-CLASS-428-913 US-PATENT-CLASS-428-93 US-PATENT-CLASS-428-94 US-PATENT-CLASS-428-95 US-PATENT-CLASS-428-96 US-PATENT-CLASS-428-97 US-PATENT-CLASS-49-DIG.1 US-PATENT-CLASS-49-479 US-PATENT-CLASS-49-485 US-PATENT-4,078,110	N78-27226*	c 25	NASA-CASE-LEW-10518-3 US-PATENT-APPL-SN-394207 US-PATENT-CLASS-176-11 US-PATENT-CLASS-176-16 US-PATENT-CLASS-250-400 US-PATENT-CLASS-250-429 US-PATENT-CLASS-250-492B US-PATENT-4,088,532	N78-31129*	c 09	NASA-CASE-MS-C-19706-1 US-PATENT-APPL-SN-767911 US-PATENT-CLASS-239-265.25 US-PATENT-CLASS-73-147 US-PATENT-4,091,665
N78-25351*	c 34	NASA-CASE-LEW-12718-1 US-PATENT-APPL-SN-779428 US-PATENT-CLASS-137-484.2 US-PATENT-CLASS-137-501 US-PATENT-CLASS-137-505.16 US-PATENT-4,084,612	N78-27326*	c 33	NASA-CASE-MFS-23312-1 US-PATENT-APPL-SN-699012 US-PATENT-CLASS-29-571 US-PATENT-CLASS-29-578 US-PATENT-CLASS-357-91 US-PATENT-4,087,902	N78-31232*	c 27	NASA-CASE-ARC-11008-1 US-PATENT-APPL-SN-708951 US-PATENT-CLASS-260-2.5N US-PATENT-CLASS-260-47CP US-PATENT-CLASS-260-63N US-PATENT-CLASS-260-78.41 US-PATENT-4,092,274
N78-25391*	c 35	NASA-CASE-NPO-13948-1 US-PATENT-APPL-SN-752748 US-PATENT-CLASS-204-195W US-PATENT-CLASS-73-336.5 US-PATENT-4,083,765	N78-27357*	c 34	NASA-CASE-LEW-11877-1 US-PATENT-APPL-SN-708660 US-PATENT-CLASS-431-10 US-PATENT-CLASS-431-328 US-PATENT-CLASS-431-7 US-PATENT-CLASS-60-9.65 US-PATENT-CLASS-60-39.69R US-PATENT-4,087,962	N78-31233*	c 27	NASA-CASE-ARC-11057-1 US-PATENT-APPL-SN-807762 US-PATENT-CLASS-350-165 US-PATENT-CLASS-350-175NG US-PATENT-CLASS-427-164 US-PATENT-CLASS-427-40 US-PATENT-CLASS-427-41 US-PATENT-CLASS-428-411 US-PATENT-CLASS-428-412 US-PATENT-CLASS-428-422 US-PATENT-CLASS-428-447 US-PATENT-CLASS-428-515 US-PATENT-CLASS-428-523 US-PATENT-CLASS-428-538 US-PATENT-4,091,166
N78-25426*	c 37	NASA-CASE-MS-C-12731-1 US-PATENT-APPL-SN-690816 US-PATENT-CLASS-137-505.25 US-PATENT-CLASS-137-625.3 US-PATENT-CLASS-137-625.38 US-PATENT-4,083,380	N78-27384*	c 35	NASA-CASE-LAR-11973-1 US-PATENT-APPL-SN-821681 US-PATENT-CLASS-73-170A US-PATENT-CLASS-73-425.4R US-PATENT-CLASS-73-61R US-PATENT-4,089,209	N78-31255*	c 28	NASA-CASE-NPO-14103-1 US-PATENT-APPL-SN-797210 US-PATENT-CLASS-149-105 US-PATENT-CLASS-149-111 US-PATENT-CLASS-149-19.4 US-PATENT-CLASS-149-19.8 US-PATENT-CLASS-149-88 US-PATENT-CLASS-149-92 US-PATENT-CLASS-149-93 US-PATENT-4,092,188
N78-25527*	c 44	NASA-CASE-LEW-12552-1 US-PATENT-APPL-SN-770869 US-PATENT-CLASS-136-89CC US-PATENT-CLASS-29-572 US-PATENT-CLASS-357-30 US-PATENT-CLASS-357-65 US-PATENT-CLASS-357-67 US-PATENT-CLASS-427-261 US-PATENT-CLASS-427-75 US-PATENT-4,082,569	N78-27402*	c 36	NASA-CASE-NPO-13945-1 US-PATENT-APPL-SN-704180 US-PATENT-CLASS-331-94.5G US-PATENT-CLASS-331-94.5P US-PATENT-CLASS-331-94.5PE US-PATENT-4,088,965	N78-31321*	c 32	NASA-CASE-NPO-14022-1 US-PATENT-APPL-SN-780728 US-PATENT-CLASS-343-781CA US-PATENT-CLASS-343-782 US-PATENT-CLASS-343-837 US-PATENT-4,092,648
N78-25528*	c 44	NASA-CASE-LEW-12185-1 US-PATENT-APPL-SN-746269 US-PATENT-CLASS-136-89H US-PATENT-CLASS-136-89P US-PATENT-CLASS-29-572 US-PATENT-CLASS-29-628 US-PATENT-4,083,097	N78-27423*	c 37	NASA-CASE-MS-C-16270-1 US-PATENT-APPL-SN-837260 US-PATENT-CLASS-269-21 US-PATENT-CLASS-269-266 US-PATENT-4,088,312	N78-31426*	c 37	NASA-CASE-GSC-11883-2 US-PATENT-APPL-SN-596787 US-PATENT-APPL-SN-747675 US-PATENT-CLASS-60-527 US-PATENT-CLASS-74-100R US-PATENT-4,010,455 US-PATENT-4,092,874
N78-25529*	c 44	NASA-CASE-LEW-12541-1 US-PATENT-APPL-SN-790637 US-PATENT-CLASS-136-89CC US-PATENT-CLASS-136-89H US-PATENT-CLASS-136-89P US-PATENT-CLASS-156-633 US-PATENT-CLASS-29-572 US-PATENT-4,084,985	N78-27424*	c 37	NASA-CASE-LAR-11889-2 US-PATENT-APPL-SN-662182 US-PATENT-APPL-SN-807703 US-PATENT-CLASS-308-10 US-PATENT-CLASS-73-178R US-PATENT-4,088,018	N78-31525*	c 44	NASA-CASE-NPO-13581-2 US-PATENT-APPL-SN-590975 US-PATENT-APPL-SN-811815 US-PATENT-CLASS-126-271 US-PATENT-CLASS-237-1A US-PATENT-4,091,800
N78-25530*	c 44	NASA-CASE-LEW-12649-1 US-PATENT-APPL-SN-720521 US-PATENT-CLASS-427-385B US-PATENT-CLASS-427-385C US-PATENT-CLASS-429-254 US-PATENT-4,085,241	N78-27425*	c 37	NASA-CASE-ARC-10981-1 US-PATENT-APPL-SN-738218 US-PATENT-CLASS-248-178 US-PATENT-CLASS-248-186 US-PATENT-4,088,291	N78-31526*	c 44	NASA-CASE-NPO-13813-1 NASA-CASE-NPO-13914-1 US-PATENT-APPL-SN-765139 US-PATENT-CLASS-126-270 US-PATENT-CLASS-126-271 US-PATENT-CLASS-350-299 US-PATENT-4,091,798
N78-25531*	c 44	NASA-CASE-MFS-23270-1 US-PATENT-APPL-SN-744573 US-PATENT-CLASS-320-13 US-PATENT-CLASS-320-15 US-PATENT-CLASS-320-32 US-PATENT-CLASS-320-39 US-PATENT-CLASS-320-9 US-PATENT-4,084,124	N78-27515*	c 44	NASA-CASE-NPO-12148-1 US-PATENT-APPL-SN-709415 US-PATENT-CLASS-136-89P US-PATENT-4,089,705	N78-31527*	c 44	NASA-CASE-NPO-13937-1 US-PATENT-APPL-SN-718137 US-PATENT-CLASS-201-17 US-PATENT-CLASS-44-1R US-PATENT-CLASS-44-2 US-PATENT-4,081,250
N78-27121*	c 07	NASA-CASE-LAR-11919-1 US-PATENT-APPL-SN-672221 US-PATENT-CLASS-239-265.25 US-PATENT-CLASS-239-265.33 US-PATENT-CLASS-60-230 US-PATENT-4,088,270	N78-27733*	c 51	NASA-CASE-ARC-10917-1 US-PATENT-APPL-SN-672223 US-PATENT-CLASS-119-29 US-PATENT-4,088,094	N78-31735*	c 54	NASA-CASE-ARC-11058-1 US-PATENT-APPL-SN-753965 US-PATENT-CLASS-2-2.1A US-PATENT-CLASS-285-235 US-PATENT-4,091,464
			N78-27904*	c 74	NASA-CASE-LAR-11869-1 US-PATENT-APPL-SN-740155 US-PATENT-CLASS-356-120 US-PATENT-CLASS-356-167 US-PATENT-4,088,408	N78-31736*	c 54	NASA-CASE-ARC-11100-1
			N78-27913*	c 75	NASA-CASE-MFS-22906-1 US-PATENT-APPL-SN-684807 US-PATENT-CLASS-29-81C US-PATENT-CLASS-313-231.3 US-PATENT-CLASS-315-111.2 US-PATENT-4,088,926			
			N78-28411*	c 35	NASA-CASE-KSC-11035-1 US-PATENT-APPL-SN-780874 US-PATENT-CLASS-324-130 US-PATENT-CLASS-324-32 US-PATENT-CLASS-324-74			

		US-PATENT-APPL-SN-780569	N78-32340*	c 33	NASA-CASE-GSC-12146-1		US-PATENT-CLASS-123-3
		US-PATENT-CLASS-2-2.1A			US-PATENT-APPL-SN-782480		US-PATENT-4,112,875
		US-PATENT-4,091,465			US-PATENT-CLASS-325-159	N78-33913*	c 74
N78-32086*	c 05	NASA-CASE-LAR-11932-1			US-PATENT-CLASS-325-187		NASA-CASE-NPO-10233-1
		US-PATENT-APPL-SN-718244			US-PATENT-CLASS-333-17R		US-PATENT-APPL-SN-716885
		US-PATENT-CLASS-244-218			US-PATENT-CLASS-333-81R		US-PATENT-CLASS-250-218
		US-PATENT-CLASS-244-45A			US-PATENT-4,092,617		US-PATENT-CLASS-250-227
		US-PATENT-CLASS-244-46	N78-32341*	c 33	NASA-CASE-LEW-12791-1		US-PATENT-CLASS-250-239
		US-PATENT-4,093,156			US-PATENT-APPL-SN-801432		US-PATENT-CLASS-356-208
N78-32168* #	c 15	NASA-CASE-LAR-12264-1			US-PATENT-CLASS-363-101	N79-10057*	c 07
		US-PATENT-APPL-SN-943087			US-PATENT-CLASS-363-16		NASA-CASE-LEW-12232-1
N78-32179*	c 20	NASA-CASE-NPO-11458A			US-PATENT-CLASS-363-60		US-PATENT-APPL-SN-776029
		US-PATENT-APPL-SN-48621			US-PATENT-4,092,712		US-PATENT-CLASS-415-115
		US-PATENT-CLASS-102-103	N78-32395*	c 35	NASA-CASE-ARC-11036-1		US-PATENT-CLASS-415-116
		US-PATENT-CLASS-149-19.4			US-PATENT-APPL-SN-740457		US-PATENT-CLASS-60-39.14
		US-PATENT-CLASS-149-42			US-PATENT-CLASS-33-366	N79-10162*	c 25
		US-PATENT-CLASS-149-43			US-PATENT-4,094,073		NASA-CASE-ARC-11053-1
		US-PATENT-CLASS-149-44			NASA-CASE-MFS-23363-1		US-PATENT-APPL-SN-814378
		US-PATENT-CLASS-149-76	N78-32396*	c 35	US-PATENT-APPL-SN-730046		US-PATENT-CLASS-23-252P
		US-PATENT-CLASS-149-83			US-PATENT-CLASS-324-173		US-PATENT-CLASS-423-581
		US-PATENT-CLASS-149-85			US-PATENT-CLASS-324-207		US-PATENT-4,101,644
		US-PATENT-4,116,131			US-PATENT-4,093,917	N79-10163*	c 25
N78-32229*	c 26	NASA-CASE-ARC-10992-1			NASA-CASE-LAR-11617-2		NASA-CASE-NPO-13274-1
		US-PATENT-APPL-SN-760810			US-PATENT-APPL-SN-547072		US-PATENT-APPL-SN-406296
		US-PATENT-CLASS-204-164	N78-32397*	c 35	US-PATENT-APPL-SN-668771		US-PATENT-CLASS-204-180S
		US-PATENT-CLASS-204-175			US-PATENT-CLASS-324-249		US-PATENT-CLASS-204-299
		US-PATENT-CLASS-423-582			US-PATENT-4,088,954	N79-10262*	c 32
		US-PATENT-CLASS-423-583			NASA-CASE-MFS-23114-1		NASA-CASE-NPO-13941-1
		US-PATENT-4,094,758	N78-32447*	c 38	US-PATENT-APPL-SN-686331		US-PATENT-APPL-SN-774384
N78-32256*	c 27	NASA-CASE-MSC-14903-1			US-PATENT-CLASS-350-3.5		US-PATENT-CLASS-307-233R
		US-PATENT-APPL-SN-706424			US-PATENT-CLASS-356-72		US-PATENT-CLASS-324-77B
		US-PATENT-CLASS-260-2P			US-PATENT-CLASS-356-73		US-PATENT-CLASS-324-77C
		US-PATENT-CLASS-260-551P			US-PATENT-CLASS-73-603		US-PATENT-4,118,666
		US-PATENT-CLASS-260-606-5P			US-PATENT-4,093,382	N79-10263*	c 32
		US-PATENT-CLASS-260-959			NASA-CASE-LAR-11208-1		NASA-CASE-MSC-12743-1
		US-PATENT-CLASS-526-13	N78-32539*	c 44	US-PATENT-APPL-SN-710036		US-PATENT-APPL-SN-765167
		US-PATENT-CLASS-526-23			US-PATENT-CLASS-417-88		US-PATENT-CLASS-325-41
		US-PATENT-CLASS-526-27			US-PATENT-CLASS-60-39.07		US-PATENT-CLASS-340-146.1AX
		US-PATENT-CLASS-526-275			US-PATENT-CLASS-60-39.14		US-PATENT-CLASS-340-146.1E
		US-PATENT-CLASS-526-276			US-PATENT-CLASS-60-39.33	N79-10264*	c 32
		US-PATENT-CLASS-526-278			US-PATENT-CLASS-98-1.5		NASA-CASE-MFS-22234-1
		US-PATENT-CLASS-526-49			US-PATENT-4,091,613		US-PATENT-APPL-SN-730778
		US-PATENT-CLASS-526-50			NASA-CASE-KSC-11034-1		US-PATENT-CLASS-343-6R
		US-PATENT-CLASS-544-195	N78-32542*	c 44	US-PATENT-APPL-SN-782481		US-PATENT-CLASS-343-9
		US-PATENT-4,092,466			US-PATENT-CLASS-60-641	N79-10337*	c 33
N78-32260*	c 27	NASA-CASE-ARC-11051-1			US-PATENT-CLASS-60-671		NASA-CASE-KSC-11018-1
		US-PATENT-APPL-SN-736910			US-PATENT-4,087,975		US-PATENT-APPL-SN-782693
		US-PATENT-CLASS-106-48			NASA-CASE-MSC-14805-1		US-PATENT-CLASS-324-133
		US-PATENT-CLASS-106-54	N78-32720*	c 54	US-PATENT-APPL-SN-688856		US-PATENT-CLASS-324-72
		US-PATENT-CLASS-427-215			US-PATENT-CLASS-340-213R		US-PATENT-CLASS-324-96
		US-PATENT-CLASS-427-376A			US-PATENT-CLASS-340-262	N79-10338*	c 33
		US-PATENT-CLASS-427-376B			US-PATENT-CLASS-340-279		NASA-CASE-GSC-12228-1
		US-PATENT-CLASS-427-379			US-PATENT-CLASS-340-285		US-PATENT-APPL-SN-858764
		US-PATENT-CLASS-427-380			US-PATENT-CLASS-340-309.1		US-PATENT-CLASS-324-57R
		US-PATENT-CLASS-428-312			US-PATENT-4,092,633		US-PATENT-CLASS-324-83D
		US-PATENT-CLASS-428-325	N78-32721*	c 54	NASA-CASE-ARC-11059-1		US-PATENT-CLASS-324-85
		US-PATENT-CLASS-428-331			US-PATENT-APPL-SN-753978		US-PATENT-CLASS-328-163
		US-PATENT-CLASS-428-341			US-PATENT-CLASS-128-142.7	N79-10339*	c 33
		US-PATENT-CLASS-428-406			US-PATENT-CLASS-62-259		NASA-CASE-LEW-12013-1
		US-PATENT-CLASS-428-427			US-PATENT-4,095,593		US-PATENT-APPL-SN-768795
		US-PATENT-CLASS-428-428			NASA-CASE-GSC-12083-1		US-PATENT-CLASS-301-82
		US-PATENT-CLASS-428-446	N78-32848*	c 73	US-PATENT-APPL-SN-643897		US-PATENT-CLASS-315-3.5
		US-PATENT-CLASS-428-920			US-PATENT-CLASS-350-170		US-PATENT-CLASS-315-3.6
		US-PATENT-CLASS-65-30R			US-PATENT-CLASS-350-173	N79-10389*	c 35
		US-PATENT-CLASS-65-60D			US-PATENT-CLASS-350-174		NASA-CASE-MFS-23461-1
		US-PATENT-4,093,771			US-PATENT-CLASS-350-286		US-PATENT-APPL-SN-694406
N78-32261*	c 27	NASA-CASE-LAR-11828-1			US-PATENT-CLASS-350-320		US-PATENT-CLASS-250-475
		US-PATENT-APPL-SN-448321			US-PATENT-4,093,354		US-PATENT-CLASS-252-301.1R
		US-PATENT-APPL-SN-562992			NASA-CASE-ARC-11039-1		US-PATENT-CLASS-252-301.16
		US-PATENT-CLASS-260-47CP	N78-32854*	c 74	US-PATENT-APPL-SN-750655		US-PATENT-CLASS-96-27R
		US-PATENT-CLASS-260-49			US-PATENT-CLASS-351-166		US-PATENT-CLASS-96-60R
		US-PATENT-CLASS-260-63N			US-PATENT-CLASS-427-164	N79-10390*	c 35
		US-PATENT-CLASS-260-63R			US-PATENT-CLASS-427-302		NASA-CASE-LAR-12260-1
		US-PATENT-CLASS-260-65			US-PATENT-CLASS-427-322		US-PATENT-CLASS-73-579
		US-PATENT-CLASS-260-78TF			US-PATENT-CLASS-427-38		US-PATENT-CLASS-73-589
		US-PATENT-4,094,862			US-PATENT-CLASS-427-387	N79-10391*	c 35
N78-32262*	c 27	NASA-CASE-MSC-14331-3			US-PATENT-CLASS-427-41		NASA-CASE-NPO-13862-1
		US-PATENT-APPL-SN-657998			US-PATENT-CLASS-427-44		US-PATENT-APPL-SN-744577
		US-PATENT-CLASS-264-130			US-PATENT-CLASS-428-412		US-PATENT-CLASS-324-77K
		US-PATENT-CLASS-264-184			US-PATENT-CLASS-428-447		US-PATENT-CLASS-343-17.2PC
		US-PATENT-CLASS-264-211			US-PATENT-4,096,315		US-PATENT-CLASS-343-5CM
		US-PATENT-CLASS-264-236			NASA-CASE-LEW-12496-1		US-PATENT-CLASS-343-5W
		US-PATENT-4,094,943	N78-33101*	c 07	US-PATENT-APPL-SN-668971	N79-10418*	c 37
N78-32338*	c 33	NASA-CASE-GSC-12137-1			US-PATENT-CLASS-29-463		NASA-CASE-LEW-12569-1
		US-PATENT-APPL-SN-808510			US-PATENT-CLASS-416-214A		US-PATENT-APPL-SN-792069
		US-PATENT-CLASS-329-124			US-PATENT-CLASS-416-244A		US-PATENT-CLASS-308-DIG.1
		US-PATENT-CLASS-331-12			US-PATENT-CLASS-74-572		US-PATENT-CLASS-308-121
		US-PATENT-CLASS-331-4			US-PATENT-4,097,194		US-PATENT-CLASS-308-160
		US-PATENT-CLASS-331-64	N78-33228*	c 27	NASA-CASE-NPO-08835-1		US-PATENT-CLASS-308-163
		US-PATENT-4,092,606			US-PATENT-APPL-SN-588721		US-PATENT-CLASS-308-172
N78-32339*	c 33	NASA-CASE-GSC-12145-1			US-PATENT-CLASS-260-28.5		US-PATENT-CLASS-308-5R
		US-PATENT-APPL-SN-769149			US-PATENT-3,527,724		US-PATENT-CLASS-308-9
		US-PATENT-CLASS-307-229			NASA-CASE-NPO-13763-1	N79-10419*	c 37
		US-PATENT-CLASS-307-230	N78-33526*	c 44	US-PATENT-APPL-SN-718268		NASA-CASE-FRC-10111-1
		US-PATENT-CLASS-328-145			US-PATENT-CLASS-123-DIG.12		US-PATENT-APPL-SN-713027
		US-PATENT-4,091,329			US-PATENT-CLASS-123-1A		US-PATENT-CLASS-30-90.6
							US-PATENT-CLASS-81-9.5R
							US-PATENT-4,117,749

## ACCESSION NUMBER INDEX

N79-13288

N79-10420\* c 37 ..... NASA-CASE-NPO-14014-1  
US-PATENT-APPL-SN-826204  
US-PATENT-CLASS-188-1C  
US-PATENT-CLASS-256-1  
US-PATENT-CLASS-256-13.1  
US-PATENT-4,118,014  
N79-10421\* c 37 ..... NASA-CASE-MFS-23620-1  
US-PATENT-APPL-SN-799023  
US-PATENT-CLASS-219-124.2.2  
US-PATENT-CLASS-219-124.32  
US-PATENT-CLASS-219-125.1  
US-PATENT-CLASS-228-8  
US-PATENT-4,118,620  
N79-10422\* c 37 ..... NASA-CASE-MFS-23051-1  
US-PATENT-APPL-SN-632111  
US-PATENT-CLASS-15-230.16  
US-PATENT-CLASS-15-230.17  
US-PATENT-CLASS-29-125  
US-PATENT-CLASS-428-133  
US-PATENT-CLASS-74-572  
US-PATENT-4,098,142  
N79-10513\* c 44 ..... NASA-CASE-NPO-13732-1  
US-PATENT-APPL-SN-765138  
US-PATENT-CLASS-429-13  
US-PATENT-CLASS-429-41  
US-PATENT-CLASS-429-42  
US-PATENT-4,100,331  
N79-10693\* c 51 ..... NASA-CASE-MSC-16098-1  
US-PATENT-APPL-SN-792068  
US-PATENT-CLASS-210-23F  
US-PATENT-CLASS-210-433M  
US-PATENT-CLASS-210-96M  
US-PATENT-4,118,315  
N79-10694\* c 51 ..... NASA-CASE-GSC-12173-1  
US-PATENT-APPL-SN-806440  
US-PATENT-CLASS-165-2  
US-PATENT-CLASS-165-30  
US-PATENT-CLASS-195-1.8  
US-PATENT-CLASS-219-299  
US-PATENT-CLASS-219-302  
US-PATENT-CLASS-62-514R  
US-PATENT-CLASS-62-78  
US-PATENT-4,117,881  
N79-10724\* c 52 ..... NASA-CASE-ARC-10985-1  
US-PATENT-APPL-SN-769148  
US-PATENT-CLASS-128-2.05R  
US-PATENT-CLASS-358-111  
US-PATENT-CLASS-358-96  
US-PATENT-CLASS-364-417  
US-PATENT-4,101,961  
N79-10969\* c 89 ..... NASA-CASE-MFS-23675-1  
US-PATENT-APPL-SN-820498  
US-PATENT-CLASS-350-294  
US-PATENT-CLASS-350-55  
US-PATENT-4,101,195  
N79-11108\* c 18 ..... NASA-CASE-MFS-23579-1  
US-PATENT-APPL-SN-829316  
US-PATENT-CLASS-228-13  
US-PATENT-CLASS-228-15.1  
US-PATENT-CLASS-228-173  
US-PATENT-CLASS-244-159  
US-PATENT-4,122,991  
N79-11151\* c 25 ..... NASA-CASE-NPO-13958-1  
US-PATENT-APPL-SN-745384  
US-PATENT-CLASS-126-91A  
US-PATENT-CLASS-431-10  
US-PATENT-CLASS-431-208  
US-PATENT-CLASS-432-223  
US-PATENT-CLASS-432-29  
US-PATENT-4,104,018  
N79-11152\* c 25 ..... NASA-CASE-NPO-13904-1  
US-PATENT-APPL-SN-730468  
US-PATENT-CLASS-208-10  
US-PATENT-CLASS-208-8  
US-PATENT-CLASS-302-66  
US-PATENT-CLASS-44-51  
US-PATENT-4,121,995  
N79-11215\* # c 27 ..... NASA-CASE-ARC-11170-1  
US-PATENT-APPL-SN-956161  
N79-11231\* c 28 ..... NASA-CASE-NPO-13858-1  
NASA-CASE-NPO-13859-1  
US-PATENT-APPL-SN-740153  
US-PATENT-CLASS-102-28R  
US-PATENT-4,103,619  
N79-11246\* c 31 ..... NASA-CASE-LAR-12147-1  
US-PATENT-APPL-SN-733825  
US-PATENT-CLASS-73-159  
US-PATENT-CLASS-73-95  
US-PATENT-4,103,550  
N79-11264\* c 32 ..... NASA-CASE-MSC-14939-1  
US-PATENT-APPL-SN-765165  
US-PATENT-CLASS-343-844  
US-PATENT-CLASS-343-854  
US-PATENT-4,119,972  
N79-11265\* c 32 ..... NASA-CASE-GSC-12150-1  
US-PATENT-APPL-SN-736286  
US-PATENT-CLASS-325-4  
US-PATENT-CLASS-325-67  
US-PATENT-CLASS-343-17.7  
US-PATENT-4,119,964  
N79-11313\* c 33 ..... NASA-CASE-MSC-16461-1  
US-PATENT-APPL-SN-858765  
US-PATENT-CLASS-307-232  
US-PATENT-CLASS-328-133  
US-PATENT-CLASS-331-1A  
US-PATENT-CLASS-331-14  
US-PATENT-CLASS-331-23  
US-PATENT-CLASS-331-27  
US-PATENT-4,119,926  
N79-11314\* c 33 ..... NASA-CASE-NPO-13064-1  
US-PATENT-APPL-SN-297436  
US-PATENT-CLASS-357-22  
US-PATENT-3,860,946  
N79-11315\* c 33 ..... NASA-CASE-KSC-11031-1  
US-PATENT-APPL-SN-782482  
US-PATENT-CLASS-324-102  
US-PATENT-CLASS-324-113  
US-PATENT-CLASS-324-133  
US-PATENT-4,105,966  
N79-11402\* c 37 ..... NASA-CASE-MSC-16043-1  
US-PATENT-APPL-SN-750792  
US-PATENT-CLASS-137-614.06  
US-PATENT-CLASS-137-637.05  
US-PATENT-CLASS-251-149.9  
US-PATENT-CLASS-285-326  
US-PATENT-CLASS-285-359  
US-PATENT-4,103,712  
N79-11403\* c 37 ..... NASA-CASE-LEW-12793-1  
US-PATENT-APPL-SN-745766  
US-PATENT-CLASS-60-39.08  
US-PATENT-CLASS-60-39.28R  
US-PATENT-CLASS-60-39.66  
US-PATENT-4,104,873  
N79-11404\* c 37 ..... NASA-CASE-MFS-23447-1  
US-PATENT-APPL-SN-736909  
US-PATENT-CLASS-308-194  
US-PATENT-CLASS-308-72  
US-PATENT-4,105,261  
N79-11405\* c 37 ..... NASA-CASE-NPO-13828-1  
US-PATENT-APPL-SN-672636  
US-PATENT-CLASS-123-148DC  
US-PATENT-CLASS-123-148E  
US-PATENT-CLASS-315-209CD  
US-PATENT-CLASS-315-209SC  
US-PATENT-CLASS-315-241R  
US-PATENT-4,122,816  
N79-11467\* c 44 ..... NASA-CASE-LEW-12819-1  
US-PATENT-APPL-SN-803823  
US-PATENT-CLASS-136-89CC  
US-PATENT-CLASS-136-89SJ  
US-PATENT-CLASS-357-15  
US-PATENT-CLASS-357-16  
US-PATENT-CLASS-357-30  
US-PATENT-CLASS-357-65  
US-PATENT-CLASS-357-67  
US-PATENT-4,104,084  
N79-11468\* c 44 ..... NASA-CASE-LEW-12775-1  
US-PATENT-APPL-SN-799026  
US-PATENT-CLASS-136-89  
US-PATENT-CLASS-148-188  
US-PATENT-CLASS-29-572  
US-PATENT-CLASS-427-75  
US-PATENT-4,104,091  
N79-11469\* c 44 ..... NASA-CASE-MFS-23518-1  
US-PATENT-APPL-SN-829390  
US-PATENT-CLASS-204-32  
US-PATENT-CLASS-204-33  
US-PATENT-CLASS-204-37R  
US-PATENT-CLASS-204-38B  
US-PATENT-4,104,134  
N79-11470\* c 44 ..... NASA-CASE-NPO-14126-1  
US-PATENT-APPL-SN-838336  
US-PATENT-CLASS-204-157.1R  
US-PATENT-CLASS-250-527  
US-PATENT-4,105,517  
N79-11471\* c 44 ..... NASA-CASE-NPO-13817-1  
US-PATENT-APPL-SN-801452  
US-PATENT-CLASS-126-270  
US-PATENT-CLASS-126-271  
US-PATENT-CLASS-350-288  
US-PATENT-CLASS-350-299  
US-PATENT-4,122,833  
N79-11472\* c 44 ..... NASA-CASE-LEW-12552-2  
US-PATENT-APPL-SN-844346  
US-PATENT-CLASS-29-572  
US-PATENT-CLASS-427-123  
US-PATENT-CLASS-427-126  
US-PATENT-CLASS-427-261  
US-PATENT-CLASS-427-343  
US-PATENT-CLASS-427-398A  
US-PATENT-CLASS-427-399  
US-PATENT-CLASS-427-75  
US-PATENT-CLASS-427-84  
US-PATENT-4,122,214  
N79-11865\* c 74 ..... NASA-CASE-MFS-23513-1  
US-PATENT-APPL-SN-755323  
US-PATENT-CLASS-356-124  
US-PATENT-CLASS-356-210  
US-PATENT-4,102,580  
N79-11920\* c 76 ..... NASA-CASE-NPO-13918-1  
US-PATENT-APPL-SN-706073  
US-PATENT-CLASS-156-DIG.64  
US-PATENT-CLASS-156-DIG.65  
US-PATENT-CLASS-156-DIG.88  
US-PATENT-CLASS-156-608  
US-PATENT-CLASS-156-617SP  
US-PATENT-4,121,965  
N79-12061\* c 05 ..... NASA-CASE-FRC-10092-1  
US-PATENT-APPL-SN-831634  
US-PATENT-CLASS-244-48  
US-PATENT-CLASS-244-82  
US-PATENT-CLASS-244-90R  
US-PATENT-4,124,180  
N79-12221\* c 27 ..... NASA-CASE-MSC-12619-1  
US-PATENT-APPL-SN-555750  
US-PATENT-APPL-SN-786913  
US-PATENT-CLASS-244-121  
US-PATENT-CLASS-244-158  
US-PATENT-CLASS-244-160  
US-PATENT-CLASS-428-189  
US-PATENT-CLASS-428-212  
US-PATENT-CLASS-428-280  
US-PATENT-CLASS-428-285  
US-PATENT-CLASS-428-286  
US-PATENT-CLASS-428-332  
US-PATENT-CLASS-428-447  
US-PATENT-CLASS-428-450  
US-PATENT-CLASS-428-77  
US-PATENT-CLASS-428-920  
US-PATENT-4,124,732  
N79-12321\* c 33 ..... NASA-CASE-GSC-12190-1  
US-PATENT-APPL-SN-817413  
US-PATENT-CLASS-357-22  
US-PATENT-CLASS-357-23  
US-PATENT-CLASS-357-41  
US-PATENT-CLASS-357-45  
US-PATENT-CLASS-357-55  
US-PATENT-4,119,996  
N79-12331\* c 33 ..... NASA-CASE-MSC-12662-1  
US-PATENT-APPL-SN-540779  
US-PATENT-CLASS-428-109  
US-PATENT-CLASS-428-247  
US-PATENT-CLASS-428-258  
US-PATENT-CLASS-428-259  
US-PATENT-4,107,363  
N79-12359\* c 34 ..... NASA-CASE-LAR-11729-1  
US-PATENT-APPL-SN-856461  
US-PATENT-CLASS-73-189  
US-PATENT-CLASS-73-194VS  
US-PATENT-4,122,712  
N79-12541\* c 44 ..... NASA-CASE-NPO-14100-1  
US-PATENT-APPL-SN-861391  
US-PATENT-CLASS-324-20R  
US-PATENT-CLASS-324-22  
US-PATENT-4,122,383  
N79-12584\* c 45 ..... NASA-CASE-MSC-16258-1  
US-PATENT-APPL-SN-853705  
US-PATENT-CLASS-210-50  
US-PATENT-CLASS-210-60  
US-PATENT-CLASS-210-63R  
US-PATENT-CLASS-423-242  
US-PATENT-CLASS-55-73  
US-PATENT-4,123,355  
N79-12694\* c 52 ..... NASA-CASE-NPO-13913-1  
US-PATENT-APPL-SN-687251  
US-PATENT-CLASS-128-2R  
US-PATENT-CLASS-364-120  
US-PATENT-CLASS-364-300  
US-PATENT-CLASS-364-415  
US-PATENT-CLASS-364-900  
US-PATENT-4,122,518  
N79-12890\* c 74 ..... NASA-CASE-KSC-11010-1  
US-PATENT-APPL-SN-753977  
US-PATENT-CLASS-200-46  
US-PATENT-CLASS-200-61  
US-PATENT-CLASS-250-214AL  
US-PATENT-CLASS-250-214R  
US-PATENT-CLASS-315-153  
US-PATENT-4,122,334  
N79-13214\* c 32 ..... NASA-CASE-NPO-14009-1  
US-PATENT-APPL-SN-818917  
US-PATENT-CLASS-343-117R  
US-PATENT-CLASS-343-118  
US-PATENT-CLASS-343-7.4  
US-PATENT-4,122,454  
N79-13288\* c 34 ..... NASA-CASE-LEW-12252-1  
US-PATENT-APPL-SN-559847  
US-PATENT-CLASS-165-169

		US-PATENT-CLASS-239-127.1				US-PATENT-CLASS-126-271	
		US-PATENT-CLASS-60-267				US-PATENT-CLASS-350-292	
		US-PATENT-4,107,919				US-PATENT-CLASS-350-293	
N79-13289*	c 34	NASA-CASE-LEW-12441-1				US-PATENT-CLASS-350-320	
		US-PATENT-APPL-SN-559846				US-PATENT-4,131,336	
		US-PATENT-CLASS-165-146				NASA-CASE-NPO-13930-1	
		US-PATENT-CLASS-165-169				US-PATENT-APPL-SN-700467	
		US-PATENT-CLASS-239-127.1				US-PATENT-CLASS-128-214D	
		US-PATENT-CLASS-60-267				US-PATENT-CLASS-128-272	
		US-PATENT-4,108,241				US-PATENT-CLASS-150-1	
N79-13364*	c 37	NASA-CASE-LAR-10941-2				US-PATENT-CLASS-195-1.8	
		US-PATENT-APPL-SN-395493				US-PATENT-CLASS-206-439	
		US-PATENT-CLASS-228-107				US-PATENT-CLASS-210-DIG.23	
		US-PATENT-CLASS-228-2.5				US-PATENT-CLASS-422-41	
		US-PATENT-CLASS-29-421E				US-PATENT-CLASS-422-48	
		US-PATENT-4,106,687				US-PATENT-CLASS-55-15.8	
N79-13826*	c 72	NASA-CASE-NPO-13993-1				US-PATENT-4,132,594	
		US-PATENT-APPL-SN-782463				NASA-CASE-GSC-12046-1	
		US-PATENT-CLASS-331-94.5L				US-PATENT-APPL-SN-680015	
		US-PATENT-CLASS-331-94.5P				US-PATENT-CLASS-195-103.5K	
		US-PATENT-CLASS-331-94.5PE				US-PATENT-CLASS-195-103.5L	
		US-PATENT-4,107,627				US-PATENT-4,132,599	
N79-13855*	c 74	NASA-CASE-MFS-23052-2				NASA-CASE-NPO-13935-1	
		US-PATENT-APPL-SN-590183				NASA-CASE-NPO-13944-1	
		US-PATENT-APPL-SN-772185				US-PATENT-APPL-SN-741749	
		US-PATENT-CLASS-35-12C				US-PATENT-CLASS-128-2V	
		US-PATENT-CLASS-35-12N				US-PATENT-CLASS-73-633	
		US-PATENT-CLASS-358-104				US-PATENT-CLASS-73-644	
		US-PATENT-4,106,218				US-PATENT-4,130,112	
N79-14095*	c 07	NASA-CASE-LEW-13050-1				NASA-CASE-LEW-12658-1	
		US-PATENT-APPL-SN-513346				US-PATENT-APPL-SN-702115	
		US-PATENT-CLASS-416-157B				US-PATENT-CLASS-181-190	
		US-PATENT-CLASS-416-160				US-PATENT-CLASS-181-213	
		US-PATENT-CLASS-416-162				US-PATENT-CLASS-181-222	
		US-PATENT-CLASS-416-167				US-PATENT-CLASS-181-293	
		US-PATENT-4,124,330				US-PATENT-4,106,587	
N79-14096*	c 07	NASA-CASE-LEW-12389-3				NASA-CASE-GSC-12225-1	
		US-PATENT-APPL-SN-552108				US-PATENT-APPL-SN-823566	
		US-PATENT-APPL-SN-753452				US-PATENT-CLASS-350-157	
		US-PATENT-CLASS-137-15.1				US-PATENT-4,129,357	
		US-PATENT-CLASS-244-54				NASA-CASE-MFS-23541-1	
		US-PATENT-CLASS-415-200				US-PATENT-APPL-SN-814005	
		US-PATENT-CLASS-415-201				US-PATENT-CLASS-204-192C	
		US-PATENT-CLASS-60-226A				US-PATENT-4,111,775	
		US-PATENT-CLASS-60-226B				NASA-CASE-ARC-10975-1	
		US-PATENT-CLASS-60-39.31				US-PATENT-APPL-SN-799832	
		US-PATENT-4,132,069				US-PATENT-CLASS-250-531	
N79-14097*	c 07	NASA-CASE-LEW-12378-1				US-PATENT-CLASS-250-540	
		US-PATENT-APPL-SN-573029				US-PATENT-CLASS-250-541	
		US-PATENT-CLASS-239-265.39				US-PATENT-4,130,490	
		US-PATENT-CLASS-60-226A				NASA-CASE-NPO-10872-1	
		US-PATENT-4,132,068				US-PATENT-APPL-SN-805549	
N79-14108*	c 08	NASA-CASE-LAR-11868-2				US-PATENT-CLASS-179-100.2CH	
		US-PATENT-APPL-SN-651002				US-PATENT-CLASS-340-174.1M	
		US-PATENT-APPL-SN-779429				US-PATENT-CLASS-346-74MT	
		US-PATENT-CLASS-244-218				US-PATENT-3,626,114	
		US-PATENT-CLASS-244-46				US-PATENT-4,130,490	
		US-PATENT-CLASS-244-90R				NASA-CASE-NPO-11336-1	
		US-PATENT-4,132,375				NASA-CASE-NPO-13247-1	
N79-14156*	c 24	NASA-CASE-GSC-12207-1				US-PATENT-APPL-SN-302913	
		US-PATENT-APPL-SN-844344				US-PATENT-CLASS-117-107	
		US-PATENT-CLASS-106-296				US-PATENT-CLASS-117-119	
		US-PATENT-CLASS-106-84				US-PATENT-CLASS-117-234	
		US-PATENT-CLASS-252-518				US-PATENT-CLASS-117-235	
		US-PATENT-4,111,851				US-PATENT-CLASS-117-237	
N79-14169*	c 25	NASA-CASE-ARC-11121-1				US-PATENT-CLASS-117-239	
		US-PATENT-APPL-SN-850507				US-PATENT-CLASS-117-240	
		US-PATENT-CLASS-204-180G				US-PATENT-CLASS-148-121	
		US-PATENT-CLASS-204-180S				US-PATENT-CLASS-148-6	
		US-PATENT-CLASS-204-299R				US-PATENT-CLASS-75-134D	
		US-PATENT-CLASS-23-230B				US-PATENT-3,837,908	
		US-PATENT-CLASS-424-12				NASA-CASE-ARC-11040-1	
		US-PATENT-4,130,471				US-PATENT-APPL-SN-778195	
N79-14213*	c 27	NASA-CASE-NPO-13690-2				US-PATENT-CLASS-156-331	
		US-PATENT-APPL-SN-858766				US-PATENT-CLASS-428-117	
		US-PATENT-CLASS-264-60				US-PATENT-CLASS-428-119	
		US-PATENT-CLASS-75-203				US-PATENT-CLASS-428-375	
		US-PATENT-CLASS-75-205				US-PATENT-CLASS-428-458	
		US-PATENT-CLASS-75-206				US-PATENT-CLASS-428-73	
		US-PATENT-CLASS-75-212				US-PATENT-4,135,019	
		US-PATENT-CLASS-75-226				NASA-CASE-GSC-12168-1	
		US-PATENT-4,131,459				US-PATENT-APPL-SN-838337	
N79-14214*	c 27	NASA-CASE-ARC-10892-2				US-PATENT-CLASS-165-30	
		US-PATENT-APPL-SN-589172				US-PATENT-CLASS-174-15CA	
		US-PATENT-APPL-SN-767912				US-PATENT-CLASS-250-352	
		US-PATENT-CLASS-427-294				US-PATENT-CLASS-62-514R	
		US-PATENT-CLASS-427-41				US-PATENT-4,134,447	
		US-PATENT-CLASS-428-411				NASA-CASE-MFS-23659-1	
		US-PATENT-4,132,829				US-PATENT-APPL-SN-782462	
N79-14228*	c 28	NASA-CASE-NPO-10866-1				US-PATENT-CLASS-323-44F	
		US-PATENT-APPL-SN-849274				US-PATENT-CLASS-336-DIG.1	
		US-PATENT-CLASS-149-19.9				US-PATENT-4,135,127	
		US-PATENT-CLASS-149-19.92				NASA-CASE-LEW-11583-1	
		US-PATENT-CLASS-149-20				US-PATENT-APPL-SN-414042	
		US-PATENT-4,111,729				US-PATENT-CLASS-55-118	
N79-14267*	c 32	NASA-CASE-NPO-13982-1				US-PATENT-CLASS-55-122	
						US-PATENT-CLASS-55-127	
		US-PATENT-APPL-SN-782464					
		US-PATENT-CLASS-329-122					
		US-PATENT-CLASS-343-14					
		US-PATENT-CLASS-364-458					
		US-PATENT-CLASS-364-604					
		US-PATENT-CLASS-364-728					
		US-PATENT-4,112,497					
N79-14268*	c 32	NASA-CASE-NPO-14019-1					
		US-PATENT-APPL-SN-843308					
		US-PATENT-CLASS-343-100CL					
		US-PATENT-CLASS-343-5CM					
		US-PATENT-4,132,989					
N79-14305*	c 33	NASA-CASE-KSC-11057-1					
		US-PATENT-APPL-SN-835544					
		US-PATENT-CLASS-324-102					
		US-PATENT-CLASS-324-112					
		US-PATENT-CLASS-324-113					
		US-PATENT-CLASS-324-133					
		US-PATENT-CLASS-324-72					
		US-PATENT-4,112,357					
N79-14345*	c 35	NASA-CASE-LEW-12661-1					
		US-PATENT-APPL-SN-837796					
		US-PATENT-CLASS-73-115					
		US-PATENT-4,111,041					
N79-14346*	c 35	NASA-CASE-LEW-12174-2					
		US-PATENT-APPL-SN-667929					
		US-PATENT-APPL-SN-853679					
		US-PATENT-CLASS-136-202					
		US-PATENT-CLASS-136-236					
		US-PATENT-4,111,718					
N79-14347*	c 35	NASA-CASE-LAR-12230-1					
		US-PATENT-APPL-SN-835628					
		US-PATENT-CLASS-73-147					
		US-PATENT-CLASS-73-4R					
		US-PATENT-CLASS-73-714					
		US-PATENT-CLASS-73-721					
		US-PATENT-CLASS-73-756					
		US-PATENT-4,111,058					
N79-14348*	c 35	NASA-CASE-NPO-13569-2					
		US-PATENT-APPL-SN-565162					
		US-PATENT-APPL-SN-804035					
		US-PATENT-CLASS-318-573					
		US-PATENT-CLASS-318-594					
		US-PATENT-CLASS-318-640					
		US-PATENT-4,132,940					
N79-14349*	c 35	NASA-CASE-LAR-11859-1					
		US-PATENT-APPL-SN-861396					
		US-PATENT-CLASS-324-57R					
		US-PATENT-4,130,795					
N79-14362*	c 36	NASA-CASE-GSC-12334-1					
		US-PATENT-APPL-SN-856464					
		US-PATENT-CLASS-324-0.5					
		US-PATENT-CLASS-331-94					
		US-PATENT-4,128,814					
N79-14382*	c 37	NASA-CASE-LAR-11900-1					
		US-PATENT-APPL-SN-775239					
		US-PATENT-CLASS-403-105					
		US-PATENT-CLASS-416-61					
		US-PATENT-CLASS-74-586					
		US-PATENT-4,111,068					
N79-14383*	c 37	NASA-CASE-NPO-13541-1					
		US-PATENT-APPL-SN-828262					
		US-PATENT-CLASS-81-119					
		US-PATENT-CLASS-81-180B					
		US-PATENT-CLASS-81-90B					
		US-PATENT-4,130,032					
N79-14398*	c 38	NASA-CASE-MSC-19672-1					
		US-PATENT-APPL-SN-696679					
		US-PATENT-CLASS-310-326					
		US-PATENT-CLASS-310-336					
		US-PATENT-CLASS-73-632					
		US-PATENT-CLASS-73-641					
		US-PATENT-CLASS-73-644					
		US-PATENT-4,122,725					
N79-14526*	c 44	NASA-CASE-NPO-13921-1					
		US-PATENT-APPL-SN-785257					
		US-PATENT-CLASS-126-270					
		US-PATENT-CLASS-126-271					
		US-PATENT-4,111,184					
N79-14527*	c 44	NASA-CASE-HQN-10888-1					
		US-PATENT-APPL-SN-760057					
		US-PATENT-CLASS-188-151A					
		US-PATENT-CLASS-188-269					
		US-PATENT-CLASS-303-92					
		US-PATENT-CLASS-415-9					
		US-PATENT-CLASS-416-2					
		US-PATENT-CLASS-74-572					
		US-PATENT-4,132,130					
N79-14528*	c 44	NASA-CASE-LEW-12236-2					
		US-PATENT-APPL-SN-760771					
		US-PATENT-APPL-SN-899123					
		US-PATENT-CLASS-136-89SJ					
		US-PATENT-CLASS-357-30					
		US-PATENT-4,131,486					
N79-14529*	c 44	NASA-CASE-NPO-13579-4					
		US-PATENT-APPL-SN-906297					



**N79-22373**

**F-59**

## N79-22474

N79-22474\* c 37 ..... NASA-CASE-MFS-23646-1  
US-PATENT-APPL-SN-891372  
US-PATENT-CLASS-138-96R  
US-PATENT-CLASS-220-266  
US-PATENT-CLASS-239-265.15  
US-PATENT-CLASS-239-288  
US-PATENT-CLASS-277-192  
US-PATENT-4,146,180  
N79-22475\* c 37 ..... NASA-CASE-LEW-11873-1  
US-PATENT-APPL-SN-814006  
US-PATENT-CLASS-277-62  
US-PATENT-CLASS-277-96.1  
US-PATENT-4,145,058  
N79-22537\* c 39 ..... NASA-CASE-LAR-12027-1  
US-PATENT-APPL-SN-889670  
US-PATENT-CLASS-73-770  
US-PATENT-CLASS-73-810  
US-PATENT-4,145,933  
N79-22679\* c 46 ..... NASA-CASE-NPO-14112-1  
US-PATENT-APPL-SN-826326  
US-PATENT-CLASS-102-21.6  
US-PATENT-CLASS-166-63  
US-PATENT-CLASS-175-1  
US-PATENT-CLASS-181-106  
US-PATENT-CLASS-181-117  
US-PATENT-4,148,375  
N79-23097\* c 08 ..... NASA-CASE-LAR-12215-1  
US-PATENT-APPL-SN-858762  
US-PATENT-CLASS-244-17.13  
US-PATENT-CLASS-244-195  
US-PATENT-CLASS-244-83G  
US-PATENT-CLASS-318-585  
US-PATENT-CLASS-318-616  
US-PATENT-CLASS-364-434  
US-PATENT-4,148,452  
N79-23310\* c 32 ..... NASA-CASE-KSC-11023-1  
US-PATENT-APPL-SN-918533  
US-PATENT-CLASS-179-1MN  
US-PATENT-CLASS-179-27CA  
US-PATENT-CLASS-179-84VF  
US-PATENT-4,153,818  
N79-23345\* c 33 ..... NASA-CASE-FRC-10116-1  
US-PATENT-APPL-SN-885049  
US-PATENT-CLASS-323-22T  
US-PATENT-4,151,456  
N79-23481\* c 44 ..... NASA-CASE-MFS-23349-1  
US-PATENT-APPL-SN-823061  
US-PATENT-CLASS-126-270  
US-PATENT-CLASS-126-271  
US-PATENT-4,148,295  
N79-23555\* c 46 ..... NASA-CASE-NPO-14255-1  
US-PATENT-APPL-SN-830458  
US-PATENT-CLASS-181-115  
US-PATENT-CLASS-181-120  
US-PATENT-CLASS-340-12R  
US-PATENT-4,153,134  
N79-23753\* c 71 ..... NASA-CASE-NPO-14134-1  
US-PATENT-APPL-SN-861392  
US-PATENT-CLASS-179-1DM  
US-PATENT-CLASS-179-1MF  
US-PATENT-CLASS-181-148  
US-PATENT-CLASS-340-8LF  
US-PATENT-4,149,034  
N79-23798\* c 76 ..... NASA-CASE-NPO-13969-1  
US-PATENT-APPL-SN-820499  
US-PATENT-CLASS-156-DIG.6-8  
US-PATENT-CLASS-156-617SP  
US-PATENT-CLASS-423-345  
US-PATENT-4,152,194  
N79-24062\* c 24 ..... NASA-CASE-ARC-11169-1  
US-PATENT-APPL-SN-940688  
US-PATENT-CLASS-428-366  
US-PATENT-4,148,962  
N79-24073\* c 25 ..... NASA-CASE-LAR-11922-1  
US-PATENT-APPL-SN-856460  
US-PATENT-CLASS-195-127  
US-PATENT-CLASS-204-195B  
US-PATENT-4,149,938  
N79-24203\* c 32 ..... NASA-CASE-LAR-12375-1  
US-PATENT-APPL-SN-900842  
US-PATENT-CLASS-73-647  
US-PATENT-CLASS-73-724  
US-PATENT-4,149,423  
N79-24210\* c 32 ..... NASA-CASE-NPO-13641-1  
US-PATENT-APPL-SN-777983  
US-PATENT-CLASS-343-100TD  
US-PATENT-4,148,031  
N79-24254\* c 33 ..... NASA-CASE-NPO-14000-1  
US-PATENT-APPL-SN-876431  
US-PATENT-CLASS-307-82  
US-PATENT-CLASS-363-56  
US-PATENT-CLASS-363-71  
US-PATENT-CLASS-363-97  
US-PATENT-4,150,425  
N79-24257\* c 33 ..... NASA-CASE-NPO-14056-1  
US-PATENT-APPL-SN-833637

N79-24285\*

c 34 ..... NASA-CASE-MSC-16841-1  
US-PATENT-APPL-SN-893382  
US-PATENT-CLASS-210-108  
US-PATENT-CLASS-210-142  
US-PATENT-CLASS-73-714  
US-PATENT-4,151,086  
N79-24431\* c 44 ..... NASA-CASE-NPO-13652-2  
US-PATENT-APPL-SN-848794  
US-PATENT-CLASS-228-5.1  
US-PATENT-CLASS-228-6  
US-PATENT-CLASS-29-57.4  
US-PATENT-CLASS-29-572  
US-PATENT-CLASS-29-739  
US-PATENT-CLASS-29-809  
US-PATENT-4,149,665  
N79-24432\* c 44 ..... NASA-CASE-NPO-13579-3  
US-PATENT-APPL-SN-762363  
US-PATENT-CLASS-126-270  
US-PATENT-CLASS-264-1  
US-PATENT-CLASS-264-33  
US-PATENT-CLASS-264-34  
US-PATENT-CLASS-264-35  
US-PATENT-CLASS-264-510  
US-PATENT-CLASS-264-516  
US-PATENT-CLASS-264-70  
US-PATENT-CLASS-264-71  
US-PATENT-CLASS-350-292  
US-PATENT-CLASS-350-294  
US-PATENT-CLASS-350-296  
US-PATENT-CLASS-405-229  
US-PATENT-CLASS-405-263  
US-PATENT-4,149,817  
N79-24433\* c 44 ..... NASA-CASE-NPO-13579-2  
US-PATENT-APPL-SN-762362  
US-PATENT-CLASS-126-271  
US-PATENT-CLASS-126-400  
US-PATENT-CLASS-237-1A  
US-PATENT-CLASS-350-288  
US-PATENT-CLASS-350-299  
US-PATENT-4,149,521  
N79-24651\* c 54 ..... NASA-CASE-ARC-11058-2  
US-PATENT-APPL-SN-753965  
US-PATENT-APPL-SN-883094  
US-PATENT-CLASS-2-2.1A  
US-PATENT-CLASS-285-235  
US-PATENT-4,091,464  
US-PATENT-4,151,612  
N79-24652\* c 54 ..... NASA-CASE-NPO-13906-1  
US-PATENT-APPL-SN-837259  
US-PATENT-CLASS-3-1.1  
US-PATENT-CLASS-3-12.5  
US-PATENT-CLASS-414-6  
US-PATENT-4,149,278  
N79-24976\* c 05 ..... NASA-CASE-LEW-11890-1  
US-PATENT-APPL-SN-891244  
US-PATENT-CLASS-137-15.1  
US-PATENT-CLASS-244-53B  
US-PATENT-4,154,256  
N79-25142\* c 24 ..... NASA-CASE-MSC-12737-1  
US-PATENT-APPL-SN-788045  
US-PATENT-CLASS-102-105  
US-PATENT-CLASS-244-121  
US-PATENT-CLASS-244-163  
US-PATENT-CLASS-427-350  
US-PATENT-CLASS-427-372A  
US-PATENT-CLASS-428-137  
US-PATENT-CLASS-428-282  
US-PATENT-CLASS-428-290  
US-PATENT-CLASS-428-332  
US-PATENT-CLASS-428-447  
US-PATENT-CLASS-428-920  
US-PATENT-4,151,800  
N79-25143\* c 24 ..... NASA-CASE-GSC-11577-3  
US-PATENT-APPL-SN-322997  
US-PATENT-APPL-SN-506803  
US-PATENT-APPL-SN-645502  
US-PATENT-CLASS-156-89  
US-PATENT-CLASS-220-2.2  
US-PATENT-CLASS-65-43  
US-PATENT-3,859,714  
US-PATENT-4,155,475  
N79-25443\* c 43 ..... NASA-CASE-MFS-23720-3  
US-PATENT-APPL-SN-848420  
US-PATENT-CLASS-73-12  
US-PATENT-CLASS-73-82  
US-PATENT-4,154,084  
N79-25481\* c 44 ..... NASA-CASE-LEW-12972-1  
US-PATENT-APPL-SN-897829  
US-PATENT-CLASS-429-253  
US-PATENT-CLASS-526-7  
US-PATENT-CLASS-526-9  
US-PATENT-4,154,912

## ACCESSION NUMBER INDEX

N79-25482\* c 44 ..... NASA-CASE-NPO-14199-1  
NASA-CASE-NPO-14200-1  
US-PATENT-APPL-SN-891243  
US-PATENT-CLASS-136-89CA  
US-PATENT-CLASS-136-89CC  
US-PATENT-CLASS-136-89PC  
US-PATENT-CLASS-136-89SJ  
US-PATENT-4,153,476  
N79-26075\* c 12 ..... NASA-CASE-MFS-23460-1  
US-PATENT-APPL-SN-746578  
US-PATENT-CLASS-13-20  
US-PATENT-CLASS-13-22  
US-PATENT-CLASS-13-24  
US-PATENT-CLASS-219-410  
US-PATENT-4,158,742  
N79-26100\* c 15 ..... NASA-CASE-ARC-11104-1  
US-PATENT-APPL-SN-854920  
US-PATENT-CLASS-244-121  
US-PATENT-CLASS-260-37EP  
US-PATENT-CLASS-260-830S  
US-PATENT-CLASS-264-102  
US-PATENT-CLASS-264-145  
US-PATENT-CLASS-264-151  
US-PATENT-CLASS-264-175  
US-PATENT-CLASS-264-236  
US-PATENT-CLASS-428-220  
US-PATENT-CLASS-428-413  
US-PATENT-CLASS-428-414  
US-PATENT-CLASS-428-418  
US-PATENT-CLASS-428-421  
US-PATENT-CLASS-428-920  
US-PATENT-4,156,752  
N79-26372\* c 35 ..... NASA-CASE-LAR-11889-1  
US-PATENT-APPL-SN-662182  
US-PATENT-CLASS-308-10  
US-PATENT-CLASS-73-178R  
US-PATENT-4,156,548  
N79-26439\* c 43 ..... NASA-CASE-MFS-23726-1  
US-PATENT-APPL-SN-848418  
US-PATENT-CLASS-105-161  
US-PATENT-CLASS-299-1  
US-PATENT-CLASS-33-1N  
US-PATENT-CLASS-33-1Q  
US-PATENT-CLASS-33-174L  
US-PATENT-CLASS-364-560  
US-PATENT-4,156,971  
N79-26474\* c 44 ..... NASA-CASE-LEW-13150-1  
US-PATENT-APPL-SN-914260  
US-PATENT-CLASS-429-101  
US-PATENT-CLASS-429-15  
US-PATENT-4,159,366  
N79-26475\* c 44 ..... NASA-CASE-MFS-23540-1  
US-PATENT-APPL-SN-863773  
US-PATENT-CLASS-29-572  
US-PATENT-CLASS-29-577  
US-PATENT-CLASS-29-578  
US-PATENT-CLASS-29-580  
US-PATENT-CLASS-357-45  
US-PATENT-4,156,309  
N79-26771\* c 52 ..... NASA-CASE-ARC-10994-2  
US-PATENT-APPL-SN-759965  
US-PATENT-CLASS-128-660  
US-PATENT-CLASS-73-626  
US-PATENT-4,154,230  
N79-26772\* c 52 ..... NASA-CASE-KSC-11069-1  
US-PATENT-APPL-SN-876438  
US-PATENT-CLASS-3-1.9  
US-PATENT-CLASS-3-12  
US-PATENT-CLASS-3-2  
US-PATENT-4,158,895  
N79-27836\* c 52 ..... NASA-CASE-NPO-13910-1  
US-PATENT-APPL-SN-712270  
US-PATENT-CLASS-128-329R  
US-PATENT-CLASS-128-639  
US-PATENT-4,154,228  
N79-28253\* c 25 ..... NASA-CASE-NPO-13650-1  
US-PATENT-APPL-SN-704468  
US-PATENT-CLASS-118-49  
US-PATENT-CLASS-23-252R  
US-PATENT-CLASS-248  
US-PATENT-CLASS-253  
US-PATENT-CLASS-337  
US-PATENT-CLASS-349  
US-PATENT-CLASS-423-33.5  
US-PATENT-CLASS-427-95  
US-PATENT-4,033,286  
N79-28307\* c 27 ..... NASA-CASE-LEW-12053-2  
US-PATENT-APPL-SN-796263  
US-PATENT-CLASS-260-37N  
US-PATENT-CLASS-260-42  
US-PATENT-CLASS-260-53  
US-PATENT-CLASS-528-126  
US-PATENT-CLASS-528-127  
US-PATENT-CLASS-528-128  
US-PATENT-CLASS-528-221  
US-PATENT-CLASS-528-223

## ACCESSION NUMBER INDEX

N80-14474

				US-PATENT-CLASS-528-225	N79-33316*	c 27	NASA-CASE-LAR-12054-1	N80-10799*	c 54	NASA-CASE-MSC-16182-1
				US-PATENT-CLASS-528-227			US-PATENT-APPL-SN-839963			US-PATENT-APPL-SN-780938
				US-PATENT-CLASS-528-229			US-PATENT-CLASS-264-137			US-PATENT-CLASS-128-142R
				US-PATENT-CLASS-528-331			US-PATENT-CLASS-428-474			US-PATENT-CLASS-128-191R
				US-PATENT-CLASS-528-336			US-PATENT-CLASS-528-229			US-PATENT-CLASS-128-212
				US-PATENT-CLASS-528-337			US-PATENT-4,166,170			US-PATENT-4,168,706
				US-PATENT-CLASS-528-338	N79-33392*	c 33	NASA-CASE-XMF-04494-1	N80-14107*	c 05	NASA-CASE-ARC-11106-1
				US-PATENT-CLASS-528-342			US-PATENT-APPL-SN-547643			US-PATENT-APPL-SN-831633
				US-PATENT-CLASS-544-193			US-PATENT-CLASS-200-83			US-PATENT-CLASS-415-199
				US-PATENT-4,159,262			US-PATENT-3,378,657			US-PATENT-CLASS-416-228
N79-28342*	c 28			NASA-CASE-NPO-14260-1	N79-33393*	c 33	NASA-CASE-XMS-01244-1			US-PATENT-CLASS-416-238
				US-PATENT-APPL-SN-861390			US-PATENT-APPL-SN-20370			US-PATENT-4,168,939
				US-PATENT-CLASS-149-19.4			US-PATENT-CLASS-200-114	N80-14183*	c 18	NASA-CASE-GSC-12331-1
				US-PATENT-CLASS-149-19.9			US-PATENT-3,123,692			US-PATENT-APPL-SN-943088
				US-PATENT-CLASS-149-20	N79-33449*	c 35	NASA-CASE-XGS-01245-1			US-PATENT-CLASS-343-880
				US-PATENT-4,158,583			US-PATENT-APPL-SN-134619			US-PATENT-CLASS-343-883
N79-28370*	c 31			NASA-CASE-MFS-23721-1			US-PATENT-CLASS-338-18			US-PATENT-4,176,360
				US-PATENT-APPL-SN-847277			US-PATENT-3,119,086	N80-14188*	c 20	NASA-CASE-XLE-02062-1
				US-PATENT-CLASS-343-14			NASA-CASE-XGS-01293-1			US-PATENT-APPL-SN-545793
				US-PATENT-CLASS-343-5NA	N79-33450*	c 35	US-PATENT-APPL-SN-150690			US-PATENT-CLASS-60-203
				US-PATENT-4,161,731			US-PATENT-CLASS-73-400			US-PATENT-CLASS-60-259
N79-28415*	c 33			NASA-CASE-MSC-16697-1			US-PATENT-3,190,124			US-PATENT-4,171,615
				US-PATENT-APPL-SN-885067	N79-33467*	c 37	NASA-CASE-XMS-01077-1	N80-14229*	c 26	NASA-CASE-NPO-14474-1
				US-PATENT-CLASS-307-119			US-PATENT-APPL-SN-228049			US-PATENT-APPL-SN-918537
				US-PATENT-CLASS-307-98			US-PATENT-CLASS-312-319			US-PATENT-CLASS-423-149
				US-PATENT-CLASS-361-170			US-PATENT-3,123,418			US-PATENT-CLASS-423-293
N79-28416*	c 33			NASA-CASE-GSC-12171-1	N79-33468*	c 37	NASA-CASE-HON-00573-1			US-PATENT-CLASS-423-348
				US-PATENT-APPL-SN-878542			US-PATENT-APPL-SN-129379			US-PATENT-CLASS-423-417
				US-PATENT-CLASS-343-909			US-PATENT-CLASS-137-14			US-PATENT-CLASS-423-625
				US-PATENT-4,160,254			US-PATENT-3,134,389			US-PATENT-4,172,883
N79-28527*	c 35			NASA-CASE-NPO-13953-1	N79-33469*	c 37	NASA-CASE-XGS-01286-1	N80-14281*	c 32	NASA-CASE-NPO-13830-1
				US-PATENT-APPL-SN-880727			US-PATENT-APPL-SN-142583			US-PATENT-APPL-SN-703905
				US-PATENT-CLASS-356-237			US-PATENT-CLASS-251-172			US-PATENT-APPL-SN-834257
				US-PATENT-CLASS-356-404			US-PATENT-3,233,862			US-PATENT-CLASS-333-81R
				US-PATENT-4,160,601	N79-34011*	c 74	NASA-CASE-NPO-14066-1			US-PATENT-CLASS-343-18A
N79-28549*	c 37			NASA-CASE-GSC-12297-1			US-PATENT-APPL-SN-827464			US-PATENT-CLASS-343-909
				US-PATENT-APPL-SN-880838			US-PATENT-CLASS-250-216			US-PATENT-4,164,718
				US-PATENT-CLASS-165-105			US-PATENT-CLASS-250-551	N80-14330*	c 33	NASA-CASE-NPO-10857-1
				US-PATENT-CLASS-357-74			US-PATENT-4,166,959			US-PATENT-APPL-SN-888362
				US-PATENT-CLASS-357-79	N80-10278*	c 20	NASA-CASE-MFS-23642-1			US-PATENT-CLASS-315-145
				US-PATENT-CLASS-357-81			US-PATENT-APPL-SN-923758			US-PATENT-CLASS-315-260
				US-PATENT-CLASS-357-82			US-PATENT-CLASS-137-177			US-PATENT-CLASS-315-334
				US-PATENT-CLASS-357-83			US-PATENT-CLASS-137-209			US-PATENT-3,635,537
				US-PATENT-4,161,747			US-PATENT-CLASS-137-574	N80-14332*	c 33	NASA-CASE-NPO-14350-1
N79-28550*	c 37			NASA-CASE-GSC-12274-1			US-PATENT-CLASS-137-576			US-PATENT-APPL-SN-921627
				US-PATENT-APPL-SN-909100			US-PATENT-CLASS-137-590			US-PATENT-CLASS-250-310
				US-PATENT-CLASS-251-7			US-PATENT-CLASS-244-135R			US-PATENT-CLASS-250-492A
				US-PATENT-CLASS-72-436			US-PATENT-4,168,718			US-PATENT-CLASS-324-158T
				US-PATENT-CLASS-72-451	N80-10358*	c 27	NASA-CASE-MSC-14903-2			US-PATENT-4,172,228
				US-PATENT-CLASS-72-470			US-PATENT-APPL-SN-706424	N80-14371*	c 35	NASA-CASE-LAR-11690-1
				US-PATENT-4,159,634			US-PATENT-APPL-SN-907435			US-PATENT-APPL-SN-928129
N79-28551*	c 37			NASA-CASE-ARC-11052-1			US-PATENT-CLASS-260-926			US-PATENT-CLASS-73-655
				US-PATENT-APPL-SN-826202			US-PATENT-4,092,466			US-PATENT-CLASS-73-661
				US-PATENT-CLASS-414-4			US-PATENT-4,168,287			US-PATENT-4,171,645
				US-PATENT-4,160,508	N80-10374*	c 28	NASA-CASE-NPO-13849-1	N80-14384*	c 36	NASA-CASE-GSC-12237-1
N79-31228*	c 09			NASA-CASE-LAR-12149-2			NASA-CASE-NPO-13907-1			US-PATENT-APPL-SN-837795
				US-PATENT-APPL-SN-829314			US-PATENT-APPL-SN-668783			US-PATENT-CLASS-331-94.5C
				US-PATENT-APPL-SN-928131			US-PATENT-CLASS-123-DIG.12			US-PATENT-CLASS-331-94.5P
				US-PATENT-CLASS-35-12E			US-PATENT-CLASS-123-179R			US-PATENT-4,173,001
				US-PATENT-CLASS-35-12H			US-PATENT-CLASS-123-3	N80-14395*	c 37	NASA-CASE-XNP-08835-1
				US-PATENT-4,164,079			US-PATENT-CLASS-23-288R			US-PATENT-APPL-SN-534931
N79-31347*	c 24			NASA-CASE-GSC-12303-1			US-PATENT-CLASS-423-650			US-PATENT-CLASS-204-224
				US-PATENT-APPL-SN-862880			US-PATENT-CLASS-48-DIG.8			US-PATENT-3,352,774
				US-PATENT-CLASS-106-74			US-PATENT-CLASS-48-10.3	N80-14397*	c 37	NASA-CASE-MFS-23284-1
				US-PATENT-CLASS-106-84			US-PATENT-CLASS-48-102A			US-PATENT-APPL-SN-753103
				US-PATENT-4,162,169			US-PATENT-CLASS-48-107			US-PATENT-CLASS-204-180G
N79-31523*	c 34			NASA-CASE-GSC-12253-1			US-PATENT-CLASS-48-117			US-PATENT-CLASS-204-299R
				US-PATENT-APPL-SN-853677			US-PATENT-CLASS-48-61			US-PATENT-4,040,940
				US-PATENT-CLASS-165-105			US-PATENT-CLASS-60-300	N80-14398*	c 37	NASA-CASE-GSC-12322-1
				US-PATENT-CLASS-165-32			US-PATENT-CLASS-60-606			US-PATENT-APPL-SN-907436
				US-PATENT-CLASS-244-1R			US-PATENT-4,033,133			US-PATENT-CLASS-244-161
				US-PATENT-CLASS-244-163	N80-10494*	c 37	NASA-CASE-NPO-14384-1			US-PATENT-CLASS-269-156
				US-PATENT-4,162,701			US-PATENT-APPL-SN-880728			US-PATENT-CLASS-294-113
N79-31706*	c 43			NASA-CASE-MFS-23725-1			US-PATENT-CLASS-210-186			US-PATENT-CLASS-294-86R
				US-PATENT-APPL-SN-848793			US-PATENT-CLASS-210-340			US-PATENT-CLASS-414-1
				US-PATENT-CLASS-250-253			US-PATENT-CLASS-239-102			US-PATENT-4,173,324
				US-PATENT-CLASS-250-272			US-PATENT-CLASS-239-302	N80-14423*	c 43	NASA-CASE-MFS-23720-2
				US-PATENT-4,165,460			US-PATENT-CLASS-422-187			US-PATENT-APPL-SN-848421
N79-31752*	c 44			NASA-CASE-NPO-14205-1			US-PATENT-CLASS-422-199			US-PATENT-CLASS-73-12
				US-PATENT-APPL-SN-920879			US-PATENT-CLASS-422-208			US-PATENT-CLASS-73-82
				US-PATENT-CLASS-106-1			US-PATENT-CLASS-422-235			US-PATENT-4,157,655
				US-PATENT-CLASS-106-1.2			US-PATENT-CLASS-422-242	N80-14472*	c 44	NASA-CASE-LEW-12586-1
				US-PATENT-CLASS-136-89CC			US-PATENT-CLASS-423-350			US-PATENT-APPL-SN-916655
				US-PATENT-CLASS-252-514	N80-10507*	c 39	NASA-CASE-NPO-14192-1			US-PATENT-CLASS-307-63
				US-PATENT-CLASS-29-572			US-PATENT-APPL-SN-830562			US-PATENT-CLASS-307-66
				US-PATENT-CLASS-29-589			US-PATENT-CLASS-181-102			US-PATENT-CLASS-323-15
				US-PATENT-CLASS-357-30			US-PATENT-CLASS-181-105			US-PATENT-CLASS-323-19
				US-PATENT-CLASS-357-65			US-PATENT-CLASS-367-26			US-PATENT-4,175,249
				US-PATENT-CLASS-357-67			US-PATENT-CLASS-467-28	N80-14473*	c 44	NASA-CASE-MFS-23727-1
				US-PATENT-CLASS-427-88			US-PATENT-4,168,483			US-PATENT-APPL-SN-856465
				US-PATENT-4,163,678	N80-10709*	c 46	NASA-CASE-NPO-14231-1			US-PATENT-CLASS-126-438
N79-31753*	c 44			NASA-CASE-NPO-14467-1			US-PATENT-APPL-SN-903019			US-PATENT-CLASS-126-442
				US-PATENT-APPL-SN-946994			US-PATENT-CLASS-175-78			US-PATENT-CLASS-350-295
				US-PATENT-CLASS-136-89PC			US-PATENT-CLASS-73-155			US-PATENT-CLASS-350-296
				US-PATENT-4,162,928			US-PATENT-4,167,111	N80-14474*	c 44	NASA-CASE-NPO-13652-3

			US-PATENT-APPL-SN-809890				US-PATENT-CLASS-73-188				US-PATENT-CLASS-156-278
			US-PATENT-APPL-SN-891358				US-PATENT-CLASS-73-189				US-PATENT-CLASS-156-285
			US-PATENT-CLASS-136-89P				US-PATENT-CLASS-73-212				US-PATENT-CLASS-156-303
			US-PATENT-CLASS-29-572				US-PATENT-4,184,149				US-PATENT-CLASS-156-312
			US-PATENT-CLASS-29-588	N80-18039*	c 07		NASA-CASE-LEW-12971-1				US-PATENT-4,184,903
			US-PATENT-CLASS-29-627				US-PATENT-APPL-SN-858936	N80-18551*	c 44		NASA-CASE-NPO-14096-1
			US-PATENT-4,133,697				US-PATENT-CLASS-60-240				US-PATENT-APPL-SN-928128
			US-PATENT-4,173,820				US-PATENT-CLASS-60-39.03				US-PATENT-CLASS-324-158D
N80-14579*	c 45		NASA-CASE-NPO-14340-1				US-PATENT-CLASS-60-39.27				US-PATENT-CLASS-324-404
			US-PATENT-APPL-SN-946992				US-PATENT-4,184,327				US-PATENT-4,184,111
			US-PATENT-CLASS-210-57	N80-18097*	c 20		NASA-CASE-MS-18179-1	N80-18552*	c 44		NASA-CASE-LAR-11999-1
			US-PATENT-CLASS-210-63Z				US-PATENT-APPL-SN-931218				US-PATENT-APPL-SN-876299
			US-PATENT-CLASS-422-9				US-PATENT-CLASS-60-63Z				US-PATENT-CLASS-250-211K
			US-PATENT-4,172,786				US-PATENT-4,183,217				US-PATENT-CLASS-250-231SE
N80-14603*	c 46		NASA-CASE-NPO-14124-1	N80-18231*	c 31		NASA-CASE-NPO-14382-1				US-PATENT-4,184,072
			US-PATENT-APPL-SN-863024				US-PATENT-APPL-SN-891373	N80-18667*	c 48		NASA-CASE-MFS-23862-1
			US-PATENT-CLASS-343-100ME				US-PATENT-CLASS-261-118				US-PATENT-APPL-SN-951423
			US-PATENT-CLASS-343-112D				US-PATENT-CLASS-422-224				US-PATENT-CLASS-73-170A
			US-PATENT-4,170,776				US-PATENT-CLASS-423-350				US-PATENT-4,184,368
N80-14684*	c 52		NASA-CASE-LEW-12955-1	N80-18252*	c 32		US-PATENT-4,188,368	N80-18690*	c 52		NASA-CASE-LEW-12723-1
			US-PATENT-APPL-SN-829318				NASA-CASE-NPO-14152-1				US-PATENT-APPL-SN-829317
			US-PATENT-CLASS-128-276				US-PATENT-APPL-SN-899828				US-PATENT-CLASS-128-276
			US-PATENT-4,157,718				US-PATENT-CLASS-178-58R				US-PATENT-CLASS-128-760
N80-14687*	c 52		NASA-CASE-NPO-14101-1				US-PATENT-CLASS-179-15BA				US-PATENT-4,184,491
			US-PATENT-APPL-SN-772434				US-PATENT-4,187,394	N80-18691*	c 52		NASA-CASE-ARC-11120-1
			US-PATENT-CLASS-210-22	N80-18253*	c 32		NASA-CASE-NPO-14328-1				US-PATENT-APPL-SN-796256
			US-PATENT-CLASS-210-321B				NASA-CASE-NPO-14579-1				US-PATENT-CLASS-128-748
			US-PATENT-4,094,775				NASA-CASE-NPO-14590-1				US-PATENT-CLASS-128-903
N80-14877*	c 72		NASA-CASE-NPO-14078-1				US-PATENT-APPL-SN-956160				US-PATENT-CLASS-73-724
			US-PATENT-APPL-SN-856466				US-PATENT-CLASS-325-305				US-PATENT-4,186,749
			US-PATENT-CLASS-250-281				US-PATENT-CLASS-325-307	N80-18951*	c 76		NASA-CASE-GSC-12291-1
			US-PATENT-CLASS-250-282				US-PATENT-CLASS-325-419				US-PATENT-APPL-SN-906298
			US-PATENT-CLASS-250-423P				US-PATENT-4,186,347				US-PATENT-CLASS-125-23R
			US-PATENT-4,158,775	N80-18285*	c 33		NASA-CASE-NPO-14229-1				US-PATENT-CLASS-269-21
N80-16116*	c 25		NASA-CASE-ARC-11107-1				US-PATENT-APPL-SN-835419				US-PATENT-CLASS-51-235
			US-PATENT-APPL-SN-883961				US-PATENT-APPL-SN-949886				US-PATENT-CLASS-83-152
			US-PATENT-CLASS-521-124				US-PATENT-CLASS-200-153S				US-PATENT-CLASS-83-870
			US-PATENT-CLASS-521-125				US-PATENT-CLASS-200-304				US-PATENT-4,184,472
			US-PATENT-CLASS-521-127				US-PATENT-CLASS-333-262	N80-20224*	c 02		NASA-CASE-LAR-12261-1
			US-PATENT-CLASS-521-157				US-PATENT-4,187,416				US-PATENT-APPL-SN-964009
			US-PATENT-CLASS-528-73	N80-18286*	c 33		NASA-CASE-GSC-12347-1				US-PATENT-CLASS-73-147
			US-PATENT-4,177,333				US-PATENT-APPL-SN-868249				US-PATENT-CLASS-73-205L
N80-16158*	c 27		NASA-CASE-LAR-12099-1				US-PATENT-CLASS-174-142				US-PATENT-4,188,823
			US-PATENT-APPL-SN-906299				US-PATENT-CLASS-174-73R	N80-20334*	c 25		NASA-CASE-NPO-14079-1
			US-PATENT-CLASS-528-207				US-PATENT-4,185,164				US-PATENT-APPL-SN-958573
			US-PATENT-CLASS-528-208	N80-18287*	c 33		NASA-CASE-NPO-14224-1				US-PATENT-CLASS-250-307
			US-PATENT-4,180,648				US-PATENT-APPL-SN-951829				US-PATENT-CLASS-250-308
N80-16163* #	c 27		NASA-CASE-NPO-14021-2				US-PATENT-CLASS-310-306				US-PATENT-4,194,115
			US-PATENT-APPL-SN-106188				US-PATENT-CLASS-343-100R	N80-20402*	c 28		NASA-CASE-LEW-12081-2
N80-16261* #	c 32		NASA-CASE-NPO-14362-1				US-PATENT-CLASS-343-100ST				US-PATENT-APPL-SN-676432
			US-PATENT-APPL-SN-106118				US-PATENT-4,187,506				US-PATENT-APPL-SN-837794
N80-16321*	c 36		NASA-CASE-LAR-12176-1	N80-18357*	c 35		NASA-CASE-NPO-14501-1				US-PATENT-CLASS-149-1
			US-PATENT-APPL-SN-929083				US-PATENT-APPL-SN-918535				US-PATENT-CLASS-423-648R
			US-PATENT-CLASS-332-751				US-PATENT-CLASS-264-40.4				US-PATENT-4,193,827
			US-PATENT-CLASS-350-359				US-PATENT-CLASS-73-343R	N80-20448*	c 32		NASA-CASE-NPO-14480-1
			US-PATENT-CLASS-356-243				US-PATENT-CLASS-73-56				US-PATENT-APPL-SN-910707
			US-PATENT-CLASS-356-28				US-PATENT-4,185,493				US-PATENT-CLASS-325-14
N80-16452*	c 44		US-PATENT-4,176,950	N80-18358*	c 35		NASA-CASE-LAR-12269-1				US-PATENT-CLASS-325-4
			NASA-CASE-MFS-23518-3				US-PATENT-APPL-SN-934576				US-PATENT-CLASS-325-8
			US-PATENT-APPL-SN-829390				US-PATENT-CLASS-73-4R				US-PATENT-CLASS-325-9
			US-PATENT-APPL-SN-910793				US-PATENT-CLASS-73-40	N80-20487*	c 33		NASA-CASE-LEW-13148-1
			US-PATENT-CLASS-126-417				US-PATENT-4,182,158				US-PATENT-APPL-SN-964754
			US-PATENT-CLASS-126-901	N80-18359*	c 35		NASA-CASE-GSC-12219-1				US-PATENT-CLASS-429-101
			US-PATENT-CLASS-428-629				US-PATENT-APPL-SN-891356				US-PATENT-CLASS-429-105
			US-PATENT-CLASS-428-650				US-PATENT-CLASS-325-363				US-PATENT-CLASS-429-107
			US-PATENT-CLASS-428-658				US-PATENT-CLASS-343-100ME				US-PATENT-CLASS-429-109
			US-PATENT-CLASS-428-675				US-PATENT-CLASS-356-216				US-PATENT-4,192,910
			US-PATENT-CLASS-428-680				US-PATENT-CLASS-73-355R	N80-20559*	c 35		NASA-CASE-LAR-12304-1
			US-PATENT-4,104,134				US-PATENT-4,178,100				US-PATENT-APPL-SN-928130
N80-16714*	c 51		NASA-CASE-MS-16260-1	N80-18364* #	c 35		NASA-CASE-NPO-13606-2				US-PATENT-CLASS-29-25.35
			US-PATENT-APPL-SN-876440				US-PATENT-APPL-SN-065676				US-PATENT-CLASS-310-311
			US-PATENT-CLASS-23-927	N80-18372*	c 36		NASA-CASE-NPO-14254-1				US-PATENT-CLASS-310-311
			US-PATENT-CLASS-422-52				US-PATENT-APPL-SN-876432				US-PATENT-CLASS-310-327
			US-PATENT-CLASS-435-34				US-PATENT-CLASS-330-4				US-PATENT-CLASS-310-334
			US-PATENT-4,176,007				US-PATENT-CLASS-331-94				US-PATENT-CLASS-310-360
N80-16715*	c 51		NASA-CASE-MFS-23883-1				US-PATENT-CLASS-333-24R				US-PATENT-4,195,244
			US-PATENT-APPL-SN-017888				US-PATENT-4,187,470	N80-20560*	c 35		NASA-CASE-FRC-10093-1
			US-PATENT-CLASS-204-180R	N80-18393*	c 37		NASA-CASE-ARC-11157-1				US-PATENT-APPL-SN-878539
			US-PATENT-CLASS-204-299R				US-PATENT-APPL-SN-935827				US-PATENT-CLASS-219-85CA
			US-PATENT-CLASS-424-12				US-PATENT-CLASS-220-423				US-PATENT-CLASS-219-85CM
			US-PATENT-4,181,589				US-PATENT-CLASS-220-445				US-PATENT-CLASS-219-85R
N80-16725*	c 52		NASA-CASE-NPO-14092-1				US-PATENT-CLASS-220-901				US-PATENT-CLASS-338-2
			US-PATENT-APPL-SN-807597				US-PATENT-4,184,609	N80-20563*	c 35		NASA-CASE-NPO-14093-1
			US-PATENT-CLASS-128-DIG.9	N80-18400* #	c 37		NASA-CASE-NPO-12131-3				US-PATENT-APPL-SN-880729
			US-PATENT-CLASS-128-348				US-PATENT-APPL-SN-096255				US-PATENT-CLASS-356-346
			US-PATENT-CLASS-128-6	N80-18498*	c 43		NASA-CASE-LAR-12344-1				US-PATENT-4,193,693
			US-PATENT-CLASS-138-103				US-PATENT-APPL-SN-945041				NASA-CASE-NPO-14237-1
			US-PATENT-CLASS-138-133				US-PATENT-CLASS-343-18B	N80-20808*	c 44		US-PATENT-APPL-SN-897831
			US-PATENT-CLASS-138-33				US-PATENT-CLASS-343-18D				US-PATENT-CLASS-126-263
			US-PATENT-CLASS-219-201				US-PATENT-CLASS-343-5CM				US-PATENT-CLASS-149-15
			US-PATENT-CLASS-219-522				US-PATENT-CLASS-343-5W				US-PATENT-CLASS-149-37
			US-PATENT-4,176,662				US-PATENT-4,184,155				US-PATENT-CLASS-220-429
N80-18036*	c 06		NASA-CASE-FRC-11009-1	N80-18550*	c 44		NASA-CASE-NPO-14303-1				US-PATENT-4,193,388
			US-PATENT-APPL-SN-910708				NASA-CASE-NPO-14305-1	N80-20810*	c 44		NASA-CASE-LAR-12205-1
			US-PATENT-CLASS-340-177VA				US-PATENT-APPL-SN-928133				US-PATENT-APPL-SN-900843
							US-PATENT-CLASS-156-104				

## ACCESSION NUMBER INDEX

N80-29539

				US-PATENT-CLASS-126-419				US-PATENT-APPL-SN-848419					US-PATENT-APPL-SN-956529
				US-PATENT-CLASS-126-434				US-PATENT-CLASS-73-12					US-PATENT-CLASS-250-338
				US-PATENT-CLASS-126-437				US-PATENT-CLASS-73-82					US-PATENT-CLASS-250-352
				US-PATENT-CLASS-165-32				US-PATENT-4,195,512					US-PATENT-CLASS-250-353
				US-PATENT-4,192,290				NASA-CASE-FRC-11012-1					US-PATENT-CLASS-356-328
N80-21138*	c 74			NASA-CASE-LAR-12178-1		N80-23969*	c 52	US-PATENT-APPL-SN-928137		N80-26658*	c 37		US-PATENT-4,205,229
				US-PATENT-APPL-SN-953390				US-PATENT-CLASS-128-666					NASA-CASE-LEW-12131-2
				US-PATENT-CLASS-350-25				US-PATENT-CLASS-128-690					US-PATENT-APPL-SN-801290
				US-PATENT-CLASS-350-285				US-PATENT-4,198,988					US-PATENT-APPL-SN-931090
				US-PATENT-CLASS-356-150		N80-24149*	c 74	NASA-CASE-GSC-12348-1					US-PATENT-CLASS-415-174
				US-PATENT-CLASS-356-152				US-PATENT-APPL-SN-929088					US-PATENT-CLASS-415-196
				US-PATENT-4,189,234				US-PATENT-CLASS-51-277					US-PATENT-4,135,851
N80-21140*	c 74			NASA-CASE-GSC-12357-1				US-PATENT-CLASS-51-283R		N80-27067*	c 51		US-PATENT-4,207,024
				US-PATENT-APPL-SN-943089				US-PATENT-CLASS-65-61					NASA-CASE-MS-16777-1
				US-PATENT-CLASS-250-277CH		N80-24437*	c 27	US-PATENT-4,198,788					US-PATENT-APPL-SN-893657
				US-PATENT-CLASS-250-280				NASA-CASE-LEW-13027-1					US-PATENT-CLASS-204-195B
				US-PATENT-CLASS-350-162R				US-PATENT-APPL-SN-958575					US-PATENT-CLASS-23-230B
				US-PATENT-CLASS-356-334				US-PATENT-CLASS-427-164					US-PATENT-CLASS-422-68
				US-PATENT-4,192,994				US-PATENT-CLASS-427-38					US-PATENT-CLASS-435-289
N80-21719*	c 35			NASA-CASE-GSC-12273-1				US-PATENT-CLASS-427-40					US-PATENT-CLASS-435-290
				US-PATENT-APPL-SN-897830				US-PATENT-CLASS-428-421					US-PATENT-CLASS-435-291
				US-PATENT-CLASS-244-165				US-PATENT-CLASS-428-474					US-PATENT-CLASS-435-3
				US-PATENT-CLASS-244-170				US-PATENT-4,199,650					US-PATENT-CLASS-435-311
				US-PATENT-4,193,570		N80-24438*	c 27	NASA-CASE-MS-14903-3					US-PATENT-CLASS-435-316
N80-21828*	c 44			NASA-CASE-MFS-23515-1				US-PATENT-APPL-SN-706424					US-PATENT-CLASS-435-32
				US-PATENT-APPL-SN-880726				US-PATENT-APPL-SN-907479					US-PATENT-CLASS-435-34
				US-PATENT-CLASS-415-101				US-PATENT-CLASS-260-DIG.29					US-PATENT-CLASS-435-38
				US-PATENT-CLASS-415-2				US-PATENT-CLASS-525-326					US-PATENT-CLASS-435-39
N80-23383*	c 25			US-PATENT-4,191,505				US-PATENT-CLASS-525-336		N80-27072*	c 52		US-PATENT-4,204,037
				NASA-CASE-ARC-11154-1				US-PATENT-CLASS-525-340					NASA-CASE-NPO-14212-1
				US-PATENT-APPL-SN-921626				US-PATENT-CLASS-525-374					US-PATENT-APPL-SN-838308
				US-PATENT-CLASS-521-146				US-PATENT-CLASS-525-375					US-PATENT-CLASS-128-642
				US-PATENT-CLASS-521-55				US-PATENT-CLASS-526-261					US-PATENT-CLASS-128-774
				US-PATENT-CLASS-521-918				US-PATENT-CLASS-526-275					US-PATENT-CLASS-128-782
				US-PATENT-CLASS-525-4				US-PATENT-CLASS-526-276					US-PATENT-CLASS-33-125R
				US-PATENT-CLASS-55-66				US-PATENT-CLASS-526-278					US-PATENT-CLASS-338-2
				US-PATENT-CLASS-55-67				US-PATENT-CLASS-528-481					US-PATENT-CLASS-73-781
				US-PATENT-CLASS-55-68				US-PATENT-4,200,721		N80-27163*	c 72		US-PATENT-4,204,544
				US-PATENT-CLASS-55-72		N80-24510*	c 32	NASA-CASE-NPO-14524-1					NASA-CASE-NPO-14324-1
				US-PATENT-4,198,792				NASA-CASE-NPO-14527-1					US-PATENT-APPL-SN-940970
N80-23419*	c 26			NASA-CASE-MFS-23816-1				US-PATENT-APPL-SN-957452					US-PATENT-CLASS-250-427
				US-PATENT-APPL-SN-974292				US-PATENT-CLASS-350-294					US-PATENT-CLASS-313-156
				US-PATENT-CLASS-148-32				US-PATENT-CLASS-350-6.5					US-PATENT-CLASS-313-362
				US-PATENT-CLASS-75-135				US-PATENT-CLASS-350-6.6					US-PATENT-CLASS-313-363
				US-PATENT-CLASS-75-138				US-PATENT-CLASS-356-28.5					US-PATENT-4,206,383
				US-PATENT-CLASS-75-178R				US-PATENT-4,201,468		N80-27185*	c 74		NASA-CASE-LAR-12251-1
				US-PATENT-4,198,232		N80-24573*	c 34	NASA-CASE-LEW-12441-2					US-PATENT-APPL-SN-953389
N80-23452*	c 27			NASA-CASE-ARC-10980-1				US-PATENT-APPL-SN-559846					US-PATENT-CLASS-350-175E
				US-PATENT-APPL-SN-694407				US-PATENT-APPL-SN-856462					US-PATENT-CLASS-350-226
				US-PATENT-CLASS-204-171				US-PATENT-CLASS-239-127.1					US-PATENT-4,206,970
				US-PATENT-CLASS-210-23H				US-PATENT-CLASS-60-267		N80-28300*	c 02		NASA-CASE-FRC-11024-1
				US-PATENT-CLASS-210-500M				US-PATENT-4,199,937					US-PATENT-APPL-SN-015983
				US-PATENT-CLASS-427-245		N80-24741*	c 44	NASA-CASE-NPO-14635-1					US-PATENT-CLASS-73-180
				US-PATENT-CLASS-427-41				US-PATENT-APPL-SN-008212					US-PATENT-CLASS-73-182
				US-PATENT-4,199,448				US-PATENT-CLASS-136-895G					US-PATENT-CLASS-73-861.65
N80-23471*	c 28			NASA-CASE-NPO-14109-1				US-PATENT-CLASS-156-DIG.64					US-PATENT-CLASS-73-861.66
				US-PATENT-APPL-SN-946990				US-PATENT-CLASS-156-605					US-PATENT-4,212,199
				US-PATENT-CLASS-149-108.4				US-PATENT-CLASS-156-617SP		N80-28492*	c 26		NASA-CASE-LAR-11821-1
				US-PATENT-CLASS-23-300				US-PATENT-CLASS-252-62.3E					US-PATENT-APPL-SN-023501
				US-PATENT-CLASS-23-302A				US-PATENT-4,210,622					US-PATENT-CLASS-148-131
				US-PATENT-CLASS-23-302R		N80-24906*	c 46	NASA-CASE-NPO-14558-1					US-PATENT-CLASS-266-119
				US-PATENT-CLASS-23-302T				US-PATENT-APPL-SN-945436					US-PATENT-CLASS-266-249
				US-PATENT-4,198,209				US-PATENT-CLASS-73-155					US-PATENT-CLASS-266-274
N80-23524*	c 32			NASA-CASE-NPO-14519-1				US-PATENT-4,196,619					US-PATENT-4,212,690
				US-PATENT-APPL-SN-008207		N80-26298*	c 07	NASA-CASE-ARC-10814-2		N80-28536*	c 28		NASA-CASE-NPO-14477-1
				US-PATENT-CLASS-343-786				US-PATENT-APPL-SN-684045					US-PATENT-APPL-SN-951830
				US-PATENT-CLASS-343-895				US-PATENT-APPL-SN-831632					US-PATENT-CLASS-149-19.2
				US-PATENT-4,199,764				US-PATENT-CLASS-60-39.06					US-PATENT-CLASS-149-19.9
N80-23559*	c 33			NASA-CASE-NPO-13804-1				US-PATENT-CLASS-60-733					US-PATENT-CLASS-149-20
				US-PATENT-APPL-SN-766999				US-PATENT-CLASS-60-746					US-PATENT-4,210,474
				US-PATENT-CLASS-310-319				US-PATENT-4,204,402		N80-28578*	c 32		NASA-CASE-GSC-12365-1
				US-PATENT-CLASS-331-65				NASA-CASE-MFS-23626-1					US-PATENT-APPL-SN-039031
				US-PATENT-CLASS-340-602				US-PATENT-APPL-SN-941711					US-PATENT-CLASS-343-100SA
				US-PATENT-CLASS-340-604				US-PATENT-CLASS-156-212					US-PATENT-CLASS-343-844
				US-PATENT-4,197,530				US-PATENT-CLASS-156-213					US-PATENT-CLASS-343-854
N80-23653*	c 37			NASA-CASE-MS-16938-1				US-PATENT-CLASS-156-285					US-PATENT-4,213,131
				US-PATENT-APPL-SN-938582				US-PATENT-CLASS-260-17.2		N80-28686*	c 35		NASA-CASE-LAR-11370-1
				US-PATENT-CLASS-151-41.76				US-PATENT-CLASS-264-118					US-PATENT-APPL-SN-940689
				US-PATENT-4,193,435				US-PATENT-CLASS-264-119					US-PATENT-CLASS-250-457
N80-23654*	c 37			NASA-CASE-NPO-14473-1				US-PATENT-CLASS-264-124					US-PATENT-CLASS-250-491
				US-PATENT-APPL-SN-938300				US-PATENT-4,204,899					US-PATENT-CLASS-250-513
				US-PATENT-CLASS-137-375				NASA-CASE-MS-16074-1					US-PATENT-4,213,051
				US-PATENT-CLASS-137-625.4		N80-26446*	c 27	US-PATENT-APPL-SN-747674					NASA-CASE-LAR-12285-1
				US-PATENT-CLASS-251-138				US-PATENT-CLASS-204-159.15		N80-28687*	c 35		US-PATENT-APPL-SN-929087
				US-PATENT-CLASS-251-86				US-PATENT-CLASS-204-159.19					US-PATENT-CLASS-356-244
				US-PATENT-4,195,666				US-PATENT-CLASS-525-426					US-PATENT-CLASS-356-369
N80-23655*	c 37			NASA-CASE-GSC-12318-1				US-PATENT-CLASS-8-DIG.12					US-PATENT-4,210,401
				US-PATENT-APPL-SN-894213				US-PATENT-CLASS-8-DIG.18		N80-28711*	c 37		NASA-CASE-LEW-12119-1
				US-PATENT-CLASS-219-160				US-PATENT-CLASS-8-115.5					US-PATENT-APPL-SN-672219
				US-PATENT-CLASS-219-161				US-PATENT-4,203,723					US-PATENT-CLASS-277-153
				US-PATENT-CLASS-228-212		N80-26599*	c 33	NASA-CASE-FRC-10113-1					US-PATENT-CLASS-277-193
				US-PATENT-CLASS-228-222				US-PATENT-APPL-SN-885066					US-PATENT-CLASS-277-224
				US-PATENT-CLASS-228-44.1R				US-PATENT-CLASS-324-51					US-PATENT-4,212,477
				US-PATENT-CLASS-269-287				US-PATENT-4,204,154		N80-29539*	c 32		NASA-CASE-LAR-11745-1
				US-PATENT-4,196,840		N80-26635*	c 35	NASA-CASE-NPO-14372-1					US-PATENT-APPL-SN-799025
N80-23711*	c 43			NASA-CASE-MFS-23720-1				US-PATENT-APPL-SN-846333					US-PATENT-CLASS-343-786

N80-29583* #	c 33	US-PATENT-4,089,004	US-PATENT-APPL-SN-938293	US-PATENT-CLASS-260-898
		NASA-CASE-FRC-11055-1	US-PATENT-CLASS-333-12	US-PATENT-CLASS-260-901
N80-29703*	c 37	US-PATENT-APPL-SN-172098	US-PATENT-CLASS-333-252	US-PATENT-CLASS-521-27
		NASA-CASE-NPO-14406-1	US-PATENT-CLASS-333-99S	US-PATENT-CLASS-521-32
N80-29834*	c 44	US-PATENT-APPL-SN-951828	US-PATENT-4,215,327	US-PATENT-CLASS-521-62
		US-PATENT-CLASS-125-21	NASA-CASE-NPO-14424-1	US-PATENT-4,119,581
N80-29834*	c 44	US-PATENT-CLASS-83-820	NASA-CASE-NPO-14430-1	NASA-CASE-MS-C-12631-3
		US-PATENT-4,191,159	US-PATENT-APPL-SN-918534	US-PATENT-APPL-SN-006952
N80-29834*	c 44	NASA-CASE-LAR-11551-1	US-PATENT-CLASS-324-62	US-PATENT-APPL-SN-568541
		US-PATENT-APPL-SN-883090	US-PATENT-CLASS-324-64	US-PATENT-APPL-SN-785279
N80-29835*	c 44	US-PATENT-CLASS-290-53	US-PATENT-4,218,650	US-PATENT-CLASS-156-154
		US-PATENT-CLASS-310-30	NASA-CASE-MFS-23777-1	US-PATENT-CLASS-156-160
N80-29835*	c 44	US-PATENT-4,191,893	US-PATENT-APPL-SN-931217	US-PATENT-CLASS-156-163
		NASA-CASE-NPO-13786-1	US-PATENT-CLASS-318-15	US-PATENT-CLASS-156-212
N80-31790*	c 37	US-PATENT-APPL-SN-696374	US-PATENT-CLASS-74-425	US-PATENT-CLASS-156-267
		US-PATENT-CLASS-148-1.5	US-PATENT-CLASS-74-661	US-PATENT-CLASS-156-295
N80-31790*	c 37	US-PATENT-CLASS-357-30	US-PATENT-CLASS-74-665C	US-PATENT-CLASS-156-323
		US-PATENT-CLASS-357-52	US-PATENT-4,215,592	US-PATENT-CLASS-156-331
N80-31790*	c 37	US-PATENT-CLASS-357-91	NASA-CASE-GSC-12289-1	US-PATENT-4,032,089
		US-PATENT-4,090,213	US-PATENT-APPL-SN-943086	US-PATENT-4,225,372
N80-32244*	c 76	NASA-CASE-LEW-12274-1	US-PATENT-CLASS-198-847	NASA-CASE-LAR-12054-2
		US-PATENT-APPL-SN-950876	US-PATENT-CLASS-198-848	US-PATENT-APPL-SN-011737
N80-32244*	c 76	US-PATENT-CLASS-417-383	US-PATENT-CLASS-474-205	US-PATENT-APPL-SN-839963
		US-PATENT-CLASS-60-520	US-PATENT-4,215,590	US-PATENT-CLASS-264-137
N80-32245*	c 76	US-PATENT-4,215,548	NASA-CASE-ARC-11258-1	US-PATENT-CLASS-427-385.5
		NASA-CASE-NPO-14298-1	US-PATENT-APPL-SN-185865	US-PATENT-CLASS-427-429
N80-32245*	c 76	US-PATENT-APPL-SN-938579	NASA-CASE-LEW-12940-1	US-PATENT-CLASS-428-473.5
		US-PATENT-CLASS-156-DIG.96	US-PATENT-APPL-SN-953391	US-PATENT-4,166,170
N80-32245*	c 76	US-PATENT-CLASS-422-246	US-PATENT-CLASS-313-231.4	US-PATENT-4,233,258
		US-PATENT-4,216,186	US-PATENT-CLASS-313-362	NASA-CASE-LEW-12081-3
N80-32359*	c 04	NASA-CASE-NPO-14295-1	US-PATENT-4,218,633	US-PATENT-APPL-SN-009887
		US-PATENT-APPL-SN-901055	NASA-CASE-MS-C-18255-1	US-PATENT-APPL-SN-676432
N80-32392*	c 07	US-PATENT-CLASS-156-DIG.64	US-PATENT-APPL-SN-025163	US-PATENT-APPL-SN-837794
		US-PATENT-CLASS-156-DIG.88	US-PATENT-CLASS-250-347	US-PATENT-CLASS-149-1
N80-32392*	c 07	US-PATENT-CLASS-156-601	US-PATENT-CLASS-250-352	US-PATENT-CLASS-156-344
		US-PATENT-CLASS-156-617SP	US-PATENT-CLASS-250-353	US-PATENT-CLASS-423-648R
N80-32392*	c 07	US-PATENT-4,217,165	US-PATENT-CLASS-350-55	US-PATENT-CLASS-44-7R
		NASA-CASE-NPO-14173-1	US-PATENT-CLASS-356-72	US-PATENT-CLASS-55-2
N80-32484*	c 26	US-PATENT-APPL-SN-938581	US-PATENT-4,215,273	US-PATENT-CLASS-62-12
		US-PATENT-CLASS-343-112R	NASA-CASE-LEW-11930-3	US-PATENT-CLASS-62-18
N80-32484*	c 26	US-PATENT-4,215,345	US-PATENT-APPL-SN-513611	US-PATENT-CLASS-62-40
		NASA-CASE-ARC-10977-1	US-PATENT-APPL-SN-616528	US-PATENT-CLASS-62-47
N80-32514*	c 27	US-PATENT-APPL-SN-023436	US-PATENT-APPL-SN-764245	US-PATENT-4,077,788
		US-PATENT-CLASS-239-127.3	US-PATENT-CLASS-75-200	US-PATENT-4,193,827
N80-32514*	c 27	US-PATENT-CLASS-239-265.33	US-PATENT-CLASS-75-222	US-PATENT-4,229,196
		US-PATENT-CLASS-60-264	US-PATENT-4,214,905	NASA-CASE-KSC-11064-1
N80-32514*	c 27	US-PATENT-4,214,703	NASA-CASE-MFS-25535-1	US-PATENT-APPL-SN-897840
		NASA-CASE-LEW-12542-3	US-PATENT-APPL-SN-199765	US-PATENT-CLASS-169-62
N80-32515*	c 27	US-PATENT-APPL-SN-007083	NASA-CASE-LEW-12806-2	US-PATENT-CLASS-169-70
		US-PATENT-APPL-SN-803822	US-PATENT-APPL-SN-065676	US-PATENT-4,219,084
N80-32515*	c 27	US-PATENT-CLASS-75-124	US-PATENT-APPL-SN-915050	NASA-CASE-NPO-14536-1
		US-PATENT-4,214,902	US-PATENT-CLASS-136-249	US-PATENT-APPL-SN-974471
N80-32516*	c 27	NASA-CASE-NPO-13137-1	US-PATENT-CLASS-136-291	US-PATENT-CLASS-343-100TD
		US-PATENT-APPL-SN-332123	US-PATENT-CLASS-363-147	US-PATENT-4,233,606
N80-32516*	c 27	US-PATENT-APPL-SN-374810	US-PATENT-CLASS-363-27	NASA-CASE-NPO-14749-1
		US-PATENT-CLASS-568-852	US-PATENT-CLASS-363-60	US-PATENT-APPL-SN-078521
N80-32516*	c 27	US-PATENT-CLASS-568-861	US-PATENT-4,217,633	US-PATENT-CLASS-375-107
		US-PATENT-4,118,427	NASA-CASE-ARC-11174-1	US-PATENT-CLASS-455-61
N80-32515*	c 27	NASA-CASE-NPO-13899-1	US-PATENT-APPL-SN-929086	US-PATENT-CLASS-455-619
		US-PATENT-APPL-SN-761252	US-PATENT-CLASS-260-17.2	US-PATENT-CLASS-455-71
N80-32516*	c 27	US-PATENT-APPL-SN-933186	US-PATENT-CLASS-428-114	US-PATENT-4,234,971
		US-PATENT-CLASS-260-346.3	US-PATENT-CLASS-428-528	NASA-CASE-MS-C-16800-1
N80-32516*	c 27	US-PATENT-4,196,129	US-PATENT-CLASS-428-541	US-PATENT-APPL-SN-953313
		NASA-CASE-LEW-13103-1	US-PATENT-CLASS-428-921	US-PATENT-CLASS-343-727
N80-32516*	c 27	US-PATENT-APPL-SN-971596	US-PATENT-4,209,561	US-PATENT-CLASS-343-789
		US-PATENT-CLASS-156-272	NASA-CASE-LAR-12065-1	US-PATENT-CLASS-343-797
N80-32516*	c 27	US-PATENT-CLASS-156-292	US-PATENT-APPL-SN-889671	US-PATENT-4,218,685
		US-PATENT-CLASS-204-159.11	US-PATENT-CLASS-156-330	NASA-CASE-NPO-14163-1
N80-32516*	c 27	US-PATENT-CLASS-204-159.14	US-PATENT-CLASS-428-113	US-PATENT-APPL-SN-878541
		US-PATENT-CLASS-264-212	US-PATENT-CLASS-428-114	US-PATENT-CLASS-363-56
N80-32583*	c 31	US-PATENT-CLASS-264-22	US-PATENT-CLASS-428-140	US-PATENT-CLASS-363-71
		US-PATENT-CLASS-427-44	US-PATENT-CLASS-428-413	US-PATENT-CLASS-363-78
N80-32583*	c 31	US-PATENT-CLASS-428-500	US-PATENT-CLASS-428-480	US-PATENT-4,222,098
		US-PATENT-CLASS-429-139	US-PATENT-CLASS-428-902	NASA-CASE-GSC-12411-1
N80-32583*	c 31	US-PATENT-4,218,280	US-PATENT-4,229,473	US-PATENT-APPL-SN-965367
		NASA-CASE-GSC-12191-1	NASA-CASE-NPO-14143-1	US-PATENT-CLASS-340-309.4
N80-32584*	c 31	US-PATENT-APPL-SN-009886	US-PATENT-APPL-SN-938297	US-PATENT-CLASS-340-310A
		US-PATENT-CLASS-165-16	US-PATENT-CLASS-250-343	US-PATENT-CLASS-340-310R
N80-32584*	c 31	US-PATENT-CLASS-236-13	US-PATENT-CLASS-356-437	US-PATENT-CLASS-340-870.24
		US-PATENT-CLASS-236-44C	US-PATENT-4,234,258	US-PATENT-CLASS-368-47
N80-32584*	c 31	US-PATENT-CLASS-236-49	NASA-CASE-ARC-11241-1	US-PATENT-CLASS-370-85
		US-PATENT-4,210,278	US-PATENT-APPL-SN-037066	US-PATENT-4,228,422
N80-32584*	c 31	NASA-CASE-NPO-14191-1	US-PATENT-CLASS-260-33.8F	NASA-CASE-NPO-14513-1
		US-PATENT-APPL-SN-830846	US-PATENT-CLASS-528-362	US-PATENT-APPL-SN-025162
N80-32604*	c 32	US-PATENT-CLASS-181-102	US-PATENT-CLASS-528-401	US-PATENT-CLASS-165-105
		US-PATENT-CLASS-367-27	US-PATENT-CLASS-528-422	US-PATENT-CLASS-62-514R
N80-32604*	c 32	US-PATENT-CLASS-367-36	US-PATENT-4,234,715	US-PATENT-4,218,892
		US-PATENT-CLASS-367-57	NASA-CASE-NPO-14001-1	NASA-CASE-MS-C-16973-1
N80-32604*	c 32	US-PATENT-4,214,226	US-PATENT-APPL-SN-771245	US-PATENT-APPL-SN-969756
		NASA-CASE-MS-C-18334-1	US-PATENT-CLASS-210-24R	US-PATENT-CLASS-150-11
N80-32605*	c 32	US-PATENT-APPL-SN-051270	US-PATENT-CLASS-260-17A	US-PATENT-CLASS-156-294
		US-PATENT-CLASS-343-700MS	US-PATENT-CLASS-260-2.1E	US-PATENT-CLASS-52-232
N80-32605*	c 32	US-PATENT-CLASS-343-830	US-PATENT-CLASS-260-858	US-PATENT-CLASS-52-743
		US-PATENT-4,218,682	US-PATENT-CLASS-260-886	US-PATENT-4,235,080
N80-32605*	c 32	NASA-CASE-NPO-14253-1	US-PATENT-CLASS-260-8900	NASA-CASE-NPO-14220-1
		NASA-CASE-NPO-14640-1	US-PATENT-CLASS-260-895	US-PATENT-APPL-SN-907421



		US-PATENT-CLASS-60-518				US-PATENT-CLASS-375-1				US-PATENT-CLASS-333-204
		US-PATENT-CLASS-74-417				US-PATENT-CLASS-375-115				US-PATENT-4,227,096
		US-PATENT-4,228,656				US-PATENT-CLASS-375-58		N81-17349*	c 33	NASA-CASE-MSC-16747-1
N81-14319*	c 37	NASA-CASE-LAR-11855-1				US-PATENT-4,221,005				US-PATENT-APPL-SN-974475
		US-PATENT-APPL-SN-953314		N81-15192*	c 33	NASA-CASE-NPO-14444-1				US-PATENT-CLASS-328-134
		US-PATENT-CLASS-407-117				US-PATENT-APPL-SN-017890				US-PATENT-CLASS-328-37
		US-PATENT-CLASS-407-85				US-PATENT-CLASS-332-22				US-PATENT-CLASS-328-55
		US-PATENT-CLASS-408-1R				US-PATENT-CLASS-332-23R				US-PATENT-CLASS-331-48
		US-PATENT-CLASS-82-1.2				US-PATENT-CLASS-375-54				US-PATENT-4,241,308
		US-PATENT-CLASS-82-1C				US-PATENT-CLASS-375-67		N81-17432*	c 37	NASA-CASE-NPO-14388-1
		US-PATENT-CLASS-82-36R				US-PATENT-CLASS-455-102				US-PATENT-APPL-SN-008208
		US-PATENT-4,218,941				US-PATENT-4,216,542				US-PATENT-CLASS-60-518
N81-14320*	c 37	NASA-CASE-GSC-12429-1		N81-15363*	c 37	NASA-CASE-MSC-18134-1				US-PATENT-CLASS-74-417
		US-PATENT-APPL-SN-009888				US-PATENT-APPL-SN-974472				US-PATENT-4,240,256
		US-PATENT-CLASS-244-161				US-PATENT-CLASS-277-181		N81-17433*	c 37	NASA-CASE-ARC-11251-1
		US-PATENT-CLASS-294-106				US-PATENT-CLASS-377-229				US-PATENT-APPL-SN-057465
		US-PATENT-CLASS-414-1				US-PATENT-4,219,203				US-PATENT-CLASS-128-DIG.20
		US-PATENT-4,219,171		N81-15364*	c 37	NASA-CASE-NPO-14170-1				US-PATENT-CLASS-137-549
N81-14389*	c 44	NASA-CASE-NPO-14416-1				US-PATENT-APPL-SN-860404				US-PATENT-CLASS-137-886
		US-PATENT-APPL-SN-014664				US-PATENT-CLASS-188-134				US-PATENT-CLASS-137-887
		US-PATENT-CLASS-29-DIG.1				US-PATENT-CLASS-188-180				US-PATENT-CLASS-251-216
		US-PATENT-CLASS-29-832				US-PATENT-CLASS-188-184				US-PATENT-CLASS-251-339
		US-PATENT-4,219,926				US-PATENT-CLASS-244-173				US-PATENT-4,239,057
N81-14605*	c 51	NASA-CASE-ARC-11114-1		N81-15706*	c 60	US-PATENT-4,219,107		N81-17499*	c 43	NASA-CASE-FRC-11013-1
		US-PATENT-APPL-SN-951422				NASA-CASE-NPO-14162-1				US-PATENT-APPL-SN-043912
		US-PATENT-CLASS-128-DIG.12				NASA-CASE-NPO-14167-1				US-PATENT-CLASS-244-160
		US-PATENT-CLASS-128-DIG.16				NASA-CASE-NPO-14169-1				US-PATENT-CLASS-244-49
		US-PATENT-CLASS-128-DIG.26				US-PATENT-APPL-SN-893903				US-PATENT-4,240,601
		US-PATENT-CLASS-128-DIG.6				US-PATENT-CLASS-307-219		N81-17518*	c 44	NASA-CASE-NPO-14619-1
		US-PATENT-CLASS-128-DIG.9				US-PATENT-CLASS-307-225R				US-PATENT-APPL-SN-027559
		US-PATENT-CLASS-128-204.18				US-PATENT-CLASS-307-269				US-PATENT-CLASS-126-419
		US-PATENT-CLASS-128-207.14				US-PATENT-CLASS-307-291				US-PATENT-CLASS-60-524
		US-PATENT-CLASS-128-207.28				US-PATENT-CLASS-328-192				US-PATENT-CLASS-60-641
		US-PATENT-CLASS-128-236				US-PATENT-CLASS-328-48				US-PATENT-4,236,383
		US-PATENT-4,212,297				US-PATENT-CLASS-328-71		N81-17886*	c 74	NASA-CASE-NPO-14219-1
N81-14612*	c 52	NASA-CASE-ARC-11117-1				US-PATENT-4,213,064				US-PATENT-APPL-SN-888432
		US-PATENT-APPL-SN-003693		N81-15767*	c 71	NASA-CASE-MFS-25050-1				US-PATENT-CLASS-350-301
		US-PATENT-CLASS-128-642				US-PATENT-APPL-SN-057466				US-PATENT-CLASS-354-118
		US-PATENT-4,219,027				US-PATENT-CLASS-308-10				US-PATENT-CLASS-362-11
N81-14613*	c 52	NASA-CASE-ARC-11118-2				US-PATENT-CLASS-73-505				US-PATENT-CLASS-362-241
		US-PATENT-APPL-SN-850504				US-PATENT-4,218,921				US-PATENT-4,213,684
		US-PATENT-APPL-SN-974476		N81-16209* #	c 26	NASA-CASE-LEW-23169-2		N81-17887*	c 74	NASA-CASE-NPO-14657-1
		US-PATENT-CLASS-424-274				US-PATENT-APPL-SN-191746				US-PATENT-APPL-SN-008211
		US-PATENT-4,230,717		N81-17057*	c 06	NASA-CASE-FRC-11029-1				US-PATENT-CLASS-356-432
N81-14968*	c 02	NASA-CASE-LAR-12326-1				US-PATENT-APPL-SN-164617				US-PATENT-CLASS-73-15R
		US-PATENT-APPL-SN-019541				US-PATENT-CLASS-73-147				US-PATENT-4,243,327
		US-PATENT-CLASS-102-56R				US-PATENT-CLASS-73-178R		N81-17888*	c 74	NASA-CASE-NPO-14502-1
		US-PATENT-CLASS-102-92.1				US-PATENT-4,240,290				US-PATENT-APPL-SN-965368
		US-PATENT-CLASS-244-119		N81-17170*	c 24	NASA-CASE-LEW-12493-1				US-PATENT-CLASS-356-345
		US-PATENT-CLASS-244-130				US-PATENT-APPL-SN-893857				US-PATENT-CLASS-356-352
		US-PATENT-4,225,102				US-PATENT-CLASS-156-292				US-PATENT-CLASS-356-358
N81-14999*	c 07	NASA-CASE-LEW-13201-1				US-PATENT-CLASS-228-118				US-PATENT-4,243,323
		US-PATENT-APPL-SN-038980				US-PATENT-CLASS-228-170		N81-19087*	c 05	NASA-CASE-LAR-11797-1
		US-PATENT-CLASS-137-15.1				US-PATENT-CLASS-228-174				US-PATENT-APPL-SN-969755
		US-PATENT-CLASS-181-214				US-PATENT-CLASS-228-190				US-PATENT-CLASS-244-17.25
		US-PATENT-4,220,171				US-PATENT-4,211,354				US-PATENT-CLASS-416-114
N81-15104*	c 27	NASA-CASE-NPO-10830-1		N81-17187*	c 25	NASA-CASE-NPO-13530-1				US-PATENT-CLASS-416-500
		US-PATENT-APPL-SN-825489				US-PATENT-CLASS-210-500M				US-PATENT-CLASS-74-519
		US-PATENT-CLASS-117-6				US-PATENT-CLASS-260-2.1				US-PATENT-4,245,956
		US-PATENT-CLASS-138.8R				US-PATENT-CLASS-260-2.2R		N81-19115*	c 07	NASA-CASE-LEW-12907-2
		US-PATENT-CLASS-260-33.6UB				US-PATENT-4,014,798				US-PATENT-APPL-SN-752050
		US-PATENT-CLASS-33.8UB				US-PATENT-CLASS-ARC-11248-1				US-PATENT-APPL-SN-909235
		US-PATENT-CLASS-37N		N81-17259*	c 27	US-PATENT-APPL-SN-028300				US-PATENT-CLASS-364-106
		US-PATENT-CLASS-41R				US-PATENT-CLASS-528-362				US-PATENT-CLASS-364-431
		US-PATENT-CLASS-77.5AQ				US-PATENT-CLASS-528-401				US-PATENT-CLASS-60-39.24
		US-PATENT-CLASS-77.5CH				US-PATENT-CLASS-528-422				US-PATENT-4,249,238
		US-PATENT-CLASS-859R				US-PATENT-CLASS-528-423		N81-19116*	c 07	NASA-CASE-LEW-12594-2
		US-PATENT-CLASS-94.9N				US-PATENT-4,242,498				US-PATENT-APPL-SN-741056
		US-PATENT-3,655,814		N81-17260*	c 27	NASA-CASE-LEW-13226-1				US-PATENT-APPL-SN-909608
N81-15119*	c 28	NASA-CASE-NPO-14110-1				US-PATENT-APPL-SN-070771				US-PATENT-CLASS-60-226R
		US-PATENT-APPL-SN-947000				US-PATENT-CLASS-260-326N				US-PATENT-CLASS-60-236
		US-PATENT-CLASS-149-108.4				US-PATENT-CLASS-260-326S				US-PATENT-CLASS-60-238
		US-PATENT-CLASS-23-293R				US-PATENT-CLASS-260-37EP				US-PATENT-CLASS-60-239
		US-PATENT-CLASS-252-364				US-PATENT-CLASS-528-118				US-PATENT-4,242,864
		US-PATENT-CLASS-260-96D				US-PATENT-CLASS-528-322		N81-19130*	c 08	NASA-CASE-LAR-11970-2
		US-PATENT-CLASS-423-1				US-PATENT-CLASS-538-117				US-PATENT-APPL-SN-034104
		US-PATENT-CLASS-423-131				US-PATENT-4,244,857				US-PATENT-APPL-SN-727503
		US-PATENT-CLASS-423-658.5		N81-17261*	c 27	NASA-CASE-NPO-14315-1				US-PATENT-CLASS-244-12.5
		US-PATENT-CLASS-525-384				US-PATENT-APPL-SN-900659				US-PATENT-CLASS-244-52
		US-PATENT-CLASS-526-914				US-PATENT-CLASS-201-10				US-PATENT-CLASS-244-87
		US-PATENT-CLASS-75-25				US-PATENT-CLASS-201-25				US-PATENT-4,236,684
		US-PATENT-4,229,182				US-PATENT-CLASS-201-8		N81-19242*	c 25	NASA-CASE-MFS-25000-1
N81-15154*	c 31	NASA-CASE-NPO-13758-2				US-PATENT-CLASS-44-50				US-PATENT-APPL-SN-974474
		US-PATENT-APPL-SN-623389				US-PATENT-CLASS-44-62				US-PATENT-CLASS-260-29.6RB
		US-PATENT-APPL-SN-727444				US-PATENT-4,246,001				US-PATENT-CLASS-526-201
		US-PATENT-CLASS-110-218				US-PATENT-CLASS-ARC-11253-1				US-PATENT-CLASS-526-88
		US-PATENT-CLASS-110-229		N81-17262*	c 27	US-PATENT-APPL-SN-028301				US-PATENT-4,247,434
		US-PATENT-CLASS-110-232				US-PATENT-CLASS-528-310		N81-19244*	c 25	NASA-CASE-NPO-13309-1
		US-PATENT-CLASS-110-343				US-PATENT-CLASS-528-362				US-PATENT-APPL-SN-363130
		US-PATENT-CLASS-110-347				US-PATENT-CLASS-528-401				US-PATENT-CLASS-210-24
		US-PATENT-CLASS-202-118				US-PATENT-CLASS-528-422				US-PATENT-CLASS-260-2.1E
		US-PATENT-CLASS-264-23				US-PATENT-4,245,085				US-PATENT-CLASS-260-2.2R
		US-PATENT-CLASS-425-378R		N81-17348*	c 33	NASA-CASE-MFS-23845-1				US-PATENT-CLASS-264-41
		US-PATENT-4,206,713				US-PATENT-APPL-SN-938298				US-PATENT-3,944,485
N81-15179*	c 32	NASA-CASE-MSC-18035-1				US-PATENT-CLASS-307-233R		N81-19296*	c 27	NASA-CASE-LEW-12933-1
		US-PATENT-APPL-SN-041142				US-PATENT-CLASS-307-306				US-PATENT-APPL-SN-027557

				US-PATENT-CLASS-260-33.4R	N81-22360* #	c 37	NASA-CASE-LEW-12445-1	US-PATENT-CLASS-422-3
				US-PATENT-CLASS-427-221			US-PATENT-APPL-SN-238887	US-PATENT-CLASS-422-30
				US-PATENT-CLASS-427-379	N81-24106*	c 08	NASA-CASE-LAR-12268-1	US-PATENT-CLASS-422-34
				US-PATENT-CLASS-528-353			US-PATENT-APPL-SN-015996	US-PATENT-4,250,143
				US-PATENT-4,244,853			US-PATENT-CLASS-244-181	N81-24779* c 62
N81-19343*	c 31			NASA-CASE-GSC-12513-1			US-PATENT-CLASS-244-195	NASA-CASE-KSC-11048-1
				US-PATENT-APPL-SN-053571			US-PATENT-CLASS-318-584	US-PATENT-APPL-SN-023437
				US-PATENT-CLASS-109-49.5			US-PATENT-CLASS-364-434	US-PATENT-CLASS-364-200
				US-PATENT-CLASS-109-58.5			US-PATENT-4,261,537	US-PATENT-4,254,464
				US-PATENT-CLASS-220-82R	N81-24256*	c 27	NASA-CASE-ARC-11253-3	N81-24900* c 74
				US-PATENT-CLASS-220-89A			US-PATENT-APPL-SN-028301	NASA-CASE-GSC-12528-1
				US-PATENT-CLASS-49-171			US-PATENT-APPL-SN-145283	US-PATENT-APPL-SN-111439
				US-PATENT-4,245,566			US-PATENT-CLASS-260-465.5R	US-PATENT-CLASS-250-368
N81-19389*	c 33			NASA-CASE-NPO-14297-1			US-PATENT-CLASS-528-310	US-PATENT-CLASS-250-483
				US-PATENT-APPL-SN-938299			US-PATENT-CLASS-564-229	US-PATENT-4,262,206
				US-PATENT-CLASS-156-DIG.96			US-PATENT-4,269,787	N81-25159* c 25
				US-PATENT-CLASS-156-608	N81-24257*	c 27	NASA-CASE-LEW-13135-2	NASA-CASE-NPO-15102-1
				US-PATENT-CLASS-219-10.49R			US-PATENT-APPL-SN-113014	US-PATENT-APPL-SN-154726
				US-PATENT-CLASS-219-10.67			US-PATENT-APPL-SN-971475	US-PATENT-CLASS-250-350
				US-PATENT-CLASS-422-246			US-PATENT-CLASS-264-104	US-PATENT-CLASS-356-432
				US-PATENT-CLASS-422-249			US-PATENT-CLASS-264-105	US-PATENT-4,253,769
				US-PATENT-CLASS-432-264			US-PATENT-CLASS-429-139	N81-25188* c 26
				US-PATENT-4,242,553			US-PATENT-CLASS-429-249	NASA-CASE-LEW-13088-1
N81-19392*	c 33			NASA-CASE-GSC-12360-1			US-PATENT-CLASS-429-253	US-PATENT-APPL-SN-089779
				US-PATENT-APPL-SN-041164			US-PATENT-CLASS-429-27	US-PATENT-CLASS-428-471
				US-PATENT-CLASS-363-101			US-PATENT-CLASS-429-28	US-PATENT-CLASS-428-632
				US-PATENT-CLASS-363-21			US-PATENT-CLASS-525-61	US-PATENT-CLASS-428-678
				US-PATENT-4,245,286			US-PATENT-4,262,067	US-PATENT-CLASS-428-679
N81-19393*	c 33			NASA-CASE-NPO-14505-1	N81-24258*	c 27	NASA-CASE-NPO-10424-1	US-PATENT-CLASS-428-680
				US-PATENT-APPL-SN-956166			US-PATENT-APPL-SN-692636	US-PATENT-4,255,495
				US-PATENT-CLASS-363-21			US-PATENT-CLASS-260-37	N81-25209* c 27
				US-PATENT-CLASS-363-36			US-PATENT-3,651,008	NASA-CASE-MSC-18107-1
				US-PATENT-CLASS-363-40	N81-24280*	c 28	NASA-CASE-MSC-16394-1	US-PATENT-APPL-SN-956168
				US-PATENT-CLASS-363-47			US-PATENT-APPL-SN-161255	US-PATENT-CLASS-430-271
				US-PATENT-4,245,288			US-PATENT-CLASS-204-129	US-PATENT-CLASS-430-325
N81-19426*	c 35			NASA-CASE-MFS-23923-1			US-PATENT-CLASS-204-252	US-PATENT-CLASS-430-329
				US-PATENT-APPL-SN-053569			US-PATENT-CLASS-204-266	US-PATENT-CLASS-430-330
				US-PATENT-CLASS-73-190R			US-PATENT-CLASS-204-290F	US-PATENT-4,262,080
				US-PATENT-4,248,083			US-PATENT-CLASS-204-290R	N81-25258* c 31
N81-19427*	c 35			NASA-CASE-MSC-16370-1			US-PATENT-CLASS-204-291	NASA-CASE-LAR-12095-1
				US-PATENT-APPL-SN-061556			US-PATENT-4,263,112	US-PATENT-APPL-SN-811401
				US-PATENT-CLASS-329-107	N81-24338*	c 33	NASA-CASE-NPO-14617-1	US-PATENT-CLASS-244-158R
				US-PATENT-CLASS-329-50			US-PATENT-APPL-SN-051269	US-PATENT-CLASS-403-171
				US-PATENT-CLASS-375-1			US-PATENT-CLASS-330-8	US-PATENT-CLASS-428-902
				US-PATENT-CLASS-375-104			US-PATENT-4,262,259	US-PATENT-CLASS-52-309.1
				US-PATENT-CLASS-375-34	N81-24422*	c 36	NASA-CASE-LAR-12177-1	US-PATENT-CLASS-52-648
				US-PATENT-CLASS-375-99			US-PATENT-APPL-SN-027558	US-PATENT-CLASS-52-726
				US-PATENT-4,241,312			US-PATENT-CLASS-356-28.5	US-PATENT-4,259,821
N81-19455*	c 37			NASA-CASE-LEW-12982-1			US-PATENT-CLASS-356-356	N81-25259* c 31
				US-PATENT-APPL-SN-929084			US-PATENT-CLASS-356-358	NASA-CASE-LAR-12077-1
				US-PATENT-CLASS-204-192E			US-PATENT-4,255,048	US-PATENT-APPL-SN-014663
				US-PATENT-CLASS-228-116	N81-24442*	c 37	NASA-CASE-LEW-12991-1	US-PATENT-CLASS-52-645
				US-PATENT-CLASS-228-205			US-PATENT-APPL-SN-961832	US-PATENT-4,259,825
				US-PATENT-4,245,768			US-PATENT-CLASS-277-96	N81-25278* c 32
N81-19558*	c 44			NASA-CASE-NPO-14670-1			US-PATENT-4,260,166	NASA-CASE-NPO-14588-1
				US-PATENT-APPL-SN-043941	N81-24443*	c 37	NASA-CASE-LAR-11695-2	US-PATENT-APPL-SN-008209
				US-PATENT-CLASS-136-258			US-PATENT-APPL-SN-103836	US-PATENT-CLASS-343-755
				US-PATENT-CLASS-252-62.3E			US-PATENT-APPL-SN-893865	US-PATENT-CLASS-343-772
				US-PATENT-CLASS-357-30			US-PATENT-CLASS-152-330RF	US-PATENT-CLASS-343-781R
				US-PATENT-CLASS-357-59			US-PATENT-CLASS-152-353G	US-PATENT-CLASS-343-786
				US-PATENT-CLASS-357-63			US-PATENT-CLASS-152-353R	US-PATENT-4,258,366
				US-PATENT-4,249,957			US-PATENT-CLASS-152-379.4	N81-25299* c 33
N81-19896*	c 74			NASA-CASE-NPO-11337-1			US-PATENT-CLASS-244-103R	NASA-CASE-GSC-12399-1
				NASA-CASE-NPO-11575-1			US-PATENT-CLASS-244-130	US-PATENT-APPL-SN-961831
				US-PATENT-APPL-SN-090584			US-PATENT-4,267,992	US-PATENT-CLASS-70-58
				US-PATENT-APPL-SN-276599	N81-24519*	c 44	NASA-CASE-LEW-12441-3	US-PATENT-4,252,007
				US-PATENT-CLASS-340-146.3H			US-PATENT-APPL-SN-032307	N81-25370* c 37
				US-PATENT-CLASS-340-146.3S			US-PATENT-APPL-SN-856462	NASA-CASE-NPO-14221-1
				US-PATENT-CLASS-340-146.3Y			US-PATENT-CLASS-239-127.1	US-PATENT-APPL-SN-907431
				US-PATENT-3,845,466			US-PATENT-CLASS-60-204	US-PATENT-CLASS-60-517
N81-19898*	c 74			NASA-CASE-NPO-12087-1			US-PATENT-CLASS-60-267	US-PATENT-CLASS-60-525
				US-PATENT-APPL-SN-095217			US-PATENT-4,199,937	US-PATENT-4,255,929
				US-PATENT-CLASS-250-83.6R			US-PATENT-4,245,469	N81-25371* c 37
				US-PATENT-3,704,284	N81-24520*	c 44	NASA-CASE-MFS-23999-1	NASA-CASE-NPO-13823-1
N81-20352* #	c 33			NASA-CASE-NPO-13970-1			US-PATENT-APPL-SN-060435	US-PATENT-APPL-SN-658487
				US-PATENT-APPL-SN-023484			US-PATENT-CLASS-250-203R	US-PATENT-CLASS-106-43
				US-PATENT-CLASS-318-138			US-PATENT-CLASS-250-209	US-PATENT-CLASS-264-332
				US-PATENT-CLASS-318-254			US-PATENT-4,262,195	US-PATENT-4,252,768
				US-PATENT-CLASS-318-439	N81-24521*	c 44	NASA-CASE-LEW-12918-1	N81-25400* c 39
				US-PATENT-4,249,116			US-PATENT-APPL-SN-134855	NASA-CASE-NPO-14363-1
N81-20703*	c 52			NASA-CASE-NPO-14329-1			US-PATENT-CLASS-429-120	US-PATENT-APPL-SN-969760
				US-PATENT-APPL-SN-044432			US-PATENT-CLASS-429-160	US-PATENT-CLASS-356-213
				US-PATENT-CLASS-128-642			US-PATENT-CLASS-429-164	US-PATENT-CLASS-356-216
				US-PATENT-CLASS-128-774			US-PATENT-CLASS-429-94	US-PATENT-CLASS-356-234
				US-PATENT-CLASS-73-141A			US-PATENT-4,262,064	US-PATENT-CLASS-356-32
				US-PATENT-4,249,417	N81-24711*	c 52	NASA-CASE-MSC-16433-1	US-PATENT-4,252,111
N81-21047*	c 04			NASA-CASE-ARC-11257-1			US-PATENT-APPL-SN-910992	N81-25660* c 52
				US-PATENT-APPL-SN-078611			US-PATENT-CLASS-128-295	NASA-CASE-MFS-23717-1
				US-PATENT-CLASS-73-178R			US-PATENT-CLASS-128-761	US-PATENT-APPL-SN-950877
				US-PATENT-CLASS-73-490			US-PATENT-CLASS-4-144.3	US-PATENT-CLASS-128-DIG.25
				US-PATENT-CLASS-73-504			US-PATENT-4,246,901	US-PATENT-CLASS-128-11R
				US-PATENT-4,244,215	N81-24724*	c 54	NASA-CASE-KSC-11085-1	US-PATENT-CLASS-128-346
N81-22280* #	c 33			NASA-CASE-MFS-24368-3			US-PATENT-APPL-SN-046739	US-PATENT-CLASS-137-493
				US-PATENT-APPL-SN-243683			US-PATENT-CLASS-261-79A	US-PATENT-4,256,093
N81-22344* #	c 36			NASA-CASE-GSC-12609-1			US-PATENT-CLASS-422-109	N81-25661* c 52
				US-PATENT-APPL-SN-218586			US-PATENT-CLASS-422-27	NASA-CASE-GSC-12082-2
								US-PATENT-APPL-SN-676958
								US-PATENT-APPL-SN-798976
								US-PATENT-CLASS-128-80F
								US-PATENT-4,252,111
								N81-25662* c 52
								NASA-CASE-ARC-11167-1
								US-PATENT-APPL-SN-057526
								US-PATENT-CLASS-128-89R
								US-PATENT-4,261,349
								N81-26073* # c 02
								NASA-CASE-KSC-11042-2
								US-PATENT-APPL-SN-154663
								N81-26114* c 05
								NASA-CASE-LAR-12406-1
								US-PATENT-APPL-SN-008210
								US-PATENT-CLASS-165-104.14
								US-PATENT-CLASS-244-117A

				US-PATENT-CLASS-244-163				US-PATENT-CLASS-528-6				US-PATENT-APPL-SN-102002
				US-PATENT-CLASS-60-259				US-PATENT-4,276,403				US-PATENT-CLASS-364-453
				US-PATENT-CLASS-60-267				NASA-CASE-ARC-11321-1				US-PATENT-CLASS-364-566
				US-PATENT-CLASS-60-730				US-PATENT-APPL-SN-175452				US-PATENT-CLASS-73-178R
				US-PATENT-CLASS-62-DIG.5				US-PATENT-CLASS-428-260				US-PATENT-CLASS-73-510
				US-PATENT-4,273,304				US-PATENT-CLASS-428-367				US-PATENT-4,281,384
N81-26152*	c 08			NASA-CASE-LAR-12562-1				US-PATENT-CLASS-428-408		N81-29160*	c 23	NASA-CASE-LEW-13101-2
				US-PATENT-APPL-SN-015995				US-PATENT-CLASS-428-902				US-PATENT-APPL-SN-145271
				US-PATENT-CLASS-244-181				US-PATENT-CLASS-428-920				US-PATENT-APPL-SN-971473
				US-PATENT-CLASS-244-182				US-PATENT-CLASS-526-262				US-PATENT-CLASS-260-17.4UC
				US-PATENT-4,266,743				US-PATENT-CLASS-528-228				US-PATENT-CLASS-264-104
N81-26161*	c 14			NASA-CASE-LAR-12250-1				US-PATENT-4,276,344				US-PATENT-CLASS-428-139
				US-PATENT-APPL-SN-910794				NASA-CASE-MS-16217-1				US-PATENT-CLASS-429-249
				US-PATENT-CLASS-244-160				US-PATENT-APPL-SN-893383				US-PATENT-CLASS-429-253
				US-PATENT-CLASS-244-2				US-PATENT-CLASS-52-108				US-PATENT-CLASS-429-27
				US-PATENT-CLASS-244-63				US-PATENT-CLASS-52-745				US-PATENT-CLASS-429-28
				US-PATENT-4,265,416				US-PATENT-4,237,662				US-PATENT-CLASS-525-56
N81-26179*	c 24			NASA-CASE-LEW-12493-2				NASA-CASE-LAR-12195-1				US-PATENT-CLASS-525-61
				US-PATENT-APPL-SN-122967				US-PATENT-APPL-SN-946991				US-PATENT-4,272,470
				US-PATENT-APPL-SN-893857				US-PATENT-CLASS-182-62.5		N81-29163*	c 24	NASA-CASE-MFS-23674-1
				US-PATENT-CLASS-228-118				US-PATENT-CLASS-212-267				US-PATENT-APPL-SN-912276
				US-PATENT-CLASS-228-190				US-PATENT-CLASS-52-111				US-PATENT-CLASS-156-161
				US-PATENT-4,211,354				US-PATENT-CLASS-52-632				US-PATENT-CLASS-156-165
				US-PATENT-4,267,953				US-PATENT-4,238,911				US-PATENT-CLASS-156-285
N81-26358*	c 33			NASA-CASE-LAR-12196-1				NASA-CASE-GSC-12147-1				US-PATENT-CLASS-156-294
				US-PATENT-APPL-SN-017887				US-PATENT-APPL-SN-780873				US-PATENT-CLASS-156-74
				US-PATENT-CLASS-343-100PE				US-PATENT-CLASS-343-112R				US-PATENT-CLASS-264-229
				US-PATENT-4,264,908				US-PATENT-4,276,553				US-PATENT-CLASS-264-231
N81-26359*	c 33			NASA-CASE-KSC-11065-1				NASA-CASE-MFS-23988-1				US-PATENT-CLASS-264-258
				US-PATENT-APPL-SN-051271				US-PATENT-APPL-SN-044431				US-PATENT-CLASS-264-259
				US-PATENT-CLASS-324-51				US-PATENT-CLASS-307-252UA				US-PATENT-CLASS-264-311
				US-PATENT-CLASS-324-73AT				US-PATENT-CLASS-318-799				US-PATENT-CLASS-74-572
				US-PATENT-CLASS-371-20				US-PATENT-CLASS-318-810				US-PATENT-4,190,626
				US-PATENT-CLASS-371-25				US-PATENT-4,266,177		N81-29229*	c 27	NASA-CASE-LAR-12642-1
				US-PATENT-4,267,594				NASA-CASE-NPO-14426-1				US-PATENT-APPL-SN-092141
N81-26360*	c 33			NASA-CASE-GSC-12515-1				US-PATENT-APPL-SN-009889				US-PATENT-CLASS-264-137
				US-PATENT-APPL-SN-172727				US-PATENT-CLASS-307-352				US-PATENT-CLASS-428-473.5
				US-PATENT-CLASS-148-1.5				US-PATENT-CLASS-307-353				US-PATENT-CLASS-528-222
				US-PATENT-CLASS-148-187				US-PATENT-CLASS-328-151				US-PATENT-CLASS-528-229
				US-PATENT-CLASS-156-647				US-PATENT-4,262,258				US-PATENT-4,281,102
				US-PATENT-CLASS-156-648				NASA-CASE-MS-12745-1		N81-29308*	c 32	NASA-CASE-NPO-14641-1
				US-PATENT-CLASS-156-649				US-PATENT-APPL-SN-746579				US-PATENT-APPL-SN-076643
				US-PATENT-CLASS-29-571				US-PATENT-CLASS-179-78				US-PATENT-CLASS-343-100CL
				US-PATENT-CLASS-29-578				US-PATENT-CLASS-333-12				US-PATENT-CLASS-455-278
				US-PATENT-CLASS-29-580				US-PATENT-CLASS-361-56				US-PATENT-4,278,978
				US-PATENT-CLASS-357-23				US-PATENT-CLASS-361-91		N81-29342*	c 33	NASA-CASE-GSC-12111-2
				US-PATENT-CLASS-357-55				US-PATENT-4,264,940				US-PATENT-APPL-SN-678813
				US-PATENT-CLASS-357-60				NASA-CASE-NPO-14521-1				US-PATENT-APPL-SN-830272
				US-PATENT-CLASS-357-91				US-PATENT-APPL-SN-023439				US-PATENT-CLASS-350-96.25
				US-PATENT-4,272,302				US-PATENT-CLASS-244-161				US-PATENT-CLASS-365-120
N81-26402*	c 34			NASA-CASE-KSC-11076-1				US-PATENT-CLASS-294-86R				US-PATENT-4,154,501
				US-PATENT-APPL-SN-051274				US-PATENT-CLASS-318-640		N81-29407*	c 35	NASA-CASE-LAR-12308-1
				US-PATENT-CLASS-364-510				US-PATENT-CLASS-356-152				US-PATENT-APPL-SN-111438
				US-PATENT-CLASS-364-571				US-PATENT-CLASS-414-730				US-PATENT-CLASS-73-683.31
				US-PATENT-CLASS-73-861				US-PATENT-4,260,187				US-PATENT-CLASS-73-684.52
				US-PATENT-4,253,156				NASA-CASE-LEW-13556-1				US-PATENT-4,274,285
N81-26431*	c 35			NASA-CASE-FRC-10112-1				US-PATENT-APPL-SN-272233		N81-29524*	c 44	NASA-CASE-LEW-13148-2
				US-PATENT-APPL-SN-122965				NASA-CASE-NPO-14402-1				US-PATENT-APPL-SN-061555
				US-PATENT-CLASS-219-209				US-PATENT-APPL-SN-855364				US-PATENT-APPL-SN-964754
				US-PATENT-CLASS-219-210				US-PATENT-CLASS-128-665				US-PATENT-CLASS-204-2.1
				US-PATENT-CLASS-219-510				US-PATENT-CLASS-356-406				US-PATENT-4,192,910
				US-PATENT-CLASS-236-1F				US-PATENT-CLASS-356-407				US-PATENT-4,270,984
				US-PATENT-CLASS-361-334				US-PATENT-CLASS-356-416		N81-29525*	c 44	NASA-CASE-NPO-13689-2
				US-PATENT-CLASS-73-361				US-PATENT-4,170,987				US-PATENT-APPL-SN-093714
				US-PATENT-4,264,802				NASA-CASE-LAR-12320-1				US-PATENT-APPL-SN-597430
N81-26447*	c 37			NASA-CASE-LEW-12119-2				US-PATENT-APPL-SN-043913				US-PATENT-APPL-SN-683073
				US-PATENT-APPL-SN-102004				US-PATENT-CLASS-434-59				US-PATENT-APPL-SN-837513
				US-PATENT-APPL-SN-672219				US-PATENT-4,264,310				US-PATENT-CLASS-136-255
				US-PATENT-CLASS-277-153				NASA-CASE-NPO-14554-1				US-PATENT-CLASS-136-258
				US-PATENT-CLASS-277-193				US-PATENT-APPL-SN-974473				US-PATENT-CLASS-136-262
				US-PATENT-4,212,477				US-PATENT-CLASS-364-200				US-PATENT-CLASS-357-15
				US-PATENT-4,266,788				US-PATENT-CLASS-364-900				US-PATENT-CLASS-357-30
N81-26509*	c 43			NASA-CASE-NPO-14140-1				US-PATENT-CLASS-370-58				US-PATENT-4,278,830
				NASA-CASE-NPO-14387-1				US-PATENT-4,264,984		N81-29763*	c 52	NASA-CASE-ARC-11031-1
				US-PATENT-APPL-SN-897832				NASA-CASE-LAR-12520-1				US-PATENT-APPL-SN-897828
				US-PATENT-CLASS-134-17				US-PATENT-APPL-SN-067596				US-PATENT-CLASS-128-275
				US-PATENT-CLASS-166-222				US-PATENT-CLASS-204-1T				US-PATENT-CLASS-128-760
				US-PATENT-CLASS-166-77				US-PATENT-CLASS-204-195B				US-PATENT-4,190,060
				US-PATENT-CLASS-239-562				US-PATENT-CLASS-435-291		N81-29764*	c 52	NASA-CASE-ARC-11118-1
				US-PATENT-CLASS-239-591				US-PATENT-CLASS-435-34				US-PATENT-APPL-SN-850504
				US-PATENT-CLASS-299-13				US-PATENT-CLASS-435-5				US-PATENT-CLASS-424-247
				US-PATENT-CLASS-299-17				US-PATENT-4,264,728				US-PATENT-CLASS-424-267
				US-PATENT-CLASS-299-20				NASA-CASE-MS-18381-1				US-PATENT-CLASS-424-274
				US-PATENT-4,226,475				US-PATENT-APPL-SN-034531				US-PATENT-4,279,906
N81-26718*	c 54			NASA-CASE-MFS-23696-1				US-PATENT-CLASS-128-295		N81-29963*	c 74	NASA-CASE-NPO-14448-1
				US-PATENT-APPL-SN-945044				US-PATENT-CLASS-4-144.3				US-PATENT-APPL-SN-037560
				US-PATENT-CLASS-294-93				US-PATENT-4,270,539				US-PATENT-CLASS-356-345
				US-PATENT-CLASS-414-4				NASA-CASE-LEW-12990-1				US-PATENT-CLASS-356-346
				US-PATENT-CLASS-414-735				US-PATENT-APPL-SN-916654				US-PATENT-4,278,351
				US-PATENT-CLASS-414-744A				US-PATENT-CLASS-261-28		N81-32510*	c 37	NASA-CASE-MS-16239-1
				US-PATENT-4,273,505				US-PATENT-CLASS-431-2				US-PATENT-APPL-SN-847276
N81-27271*	c 27			NASA-CASE-ARC-11176-2				US-PATENT-CLASS-60-39.06				US-PATENT-CLASS-91-325
				US-PATENT-APPL-SN-129798				US-PATENT-CLASS-60-726				US-PATENT-CLASS-91-341R
				US-PATENT-CLASS-528-168				US-PATENT-CLASS-60-737				US-PATENT-CLASS-91-410
				US-PATENT-CLASS-528-399				US-PATENT-4,189,914				US-PATENT-4,283,995
				US-PATENT-CLASS-528-4				NASA-CASE-LAR-12052-1		N81-32829*	c 51	NASA-CASE-MFS-23825-1

				US-PATENT-APPL-SN-145273				US-PATENT-CLASS-528-351					US-PATENT-CLASS-250-235
				US-PATENT-CLASS-119-17				US-PATENT-CLASS-528-353					US-PATENT-CLASS-250-236
				US-PATENT-CLASS-119-18				US-PATENT-4,284,461					US-PATENT-CLASS-358-109
				US-PATENT-4,284,034		N82-11336*	c 32	NASA-CASE-MSC-18606-1		N82-15381*	c 35	NASA-CASE-NPO-14839-1	US-PATENT-4,300,159
N81-33235*	c 24			NASA-CASE-LAR-12065-2				US-PATENT-APPL-SN-145206				US-PATENT-APPL-SN-106119	US-PATENT-CLASS-343-100PE
				US-PATENT-APPL-SN-119337				US-PATENT-CLASS-343-700MS				US-PATENT-CLASS-343-100PE	US-PATENT-CLASS-455-137
				US-PATENT-APPL-SN-889671				US-PATENT-CLASS-343-727				US-PATENT-CLASS-455-139	US-PATENT-CLASS-455-60
				US-PATENT-CLASS-156-242				US-PATENT-CLASS-343-795				US-PATENT-CLASS-455-60	US-PATENT-4,295,140
				US-PATENT-CLASS-156-245				US-PATENT-CLASS-343-846				NASA-CASE-ARC-10990-1	US-PATENT-APPL-SN-749420
				US-PATENT-CLASS-156-252				US-PATENT-4,287,518				US-PATENT-CLASS-244-114R	US-PATENT-CLASS-340-26
				US-PATENT-CLASS-156-264		N82-11357*	c 33	NASA-CASE-MSC-18106-1		N82-16059*	c 04	US-PATENT-4,291,294	US-PATENT-FRC-11005-1
				US-PATENT-CLASS-156-285				US-PATENT-APPL-SN-098568				US-PATENT-APPL-SN-043942	US-PATENT-CLASS-340-27NA
				US-PATENT-CLASS-156-290				US-PATENT-CLASS-335-256				US-PATENT-CLASS-73-178R	US-PATENT-4,283,705
				US-PATENT-4,229,473				US-PATENT-CLASS-335-266				US-PATENT-ARC-11244-1	US-PATENT-APPL-SN-054501
				US-PATENT-4,274,901				US-PATENT-CLASS-361-141				US-PATENT-CLASS-260-340.9R	US-PATENT-CLASS-568-445
N81-33246*	c 25			NASA-CASE-NPO-14272-1				US-PATENT-4,295,111		N82-16075*	c 06	US-PATENT-4,277,402	NASA-CASE-MSC-18382-1
				US-PATENT-APPL-SN-878253				NASA-CASE-MFS-25586-1				US-PATENT-APPL-SN-145107	US-PATENT-CLASS-106-18.16
				US-PATENT-CLASS-201-17		N82-11360* #	c 33	US-PATENT-APPL-SN-310714				US-PATENT-CLASS-106-18.24	US-PATENT-CLASS-260-45.7R
				US-PATENT-CLASS-44-1R				NASA-CASE-LEW-12950-1				US-PATENT-CLASS-427-393.3	US-PATENT-CLASS-428-263
				US-PATENT-CLASS-44-2		N82-11399* #	c 34	US-PATENT-APPL-SN-202228				US-PATENT-CLASS-428-264	US-PATENT-CLASS-428-265
				US-PATENT-4,146,367				NASA-CASE-LAR-12552-1				US-PATENT-CLASS-428-267	US-PATENT-CLASS-428-267
N81-33319*	c 31			NASA-CASE-NPO-14596-1		N82-11431*	c 35	US-PATENT-APPL-SN-070366		N82-16174*	c 23	US-PATENT-CLASS-428-272	US-PATENT-4,284,682
				US-PATENT-APPL-SN-037072				US-PATENT-CLASS-235-92PC				US-PATENT-CLASS-428-272	NASA-CASE-GSC-12420-1
				US-PATENT-CLASS-264-24				US-PATENT-CLASS-324-71CP				US-PATENT-APPL-SN-129793	US-PATENT-CLASS-333-104
				US-PATENT-CLASS-264-5				US-PATENT-4,286,209				US-PATENT-CLASS-333-246	US-PATENT-4,302,734
				US-PATENT-CLASS-264-9				NASA-CASE-MFS-23250-1				NASA-CASE-GSC-12321-1	US-PATENT-APPL-SN-102001
				US-PATENT-CLASS-65-142		N82-11432*	c 35	US-PATENT-APPL-SN-119340				US-PATENT-CLASS-356-349	US-PATENT-CLASS-356-386
				US-PATENT-CLASS-65-21.4				US-PATENT-CLASS-422-40				US-PATENT-4,299,492	NASA-CASE-MSC-18422-1
				US-PATENT-CLASS-65-22				US-PATENT-CLASS-430-17				US-PATENT-APPL-SN-102593	US-PATENT-CLASS-244-113
				US-PATENT-4,279,632				US-PATENT-CLASS-430-372				US-PATENT-CLASS-244-163	US-PATENT-CLASS-244-217
N81-33403*	c 33			NASA-CASE-GSC-12324-1				US-PATENT-4,287,152				US-PATENT-CLASS-277-189	US-PATENT-CLASS-277-81R
				US-PATENT-APPL-SN-945043		N82-11469* #	c 37	NASA-CASE-NPO-15539-1		N82-16340*	c 33	US-PATENT-CLASS-418-113	US-PATENT-CLASS-418-142
				US-PATENT-CLASS-358-109				US-PATENT-APPL-SN-303670				US-PATENT-4,290,612	NASA-CASE-MFS-23775-1
				US-PATENT-CLASS-358-213				NASA-CASE-NPO-13877-1				US-PATENT-APPL-SN-098569	US-PATENT-CLASS-73-341
				US-PATENT-4,280,141		N82-11634*	c 45	US-PATENT-APPL-SN-652979				US-PATENT-4,282,752	NASA-CASE-NPO-15071-1
N81-33404*	c 33			NASA-CASE-NPO-14316-1				US-PATENT-CLASS-210-40				US-PATENT-APPL-SN-150115	US-PATENT-CLASS-126-438
				US-PATENT-APPL-SN-051276				US-PATENT-CLASS-252-422				US-PATENT-CLASS-250-527	US-PATENT-CLASS-48-89
				US-PATENT-CLASS-363-24				US-PATENT-4,209,393				US-PATENT-CLASS-48-89	US-PATENT-4,290,779
				US-PATENT-CLASS-363-56				NASA-CASE-MSC-14836-1				US-PATENT-CLASS-4230-1	US-PATENT-APPL-SN-129779
				US-PATENT-4,276,588		N82-11770*	c 52	US-PATENT-APPL-SN-691647				US-PATENT-CLASS-370-100	US-PATENT-CLASS-375-106
N81-33405*	c 33			NASA-CASE-NPO-14435-1				US-PATENT-CLASS-128-327				US-PATENT-CLASS-375-114	US-PATENT-CLASS-375-116
				US-PATENT-APPL-SN-017886				US-PATENT-CLASS-128-686				US-PATENT-4,298,987	NASA-CASE-FRC-11062-1
				US-PATENT-CLASS-329-122				US-PATENT-CLASS-128-691				US-PATENT-APPL-SN-185869	US-PATENT-CLASS-181-214
				US-PATENT-CLASS-331-DIG.2				US-PATENT-4,294,261				US-PATENT-4,300,656	NASA-CASE-GSC-12194-2
				US-PATENT-CLASS-364-514				NASA-CASE-MSC-16497-1				US-PATENT-APPL-SN-819029	US-PATENT-APPL-SN-971474
				US-PATENT-CLASS-375-1				US-PATENT-APPL-SN-041145				US-PATENT-CLASS-60-200R	US-PATENT-CLASS-60-39.46M
				US-PATENT-4,279-018				US-PATENT-CLASS-204-1T				US-PATENT-4,288,982	NASA-CASE-ARC-11176-1
N81-33448*	c 35			NASA-CASE-NPO-14258-1				US-PATENT-CLASS-204-195S				US-PATENT-APPL-SN-129799	US-PATENT-CLASS-528-168
				US-PATENT-APPL-SN-853349				US-PATENT-CLASS-204-263				US-PATENT-CLASS-528-399	US-PATENT-CLASS-528-4
				US-PATENT-APPL-SN-972252				US-PATENT-CLASS-204-264				US-PATENT-CLASS-528-6	US-PATENT-CLASS-528-7
				US-PATENT-CLASS-350-370				US-PATENT-CLASS-204-266				US-PATENT-CLASS-528-8	US-PATENT-CLASS-528-9
				US-PATENT-CLASS-356-350				US-PATENT-CLASS-204-275				US-PATENT-CLASS-528-10	US-PATENT-CLASS-528-11
				US-PATENT-CLASS-356-351				US-PATENT-CLASS-204-276				US-PATENT-CLASS-528-12	US-PATENT-CLASS-528-13
				US-PATENT-4,280,766				US-PATENT-CLASS-204-278				US-PATENT-CLASS-528-14	US-PATENT-CLASS-528-15
N81-33482*	c 37			NASA-CASE-NPO-15227-1				US-PATENT-CLASS-23-230PC				US-PATENT-CLASS-528-16	US-PATENT-CLASS-528-17
				US-PATENT-APPL-SN-163840				US-PATENT-CLASS-23-232E				US-PATENT-CLASS-528-18	US-PATENT-CLASS-528-19
				US-PATENT-CLASS-118-50				US-PATENT-CLASS-422-80				US-PATENT-CLASS-528-20	US-PATENT-CLASS-528-21
				US-PATENT-CLASS-118-52				US-PATENT-4,293,522				US-PATENT-CLASS-528-22	US-PATENT-CLASS-528-23
				US-PATENT-CLASS-269-21				NASA-CASE-NPO-14054-1				US-PATENT-CLASS-528-24	US-PATENT-CLASS-528-25
				US-PATENT-CLASS-427-240				US-PATENT-APPL-SN-969761				US-PATENT-CLASS-528-26	US-PATENT-CLASS-528-27
				US-PATENT-4,280,689				US-PATENT-CLASS-343-5CM				US-PATENT-CLASS-528-28	US-PATENT-CLASS-528-29
N81-33483*	c 37			NASA-CASE-FRC-11044-1				US-PATENT-4,292,634				US-PATENT-CLASS-528-30	US-PATENT-CLASS-528-31
				US-PATENT-APPL-SN-135056				NASA-CASE-MFS-25363-1				US-PATENT-CLASS-528-32	US-PATENT-CLASS-528-33
				US-PATENT-CLASS-318-663				US-PATENT-APPL-SN-171933				US-PATENT-CLASS-528-34	US-PATENT-CLASS-528-35
				US-PATENT-CLASS-74-89				US-PATENT-CLASS-118-423				US-PATENT-CLASS-528-36	US-PATENT-CLASS-528-37
				US-PATENT-CLASS-92-130R				US-PATENT-CLASS-118-500				US-PATENT-CLASS-528-38	US-PATENT-CLASS-528-39
				US-PATENT-4,274,038				US-PATENT-CLASS-134-137				US-PATENT-CLASS-528-40	US-PATENT-CLASS-528-41
N82-11088*	c 09			NASA-CASE-LAR-12532-1				US-PATENT-4,286,542				US-PATENT-CLASS-528-42	US-PATENT-CLASS-528-43
				US-PATENT-APPL-SN-135040				NASA-CASE-LEW-12989-1				US-PATENT-CLASS-528-44	US-PATENT-CLASS-528-45
				US-PATENT-CLASS-73-147				US-PATENT-APPL-SN-092145				US-PATENT-CLASS-528-46	US-PATENT-CLASS-528-47
				US-PATENT-4,286,460				US-PATENT-CLASS-277-27				US-PATENT-CLASS-528-48	US-PATENT-CLASS-528-49
N82-11144*	c 25			NASA-CASE-NPO-14273-1				US-PATENT-CLASS-277-40				US-PATENT-CLASS-528-50	US-PATENT-CLASS-528-51
				US-PATENT-APPL-SN-969759				US-PATENT-CLASS-277-93R				US-PATENT-CLASS-528-52	US-PATENT-CLASS-528-53
				US-PATENT-CLASS-110-234				US-PATENT-4,291,887				US-PATENT-CLASS-528-54	US-PATENT-CLASS-528-55
				US-PATENT-CLASS-110-245				NASA-CASE-NPO-14544-1				US-PATENT-CLASS-528-56	US-PATENT-CLASS-528-57
				US-PATENT-CLASS-110-255				US-PATENT-APPL-SN-078612				US-PATENT-CLASS-528-58	US-PATENT-CLASS-528-59
				US-PATENT-CLASS-110-266				US-PATENT-CLASS-343-100ME				US-PATENT-CLASS-528-60	US-PATENT-CLASS-528-61
				US-PATENT-CLASS-122-4D				US-PATENT-CLASS-343-100PE				US-PATENT-CLASS-528-62	US-PATENT-CLASS-528-63
				US-PATENT-4,287,838				US-PATENT-CLASS-343-781P				US-PATENT-CLASS-528-64	US-PATENT-CLASS-528-65
N82-11206*	c 27			NASA-CASE-LAR-12640-1				US-PATENT-4,282,525				US-PATENT-CLASS-528-66	US-PATENT-CLASS-528-67
				US-PATENT-APPL-SN-092142				NASA-CASE-MFS-25139-1				US-PATENT-CLASS-528-68	US-PATENT-CLASS-528-69
				US-PATENT-CLASS-156-307.7				US-PATENT-APPL-SN-126138				US-PATENT-CLASS-528-70	US-PATENT-CLASS-528-71
				US-PATENT-CLASS-156-307.3				US-PATENT-CLASS-239-499				US-PATENT-CLASS-528-72	US-PATENT-CLASS-528-73
				US-PATENT-CLASS-156-307.5				US-PATENT-CLASS-239-589				US-PATENT-CLASS-528-74	US-PATENT-CLASS-528-75
				US-PATENT-CLASS-156-331.5				US-PATENT-CLASS-239-601				US-PATENT-CLASS-528-76	US-PATENT-CLASS-528-77
				US-PATENT-CLASS-528-126				US-PATENT-4,300,723				US-PATENT-CLASS-528-78	US-PATENT-CLASS-528-79
				US-PATENT-CLASS-528-172				NASA-CASE-LAR-12592-1				US-PATENT-CLASS-528-80	US-PATENT-CLASS-528-81
				US-PATENT-CLASS-528-173				US-PATENT-APPL-SN-041141				US-PATENT-CLASS-528-82	US-PATENT-CLASS-528-83
				US-PATENT-CLASS-528-180				US-PATENT-CLASS-331-94.5C				US-PATENT-CLASS-528-84	US-PATENT-CLASS-528-85
				US-PATENT-CLASS-528-207				US-PATENT-CLASS-331-94.5D				US-PATENT-CLASS-528-86	US-PATENT-CLASS-528-87
				US-PATENT-CLASS-528-208				US-PATENT-CLASS-331-94.5P				US-PATENT-CLASS-528-88	US-PATENT-CLASS-528-89
				US-PATENT-CLASS-528-210				US-PATENT-4,300,106				US-PATENT-CLASS-528-90	US-PATENT-CLASS-528-91
				US-PATENT-CLASS-528-211				NASA-CASE-GSC-12032-2				US-PATENT-CLASS-528-92	US-PATENT-CLASS-528-93
				US-PATENT-CLASS-528-225				US-PATENT-APPL-SN-578700				US-PATENT-CLASS-528-94	US-PATENT-CLASS-528-95
				US-PATENT-CLASS-528-228				US-PATENT-APPL-SN-583219				US-PATENT-CLASS-528-96	US-PATENT-CLASS-528-97

## ACCESSION NUMBER INDEX

N82-24492

		US-PATENT-CLASS-568-5				US-PATENT-CLASS-244-190				US-PATENT-CLASS-428-466
		NASA-CASE-ARC-11245-1				US-PATENT-CLASS-318-580				US-PATENT-CLASS-428-493
N82-18401*	c 28	US-PATENT-APPL-SN-088663	N82-23254*	c 09	NASA-CASE-LAR-12441-1	US-PATENT-4,326,685	N82-24415*	c 33	NASA-CASE-LEW-13282-1	US-PATENT-4,327,150
		US-PATENT-CLASS-239-690			US-PATENT-APPL-SN-145210	US-PATENT-CLASS-73-147			US-PATENT-APPL-SN-073579	US-PATENT-CLASS-315-3.6
		US-PATENT-CLASS-361-226			US-PATENT-4,327,581				US-PATENT-CLASS-315-5.38	US-PATENT-4,277,721
		US-PATENT-4,303,961	N82-23282*	c 25	NASA-CASE-NPO-14542-1	US-PATENT-APPL-SN-030831	N82-24416*	c 33	NASA-CASE-LAR-12633-1	US-PATENT-APPL-SN-135039
N82-18443*	c 32	US-PATENT-APPL-SN-14632-1			US-PATENT-CLASS-166-267	US-PATENT-CLASS-166-303			US-PATENT-CLASS-358-213	US-PATENT-4,279,001
		US-PATENT-CLASS-367-100			US-PATENT-CLASS-208-241	US-PATENT-4,310,049	N82-24417*	c 33	NASA-CASE-FRC-11025-1	US-PATENT-APPL-SN-115536
		US-PATENT-CLASS-367-102			US-PATENT-4,310,049	NASA-CASE-NPO-14361-1			US-PATENT-CLASS-328-167	US-PATENT-CLASS-330-109
		US-PATENT-CLASS-367-88	N82-23376*	c 32	US-PATENT-APPL-SN-053572	US-PATENT-CLASS-343-17.1PF			US-PATENT-CLASS-330-290	US-PATENT-CLASS-330-294
N82-18493*	c 33	NASA-CASE-FRC-11041-1			US-PATENT-CLASS-343-7.5	US-PATENT-CLASS-356-5			US-PATENT-CLASS-330-306	US-PATENT-CLASS-364-825
		US-PATENT-APPL-SN-126064			US-PATENT-CLASS-367-95	US-PATENT-4,320,397	N82-24418*	c 33	NASA-CASE-NPO-14556-1	US-PATENT-APPL-SN-023485
		US-PATENT-CLASS-318-561			US-PATENT-CLASS-367-95	NASA-CASE-NPO-14813-1			US-PATENT-APPL-SN-023485	US-PATENT-CLASS-307-415
		US-PATENT-CLASS-318-620			US-PATENT-CLASS-367-95	US-PATENT-APPL-SN-145282			US-PATENT-CLASS-307-415	US-PATENT-CLASS-328-67
		US-PATENT-CLASS-318-621			US-PATENT-CLASS-367-95	US-PATENT-CLASS-250-216			US-PATENT-CLASS-331-94.5G	US-PATENT-CLASS-331-94.5PE
		US-PATENT-CLASS-318-622			US-PATENT-CLASS-367-95	US-PATENT-CLASS-250-235			US-PATENT-CLASS-331-94.5PE	US-PATENT-CLASS-333-20
		US-PATENT-4,298,833	N82-24072*	c 74	NASA-CASE-NPO-14813-1	US-PATENT-CLASS-250-235			US-PATENT-CLASS-331-94.5G	US-PATENT-CLASS-331-94.5PE
N82-18494*	c 33	NASA-CASE-FRC-11018-1			US-PATENT-APPL-SN-145282	US-PATENT-CLASS-250-235			US-PATENT-CLASS-331-94.5G	US-PATENT-CLASS-331-94.5PE
		US-PATENT-APPL-SN-031652			US-PATENT-CLASS-250-216	US-PATENT-CLASS-250-235			US-PATENT-CLASS-331-94.5G	US-PATENT-CLASS-331-94.5PE
		US-PATENT-CLASS-331-113R			US-PATENT-CLASS-250-216	US-PATENT-CLASS-250-235			US-PATENT-CLASS-331-94.5G	US-PATENT-CLASS-331-94.5PE
		US-PATENT-CLASS-363-132			US-PATENT-CLASS-250-235	US-PATENT-CLASS-250-235			US-PATENT-CLASS-331-94.5G	US-PATENT-CLASS-331-94.5PE
		US-PATENT-CLASS-363-17	N82-24205*	c 08	NASA-CASE-LAR-12412-1	US-PATENT-APPL-SN-067595			US-PATENT-CLASS-331-94.5G	US-PATENT-CLASS-331-94.5PE
		US-PATENT-CLASS-363-61			US-PATENT-APPL-SN-067595	US-PATENT-CLASS-244-213			US-PATENT-CLASS-331-94.5G	US-PATENT-CLASS-331-94.5PE
N82-18601*	c 37	US-PATENT-4,298,926			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226	N82-24419*	c 33	NASA-CASE-GSC-12415-1	US-PATENT-APPL-SN-043943
		NASA-CASE-LAR-12372-1			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-APPL-SN-108107			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-188-371			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-244-110C			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-280-805			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-57-906			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-4,304,320			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
N82-18686*	c 44	NASA-CASE-MFS-25287-1			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-APPL-SN-098570			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-126-422			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-126-429			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-126-430			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-4,304,219			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
N82-19029*	c 74	NASA-CASE-NPO-15036-1			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-APPL-SN-188160			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-455-610			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-455-612			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-455-615			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-455-617			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-4,287,606			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
N82-19540*	c 37	NASA-CASE-LEW-12131-3			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-APPL-SN-096255			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-APPL-SN-801290			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-APPL-SN-931090			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-415-174			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-415-196			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-4,135,851			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-4,207,024			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-4,295,786			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
N82-21268*	c 25	NASA-CASE-LEW-12358-2			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-APPL-SN-776146			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-APPL-SN-848428			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-264-216			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-264-453			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-264-53			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-427-115			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-427-244			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-427-246			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-4,133,941			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-4,309,372			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
N82-21269*	c 25	NASA-CASE-XLA-08914-2			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-APPL-SN-662181			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-APPL-SN-810576			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-210-321.1			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-55-158			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-4,302,223			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
N82-21587*	c 37	NASA-CASE-NPO-14395-1			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-APPL-SN-961833			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-104-83			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-105-1A			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-105-171			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-105-180			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-105-218R			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-248-425			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-4,301,740			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
N82-22496* #	c 37	NASA-CASE-ARC-11325-1			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-APPL-SN-354126			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
N82-22875*	c 52	NASA-CASE-GSC-12081-2			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-APPL-SN-672299			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-APPL-SN-796258			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-128-1.2			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-128-778			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-33-143C			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-4,294,264			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
N82-23231*	c 04	NASA-CASE-FRC-11052-1			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-APPL-SN-129783			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-244-168			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383
		US-PATENT-CLASS-244-175			US-PATENT-CLASS-244-213	US-PATENT-CLASS-244-226			US-PATENT-CLASS-165-32	US-PATENT-CLASS-62-383

		US-PATENT-4,312,292			US-PATENT-CLASS-340-347DD			US-PATENT-APPL-SN-161254
N82-24493*	c 37	NASA-CASE-NPO-15115-1	N82-26571*	c 33	US-PATENT-4,313,103			US-PATENT-CLASS-427-205
		US-PATENT-APPL-SN-154725			NASA-CASE-LAR-12595-1			US-PATENT-CLASS-427-253
		US-PATENT-CLASS-74-18.1			US-PATENT-APPL-SN-070774			US-PATENT-CLASS-427-405
		US-PATENT-CLASS-74-18.2			US-PATENT-CLASS-156-157			US-PATENT-CLASS-428-938
		US-PATENT-CLASS-92-37			US-PATENT-CLASS-156-272			US-PATENT-CLASS-428-941
N82-24494*	c 37	US-PATENT-4,311,057			US-PATENT-CLASS-156-379.7	N82-28442*	c 27	US-PATENT-4,310,574
		NASA-CASE-MSC-18526-1			US-PATENT-CLASS-156-71			NASA-CASE-NPO-14845-1
		US-PATENT-APPL-SN-119335			US-PATENT-CLASS-219-10.41			US-PATENT-APPL-SN-219680
		US-PATENT-CLASS-285-159			US-PATENT-CLASS-219-10.53			US-PATENT-CLASS-264-5
		US-PATENT-CLASS-285-401			US-PATENT-CLASS-219-545			US-PATENT-CLASS-425-6
		US-PATENT-CLASS-285-89			US-PATENT-CLASS-428-247			US-PATENT-CLASS-65-142
		US-PATENT-CLASS-403-315			US-PATENT-4,313,777			US-PATENT-CLASS-65-21.4
N82-24639*	c 44	US-PATENT-4,320,911	N82-26572*	c 33	NASA-CASE-LAR-12465-1			US-PATENT-CLASS-65-22
		NASA-CASE-MFS-23830-1			US-PATENT-APPL-SN-106136			US-PATENT-CLASS-65-22
		US-PATENT-APPL-SN-129780			US-PATENT-CLASS-361-283	N82-28545*	c 33	NASA-CASE-MFS-23776-1
		US-PATENT-CLASS-415-DIG.8			US-PATENT-CLASS-367-181			US-PATENT-APPL-SN-145272
		US-PATENT-CLASS-415-2R			US-PATENT-CLASS-73-724			US-PATENT-CLASS-250-214
		US-PATENT-4,309,146			US-PATENT-4,310,906			US-PATENT-CLASS-250-221
N82-24640*	c 44	NASA-CASE-LAR-12148-1	N82-26628*	c 35	NASA-CASE-LAR-12474-1			US-PATENT-4,319,133
		US-PATENT-APPL-SN-051275			US-PATENT-APPL-SN-171934	N82-28604*	c 35	NASA-CASE-LAR-12709-1
		US-PATENT-CLASS-60-516			US-PATENT-CLASS-352-171			US-PATENT-APPL-SN-235796
		US-PATENT-CLASS-60-641.14			US-PATENT-CLASS-354-217			US-PATENT-CLASS-204-195B
		US-PATENT-4,326,381			US-PATENT-CLASS-354-289			US-PATENT-CLASS-435-291
N82-24641*	c 44	NASA-CASE-GSC-10019-1			US-PATENT-4,311,378			US-PATENT-CLASS-435-34
		US-PATENT-APPL-SN-680048	N82-26631* #	c 35	NASA-CASE-MFS-25707-1			US-PATENT-CLASS-435-39
		US-PATENT-CLASS-136-6			US-PATENT-APPL-SN-359627			US-PATENT-4,335,206
		US-PATENT-3,498,841	N82-26672*	c 37	NASA-CASE-MSC-18538-1	N82-28616*	c 36	NASA-CASE-NPO-14782-1
N82-24642*	c 44	NASA-CASE-GSC-10350-1			US-PATENT-APPL-SN-138944			US-PATENT-APPL-SN-119339
		US-PATENT-APPL-SN-679980			US-PATENT-CLASS-30-102			US-PATENT-CLASS-330-4.3
		US-PATENT-CLASS-136-6			US-PATENT-4,305,205			US-PATENT-CLASS-372-56
		US-PATENT-3,498,840	N82-26673* #	c 37	NASA-CASE-MSC-18742-1			US-PATENT-CLASS-372-58
N82-24643*	c 44	NASA-CASE-GSC-10017-1			US-PATENT-APPL-SN-293417			US-PATENT-CLASS-372-82
		US-PATENT-APPL-SN-679996	N82-26674* #	c 37	NASA-CASE-LEW-13268-2			US-PATENT-4,328,464
		US-PATENT-CLASS-136-6			US-PATENT-APPL-SN-325931	N82-28780*	c 44	NASA-CASE-NPO-13689-4
		US-PATENT-3,519,484	N82-26776*	c 44	NASA-CASE-NPO-15183-1			US-PATENT-APPL-SN-225501
N82-24644*	c 44	NASA-CASE-GSC-10018-1			US-PATENT-APPL-SN-173519			US-PATENT-APPL-SN-597430
		US-PATENT-APPL-SN-679987			US-PATENT-CLASS-62-148			US-PATENT-APPL-SN-683073
		US-PATENT-CLASS-136-6			US-PATENT-CLASS-62-235.1			US-PATENT-APPL-SN-837513
		US-PATENT-3,519,483			US-PATENT-CLASS-62-238.3			US-PATENT-APPL-SN-93714
N82-24645*	c 44	NASA-CASE-GSC-10349-1			US-PATENT-CLASS-62-239			US-PATENT-CLASS-148-175
		US-PATENT-APPL-SN-658999			US-PATENT-CLASS-62-244			US-PATENT-CLASS-29-572
		US-PATENT-CLASS-136-148			US-PATENT-CLASS-62-476			US-PATENT-CLASS-427-531
		US-PATENT-3,506,496			US-PATENT-4,307,575			US-PATENT-CLASS-427-74
N82-24779*	c 47	NASA-CASE-KSC-11099-1	N82-26777*	c 44	NASA-CASE-NPO-15179-1			US-PATENT-4,278,830
		US-PATENT-APPL-SN-043945			US-PATENT-APPL-SN-185867			US-PATENT-4,321,099
		US-PATENT-CLASS-324-72			US-PATENT-CLASS-136-261	N82-29002*	c 54	NASA-CASE-XMS-03694-1
		US-PATENT-CLASS-324-77R			US-PATENT-CLASS-136-290			US-PATENT-APPL-SN-394280
		US-PATENT-4,272,720			US-PATENT-CLASS-148-1.5			US-PATENT-CLASS-165-46
N82-24839*	c 60	NASA-CASE-FRC-11042-1			US-PATENT-CLASS-219-121LN			US-PATENT-3,295,594
		US-PATENT-APPL-SN-129778			US-PATENT-CLASS-357-30	N82-29013*	c 60	NASA-CASE-MSC-18498-1
		US-PATENT-CLASS-254-131			US-PATENT-CLASS-357-63			US-PATENT-APPL-SN-173518
		US-PATENT-CLASS-29-267			US-PATENT-4,311,870			US-PATENT-CLASS-244-194
		US-PATENT-CLASS-29-764	N82-26987*	c 54	NASA-CASE-ARC-11314-1			US-PATENT-CLASS-318-564
		US-PATENT-4,307,510			US-PATENT-APPL-SN-168943			US-PATENT-CLASS-371-68
N82-25484* #	c 35	NASA-CASE-NPO-15494-1			US-PATENT-CLASS-73-862.08			US-PATENT-4,327,437
		US-PATENT-APPL-SN-325885			US-PATENT-4,311,055	N82-29330*	c 09	NASA-CASE-KSC-11042-1
N82-26277*	c 05	NASA-CASE-FRC-11007-2	N82-27086* #	c 71	NASA-CASE-NPO-15562-1			US-PATENT-APPL-SN-154663
		US-PATENT-APPL-SN-043911			US-PATENT-APPL-SN-364097			US-PATENT-APPL-SN-862878
		US-PATENT-CLASS-244-12.2	N82-27558*	c 32	NASA-CASE-MSC-18532-1			US-PATENT-CLASS-53-429
		US-PATENT-CLASS-244-23C			US-PATENT-APPL-SN-172099			US-PATENT-CLASS-8-150
		US-PATENT-CLASS-244-34A			US-PATENT-CLASS-343-789			US-PATENT-4,244,810
		US-PATENT-CLASS-244-93			US-PATENT-CLASS-343-895			US-PATENT-4,313,291
		US-PATENT-4,307,856	N82-28279*	c 05	US-PATENT-4,315,266	N82-29358*	c 23	NASA-CASE-LAR-10423-1
N82-26293*	c 07	NASA-CASE-LEW-13199-1			NASA-CASE-LAR-12175-1			US-PATENT-APPL-SN-877445
		US-PATENT-APPL-SN-025301			US-PATENT-APPL-SN-079913			US-PATENT-CLASS-260-65
		US-PATENT-CLASS-244-110B			US-PATENT-CLASS-244-48			US-PATENT-3,657,190
		US-PATENT-CLASS-60-226A	N82-28353*	c 23	US-PATENT-4,330,100	N82-29362*	c 24	NASA-CASE-MSC-18223-1
		US-PATENT-4,278,220			NASA-CASE-ARC-11267-2			US-PATENT-APPL-SN-219681
N82-26384*	c 24	NASA-CASE-LAR-11688-1			US-PATENT-APPL-SN-163838			US-PATENT-CLASS-128-280
		US-PATENT-APPL-SN-878540			US-PATENT-CLASS-528-401			US-PATENT-CLASS-128-283
		US-PATENT-CLASS-244-119			US-PATENT-CLASS-528-422			US-PATENT-CLASS-128-284
		US-PATENT-CLASS-244-123			US-PATENT-CLASS-547-131			US-PATENT-CLASS-128-285
		US-PATENT-CLASS-244-132			US-PATENT-CLASS-564-229			US-PATENT-CLASS-128-288
		US-PATENT-4,310,132			US-PATENT-4,316,035			US-PATENT-CLASS-128-291
N82-26387* #	c 24	NASA-CASE-MSC-18934-3	N82-28368*	c 25	NASA-CASE-NPO-15015-1			US-PATENT-CLASS-128-296
		US-PATENT-APPL-SN-361711			US-PATENT-APPL-SN-145207			US-PATENT-CLASS-428-283
N82-26396*	c 25	NASA-CASE-LAR-12705-1			US-PATENT-CLASS-203-12			US-PATENT-CLASS-428-284
		US-PATENT-APPL-SN-135058			US-PATENT-CLASS-422-186			US-PATENT-CLASS-428-286
		US-PATENT-CLASS-252-514			US-PATENT-CLASS-422-198			US-PATENT-CLASS-428-287
		US-PATENT-4,311,615			US-PATENT-CLASS-423-235			US-PATENT-CLASS-428-288
N82-26568*	c 33	NASA-CASE-LEW-12296-1			US-PATENT-CLASS-423-539			US-PATENT-4,338,371
		US-PATENT-APPL-SN-122966			US-PATENT-CLASS-423-540	N82-29370*	c 25	NASA-CASE-XGS-05584-1
		US-PATENT-CLASS-315-3.5			US-PATENT-CLASS-423-542			NASA-CASE-XGS-07375-1
		US-PATENT-CLASS-315-3.6			US-PATENT-CLASS-423-579			NASA-CASE-XGS-07397-1
		US-PATENT-CLASS-330-43			US-PATENT-CLASS-423-648R			US-PATENT-APPL-SN-446071
		US-PATENT-4,315,194			US-PATENT-4,314,984			US-PATENT-CLASS-106-197
N82-26569*	c 33	NASA-CASE-MFS-23828-1	N82-28440*	c 27	NASA-CASE-LEW-13120-1	N82-29371*	c 25	NASA-CASE-NPO-14902-1
		US-PATENT-APPL-SN-111436			US-PATENT-APPL-SN-218587			US-PATENT-APPL-SN-156790
		US-PATENT-CLASS-318-254			US-PATENT-CLASS-204-192EC			US-PATENT-CLASS-201-17
		US-PATENT-CLASS-318-806			US-PATENT-CLASS-264-22			US-PATENT-CLASS-44-15R
		US-PATENT-CLASS-318-812			US-PATENT-CLASS-264-220			US-PATENT-4,325,707
		US-PATENT-CLASS-318-830			US-PATENT-CLASS-428-141	N82-29415*	c 26	NASA-CASE-LEW-13169-1
		US-PATENT-4,313,077			US-PATENT-4,329,385			US-PATENT-APPL-SN-102003
N82-26570*	c 33	NASA-CASE-LAR-12659-1	N82-28441*	c 27	NASA-CASE-LEW-13343-1			US-PATENT-CLASS-204-192C
		US-PATENT-APPL-SN-171928						



## ACCESSION NUMBER INDEX

N83-10900

- N82-29451\* c 27 ..... NASA-CASE-HQN-10274-1  
US-PATENT-APPL-SN-683465  
US-PATENT-CLASS-106-52  
US-PATENT-CLASS-106-58
- N82-29452\* c 27 ..... NASA-CASE-HQN-10931-2  
US-PATENT-APPL-SN-246295  
US-PATENT-APPL-SN-874674  
US-PATENT-CLASS-106-50  
US-PATENT-CLASS-106-52  
US-PATENT-CLASS-106-54  
US-PATENT-CLASS-378,836
- N82-29453\* c 27 ..... NASA-CASE-LEW-13268-1  
US-PATENT-APPL-SN-145209  
US-PATENT-CLASS-415-174  
US-PATENT-CLASS-427-34  
US-PATENT-CLASS-427-423  
US-PATENT-CLASS-436,276
- N82-29454\* c 27 ..... NASA-CASE-HQN-10328-2  
US-PATENT-APPL-SN-246294  
US-PATENT-APPL-SN-874673  
US-PATENT-CLASS-106-50  
US-PATENT-CLASS-106-52  
US-PATENT-CLASS-106-54  
US-PATENT-CLASS-3,811,901
- N82-29455\* c 27 ..... NASA-CASE-HQN-10595-1  
US-PATENT-APPL-SN-259056  
US-PATENT-APPL-SN-874675  
US-PATENT-CLASS-106-50  
US-PATENT-CLASS-106-52  
US-PATENT-CLASS-3,947,281
- N82-29456\* c 27 ..... NASA-CASE-MSC-18741-1  
US-PATENT-APPL-SN-217336  
US-PATENT-CLASS-156-329  
US-PATENT-CLASS-244-121  
US-PATENT-CLASS-244-158A  
US-PATENT-CLASS-244-160  
US-PATENT-CLASS-244-163  
US-PATENT-CLASS-428-212  
US-PATENT-CLASS-428-218  
US-PATENT-CLASS-428-283  
US-PATENT-CLASS-428-289  
US-PATENT-CLASS-428-307.7  
US-PATENT-CLASS-428-311.5  
US-PATENT-CLASS-428-312.6  
US-PATENT-CLASS-428-317.9  
US-PATENT-CLASS-428-325  
US-PATENT-CLASS-428-446  
US-PATENT-CLASS-428-49  
US-PATENT-CLASS-433,368
- N82-29538\* c 33 ..... NASA-CASE-NPO-15066-1  
US-PATENT-APPL-SN-191744  
US-PATENT-CLASS-179-18GF  
US-PATENT-CLASS-340-825.89  
US-PATENT-CLASS-370-67  
US-PATENT-CLASS-433,956
- N82-29539\* c 33 ..... NASA-CASE-NPO-14311-1  
US-PATENT-APPL-SN-969762  
US-PATENT-CLASS-328-166  
US-PATENT-CLASS-455-202  
US-PATENT-CLASS-455-208  
US-PATENT-CLASS-455-234  
US-PATENT-CLASS-455-306  
US-PATENT-CLASS-433,616
- N82-29589\* c 36 ..... NASA-CASE-NPO-15111-1  
US-PATENT-APPL-SN-150040  
US-PATENT-CLASS-350-358  
US-PATENT-CLASS-432,441
- N82-29708\* c 44 ..... NASA-CASE-LEW-13171-1  
US-PATENT-APPL-SN-238790  
US-PATENT-CLASS-429-144  
US-PATENT-CLASS-429-251  
US-PATENT-CLASS-429-254  
US-PATENT-CLASS-431,746
- N82-29709\* c 44 ..... NASA-CASE-LEW-13401-1  
US-PATENT-APPL-SN-219678  
US-PATENT-CLASS-136-249  
US-PATENT-CLASS-148-1.5  
US-PATENT-CLASS-29-572  
US-PATENT-CLASS-357-30  
US-PATENT-CLASS-435,503
- N82-29710\* c 44 ..... NASA-CASE-NPO-15269-1  
US-PATENT-APPL-SN-220214  
US-PATENT-CLASS-204-290F  
US-PATENT-CLASS-204-290R  
US-PATENT-CLASS-429-193  
US-PATENT-CLASS-429-33  
US-PATENT-CLASS-429-40  
US-PATENT-CLASS-431,742
- N82-29862\* c 52 ..... NASA-CASE-LAR-12471-1  
US-PATENT-APPL-SN-178193  
US-PATENT-CLASS-128-62A  
US-PATENT-CLASS-433-118  
US-PATENT-CLASS-433-125  
US-PATENT-CLASS-433-86  
US-PATENT-CLASS-433,422
- N82-29863\* c 52 ..... NASA-CASE-GSC-12560-1  
US-PATENT-APPL-SN-153246  
US-PATENT-CLASS-128-421  
US-PATENT-CLASS-430,868
- N82-30071\* c 74 ..... NASA-CASE-MSC-18627-1  
US-PATENT-APPL-SN-186881  
US-PATENT-CLASS-250-226  
US-PATENT-CLASS-250-231R  
US-PATENT-CLASS-374-162R  
US-PATENT-CLASS-433,516
- N82-30105\* c 76 ..... NASA-CASE-NPO-14831-1  
US-PATENT-APPL-SN-233269  
US-PATENT-CLASS-156-602  
US-PATENT-CLASS-156-608  
US-PATENT-CLASS-422-246  
US-PATENT-CLASS-433,359
- N82-30371\* c 26 ..... NASA-CASE-LEW-13169-2  
US-PATENT-APPL-SN-102003  
US-PATENT-APPL-SN-191746  
US-PATENT-CLASS-204-192C  
US-PATENT-CLASS-428-457  
US-PATENT-CLASS-428-472  
US-PATENT-CLASS-434,843
- N82-31505\* c 26 ..... NASA-CASE-LEW-13339-1  
US-PATENT-APPL-SN-199769  
US-PATENT-CLASS-148-428  
US-PATENT-CLASS-420-445  
US-PATENT-CLASS-420-551  
US-PATENT-CLASS-420-588  
US-PATENT-CLASS-430,425
- N82-31583\* c 32 ..... NASA-CASE-MSC-16462-1  
US-PATENT-APPL-SN-900841  
US-PATENT-CLASS-178-22.16  
US-PATENT-CLASS-178-22.17  
US-PATENT-CLASS-364-717  
US-PATENT-CLASS-375-106  
US-PATENT-CLASS-434,925
- N82-31659\* c 35 ..... NASA-CASE-LAR-12363-1  
US-PATENT-APPL-SN-191748  
US-PATENT-CLASS-250-332  
US-PATENT-CLASS-250-370  
US-PATENT-CLASS-29-576J  
US-PATENT-CLASS-29-576S  
US-PATENT-CLASS-29-620  
US-PATENT-CLASS-434,012
- N82-31690\* # c 37 ..... NASA-CASE-MSC-20304-1  
US-PATENT-APPL-SN-393585  
US-PATENT-CLASS-13400-1  
US-PATENT-APPL-SN-219677  
US-PATENT-CLASS-136-249  
US-PATENT-CLASS-357-30  
US-PATENT-CLASS-434,918
- N82-32366\* c 07 ..... NASA-CASE-LEW-12938-1  
US-PATENT-APPL-SN-060449  
US-PATENT-CLASS-415-145  
US-PATENT-CLASS-415-178  
US-PATENT-CLASS-60-39.07  
US-PATENT-CLASS-60-39.29  
US-PATENT-CLASS-60-726  
US-PATENT-CLASS-432,114
- N82-32373\* c 08 ..... NASA-CASE-LAR-12468-1  
US-PATENT-APPL-SN-135057  
US-PATENT-CLASS-244-118.1  
US-PATENT-CLASS-244-137R  
US-PATENT-CLASS-89-1.5G  
US-PATENT-CLASS-434,447
- N82-32417\* c 24 ..... NASA-CASE-LAR-12620-1  
US-PATENT-APPL-SN-072857  
US-PATENT-CLASS-244-132  
US-PATENT-CLASS-244-158A  
US-PATENT-CLASS-428-594  
US-PATENT-CLASS-428-604  
US-PATENT-CLASS-428-607  
US-PATENT-CLASS-428-608  
US-PATENT-CLASS-434,591
- N82-32659\* c 35 ..... NASA-CASE-GSC-12587-1  
US-PATENT-APPL-SN-173524  
US-PATENT-CLASS-250-369  
US-PATENT-CLASS-434,153
- N82-32712\* c 36 ..... NASA-CASE-LAR-12328-1  
US-PATENT-APPL-SN-073477  
US-PATENT-CLASS-350-453  
US-PATENT-CLASS-356-28.5  
US-PATENT-CLASS-434,990
- N82-32730\* c 37 ..... NASA-CASE-GSC-12584-1  
US-PATENT-APPL-SN-182879  
US-PATENT-CLASS-125-23R  
US-PATENT-CLASS-225-103  
US-PATENT-CLASS-434,287
- N82-32731\* c 37 ..... NASA-CASE-MFS-23846-1  
US-PATENT-APPL-SN-168944  
US-PATENT-CLASS-294-116  
US-PATENT-CLASS-414-222  
US-PATENT-CLASS-414-226  
US-PATENT-CLASS-414-739  
US-PATENT-CLASS-434,584
- N82-32732\* c 37 ..... NASA-CASE-LAR-12482-1  
US-PATENT-APPL-SN-100611  
US-PATENT-CLASS-403-217  
US-PATENT-CLASS-403-317  
US-PATENT-CLASS-403-331  
US-PATENT-CLASS-403-340  
US-PATENT-CLASS-52-81  
US-PATENT-CLASS-434,318
- N82-32841\* c 44 ..... NASA-CASE-LAR-12513-1  
US-PATENT-APPL-SN-161256  
US-PATENT-CLASS-250-330  
US-PATENT-CLASS-250-370  
US-PATENT-CLASS-433,873
- N82-33288\* c 85 ..... NASA-CASE-FRC-11058-1  
US-PATENT-APPL-SN-175453  
US-PATENT-CLASS-105-2R  
US-PATENT-CLASS-244-53B  
US-PATENT-CLASS-296-1S  
US-PATENT-CLASS-296-24C  
US-PATENT-CLASS-296-91  
US-PATENT-CLASS-434,506
- N82-33520\* c 27 ..... NASA-CASE-KSC-11097-1  
US-PATENT-APPL-SN-172100  
US-PATENT-CLASS-427-140  
US-PATENT-CLASS-427-372.2  
US-PATENT-CLASS-427-397.7  
US-PATENT-CLASS-430,572
- N82-33521\* c 27 ..... NASA-CASE-LEW-13028-1  
US-PATENT-APPL-SN-218588  
US-PATENT-CLASS-204-192E  
US-PATENT-CLASS-204-192EC  
US-PATENT-CLASS-204-38B  
US-PATENT-CLASS-428-141  
US-PATENT-CLASS-434,996
- N82-33523\* # c 27 ..... NASA-CASE-ARC-14408-1  
US-PATENT-APPL-SN-403371
- N82-33634\* # c 33 ..... NASA-CASE-MFS-15670-1  
US-PATENT-APPL-SN-409679
- N82-33996\* c 52 ..... NASA-CASE-NPO-14549-2  
US-PATENT-APPL-SN-149526  
US-PATENT-APPL-SN-918705  
US-PATENT-CLASS-128-422  
US-PATENT-CLASS-128-784  
US-PATENT-CLASS-128-804  
US-PATENT-CLASS-434,715
- N83-10040\* c 06 ..... NASA-CASE-NPO-15351-1  
US-PATENT-APPL-SN-224231  
US-PATENT-CLASS-343-100ME  
US-PATENT-CLASS-374-122  
US-PATENT-CLASS-374-123  
US-PATENT-CLASS-73-170R  
US-PATENT-CLASS-73-178R  
US-PATENT-CLASS-434,595
- N83-10117\* c 24 ..... NASA-CASE-LEW-12919-1  
US-PATENT-APPL-SN-264378  
US-PATENT-CLASS-204-192E  
US-PATENT-CLASS-313-106  
US-PATENT-CLASS-313-107  
US-PATENT-CLASS-315-5.38  
US-PATENT-CLASS-434,424
- N83-10126\* c 25 ..... NASA-CASE-MFS-25426-1  
US-PATENT-APPL-SN-254575  
US-PATENT-CLASS-204-299R  
US-PATENT-CLASS-434,429
- N83-10170\* c 26 ..... NASA-CASE-LEW-12941-1  
US-PATENT-APPL-SN-210632  
US-PATENT-CLASS-29-458  
US-PATENT-CLASS-29-521  
US-PATENT-CLASS-403-282  
US-PATENT-CLASS-434,954
- N83-10345\* c 33 ..... NASA-CASE-MFS-25208-1  
US-PATENT-APPL-SN-280154  
US-PATENT-CLASS-318-803  
US-PATENT-CLASS-363-87  
US-PATENT-CLASS-435,022
- N83-10417\* c 36 ..... NASA-CASE-NPO-15021-1  
US-PATENT-APPL-SN-130496  
US-PATENT-CLASS-372-56  
US-PATENT-CLASS-372-59  
US-PATENT-CLASS-372-60  
US-PATENT-CLASS-434,613
- N83-10494\* c 44 ..... NASA-CASE-LEW-13131-1  
US-PATENT-APPL-SN-246772  
US-PATENT-CLASS-204-56R  
US-PATENT-CLASS-435,574
- N83-10501\* c 44 ..... NASA-CASE-NPO-14369-1  
US-PATENT-APPL-SN-126063  
US-PATENT-CLASS-422-200  
US-PATENT-CLASS-422-202  
US-PATENT-CLASS-422-224  
US-PATENT-CLASS-55-204  
US-PATENT-CLASS-434,772
- N83-10900\* c 74 ..... NASA-CASE-GSC-12608-1  
US-PATENT-APPL-SN-195228  
US-PATENT-CLASS-350-170  
US-PATENT-CLASS-350-286

N83-13171*	c 24	US-PATENT-4,350,410	N83-18975*	c 32	US-PATENT-CLASS-428-920	N83-20996*	c 18	US-PATENT-CLASS-343-DIG2		
		NASA-CASE-MSC-18737-1			US-PATENT-4,373,003			US-PATENT-4,377,266		
		US-PATENT-APPL-SN-266256			NASA-CASE-NPO-14998-1			NASA-CASE-LEW-13269-1		
		US-PATENT-CLASS-427-379			US-PATENT-APPL-SN-195547			US-PATENT-APPL-SN-242795		
		US-PATENT-CLASS-427-384			US-PATENT-CLASS-250-203R			US-PATENT-CLASS-415-174		
N83-13172*	c 24	US-PATENT-CLASS-428-218	N83-18996*	c 33	US-PATENT-CLASS-343-100CL	N83-21311*	c 35	US-PATENT-CLASS-415-197		
		US-PATENT-4,358,486			US-PATENT-CLASS-343-5CM			US-PATENT-4,377,371		
		NASA-CASE-MSC-18736-1			US-PATENT-CLASS-364-822			NASA-CASE-LAR-12469-1		
		US-PATENT-APPL-SN-266254			US-PATENT-CLASS-364-861			US-PATENT-APPL-SN-195223		
		US-PATENT-CLASS-244-158A			US-PATENT-4,371,946			US-PATENT-CLASS-250-338		
N83-13187*	c 25	US-PATENT-CLASS-427-140	N83-19015*	c 34	US-PATENT-CLASS-364-822	N83-21503*	c 44	US-PATENT-CLASS-250-372		
		US-PATENT-CLASS-427-292			US-PATENT-APPL-SN-038550			US-PATENT-CLASS-250-474.1		
		US-PATENT-CLASS-427-302			US-PATENT-APPL-SN-180230			US-PATENT-CLASS-356-51		
		US-PATENT-CLASS-427-379			US-PATENT-CLASS-250-311			US-PATENT-4,372,680		
		US-PATENT-CLASS-427-384			US-PATENT-CLASS-324-73R			NASA-CASE-MSC-18723-1		
N83-13188*	c 25	US-PATENT-CLASS-427-387	N83-19091*	c 37	US-PATENT-CLASS-356-394	N83-21504*	c 44	US-PATENT-APPL-SN-234223		
		US-PATENT-CLASS-428-63			US-PATENT-4,358,732			US-PATENT-CLASS-73-818		
		US-PATENT-4,358,480			NASA-CASE-MFS-25282-1			US-PATENT-4,377,089		
		NASA-CASE-MFS-25306-1			US-PATENT-APPL-SN-263828			NASA-CASE-LAR-12458-1		
		US-PATENT-APPL-SN-309293			US-PATENT-CLASS-378-2			US-PATENT-APPL-SN-274705		
N83-13323*	c 32	US-PATENT-CLASS-204-280R	N83-19596*	c 74	US-PATENT-CLASS-378-43	N83-21785*	c 52	US-PATENT-CLASS-73-147		
		US-PATENT-CLASS-204-299R			US-PATENT-4,370,750			US-PATENT-4,372,158		
		US-PATENT-4,358,358			NASA-CASE-LAR-12361-1			NASA-CASE-LAR-12720-1		
		NASA-CASE-LEW-13504-1			US-PATENT-APPL-SN-182680			US-PATENT-APPL-SN-274706		
		US-PATENT-APPL-SN-272234			US-PATENT-CLASS-411-353			US-PATENT-CLASS-73-147		
N83-13323*	c 32	US-PATENT-CLASS-264-104	N83-19597*	c 74	US-PATENT-CLASS-411-517	N83-21949*	c 74	US-PATENT-4,372,159		
		US-PATENT-CLASS-429-206			US-PATENT-4,371,301			NASA-CASE-LEW-13107-1		
		US-PATENT-CLASS-429-253			NASA-CASE-LEW-12253-1			US-PATENT-APPL-SN-272407		
		US-PATENT-CLASS-525-61			US-PATENT-APPL-SN-243682			US-PATENT-CLASS-604-280		
		US-PATENT-4,357,402			US-PATENT-CLASS-165-104.26			US-PATENT-CLASS-604-8		
N83-13579*	c 44	US-PATENT-CLASS-429-253	N83-19737*	c 05	US-PATENT-CLASS-165-134R	N83-24572* #	c 25	US-PATENT-4,377,169		
		NASA-CASE-KSC-11025-1			US-PATENT-CLASS-29-157.3H			NASA-CASE-ARC-11354-1		
		US-PATENT-APPL-SN-061327			US-PATENT-4,372,377			US-PATENT-APPL-SN-282192		
		US-PATENT-CLASS-371-6			NASA-CASE-NPO-14864-1			US-PATENT-CLASS-356-357		
		US-PATENT-4,358,846			US-PATENT-APPL-SN-061822			US-PATENT-CLASS-73-147		
N83-14692*	c 44	NASA-CASE-LEW-13620-1	N83-19900*	c 27	US-PATENT-CLASS-250-227	N83-25217*	c 45	US-PATENT-4,377,343		
		US-PATENT-APPL-SN-242796			US-PATENT-CLASS-250-332			NASA-CASE-NPO-16135-1		
		US-PATENT-CLASS-136-256			US-PATENT-CLASS-250-340			US-PATENT-APPL-SN-470114		
		US-PATENT-CLASS-136-259			US-PATENT-CLASS-250-350			NASA-CASE-LAR-12363-2		
		US-PATENT-CLASS-29-572			US-PATENT-CLASS-250-351			US-PATENT-APPL-SN-377892		
N83-14693*	c 44	US-PATENT-CLASS-357-30	N83-19947*	c 31	US-PATENT-CLASS-350-353	N83-25346*	c 52	US-PATENT-CLASS-250-388		
		US-PATENT-CLASS-427-88			US-PATENT-4,262,198			US-PATENT-4,379,970		
		US-PATENT-CLASS-427-89			NASA-CASE-FRC-11065-1			NASA-CASE-MFS-25509-1		
		US-PATENT-CLASS-427-90			US-PATENT-APPL-SN-248744			US-PATENT-APPL-SN-297486		
		US-PATENT-CLASS-427-91			US-PATENT-CASE-244-121			US-PATENT-CLASS-156-DIG.62		
N83-16626*	c 33	US-PATENT-4,335,196	N83-19968*	c 32	US-PATENT-CASE-244-129.4	N83-25378*	c 60	US-PATENT-CLASS-34-57A		
		NASA-CASE-ARC-11311-1			US-PATENT-CASE-292-254			US-PATENT-CLASS-432-227		
		US-PATENT-APPL-SN-219640			US-PATENT-4,375,281			US-PATENT-CLASS-432-58		
		US-PATENT-CLASS-350-287			NASA-CASE-NPO-14857-1			US-PATENT-4,378,209		
		US-PATENT-CLASS-350-486			US-PATENT-APPL-SN-158530			NASA-CASE-NPO-15220-1		
N83-16633* #	c 33	US-PATENT-4,355,870	N83-20154* #	c 37	US-PATENT-CLASS-523-205	N83-25789*	c 24	US-PATENT-APPL-SN-15220-1		
		NASA-CASE-LEW-12892-1			US-PATENT-CLASS-524-436			US-PATENT-APPL-SN-246777		
		US-PATENT-APPL-SN-264380			US-PATENT-CLASS-524-437			US-PATENT-CLASS-220-335		
		US-PATENT-CLASS-136-255			US-PATENT-CLASS-524-503			US-PATENT-CLASS-73-863.31		
		US-PATENT-CLASS-136-256			US-PATENT-CLASS-524-564			US-PATENT-CLASS-73-863.83		
N83-17045*	c 51	US-PATENT-CLASS-136-259	N83-20280*	c 39	US-PATENT-CLASS-524-786	N83-26078*	c 37	US-PATENT-CLASS-73-864.63		
		US-PATENT-4,360,701			US-PATENT-4,373,039			US-PATENT-4,377,949		
		NASA-CASE-MSC-18794-1			NASA-CASE-NPO-15789-1			NASA-CASE-NPO-15197-1		
		US-PATENT-APPL-SN-238785			US-PATENT-APPL-SN-322316			US-PATENT-APPL-SN-263957		
		US-PATENT-CLASS-417-399			US-PATENT-CLASS-204-129.55			US-PATENT-CLASS-128-303B		
N83-17235*	c 71	US-PATENT-CLASS-74-110	N83-19968*	c 32	US-PATENT-CLASS-204-129.75	N83-27058*	c 31	US-PATENT-CLASS-128-774		
		US-PATENT-4,360,325			US-PATENT-4,375,396			US-PATENT-CLASS-128-782		
		NASA-CASE-LAR-12772-1			NASA-CASE-NPO-14035-1			US-PATENT-4,378,813		
		US-PATENT-APPL-SN-199767			US-PATENT-APPL-SN-858767			NASA-CASE-GSC-12223-1		
		US-PATENT-CLASS-73-579			US-PATENT-CLASS-343-100CL			US-PATENT-APPL-SN-041143		
N83-17305*	c 74	US-PATENT-CLASS-73-597	N83-20944*	c 07	US-PATENT-CLASS-343-9PS	N83-27126*	c 33	US-PATENT-CLASS-364-200		
		US-PATENT-CLASS-73-629			US-PATENT-4,371,873			US-PATENT-4,380,046		
		US-PATENT-CLASS-73-761			US-PATENT-4,371,873			NASA-CASE-ARC-11261-1		
		US-PATENT-4,363,242			US-PATENT-APPL-SN-460733			US-PATENT-APPL-SN-282129		
		NASA-CASE-LAR-12847-1			NASA-CASE-MSC-18929-1			US-PATENT-CLASS-423-447.2		
N83-17588* #	c 20	US-PATENT-APPL-SN-393456	N83-20944*	c 07	US-PATENT-APPL-SN-198093	N83-27085*	c 32	US-PATENT-CLASS-423-447.6		
		NASA-CASE-NPO-15213-1			US-PATENT-CLASS-128-782			US-PATENT-4,385,043		
		US-PATENT-APPL-SN-280153			US-PATENT-CLASS-358-105			NASA-CASE-GSC-12643-1		
		US-PATENT-CLASS-47-58			US-PATENT-CLASS-364-413			US-PATENT-APPL-SN-238786		
		US-PATENT-CLASS-71-98			US-PATENT-CLASS-364-522			US-PATENT-CLASS-417-15		
N83-18908*	c 27	US-PATENT-4,363,188	N83-20789*	c 76	US-PATENT-CLASS-364-559	N83-27144*	c 34	US-PATENT-CLASS-47-26		
		NASA-CASE-LAR-12883-1			US-PATENT-CLASS-73-379			US-PATENT-4,381,174		
		US-PATENT-APPL-SN-267935			US-PATENT-4,375,674			NASA-CASE-GSC-12638-1		
		US-PATENT-CLASS-73-147			NASA-CASE-NPO-15625-1			US-PATENT-APPL-SN-173520		
		US-PATENT-4,363,237			US-PATENT-APPL-SN-325933			US-PATENT-CLASS-125-20		
N83-17705*	c 74	NASA-CASE-MFS-25312-1	N83-20944*	c 07	US-PATENT-CLASS-148-173	N83-27144*	c 34	US-PATENT-CLASS-408-1R		
		US-PATENT-APPL-SN-187106			US-PATENT-CLASS-148-175			US-PATENT-CLASS-408-61		
		US-PATENT-CLASS-350-171			US-PATENT-CLASS-156-608			US-PATENT-CLASS-409-131		
		US-PATENT-4,362,361			US-PATENT-CLASS-156-624			US-PATENT-4,383,785		
		NASA-CASE-MFS-25843-1			US-PATENT-CLASS-156-635			NASA-CASE-NPO-15401-1		
N83-17705*	c 20	US-PATENT-APPL-SN-444125	N83-20944*	c 07	US-PATENT-CLASS-156-654	N83-27144*	c 34	US-PATENT-APPL-SN-259210		
		NASA-CASE-MSC-18832-1			US-PATENT-CLASS-156-662			US-PATENT-CLASS-333-22F		
		US-PATENT-APPL-SN-365950			US-PATENT-4,373,989			US-PATENT-CLASS-333-254		
		US-PATENT-CLASS-428-241			NASA-CASE-MFS-23981-1			US-PATENT-4,382,239		
		US-PATENT-CLASS-428-244			US-PATENT-APPL-SN-231543			NASA-CASE-NPO-15358-1		
N83-17705*	c 27	US-PATENT-CLASS-428-245	N83-20944*	c 07	US-PATENT-CLASS-244-159	N83-27144*	c 34	US-PATENT-APPL-SN-219968		
		US-PATENT-CLASS-428-260			US-PATENT-CLASS-244-173			US-PATENT-CLASS-323-269		
		US-PATENT-CLASS-428-331			US-PATENT-CLASS-322-2R			US-PATENT-CLASS-323-303		
		US-PATENT-CLASS-428-368			US-PATENT-CLASS-339-3R			US-PATENT-CLASS-323-350		
		US-PATENT-CLASS-428-902			US-PATENT-CLASS-339-5R			US-PATENT-4,382,224		
N83-17705*	c 27	US-PATENT-CLASS-428-913	N83-20944*	c 07	US-PATENT-CLASS-339-5R	N83-27144*	c 34	NASA-CASE-LEW-13174-1		

**N83-32342**

**F-73**

		US-PATENT-APPL-SN-258623				US-PATENT-APPL-SN-276748				US-PATENT-CLASS-318-806
		US-PATENT-CLASS-364-200				US-PATENT-CLASS-315-208				US-PATENT-4,401,934
		US-PATENT-CLASS-364-900				US-PATENT-CLASS-315-224				NASA-CASE-GSC-12812-1
N83-32515*	c 71	US-PATENT-4,394,726				US-PATENT-CLASS-315-225		N83-35307*	c 34	US-PATENT-APPL-SN-434674
		NASA-CASE-NPO-15453-1				US-PATENT-CLASS-315-237				US-PATENT-CLASS-165-104.26
		US-PATENT-APPL-SN-314829				US-PATENT-CLASS-315-241R				US-PATENT-CLASS-165-32
		US-PATENT-CLASS-60-721				US-PATENT-CLASS-372-25				US-PATENT-4,402,358
		US-PATENT-CLASS-73-505				US-PATENT-4,398,129		N83-35338*	c 35	NASA-CASE-LEW-13934-1
		US-PATENT-4,393,708		N83-34190*	c 33	NASA-CASE-MFS-25607-1				US-PATENT-APPL-SN-212949
N83-32516*	c 71	NASA-CASE-NPO-15522-1				US-PATENT-APPL-SN-325886				US-PATENT-CLASS-228-103
		US-PATENT-APPL-SN-303672				US-PATENT-CLASS-361-90				US-PATENT-CLASS-228-193
		US-PATENT-CLASS-60-721				US-PATENT-CLASS-318-729				US-PATENT-CLASS-228-263.18
		US-PATENT-CLASS-73-505				US-PATENT-CLASS-318-798				US-PATENT-CLASS-415-118
		US-PATENT-4,393,706				US-PATENT-CLASS-318-806				US-PATENT-4,402,447
N83-32577*	c 74	NASA-CASE-GSC-12614-1				US-PATENT-CLASS-361-100		N83-35350*	c 36	NASA-CASE-NPO-15201-1
		US-PATENT-APPL-SN-195227				US-PATENT-CLASS-363-54				US-PATENT-APPL-SN-246778
		US-PATENT-CLASS-356-353				US-PATENT-4,400,657				US-PATENT-CLASS-330-4
		US-PATENT-CLASS-356-363		N83-34191*	c 33	NASA-CASE-GSC-12646-1				US-PATENT-CLASS-332-7.5
		US-PATENT-4,395,123				US-PATENT-APPL-SN-284290				US-PATENT-CLASS-333-24.2
N83-33882*	c 06	NASA-CASE-FRC-11043-1				US-PATENT-CLASS-330-289				US-PATENT-4,399,415
		US-PATENT-APPL-SN-242790				US-PATENT-CLASS-330-310		N83-35781*	c 71	NASA-CASE-NPO-15334-1
		US-PATENT-CLASS-33-322				US-PATENT-4,401,953				US-PATENT-APPL-SN-341406
		US-PATENT-CLASS-74-5.34				NASA-CASE-LAR-12393-1				US-PATENT-CLASS-210-748
		US-PATENT-4,387,513		N83-34221*	c 34	US-PATENT-APPL-SN-145208				US-PATENT-CLASS-252-361
N83-33884*	c 07	NASA-CASE-ARC-10812-1				US-PATENT-CLASS-165-27				US-PATENT-CLASS-366-114
		US-PATENT-APPL-SN-657903				US-PATENT-CLASS-165-12				US-PATENT-CLASS-55-15
		US-PATENT-CLASS-181-213				US-PATENT-CLASS-165-61				US-PATENT-CLASS-55-277
		US-PATENT-CLASS-239-265.17				US-PATENT-CLASS-165-80E				US-PATENT-CLASS-55-38
		US-PATENT-CLASS-60-262				US-PATENT-CLASS-374-46				US-PATENT-CLASS-55-52
		US-PATENT-CLASS-60-269				US-PATENT-CLASS-62-514R				US-PATENT-CLASS-65-134
		US-PATENT-CLASS-60-271				US-PATENT-CLASS-62-62				US-PATENT-4,398,925
		US-PATENT-4,372,110				US-PATENT-4,346,754		N83-35888*	c 76	NASA-CASE-NPO-15530-1
N83-33950*	c 24	NASA-CASE-NPO-14987-1		N83-34272*	c 35	NASA-CASE-ARC-11317-1				US-PATENT-APPL-SN-364092
		US-PATENT-APPL-SN-164-584				US-PATENT-APPL-SN-229231				US-PATENT-CLASS-156-DIG.6
		US-PATENT-CLASS-427-215				US-PATENT-CLASS-340-518				US-PATENT-CLASS-156-DIG.73
		US-PATENT-CLASS-427-241				US-PATENT-CLASS-340-566				US-PATENT-CLASS-156-608
		US-PATENT-CLASS-428-367				US-PATENT-4,374,378				US-PATENT-4,401,505
		US-PATENT-CLASS-428-375		N83-34304*	c 36	NASA-CASE-ARC-11312-1		N83-35992*	c 01	NASA-CASE-LAR-12624-1
		US-PATENT-CLASS-428-392				US-PATENT-APPL-SN-234224				US-PATENT-APPL-SN-259209
		US-PATENT-CLASS-428-902				US-PATENT-CLASS-356-1				US-PATENT-CLASS-102-378
		US-PATENT-CLASS-428-903				US-PATENT-CLASS-356-4				US-PATENT-CLASS-244-137P
		US-PATENT-4,359,503				US-PATENT-CLASS-358-104				US-PATENT-CLASS-89-1B
N83-33977*	c 25	NASA-CASE-ARC-11326-1				US-PATENT-CLASS-358-109				US-PATENT-4,407,468
		US-PATENT-APPL-SN-178192				US-PATENT-CLASS-434-38		N83-36029*	c 07	NASA-CASE-LEW-13142-1
		US-PATENT-CLASS-252-5				US-PATENT-CLASS-434-4				US-PATENT-APPL-SN-132364
		US-PATENT-CLASS-423-419P				US-PATENT-4,391,514				US-PATENT-CLASS-60-39.07
		US-PATENT-CLASS-423-600		N83-34323*	c 37	NASA-CASE-GSC-12726-1				US-PATENT-4,404,793
		US-PATENT-CLASS-424-156				US-PATENT-APPL-SN-364093				NASA-CASE-ARC-11252-1
		US-PATENT-4,356,157				US-PATENT-CLASS-308-10		N83-36118*	c 25	US-PATENT-APPL-SN-317977
N83-34039*	c 27	NASA-CASE-GSC-12686-1				US-PATENT-4,381,375				US-PATENT-CLASS-169-47
		US-PATENT-APPL-SN-293412		N83-34448*	c 44	NASA-CASE-ARC-11164-1				US-PATENT-CLASS-252-2
		US-PATENT-CLASS-427-322				US-PATENT-APPL-SN-308007				US-PATENT-CLASS-252-5
		US-PATENT-CLASS-427-340				US-PATENT-CLASS-350-166				US-PATENT-4,406,797
		US-PATENT-CLASS-427-352				US-PATENT-CLASS-428-312.6		N83-36220*	c 27	NASA-CASE-MFS-25438-1
		US-PATENT-CLASS-427-400				US-PATENT-CLASS-428-325				US-PATENT-APPL-SN-280151
		US-PATENT-CLASS-427-407.1				US-PATENT-CLASS-428-427				US-PATENT-CLASS-156-DIG.73
		US-PATENT-4,362,769				US-PATENT-CLASS-428-428				US-PATENT-CLASS-156-DIG.89
N83-34040*	c 27	NASA-CASE-LAR-12838-1				US-PATENT-4,381,333				US-PATENT-CLASS-156-600
		US-PATENT-APPL-SN-320621		N83-34449*	c 44	NASA-CASE-LAR-12719-1				US-PATENT-CLASS-156-610
		US-PATENT-CLASS-526-259				US-PATENT-APPL-SN-367134				US-PATENT-CLASS-165-2
		US-PATENT-CLASS-526-285				US-PATENT-CLASS-126-901				US-PATENT-CLASS-165-58
		US-PATENT-CLASS-528-12				US-PATENT-CLASS-204-33				US-PATENT-CLASS-219-343
		US-PATENT-CLASS-528-125				US-PATENT-CLASS-204-35N				US-PATENT-CLASS-219-354
		US-PATENT-CLASS-528-126				US-PATENT-4,397,716				US-PATENT-CLASS-219-390
		US-PATENT-CLASS-528-128				NASA-CASE-LEW-12582-1				US-PATENT-CLASS-219-411
		US-PATENT-CLASS-528-220		N83-34796*	c 76	US-PATENT-APPL-SN-397281				US-PATENT-CLASS-350-316
		US-PATENT-CLASS-528-222				US-PATENT-CLASS-310-332				US-PATENT-4,408,658
		US-PATENT-CLASS-528-228				US-PATENT-CLASS-310-800		N83-36355*	c 33	NASA-CASE-GSC-12630-1
		US-PATENT-CLASS-528-229				US-PATENT-CLASS-428-294				US-PATENT-APPL-SN-308009
		US-PATENT-CLASS-528-38				US-PATENT-CLASS-428-421				US-PATENT-CLASS-343-100AP
		US-PATENT-4,375,536				US-PATENT-CLASS-428-422				US-PATENT-CLASS-343-840
N83-34041*	c 27	NASA-CASE-LAR-12858-1				US-PATENT-4,400,642				US-PATENT-4,407,001
		US-PATENT-APPL-SN-407240		N83-35176*	c 31	NASA-CASE-NPO-15070-1		N83-36356*	c 33	NASA-CASE-KSC-11170-1
		US-PATENT-CLASS-164-331.12				US-PATENT-APPL-SN-403847				US-PATENT-APPL-SN-284288
		US-PATENT-CLASS-264-137				US-PATENT-CLASS-264-12				US-PATENT-CLASS-330-110
		US-PATENT-CLASS-264-258				US-PATENT-CLASS-264-24				US-PATENT-CLASS-330-282
		US-PATENT-CLASS-264-331.46				US-PATENT-CLASS-264-5				US-PATENT-4,406,989
		US-PATENT-CLASS-528-222				US-PATENT-CLASS-425-10		N83-36357*	c 33	NASA-CASE-LAR-12654-1
		US-PATENT-CLASS-528-226				US-PATENT-CLASS-425-6				US-PATENT-APPL-SN-234225
		US-PATENT-4,398,021				US-PATENT-CLASS-425-7				US-PATENT-CLASS-368-184
N83-34043*	c 27	NASA-CASE-NPO-15202-1				US-PATENT-CLASS-65-142				US-PATENT-CLASS-368-200
		US-PATENT-APPL-SN-233271				US-PATENT-CLASS-65-21.3				US-PATENT-CLASS-368-201
		US-PATENT-CLASS-384-124				US-PATENT-CLASS-65-21.4				US-PATENT-4,407,589
		US-PATENT-CLASS-523-440				US-PATENT-CLASS-65-22				NASA-CASE-MSC-18791-1
		US-PATENT-CLASS-523-443				US-PATENT-4,400,191		N83-36482*	c 37	US-PATENT-APPL-SN-248746
		US-PATENT-4,395,503				NASA-CASE-LEW-13450-1				US-PATENT-CLASS-29-446
N83-34073*	c 31	NASA-CASE-ARC-11246-1		N83-35177*	c 31	US-PATENT-APPL-SN-328760				US-PATENT-CLASS-73-862.54
		US-PATENT-APPL-SN-136660				US-PATENT-CLASS-427-243				US-PATENT-CLASS-81-55
		US-PATENT-CLASS-156-264				US-PATENT-CLASS-427-247				US-PATENT-CLASS-81-57.38
		US-PATENT-CLASS-156-344				US-PATENT-CLASS-427-34				US-PATENT-4,407,165
		US-PATENT-CLASS-156-59				US-PATENT-CLASS-427-423		N83-36483*	c 37	NASA-CASE-MSC-18807-1
		US-PATENT-CLASS-273-240				US-PATENT-4,402,992				US-PATENT-APPL-SN-266688
		US-PATENT-CLASS-434-403				NASA-CASE-MFS-25209-1				US-PATENT-CLASS-123-197R
		US-PATENT-CLASS-434-88		N83-35227*	c 33	US-PATENT-APPL-SN-291132				US-PATENT-CLASS-123-78E
		US-PATENT-4,385,949				US-PATENT-CLASS-318-685				US-PATENT-4,406,256
N83-34189*	c 33	NASA-CASE-GSC-12566-1				US-PATENT-CLASS-318-798		N83-36846*	c 71	NASA-CASE-NPO-15435-1

		US-PATENT-APPL-SN-272837				US-PATENT-APPL-SN-322314				US-PATENT-CLASS-339-258RR
		US-PATENT-CLASS-308-10				US-PATENT-CLASS-156-215				US-PATENT-CLASS-339-262RR
		US-PATENT-CLASS-73-505				US-PATENT-CLASS-156-230				US-PATENT-CLASS-339-64M
		US-PATENT-4,402,221				US-PATENT-CLASS-156-235				US-PATENT-4,421,371
N83-36898*	c 74	NASA-CASE-GSC-12683-1				US-PATENT-CLASS-156-294	N84-14424*	c 33	NASA-CASE-MFS-25477-1	
		US-PATENT-APPL-SN-333535				US-PATENT-CLASS-156-391			US-PATENT-APPL-SN-243683	
		US-PATENT-CLASS-350-173				US-PATENT-CLASS-156-423			US-PATENT-APPL-SN-297524	
		US-PATENT-CLASS-350-445				US-PATENT-CLASS-156-540			US-PATENT-APPL-SN-350472	
		US-PATENT-4,407,563				US-PATENT-CLASS-156-71			US-PATENT-CLASS-318-729	
N84-11136*	c 02	NASA-CASE-LAR-12843-1				US-PATENT-CLASS-338-2			US-PATENT-CLASS-318-798	
		US-PATENT-APPL-SN-392096				US-PATENT-4,407,686			US-PATENT-CLASS-318-806	
		US-PATENT-CLASS-244-35A	N84-12444*	c 35	NASA-CASE-LAR-12706-1		N84-14461*	c 34	US-PATENT-4,417,190	
		US-PATENT-CLASS-244-35R			US-PATENT-APPL-SN-210498			NASA-CASE-GSC-12771-1		
		US-PATENT-CLASS-416-223R			US-PATENT-CLASS-324-250			US-PATENT-APPL-SN-434672		
		US-PATENT-CLASS-416-242			US-PATENT-CLASS-328-230			US-PATENT-CLASS-165-32		
		US-PATENT-4,412,664			US-PATENT-CLASS-372-74			US-PATENT-CLASS-165-41		
N84-11213*	c 24	NASA-CASE-ARC-11418-1			US-PATENT-4,414,509			US-PATENT-CLASS-165-96		
		US-PATENT-APPL-SN-452464	N84-12445*	c 35	NASA-CASE-LAR-12882-1		N84-14491*	c 35	US-PATENT-4,420,035	
		US-PATENT-CLASS-523-435			US-PATENT-APPL-SN-267179			NASA-CASE-LAR-12686-1		
		US-PATENT-CLASS-523-456			US-PATENT-CLASS-364-415			US-PATENT-APPL-SN-249304		
		US-PATENT-CLASS-528-110			US-PATENT-CLASS-73-646			US-PATENT-CLASS-364-557		
		US-PATENT-CLASS-528-361			US-PATENT-CLASS-73-658			US-PATENT-CLASS-364-558		
		US-PATENT-4,410,682			US-PATENT-4,413,522			US-PATENT-CLASS-364-571		
N84-11214*	c 24	NASA-CASE-LAR-12807-1	N84-12491*	c 37	NASA-CASE-GSC-12619-1			US-PATENT-CLASS-73-714		
		US-PATENT-APPL-SN-280155			US-PATENT-APPL-SN-225499		N84-14509*	c 36	US-PATENT-4,399,515	
		US-PATENT-CLASS-228-157			US-PATENT-CLASS-101-407BP			NASA-CASE-GSC-12565-1		
		US-PATENT-CLASS-228-181			US-PATENT-CLASS-269-3			US-PATENT-APPL-SN-270763		
		US-PATENT-CLASS-228-212			US-PATENT-4,393,777			US-PATENT-CLASS-350-299		
		US-PATENT-CLASS-244-119	N84-12492*	c 37	NASA-CASE-GSC-12622-1			US-PATENT-CLASS-356-345		
		US-PATENT-CLASS-244-123			US-PATENT-APPL-SN-243684			US-PATENT-CLASS-372-100		
		US-PATENT-CLASS-428-593			US-PATENT-CLASS-308-2A			US-PATENT-CLASS-372-108		
		US-PATENT-CLASS-52-806			US-PATENT-4,405,184			US-PATENT-CLASS-372-93		
		US-PATENT-CLASS-52-808	N84-12493*	c 37	NASA-CASE-LAR-12923-1			US-PATENT-CLASS-372-94		
		US-PATENT-4,411,380			US-PATENT-APPL-SN-383063			US-PATENT-CLASS-372-98		
N84-11497*	c 37	NASA-CASE-MFS-25678-1			US-PATENT-CLASS-416-117		N84-14583*	c 44	US-PATENT-4,420,836	
		US-PATENT-APPL-SN-378533			US-PATENT-CLASS-416-132B			NASA-CASE-NPO-15100-1		
		US-PATENT-CLASS-277-116.6			US-PATENT-4,415,311			US-PATENT-APPL-SN-259211		
		US-PATENT-CLASS-277-124	N84-12654*	c 45	NASA-CASE-NSTL-10			US-PATENT-CLASS-138-42		
		US-PATENT-CLASS-277-164			US-PATENT-APPL-SN-335036			US-PATENT-CLASS-251-127		
		US-PATENT-CLASS-277-177			US-PATENT-CLASS-210-151			US-PATENT-4,418,722		
		US-PATENT-CLASS-277-190			US-PATENT-CLASS-210-602		N84-14873*	c 71	NASA-CASE-LAR-11903-2	
		US-PATENT-4,410,189			US-PATENT-CLASS-210-605			US-PATENT-APPL-SN-238791		
N84-11744*	c 52	NASA-CASE-MFS-25740-1			US-PATENT-CLASS-210-617			US-PATENT-APPL-SN-753971		
		US-PATENT-APPL-SN-371352			US-PATENT-CLASS-47-58			US-PATENT-CLASS-239-265.17		
		US-PATENT-CLASS-128-DIG.25			US-PATENT-4,415,450		N84-16231*	c 15	US-PATENT-4,398,667	
		US-PATENT-CLASS-128-1R	N84-12968* #	c 76	NASA-CASE-NPO-15811-1			NASA-CASE-LAR-12751-1		
		US-PATENT-CLASS-128-346			US-PATENT-APPL-SN-547175			US-PATENT-APPL-SN-338386		
		US-PATENT-4,408,597	N84-14132*	c 04	NASA-CASE-LAR-12638-1			US-PATENT-CLASS-73-167		
N84-11758*	c 54	NASA-CASE-MSC-18223-2			US-PATENT-APPL-SN-367187			US-PATENT-CLASS-73-432R		
		US-PATENT-APPL-SN-219681			US-PATENT-CLASS-33-DIG.3			US-PATENT-CLASS-73-9		
		US-PATENT-APPL-SN-368187			US-PATENT-CLASS-33-348			US-PATENT-4,425,785		
		US-PATENT-CLASS-604-368			US-PATENT-CLASS-33-356		N84-16255*	c 23	NASA-CASE-NPO-15767-1	
		US-PATENT-CLASS-604-378			US-PATENT-CLASS-33-361			US-PATENT-APPL-SN-315584		
		US-PATENT-CLASS-604-396			US-PATENT-4,418,480			US-PATENT-CLASS-208-10		
		US-PATENT-4,338,371	N84-14322*	c 27	NASA-CASE-ARC-11400-1			US-PATENT-CLASS-208-8LE		
		US-PATENT-4,411,660			US-PATENT-APPL-SN-441899			US-PATENT-4,388,171		
N84-11920*	c 74	NASA-CASE-GSC-12640-1			US-PATENT-CLASS-428-246		N84-16262*	c 24	NASA-CASE-MSC-16934-3	
		US-PATENT-APPL-SN-267178			US-PATENT-CLASS-428-260			US-PATENT-APPL-SN-185868		
		US-PATENT-CLASS-250-363R			US-PATENT-CLASS-428-367			US-PATENT-APPL-SN-361711		
		US-PATENT-CLASS-250-363S			US-PATENT-CLASS-428-408			US-PATENT-APPL-SN-969757		
		US-PATENT-CLASS-250-368			US-PATENT-CLASS-428-473.5			US-PATENT-CLASS-164-119		
		US-PATENT-CLASS-378-2			US-PATENT-CLASS-428-902			US-PATENT-CLASS-264-118		
		US-PATENT-4,404,469			US-PATENT-CLASS-428-920			US-PATENT-CLASS-264-59		
N84-11921*	c 74	NASA-CASE-NPO-15375-1			US-PATENT-CLASS-524-494			US-PATENT-CLASS-264-60		
		US-PATENT-APPL-SN-210405			US-PATENT-CLASS-524-496			US-PATENT-4,421,700		
		US-PATENT-CLASS-250-227			US-PATENT-CLASS-524-500		N84-16276*	c 25	NASA-CASE-LEW-13426-1	
		US-PATENT-CLASS-3-1.1			US-PATENT-CLASS-524-530			US-PATENT-APPL-SN-393588		
		US-PATENT-CLASS-350-96.10			US-PATENT-CLASS-525-282			US-PATENT-CLASS-110-166		
		US-PATENT-CLASS-350-96.15			US-PATENT-CLASS-525-287			US-PATENT-CLASS-110-262		
		US-PATENT-CLASS-73-432T			US-PATENT-4,421,820			US-PATENT-CLASS-110-263		
		US-PATENT-4,405,197	N84-14323*	c 27	NASA-CASE-LAR-12881-1			US-PATENT-CLASS-110-265		
N84-12154*	c 05	NASA-CASE-LAR-12615-1			US-PATENT-APPL-SN-361215			US-PATENT-CLASS-431-1		
		US-PATENT-APPL-SN-263829			US-PATENT-CLASS-206-447			US-PATENT-4,425,854		
		US-PATENT-CLASS-244-13			US-PATENT-CLASS-206-582		N84-16452*	c 33	NASA-CASE-LEW-13570-1	
		US-PATENT-CLASS-244-45R			US-PATENT-CLASS-428-202			US-PATENT-APPL-SN-251009		
		US-PATENT-CLASS-244-53R			US-PATENT-CLASS-428-347			US-PATENT-CLASS-315-3.5		
		US-PATENT-CLASS-244-55			US-PATENT-CLASS-428-40			US-PATENT-CLASS-315-3.6		
		US-PATENT-CLASS-244-91			US-PATENT-CLASS-428-78			US-PATENT-CLASS-315-39.3		
		US-PATENT-4,415,133			US-PATENT-4,420,518			US-PATENT-CLASS-333-162		
N84-12193* #	c 09	NASA-CASE-ARC-11426-1	N84-14324*	c 27	NASA-CASE-MSC-18382-2			US-PATENT-4,422,012		
		US-PATENT-APPL-SN-526741			US-PATENT-APPL-SN-241155		N84-16453*	c 33	NASA-CASE-MFS-25430-1	
N84-12262*	c 25	NASA-CASE-NPO-15458-1			US-PATENT-CLASS-524-371			US-PATENT-APPL-SN-383083		
		US-PATENT-APPL-SN-376306			US-PATENT-4,395,511			US-PATENT-CLASS-363-25		
		US-PATENT-CLASS-204-DIG.3	N84-14421*	c 33	NASA-CASE-GSC-12650-1			US-PATENT-CLASS-363-65		
		US-PATENT-CLASS-204-129			US-PATENT-APPL-SN-301077			US-PATENT-CLASS-363-67		
		US-PATENT-CLASS-204-242			US-PATENT-CLASS-330-107			US-PATENT-CLASS-363-71		
		US-PATENT-CLASS-204-278			US-PATENT-CLASS-330-109			US-PATENT-4,426,678		
		US-PATENT-CLASS-204-290R			US-PATENT-4,417,215		N84-16454*	c 33	NASA-CASE-GSC-12645-1	
		US-PATENT-CLASS-427-443.2			US-PATENT-CLASS-LEW-13286-1			US-PATENT-APPL-SN-284314		
		US-PATENT-CLASS-429-111			US-PATENT-APPL-SN-272406			US-PATENT-CLASS-324-79R		
		US-PATENT-4,414,080			US-PATENT-CLASS-252-182.1			US-PATENT-CLASS-324-83A		
N84-12406*	c 34	NASA-CASE-MFS-25631-1			US-PATENT-CLASS-429-206			US-PATENT-CLASS-324-83R		
		US-PATENT-APPL-SN-308203			US-PATENT-CLASS-429-229			US-PATENT-CLASS-328-133		
		US-PATENT-CLASS-239-426			US-PATENT-4,418,130			US-PATENT-CLASS-330-289		
		US-PATENT-4,413,784	N84-14423*	c 33	NASA-CASE-MFS-25211-2			US-PATENT-4,425,543		
N84-12443*	c 35	NASA-CASE-FRC-11068-1			US-PATENT-APPL-SN-432057		N84-16455*	c 33	NASA-CASE-MFS-25616-1	

			US-PATENT-APPL-SN-325932				US-PATENT-CLASS-244-215				US-PATENT-APPL-SN-433598
			US-PATENT-CLASS-318-799				US-PATENT-CLASS-244-216				US-PATENT-CLASS-524-171
			US-PATENT-CLASS-323-243				US-PATENT-CLASS-244-219				US-PATENT-CLASS-525-534
			US-PATENT-CLASS-323-246				US-PATENT-4,444,368				US-PATENT-CLASS-525-535
			US-PATENT-4,426,614				NASA-CASE-LEW-13822-1				US-PATENT-CLASS-525-536
N84-16456*	c 33		NASA-CASE-NPO-15161-1	N84-22559*	c 07		US-PATENT-APPL-SN-350473				US-PATENT-CLASS-528-25
			US-PATENT-APPL-SN-325083				US-PATENT-CLASS-364-558				US-PATENT-CLASS-528-26
			US-PATENT-CLASS-427-216				US-PATENT-CLASS-73-115				US-PATENT-4,431,761
			US-PATENT-CLASS-427-217	N84-22560*	c 07		US-PATENT-4,428,226	N84-22748*	c 27		NASA-CASE-NPO-15640-1
			US-PATENT-CLASS-427-226				NASA-CASE-LEW-13654-1				US-PATENT-APPL-SN-465367
			US-PATENT-CLASS-427-376.6				US-PATENT-APPL-SN-245571				US-PATENT-CLASS-156-304.3
			US-PATENT-CLASS-427-376.7				US-PATENT-CLASS-416-224				US-PATENT-CLASS-156-304.6
			US-PATENT-CLASS-427-436				US-PATENT-CLASS-416-233				US-PATENT-CLASS-156-499
			US-PATENT-CLASS-427-437				US-PATENT-CLASS-416-92				US-PATENT-CLASS-156-81
			US-PATENT-CLASS-427-58				US-PATENT-CLASS-416-97R				US-PATENT-CLASS-156-89
			US-PATENT-CLASS-427-75				US-PATENT-4,411,597				US-PATENT-4,420,352
			US-PATENT-CLASS-427-88	N84-22601*	c 16		NASA-CASE-MSC-20254-1	N84-22749*	c 27		NASA-CASE-LAR-12980-1
			US-PATENT-CLASS-427-96				US-PATENT-APPL-SN-418137				US-PATENT-APPL-SN-469866
			US-PATENT-4,388,346				US-PATENT-CLASS-244-158A				US-PATENT-CLASS-528-125
N84-16523*	c 35		NASA-CASE-LAR-12007-3				US-PATENT-CLASS-52-404				US-PATENT-CLASS-528-128
			US-PATENT-APPL-SN-352831				US-PATENT-CLASS-52-506				US-PATENT-CLASS-528-172
			US-PATENT-CLASS-33-293				US-PATENT-4,439,968				US-PATENT-CLASS-528-185
			US-PATENT-4,428,122	N84-22605*	c 18		NASA-CASE-MSC-18969-1				US-PATENT-4,444,979
N84-16542*	c 36		NASA-CASE-LAR-12870-1				US-PATENT-APPL-SN-368189	N84-22750*	c 27		NASA-CASE-ARC-11370-1
			US-PATENT-APPL-SN-317658				US-PATENT-CLASS-244-161				US-PATENT-APPL-SN-491125
			US-PATENT-CLASS-372-55				US-PATENT-CLASS-403-322				US-PATENT-CLASS-525-389
			US-PATENT-CLASS-372-79				US-PATENT-4,431,333				US-PATENT-CLASS-528-394
			US-PATENT-4,424,592	N84-22609* #	c 18		NASA-CASE-MFS-15429-1				US-PATENT-CLASS-528-399
N84-16560*	c 37		NASA-CASE-MFS-25510-1				US-PATENT-APPL-SN-596959				US-PATENT-CLASS-528-6
			US-PATENT-APPL-SN-293414	N84-22610* #	c 18		NASA-CASE-MSC-20543-1				US-PATENT-CLASS-528-7
			US-PATENT-CLASS-248-228				US-PATENT-APPL-SN-580574				US-PATENT-CLASS-528-7
			US-PATENT-4,422,609	N84-22612* #	c 18		NASA-CASE-ARC-11505-1				US-PATENT-CLASS-568-4
N84-16561*	c 37		NASA-CASE-LAR-12785-1				US-PATENT-APPL-SN-588036				US-PATENT-CLASS-568-5
			US-PATENT-APPL-SN-297488	N84-22695*	c 24		NASA-CASE-LEW-13837-1	N84-22820*	c 32		NASA-CASE-MSC-18675-1
			US-PATENT-CLASS-239-568				US-PATENT-APPL-SN-495381				US-PATENT-APPL-SN-266687
			US-PATENT-CLASS-241-95				US-PATENT-CLASS-204-192C				US-PATENT-CLASS-343-17.5
			US-PATENT-CLASS-406-155				US-PATENT-CLASS-204-192R				US-PATENT-CLASS-343-9R
			US-PATENT-4,428,703				US-PATENT-CLASS-204-192SP				US-PATENT-4,439,766
N84-16803*	c 54		NASA-CASE-MSC-20202-1				US-PATENT-CLASS-423-DIG.10	N84-22884*	c 33		NASA-CASE-MFS-256704-1
			US-PATENT-APPL-SN-414106				US-PATENT-CLASS-423-414				US-PATENT-APPL-SN-409678
			US-PATENT-CLASS-128-1A				US-PATENT-CLASS-423-445				US-PATENT-CLASS-204-192EC
			US-PATENT-CLASS-128-15R				US-PATENT-CLASS-423-446				US-PATENT-4,437,961
			US-PATENT-CLASS-128-38				US-PATENT-CLASS-423-449	N84-22885*	c 33		NASA-CASE-MFS-25535-2
			US-PATENT-4,421,109				US-PATENT-4,437,962				US-PATENT-APPL-SN-476244
N84-16940*	c 71		NASA-CASE-NPO-15592-1	N84-22709*	c 25		NASA-CASE-NPO-15210-1				US-PATENT-CLASS-318-438
			US-PATENT-APPL-SN-314702				US-PATENT-APPL-SN-322312				US-PATENT-CLASS-318-729
			US-PATENT-CLASS-118-300				US-PATENT-CLASS-208-10				US-PATENT-CLASS-318-798
			US-PATENT-CLASS-118-50				US-PATENT-CLASS-208-8LE				US-PATENT-CLASS-318-805
			US-PATENT-CLASS-118-50.1				US-PATENT-4,443,321				US-PATENT-CLASS-318-810
			US-PATENT-CLASS-118-500	N84-22734*	c 26		NASA-CASE-LEW-13349-1				US-PATENT-4,433,276
			US-PATENT-CLASS-118-57				US-PATENT-APPL-SN-350476	N84-22886*	c 33		NASA-CASE-MFS-25323-1
			US-PATENT-CLASS-118-62				US-PATENT-CLASS-29-623.5				US-PATENT-APPL-SN-297524
			US-PATENT-CLASS-427-346				US-PATENT-CLASS-427-115				US-PATENT-CLASS-318-729
			US-PATENT-CLASS-427-421				US-PATENT-CLASS-427-125				US-PATENT-CLASS-318-812
			US-PATENT-CLASS-427-426				US-PATENT-CLASS-427-126.6				US-PATENT-4,439,718
			US-PATENT-CLASS-427-57				US-PATENT-CLASS-427-296	N84-22887*	c 33		NASA-CASE-GSC-12567-1
			US-PATENT-CLASS-427-6				US-PATENT-CLASS-427-306				US-PATENT-APPL-SN-373839
			US-PATENT-CLASS-65-213				US-PATENT-CLASS-429-223				US-PATENT-CLASS-330-109
			US-PATENT-4,425,376				US-PATENT-CLASS-429-234				US-PATENT-CLASS-330-277
N84-16959* #	c 72		NASA-CASE-NPO-15547-1				US-PATENT-4,439,465				US-PATENT-CLASS-330-294
			US-PATENT-APPL-SN-276076	N84-22744*	c 27		NASA-CASE-ARC-11402-1				US-PATENT-4,437,069
N84-17555*	c 35		NASA-CASE-NPO-15426-1				US-PATENT-APPL-SN-366025	N84-22903*	c 34		NASA-CASE-NPO-15465-1
			US-PATENT-APPL-SN-196877				US-PATENT-CLASS-260-465.5R				US-PATENT-APPL-SN-284289
			US-PATENT-CLASS-210-748				US-PATENT-CLASS-260-465.6				US-PATENT-CLASS-126-417
			US-PATENT-CLASS-422-121				US-PATENT-CLASS-528-362				US-PATENT-CLASS-165-DIG.6
			US-PATENT-CLASS-422-169				US-PATENT-CLASS-528-401				US-PATENT-CLASS-165-135
			US-PATENT-CLASS-422-178				US-PATENT-CLASS-528-422				US-PATENT-CLASS-62-DIG.1
			US-PATENT-CLASS-422-186				US-PATENT-CLASS-528-423				US-PATENT-CLASS-62-264
			US-PATENT-CLASS-55-DIG.25				US-PATENT-CLASS-544-215				US-PATENT-CLASS-62-467R
			US-PATENT-CLASS-55-DIG.30				US-PATENT-CLASS-564-243				US-PATENT-4,423,605
			US-PATENT-CLASS-55-105				US-PATENT-4,434,106	N84-22928*	c 35		NASA-CASE-MFS-25687-1
			US-PATENT-CLASS-55-126	N84-22745*	c 27		NASA-CASE-ARC-11368-3				US-PATENT-APPL-SN-350474
			US-PATENT-CLASS-55-131				US-PATENT-APPL-SN-288267				US-PATENT-CLASS-324-262
			US-PATENT-CLASS-55-138				US-PATENT-APPL-SN-512795				US-PATENT-CLASS-73-620
			US-PATENT-CLASS-55-139				US-PATENT-CLASS-428-370				US-PATENT-CLASS-73-633
			US-PATENT-CLASS-55-145				US-PATENT-CLASS-428-408				US-PATENT-CLASS-74-58
			US-PATENT-CLASS-55-2				US-PATENT-CLASS-428-902				US-PATENT-4,434,659
			US-PATENT-CLASS-55-270				US-PATENT-CLASS-428-920	N84-22929*	c 35		NASA-CASE-MFS-25405-1
			US-PATENT-CLASS-55-283				US-PATENT-CLASS-525-417				US-PATENT-APPL-SN-274708
			US-PATENT-CLASS-55-291				US-PATENT-CLASS-526-262				US-PATENT-CLASS-356-347
			US-PATENT-CLASS-55-466				US-PATENT-CLASS-528-228				US-PATENT-4,428,675
			US-PATENT-CLASS-55-6				US-PATENT-CLASS-528-322	N84-22930*	c 35		NASA-CASE-LEW-13598-1
			US-PATENT-CLASS-55-96				US-PATENT-CLASS-548-415				US-PATENT-APPL-SN-425203
			US-PATENT-CLASS-60-275				US-PATENT-4,395,557				US-PATENT-CLASS-101-395
			US-PATENT-CLASS-60-303				US-PATENT-4,433,115				US-PATENT-CLASS-156-630
			US-PATENT-CLASS-60-311	N84-22746*	c 27		NASA-CASE-LAR-12723-2				US-PATENT-CLASS-156-654
			US-PATENT-4,376,637				US-PATENT-APPL-SN-199768				US-PATENT-CLASS-156-905
N84-22546*	c 04		NASA-CASE-GSC-12508-1				US-PATENT-APPL-SN-447371				US-PATENT-CLASS-228-165
			US-PATENT-APPL-SN-266253				US-PATENT-CLASS-525-426	N84-22931*	c 35		US-PATENT-4,437,923
			US-PATENT-CLASS-343-356				US-PATENT-CLASS-528-183				NASA-CASE-NPO-15398-1
			US-PATENT-CLASS-343-357				US-PATENT-CLASS-528-220				US-PATENT-APPL-SN-259212
			US-PATENT-4,445,118				US-PATENT-CLASS-528-345				US-PATENT-CLASS-356-216
N84-22551*	c 05		NASA-CASE-LAR-12541-1				US-PATENT-CLASS-528-348				US-PATENT-CLASS-356-234
			US-PATENT-APPL-SN-315588				US-PATENT-4,395,540				US-PATENT-4,431,306
			US-PATENT-CLASS-244-212	N84-22747*	c 27		US-PATENT-4,431,792	N84-22932*	c 35		NASA-CASE-LAR-12967-1
							NASA-CASE-LAR-12931-1				US-PATENT-APPL-SN-414107



			US-PATENT-CLASS-310-317				US-PATENT-CLASS-350-443				US-PATENT-APPL-SN-450166
			US-PATENT-CLASS-310-334				US-PATENT-4,444,464				US-PATENT-CLASS-318-729
			US-PATENT-CLASS-310-366				NASA-CASE-LEW-14035-1				US-PATENT-CLASS-318-809
			US-PATENT-4,446,396				US-PATENT-APPL-SN-136652				US-PATENT-CLASS-323-300
N84-22933*	c 35		NASA-CASE-LAR-12995-1		N84-24577*	c 07	US-PATENT-CLASS-60-757		N84-28015*	c 35	NASA-CASE-WLP-10055-1
			US-PATENT-APPL-SN-444150				US-PATENT-4,414,816				US-PATENT-APPL-SN-352827
			US-PATENT-CLASS-181-121		N84-25037* #	c 36	NASA-CASE-NPO-16030-1				US-PATENT-CLASS-73-862.65
			US-PATENT-CLASS-367-189				US-PATENT-APPL-SN-582494				US-PATENT-4,425,808
			US-PATENT-CLASS-73-589		N84-27713*	c 04	NASA-CASE-NPO-15264-1		N84-28016*	c 35	NASA-CASE-NPO-15423-1
			US-PATENT-CLASS-73-594				US-PATENT-APPL-SN-241154				US-PATENT-APPL-SN-361216
			US-PATENT-4,445,378				US-PATENT-CLASS-343-105R				US-PATENT-CLASS-250-296
N84-22934*	c 35		NASA-CASE-ARC-11361-1				US-PATENT-CLASS-364-452				US-PATENT-4,435,642
			US-PATENT-APPL-SN-373771				US-PATENT-4,396,918		N84-28017*	c 35	NASA-CASE-NPO-15706-1
			US-PATENT-CLASS-340-870.13		N84-27733*	c 06	NASA-CASE-LAR-12630-1				US-PATENT-APPL-SN-350475
			US-PATENT-CLASS-73-147				US-PATENT-APPL-SN-383384				US-PATENT-CLASS-310-154
			US-PATENT-CLASS-73-721				US-PATENT-CLASS-340-705				US-PATENT-CLASS-310-171
			US-PATENT-CLASS-73-756				US-PATENT-CLASS-340-971				US-PATENT-CLASS-310-688
			US-PATENT-4,442,716				US-PATENT-CLASS-340-975				US-PATENT-CLASS-335-222
N84-22943*	c 36		NASA-CASE-NPO-15516-1				US-PATENT-CLASS-340-978				US-PATENT-4,443,724
			US-PATENT-APPL-SN-364126				US-PATENT-CLASS-340-980		N84-28018*	c 35	NASA-CASE-MFS-25754-1
			US-PATENT-CLASS-372-20				US-PATENT-CLASS-73-178R				US-PATENT-APPL-SN-359626
			US-PATENT-CLASS-372-28				US-PATENT-4,453,163				US-PATENT-CLASS-33-169F
			US-PATENT-CLASS-372-32		N84-27749*	c 09	NASA-CASE-MFS-25791-1				US-PATENT-CLASS-62-128
			US-PATENT-4,434,490				US-PATENT-APPL-SN-409678				US-PATENT-CLASS-73-150R
N84-22944*	c 36		NASA-CASE-LEW-13526-1				US-PATENT-CLASS-417-159				US-PATENT-CLASS-73-170R
			US-PATENT-APPL-SN-358398				US-PATENT-CLASS-73-117.1				US-PATENT-CLASS-73-32R
			US-PATENT-CLASS-118-50.1				US-PATENT-4,454,753				US-PATENT-CLASS-73-864.41
			US-PATENT-CLASS-118-624		N84-27784*	c 16	NASA-CASE-MFS-25853-1				US-PATENT-4,398,412
			US-PATENT-CLASS-118-641				US-PATENT-APPL-SN-418138		N84-28019*	c 35	NASA-CASE-LAR-12743-1
			US-PATENT-CLASS-427-399				US-PATENT-CLASS-244-158R				US-PATENT-APPL-SN-372279
			US-PATENT-CLASS-427-53.1				US-PATENT-CLASS-244-172				US-PATENT-CLASS-374-1
N84-22957*	c 37		NASA-CASE-LEW-13269-2				US-PATENT-CLASS-244-63				US-PATENT-CLASS-73-1B
			US-PATENT-APPL-SN-242795				US-PATENT-4,452,412				US-PATENT-4,426,874
			US-PATENT-APPL-SN-431448		N84-27787*	c 18	NASA-CASE-MFS-25878-1		N84-28065*	c 36	NASA-CASE-GSC-12592-1
			US-PATENT-CLASS-415-174				US-PATENT-APPL-SN-431886				US-PATENT-APPL-SN-199766
			US-PATENT-CLASS-427-34				US-PATENT-CLASS-244-172				US-PATENT-CLASS-372-103
			US-PATENT-CLASS-427-423				US-PATENT-CLASS-244-63				US-PATENT-CLASS-372-4
			US-PATENT-CLASS-427-53.1				US-PATENT-4,451,017				US-PATENT-CLASS-372-71
			US-PATENT-CLASS-428-155		N84-27829*	c 24	NASA-CASE-LEW-13758-1				US-PATENT-CLASS-372-93
			US-PATENT-4,377,371				US-PATENT-APPL-SN-418139				US-PATENT-CLASS-372-95
			US-PATENT-4,430,360				US-PATENT-CLASS-73-833				US-PATENT-4,446,556
N84-22958*	c 37		NASA-CASE-LEW-12590-1				US-PATENT-CLASS-73-856		N84-28081*	c 37	NASA-CASE-NPO-14597-2
			US-PATENT-APPL-SN-229693				US-PATENT-4,452,088				US-PATENT-APPL-SN-037194
			US-PATENT-CLASS-60-730		N84-27855*	c 26	NASA-CASE-LEW-13639-2				US-PATENT-APPL-SN-401288
			US-PATENT-CLASS-60-736				US-PATENT-APPL-SN-456460				US-PATENT-CLASS-417-328
			US-PATENT-4,429,537				US-PATENT-CLASS-427-34				US-PATENT-CLASS-417-392
N84-23012* #	c 43		NASA-CASE-NPO-15656-1				US-PATENT-CLASS-427-405				US-PATENT-CLASS-417-462
			US-PATENT-APPL-SN-569370				US-PATENT-CLASS-427-419.2				US-PATENT-4,449,894
N84-23018*	c 44		NASA-CASE-NPO-15496-1				US-PATENT-CLASS-428-632		N84-28082*	c 37	NASA-CASE-GSC-12550-1
			US-PATENT-APPL-SN-379602				US-PATENT-4,451,496				US-PATENT-APPL-SN-238888
			US-PATENT-CLASS-290-55		N84-27884*	c 27	NASA-CASE-ARC-11405-1				US-PATENT-CLASS-73-468
			US-PATENT-CLASS-415-DIG.8				US-PATENT-APPL-SN-415880				US-PATENT-CLASS-74-5.5
			US-PATENT-CLASS-415-2R				US-PATENT-CLASS-528-271				US-PATENT-CLASS-74-573R
			US-PATENT-CLASS-60-641.12				US-PATENT-CLASS-528-310				US-PATENT-4,458,554
			US-PATENT-CLASS-60-698				US-PATENT-CLASS-528-327		N84-28083*	c 37	NASA-CASE-GSC-12762-1
			US-PATENT-CLASS-60-716				US-PATENT-CLASS-528-331				US-PATENT-APPL-SN-364094
			US-PATENT-4,433,544				US-PATENT-CLASS-528-362				US-PATENT-CLASS-269-224
N84-23019*	c 44		NASA-CASE-LAR-12958-1				US-PATENT-4,450,268				US-PATENT-CLASS-269-242
			US-PATENT-APPL-SN-433196		N84-27885*	c 27	NASA-CASE-LEW-13770-1				US-PATENT-CLASS-269-244
			US-PATENT-CLASS-104-DIG.4				US-PATENT-APPL-SN-404809				US-PATENT-CLASS-269-252
			US-PATENT-CLASS-204-DIG.3				US-PATENT-CLASS-526-262				US-PATENT-CLASS-269-285
			US-PATENT-CLASS-204-129				US-PATENT-CLASS-528-322				US-PATENT-4,448,408
			US-PATENT-CLASS-204-278				US-PATENT-CLASS-528-342		N84-28084*	c 37	NASA-CASE-LAR-12644-1
			US-PATENT-CLASS-204-280				US-PATENT-4,455,418				US-PATENT-APPL-SN-387728
			US-PATENT-CLASS-423-303		N84-27886*	c 27	NASA-CASE-LAR-12862-1				US-PATENT-CLASS-74-753
			US-PATENT-CLASS-429-111				US-PATENT-APPL-SN-435511				US-PATENT-CLASS-74-758
			US-PATENT-4,439,301				US-PATENT-CLASS-220-306				US-PATENT-CLASS-74-812
N84-23095*	c 52		NASA-CASE-LEW-13107-2				US-PATENT-CLASS-244-117A				US-PATENT-4,446,757
			US-PATENT-APPL-SN-444124				US-PATENT-CLASS-244-158A		N84-28085*	c 37	NASA-CASE-LAR-12786-1
			US-PATENT-CLASS-156-643				US-PATENT-4,456,208				US-PATENT-APPL-SN-309292
			US-PATENT-CLASS-156-644		N84-27951*	c 32	NASA-CASE-NPO-15024-1				US-PATENT-CLASS-30-180
			US-PATENT-CLASS-156-668				US-PATENT-APPL-SN-284287				US-PATENT-CLASS-30-188
			US-PATENT-CLASS-204-192E				US-PATENT-CLASS-343-17.7				US-PATENT-CLASS-30-228
			US-PATENT-4,432,853				US-PATENT-CLASS-434-2				US-PATENT-CLASS-30-249
N84-23113*	c 54		NASA-CASE-MSC-20261-1				US-PATENT-4,450,447				US-PATENT-CLASS-30-272R
			US-PATENT-APPL-SN-393581		N84-27952*	c 32	NASA-CASE-MSC-16170-2				US-PATENT-4,458,418
			US-PATENT-CLASS-2-161R				US-PATENT-APPL-SN-147695		N84-28203*	c 44	NASA-CASE-NPO-15388-1
			US-PATENT-CLASS-2-167				US-PATENT-APPL-SN-737975				US-PATENT-APPL-SN-284286
			US-PATENT-4,433,439				US-PATENT-CLASS-329-124				US-PATENT-CLASS-126-419
N84-23233*	c 71		NASA-CASE-NPO-15689-1				US-PATENT-CLASS-375-120				US-PATENT-CLASS-126-438
			US-PATENT-APPL-SN-358089				US-PATENT-CLASS-375-77				US-PATENT-CLASS-126-451
			US-PATENT-CLASS-310-300				US-PATENT-CLASS-375-81				US-PATENT-4,433,672
			US-PATENT-CLASS-318-116				US-PATENT-CLASS-455-202		N84-28204*	c 44	NASA-CASE-NPO-15662-1
			US-PATENT-CLASS-60-721				US-PATENT-CLASS-455-208				US-PATENT-APPL-SN-392103
			US-PATENT-CLASS-73-505				US-PATENT-CLASS-455-260				US-PATENT-CLASS-126-418
			US-PATENT-4,420,977				US-PATENT-CLASS-455-265				US-PATENT-CLASS-126-438
N84-23247*	c 74		NASA-CASE-NPO-15345-1				US-PATENT-4,455,680				US-PATENT-CLASS-126-440
			US-PATENT-APPL-SN-276749		N84-27974*	c 33	NASA-CASE-LEW-13736-1				US-PATENT-4,449,514
			US-PATENT-CLASS-358-125				US-PATENT-APPL-SN-434084		N84-28205*	c 44	NASA-CASE-LEW-13653-1
			US-PATENT-CLASS-358-213				US-PATENT-CLASS-315-3.6				US-PATENT-APPL-SN-352821
			US-PATENT-4,430,673				US-PATENT-CLASS-315-39.3				US-PATENT-CLASS-204-290
N84-23248*	c 74		NASA-CASE-GSC-12756-1				US-PATENT-CLASS-331-82				US-PATENT-CLASS-29-623.5
			US-PATENT-APPL-SN-378535				US-PATENT-CLASS-333-162				US-PATENT-CLASS-29-825
			US-PATENT-CLASS-350-172				US-PATENT-4,459,562				US-PATENT-CLASS-427-113
			US-PATENT-CLASS-350-173		N84-27975*	c 33	NASA-CASE-MFS-25854-1				US-PATENT-CLASS-427-115

		US-PATENT-CLASS-427-125				US-PATENT-CLASS-250-251			
		US-PATENT-CLASS-427-226				US-PATENT-CLASS-250-252.1			
		US-PATENT-CLASS-427-372.2				US-PATENT-CLASS-250-372			
		US-PATENT-CLASS-427-379				US-PATENT-4,469,942			
		US-PATENT-CLASS-427-380				NAS 1.71:MFS-25717-1			
		US-PATENT-CLASS-427-443				NASA-CASE-MFS-25717-1			
		US-PATENT-CLASS-429-44				US-PATENT-APPL-SN-441897			
		US-PATENT-4,454,649				US-PATENT-CLASS-175-45			
N84-28292*	c 47	NASA-CASE-LAR-12971-1				US-PATENT-CLASS-299-1			
		US-PATENT-APPL-SN-444149				US-PATENT-4,466,667			
		US-PATENT-CLASS-250-356.1				NAS 1.71:NPO-15341-1			
		US-PATENT-CLASS-73-189				NASA-CASE-NPO-15341-1			
		US-PATENT-CLASS-73-861.71				US-PATENT-APPL-SN-315583			
		US-PATENT-4,449,400				US-PATENT-CLASS-180-168			
N84-28361*	c 51	NASA-CASE-ARC-11359-1				US-PATENT-CLASS-318-587			
		US-PATENT-APPL-SN-392092				US-PATENT-CLASS-340-905			
		US-PATENT-CLASS-264-41				US-PATENT-CLASS-340-988			
		US-PATENT-CLASS-521-141				US-PATENT-4,472,716			
		US-PATENT-CLASS-521-142				NAS 1.71:MFS-25862-2			
		US-PATENT-CLASS-521-149				NASA-CASE-MFS-25862-2			
		US-PATENT-4,456,708				US-PATENT-APPL-SN-460509			
N84-28388*	c 52	NASA-CASE-LAR-12650-1				US-PATENT-CLASS-73-12			
		US-PATENT-APPL-SN-264381				US-PATENT-CLASS-73-588			
		US-PATENT-CLASS-128-325				US-PATENT-4,470,293			
		US-PATENT-CLASS-128-346				NAS 1.71:LEW-12995-1			
		US-PATENT-CLASS-24-560				NASA-CASE-LEW-12995-1			
		US-PATENT-4,416,266				US-PATENT-APPL-SN-157150			
N84-28389*	c 52	NASA-CASE-LAR-12650-2				US-PATENT-CLASS-60-303			
		US-PATENT-APPL-SN-264381				US-PATENT-CLASS-60-606			
		US-PATENT-APPL-SN-465363				US-PATENT-4,449,370			
		US-PATENT-CLASS-156-191				NASA-CASE-NPO-15351-2			
		US-PATENT-CLASS-156-285				US-PATENT-APPL-SN-224231			
		US-PATENT-CLASS-156-289				US-PATENT-APPL-SN-412039			
		US-PATENT-CLASS-156-382				US-PATENT-CLASS-73-178-R			
		US-PATENT-CLASS-29-423				US-PATENT-4,346,595			
		US-PATENT-CLASS-29-451				US-PATENT-4,474,062			
		US-PATENT-4,447,943				NASA-CASE-LAR-12950-1			
N84-28484*	c 54	NASA-CASE-MSC-20261-1				US-PATENT-APPL-SN-481106			
		US-PATENT-APPL-SN-393586				US-PATENT-CLASS-73-147			
		US-PATENT-CLASS-2-161R				US-PATENT-4,475,385			
		US-PATENT-CLASS-2-164				NAS 1.71:LEW-13230-1			
		US-PATENT-CLASS-2-167				NASA-CASE-LAR-13230-1			
		US-PATENT-4,454,611				US-PATENT-APPL-SN-548584			
N84-28491*	c 60	NASA-CASE-GSC-12447-2				US-PATENT-CLASS-523-454			
		US-PATENT-APPL-SN-128230				US-PATENT-CLASS-523-458			
		US-PATENT-APPL-SN-501060				US-PATENT-CLASS-525-484			
		US-PATENT-CLASS-364-900				US-PATENT-CLASS-528-407			
		US-PATENT-4,435,781				US-PATENT-CLASS-528-92			
N84-28492*	c 60	NASA-CASE-MSC-20258-1				US-PATENT-4,473,674			
		US-PATENT-APPL-SN-235472				NAS 1.71:NPO-15519-1			
		US-PATENT-CLASS-340-825.21				NASA-CASE-NPO-15519-1			
		US-PATENT-CLASS-340-825.5				US-PATENT-APPL-SN-314928			
		US-PATENT-CLASS-364-900				US-PATENT-CLASS-343-5-CM			
		US-PATENT-4,446,459				US-PATENT-CLASS-343-5-DP			
N84-28565*	c 70	NASA-CASE-LEW-12919-2				US-PATENT-CLASS-343-5-FP			
		US-PATENT-APPL-SN-264378				US-PATENT-4,471,357			
		US-PATENT-APPL-SN-364072				NAS 1.71:NPO-15558-1			
		US-PATENT-CLASS-313-106				NASA-CASE-NPO-15558-1			
		US-PATENT-CLASS-313-107				US-PATENT-APPL-SN-373770			
		US-PATENT-CLASS-313-351				US-PATENT-CLASS-250-343			
		US-PATENT-CLASS-315-5.38				US-PATENT-CLASS-250-351			
		US-PATENT-4,349,424				US-PATENT-CLASS-356-434			
		US-PATENT-4,417,175				US-PATENT-CLASS-356-51			
N84-28568*	c 71	NASA-CASE-MFS-25828-1				US-PATENT-4,474,471			
		US-PATENT-APPL-SN-493866				NAS 1.71:NPO-15808-1			
		US-PATENT-CLASS-137-838				NASA-CASE-NPO-15808-1			
		US-PATENT-CLASS-366-106				US-PATENT-APPL-SN-383068			
		US-PATENT-CLASS-425-6				US-PATENT-CLASS-126-415			
		US-PATENT-CLASS-65-142				US-PATENT-CLASS-4-498			
		US-PATENT-CLASS-65-160				US-PATENT-4,470,403			
		US-PATENT-CLASS-65-21.3				NASA-CASE-GSC-12652-1			
		US-PATENT-CLASS-65-21.4				US-PATENT-APPL-SN-377891			
		US-PATENT-4,447,251				US-PATENT-CLASS-128-24-A			
N84-28575*	c 72	NASA-CASE-MFS-25641-1				US-PATENT-CLASS-128-328			
		US-PATENT-APPL-SN-342857				US-PATENT-4,474,180			
		US-PATENT-CLASS-250-305				NAS 1.71:NPO-15786-1			
		US-PATENT-CLASS-324-457				NASA-CASE-NPO-15786-1			
		US-PATENT-CLASS-324-71.3				US-PATENT-APPL-SN-366103			
		US-PATENT-CLASS-324-72.5				US-PATENT-CLASS-204-1T			
		US-PATENT-4,455,532				US-PATENT-CLASS-204-37.6			
N84-28590*	c 74	NASA-CASE-NPO-15805-1				US-PATENT-CLASS-204-56R			
		US-PATENT-APPL-SN-296137				US-PATENT-CLASS-324-158D			
		US-PATENT-CLASS-250-332				US-PATENT-CLASS-324-158T			
		US-PATENT-CLASS-250-338				US-PATENT-4,462,871			
		US-PATENT-4,443,701				NASA-CASE-NPO-15629-1			
N84-28732*	c 02	NASA-CASE-LAR-12396-1				US-PATENT-APPL-SN-371351			
		US-PATENT-APPL-SN-017889				US-PATENT-CLASS-156-DIG.64			
		US-PATENT-CLASS-244-35R				US-PATENT-CLASS-156-DIG.88			
		US-PATENT-CLASS-416-223R				US-PATENT-CLASS-156-DIG.98			
		US-PATENT-CLASS-416-242				US-PATENT-CLASS-156-608			
		US-PATENT-4,459,083				US-PATENT-CLASS-156-617-SP			
N84-32447* #	c 25	NAS 1.71:LEW-13257-1				US-PATENT-CLASS-156-617-V			
		NASA-CASE-LAR-13257-1				US-PATENT-CLASS-422-246			
		US-PATENT-APPL-SN-633178				US-PATENT-CLASS-422-249			
N84-33394*	c 03	NAS 1.71:ARC-11423-1				US-PATENT-4,469,552			
		NASA-CASE-ARC-11423-1				NAS 1.71:LEW-12787-2			
						NASA-CASE-LAR-12787-2			
		US-PATENT-APPL-SN-452466							
		US-PATENT-CLASS-297-DIG.5							
		US-PATENT-CLASS-428-246							
		US-PATENT-CLASS-428-280							
		US-PATENT-CLASS-428-287							
		US-PATENT-CLASS-428-304.4							
		US-PATENT-CLASS-428-319.1							
		US-PATENT-CLASS-428-423.5							
		US-PATENT-CLASS-428-71							
		US-PATENT-CLASS-428-76							
		US-PATENT-CLASS-428-921							
		US-PATENT-CLASS-5-459							
		US-PATENT-4,463,465							
N84-33400* #	c 05	NAS 1.71:LEW-13233-1							
		NASA-CASE-LAR-13233-1							
		US-PATENT-APPL-SN-649329							
N84-33410*	c 07	NAS 1.71:LEW-13524-1							
		NASA-CASE-LEW-13524-1							
		US-PATENT-APPL-SN-238257							
		US-PATENT-CLASS-415-115							
		US-PATENT-CLASS-60-39.29							
		US-PATENT-CLASS-60-39.83							
		US-PATENT-4,416,111							
N84-33450*	c 18	NAS 1.71:LEW-12884							
		NASA-CASE-LAR-12884-1							
		US-PATENT-APPL-SN-510136							
		US-PATENT-CLASS-428-182							
		US-PATENT-CLASS-428-184							
		US-PATENT-CLASS-428-595							
		US-PATENT-CLASS-52-814							
		US-PATENT-4,472,473							
N84-33555*	c 26	NAS 1.71:LEW-13639-1							
		NASA-CASE-LEW-13639-1							
		US-PATENT-APPL-SN-403378							
		US-PATENT-CLASS-416-241R							
		US-PATENT-CLASS-428-564							
		US-PATENT-CLASS-428-639							
		US-PATENT-CLASS-428-678							
		US-PATENT-4,446,199							
N84-33589*	c 27	NAS 1.71:NPO-15753-1							
		NASA-CASE-NPO-15753-1							
		US-PATENT-APPL-SN-342871							
		US-PATENT-CLASS-219-203							
		US-PATENT-CLASS-219-219							
		US-PATENT-CLASS-219-522							
		US-PATENT-CLASS-219-541							
		US-PATENT-CLASS-219-543							
		US-PATENT-CLASS-338-309							
		US-PATENT-CLASS-428-432							
		US-PATENT-4,459,470							
N84-33660*	c 33	NAS 1.71:MFS-25302-2							
		NASA-CASE-MFS-25302-2							
		US-PATENT-APPL-SN-243683							
		US-PATENT-APPL-SN-481086							
		US-PATENT-CLASS-307-87							
		US-PATENT-CLASS-322-25							
		US-PATENT-CLASS-322-29							
		US-PATENT-CLASS-322-47							
		US-PATENT-CLASS-322-95							
		US-PATENT-4,388,585							
		US-PATENT-4,473,792							
N84-33661*	c 33	NAS 1.71:MFS-25852-1							
		NASA-CASE-MFS-25852-1							
		US-PATENT-APPL-SN-450319							
		US-PATENT-CLASS-318-729							
		US-PATENT-CLASS-318-802							
		US-PATENT-4,469,998							
N84-33663*	c 33	NAS 1.71:LEW-13495-1							
		NASA-CASE-LEW-13495-1							
		US-PATENT-APPL-SN-368188							
		US-PATENT-CLASS-323-901							
		US-PATENT-CLASS-363-22							
		US-PATENT-CLASS-363-49							
		US-PATENT-4,464,710							
N84-33765*	c 35	NAS 1.71							

**N85-21595**

**F-79**

N85-21596*	c 35	US-PATENT-CLASS-222-340	N85-21992*	c 60	US-PATENT-CLASS-343-5W	N85-29118*	c 32	US-PATENT-CLASS-358-109						
		US-PATENT-CLASS-222-43			US-PATENT-4,463,357			US-PATENT-CLASS-358-133						
		US-PATENT-CLASS-222-48			NAS 1.71:NPO-15295-1			US-PATENT-4,513,317						
		US-PATENT-4,488,663			NASA-CASE-NPO-15295-1			NASA-CASE-NPO-15743-1						
		NAS 1.71:NPO-15759-1			US-PATENT-APPL-SN-291645			US-PATENT-APPL-SN-448881						
		NASA-CASE-NPO-15759-1			US-PATENT-CLASS-364-200			US-PATENT-CLASS-343-876						
		US-PATENT-APPL-SN-367136			US-PATENT-4,481,570			US-PATENT-CLASS-455-73						
		US-PATENT-CLASS-324-427			NAS 1.71:NPO-15466-1			US-PATENT-4,503,436						
		US-PATENT-CLASS-429-58			NASA-CASE-NPO-15466-1			NASA-CASE-NPO-15553-1						
		US-PATENT-4,499,424			US-PATENT-APPL-SN-361217			US-PATENT-APPL-SN-437912						
N85-21597*	c 35	NAS 1.71:NPO-16027-1	N85-22104*	c 71	US-PATENT-CLASS-23-313R	N85-29142*	c 33	US-PATENT-CLASS-156-DIG.62						
		NASA-CASE-NPO-16027-1			US-PATENT-CLASS-55-15			US-PATENT-CLASS-364-400						
		US-PATENT-APPL-SN-500044			US-PATENT-CLASS-55-277			US-PATENT-CLASS-364-453						
		US-PATENT-CLASS-73-40.5A			US-PATENT-4,475,921			US-PATENT-CLASS-74-5.6D						
		US-PATENT-CLASS-73-753			NAS 1.71:NPO-16022-1			US-PATENT-4,521,854						
		US-PATENT-4,498,333			NASA-CASE-NPO-16022-1			NASA-CASE-NPO-15890-1-CU						
		NAS 1.71:WLP-10055-2			US-PATENT-APPL-SN-526750			US-PATENT-APPL-SN-556513						
		NASA-CASE-WLP-10055-2			US-PATENT-CLASS-73-505			US-PATENT-CLASS-331-3						
		US-PATENT-APPL-SN-352827			US-PATENT-4,463,606			US-PATENT-CLASS-331-31						
		US-PATENT-APPL-SN-526770			NAS 1.71:NPO-15155-1			US-PATENT-CLASS-331-36C						
N85-21598*	c 35	US-PATENT-CLASS-29-610SG	N85-22105*	c 71	NASA-CASE-NPO-15155-1	N85-29143*	c 33	US-PATENT-CLASS-331-94.1						
		US-PATENT-4,425,808			US-PATENT-APPL-SN-242797			US-PATENT-CLASS-331-96						
		US-PATENT-4,498,231			US-PATENT-CLASS-250-221			US-PATENT-CLASS-333-231						
		NAS 1.71:NPO-15790-1			US-PATENT-CLASS-340-555			US-PATENT-4,517,530						
		NASA-CASE-NPO-15790-1			US-PATENT-4,479,053			NASA-CASE-LEW-13102-1						
		US-PATENT-APPL-SN-423016			NAS 1.71:MFS-25861-1			US-PATENT-APPL-SN-282298						
		US-PATENT-CLASS-250-339			NASA-CASE-MFS-25861-1			US-PATENT-CLASS-429-206						
		US-PATENT-CLASS-250-343			US-PATENT-APPL-SN-504345			US-PATENT-CLASS-429-249						
		US-PATENT-4,489,239			US-PATENT-CLASS-318-729			US-PATENT-4,505,998						
		NAS 1.71:GSC-12558-1			US-PATENT-CLASS-318-812			NASA-CASE-GSC-12788-1						
N85-21639*	c 36	NASA-CASE-GSC-12558-1	N85-22877*	c 33	US-PATENT-4,489,264	N85-29144*	c 33	US-PATENT-APPL-SN-434085						
		US-PATENT-APPL-SN-383086			NAS 1.71:NPO-15801-1			US-PATENT-CLASS-307-271						
		US-PATENT-CLASS-356-43			NASA-CASE-NPO-15801-1			US-PATENT-CLASS-307-520						
		US-PATENT-CLASS-356-45			US-PATENT-APPL-SN-478130			US-PATENT-CLASS-307-521						
		US-PATENT-CLASS-374-137			US-PATENT-CLASS-350-168			US-PATENT-CLASS-307-529						
		US-PATENT-CLASS-73-705			US-PATENT-CLASS-350-505			US-PATENT-CLASS-328-167						
		US-PATENT-4,493,553			US-PATENT-CLASS-350-619			US-PATENT-CLASS-330-302						
		NAS 1.71:MSC-20319-1			US-PATENT-CLASS-356-323			US-PATENT-CLASS-330-306						
		NASA-CASE-MSC-20319-1			US-PATENT-CLASS-356-330			US-PATENT-4,521,702						
		US-PATENT-APPL-SN-393582			US-PATENT-CLASS-356-331			NASA-CASE-GSC-12817-1						
N85-21649*	c 37	US-PATENT-CLASS-292-252	N85-25436* #	c 24	US-PATENT-4,497,540	N85-29146*	c 33	US-PATENT-APPL-SN-506477						
		US-PATENT-CLASS-403-317			NAS 1.15:76884			US-PATENT-CLASS-336-198						
		US-PATENT-CLASS-81-177G			NASA-TM-76884			US-PATENT-CLASS-336-84C						
		US-PATENT-4,483,639			NASA-CASE-LAR-13262-1			US-PATENT-4,510,476						
		NAS 1.71:NPO-15483-1			US-PATENT-APPL-SN-608741			NASA-CASE-GSC-12818-1						
		NASA-CASE-NPO-15483-1			US-PATENT-CLASS-525-532			US-PATENT-APPL-SN-511362						
		US-PATENT-APPL-SN-387648			US-PATENT-CLASS-525-534			US-PATENT-CLASS-307-82						
		US-PATENT-CLASS-125-13R			US-PATENT-CLASS-528-86			US-PATENT-CLASS-363-100						
		US-PATENT-CLASS-125-15			US-PATENT-4,510,296			US-PATENT-CLASS-363-19						
		US-PATENT-CLASS-51-73R			NASA-CASE-LEW-13770-2			US-PATENT-CLASS-363-23						
N85-21650*	c 37	US-PATENT-CLASS-82-90	N85-28982*	c 25	US-PATENT-APPL-SN-404809	N85-29147*	c 33	US-PATENT-CLASS-363-61						
		US-PATENT-CLASS-83-664			US-PATENT-APPL-SN-516217			US-PATENT-CLASS-363-71						
		US-PATENT-CLASS-83-676			US-PATENT-CLASS-526-262			US-PATENT-CLASS-378-104						
		US-PATENT-4,475,527			US-PATENT-CLASS-528-322			US-PATENT-CLASS-378-112						
		NAS 1.71:LAR-12868-1			US-PATENT-CLASS-528-342			US-PATENT-4,517,472						
		NASA-CASE-LAR-12868-1			US-PATENT-4,455,418			NASA-CASE-LEW-12950-2						
		US-PATENT-APPL-SN-322321			US-PATENT-4,514,557			US-PATENT-APPL-SN-202228						
		US-PATENT-CLASS-374-208			NASA-CASE-NPO-15928-1			US-PATENT-APPL-SN-507626						
		US-PATENT-CLASS-374-210			US-PATENT-APPL-SN-537616			US-PATENT-CLASS-165-104.14						
		US-PATENT-4,491,427			US-PATENT-CLASS-204-192N			US-PATENT-CLASS-165-32						
N85-21652*	c 37	NAS 1.71:NPO-15851-1	N85-29005*	c 26	US-PATENT-CLASS-427-38	N85-29179*	c 34	US-PATENT-CLASS-310-306						
		NASA-CASE-NPO-15851-1			US-PATENT-CLASS-427-47			US-PATENT-4,506,183						
		US-PATENT-APPL-SN-415879			US-PATENT-4,522,844			NASA-CASE-MSC-20497-1						
		US-PATENT-CLASS-134-37			NASA-CASE-NPO-16103-1			US-PATENT-APPL-SN-615505						
		US-PATENT-CLASS-15-406			US-PATENT-APPL-SN-617871			US-PATENT-CLASS-122-366						
		US-PATENT-CLASS-422-129			US-PATENT-CLASS-525-26			US-PATENT-CLASS-165-1						
		US-PATENT-CLASS-422-199			US-PATENT-CLASS-525-47			US-PATENT-CLASS-165-104.26						
		US-PATENT-4,500,492			US-PATENT-CLASS-526-328			US-PATENT-4,515,207						
		NAS 1.71:NPO-15651-1			US-PATENT-CLASS-526-329.2			NAS 1.71:NPO-16494-1-CU						
		NASA-CASE-NPO-15651-1			US-PATENT-CLASS-528-288			NASA-CASE-NPO-16494-1-CU						
N85-21723*	c 43	US-PATENT-APPL-SN-375620	N85-29043*	c 27	US-PATENT-CLASS-528-289	N85-29182* #	c 34	US-PATENT-APPL-SN-739789						
		US-PATENT-CLASS-343-352			US-PATENT-CLASS-528-303			NASA-CASE-NPO-15722-1						
		US-PATENT-CLASS-374-122			US-PATENT-CLASS-528-304			US-PATENT-APPL-SN-457992						
		US-PATENT-4,499,470			US-PATENT-4,523,008			US-PATENT-CLASS-204-1T						
		NAS 1.71:LEW-13827-1			NASA-CASE-GSC-12883-1			US-PATENT-CLASS-204-430						
		NASA-CASE-LEW-13827-1			US-PATENT-APPL-SN-604337			US-PATENT-CLASS-73-336.5						
		US-PATENT-APPL-SN-486470			US-PATENT-CLASS-523-135			US-PATENT-4,514,178						
		US-PATENT-CLASS-136-225			US-PATENT-CLASS-524-388			NASA-CASE-MSC-18866-1						
		US-PATENT-CLASS-136-246			US-PATENT-CLASS-524-567			US-PATENT-APPL-SN-350471						
		US-PATENT-CLASS-357-30			US-PATENT-4,518,722			US-PATENT-CLASS-422-103						
N85-21768*	c 44	US-PATENT-4,482,778	N85-29082*	c 31	NASA-CASE-NPO-16257-1	N85-29180*	c 34	US-PATENT-CLASS-422-86						
		NAS 1.71:MFS-25637-1			US-PATENT-APPL-SN-588164			US-PATENT-CLASS-422-88						
		NASA-CASE-MFS-25637-1			US-PATENT-CLASS-62-3			US-PATENT-CLASS-436-2						
		US-PATENT-APPL-SN-375684			US-PATENT-4,507,928			US-PATENT-CLASS-73-40.7						
		US-PATENT-CLASS-290-1R			NASA-CASE-LAR-13181-1			US-PATENT-CLASS-73-863.86						
		US-PATENT-CLASS-290-4R			US-PATENT-APPL-SN-507623			US-PATENT-CLASS-73-864.52						
		US-PATENT-CLASS-307-64			US-PATENT-CLASS-156-272.4			US-PATENT-4,515,751						
		US-PATENT-CLASS-307-66			US-PATENT-CLASS-156-273.9			NASA-CASE-MSC-25707-1						
		US-PATENT-CLASS-318-46			US-PATENT-CLASS-156-380.2			US-PATENT-APPL-SN-359627						
		US-PATENT-CLASS-318-729			US-PATENT-CLASS-219-10.43			US-PATENT-CLASS-126-263						
N85-21846*	c 46	US-PATENT-4,489,243	N85-29082*	c 31	US-PATENT-CLASS-219-10.49	N85-29212*	c 35	US-PATENT-CLASS-165-48R						
		NAS 1.71:NPO-15430-1			US-PATENT-CLASS-219-10.53			US-PATENT-CLASS-165-61						
		NASA-CASE-NPO-15430-1			US-PATENT-CLASS-219-10.77			US-PATENT-CLASS-165-64						
		US-PATENT-APPL-SN-322317			US-PATENT-4,521,659			US-PATENT-CLASS-244-163						
		US-PATENT-CLASS-343-352			NASA-CASE-NPO-15432-1			US-PATENT-4,513,810						
		US-PATENT-CLASS-343-460			US-PATENT-APPL-SN-425204			NASA-CASE-NPO-16000-1						
		N85-21911*			c 32			US-PATENT-CLASS-343-460	N85-29117*	c 32	US-PATENT-CLASS-343-460	N85-29264*	c 36	NASA-CASE-NPO-16000-1

## ACCESSION NUMBER INDEX

N85-34373

		US-PATENT-APPL-SN-384547				US-PATENT-APPL-SN-516217				US-PATENT-CLASS-148-33.2
		US-PATENT-CLASS-250-339				US-PATENT-APPL-SN-561434				US-PATENT-CLASS-156-DIG.65
		US-PATENT-CLASS-364-556				US-PATENT-CLASS-526-204				US-PATENT-CLASS-156-DIG.88
		US-PATENT-4,509,130				US-PATENT-CLASS-526-217				US-PATENT-CLASS-156-612
N85-29282*	c 37	NASA-CASE-NPO-15037-2				US-PATENT-CLASS-526-262				US-PATENT-CLASS-29-576E
		US-PATENT-APPL-SN-161257				US-PATENT-CLASS-528-314				US-PATENT-CLASS-29-576J
		US-PATENT-APPL-SN-431420				US-PATENT-CLASS-528-322				US-PATENT-CLASS-29-576W
		US-PATENT-CLASS-415-1				US-PATENT-4,495,339				US-PATENT-CLASS-29-578
		US-PATENT-CLASS-415-68	N85-30187*	c 33	NASA-CASE-NPO-16021-1					US-PATENT-CLASS-357-4
		US-PATENT-4,514,137			US-PATENT-APPL-SN-402205					US-PATENT-CLASS-357-50
N85-29283*	c 37	NASA-CASE-MS-18852-1			US-PATENT-CLASS-324-158R					US-PATENT-4,522,661
		US-PATENT-APPL-SN-392094			US-PATENT-CLASS-324-65R					NASA-CASE-LAR-12893-1
		US-PATENT-CLASS-239-DIG.23			US-PATENT-4,516,071					US-PATENT-APPL-SN-364041
		US-PATENT-CLASS-239-288	N85-30281*	c 35	NASA-CASE-GSC-12851-1					US-PATENT-CLASS-204-1T
		US-PATENT-CLASS-239-322			US-PATENT-APPL-SN-459842					US-PATENT-CLASS-324-158D
		US-PATENT-CLASS-239-327			US-PATENT-CLASS-250-363S					US-PATENT-CLASS-324-71.5
		US-PATENT-CLASS-239-375			US-PATENT-CLASS-250-369					US-PATENT-4,511,838
		US-PATENT-CLASS-239-590			US-PATENT-4,521,688					NASA-CASE-ARC-11243-2
		US-PATENT-CLASS-55-DIG.42	N85-30282*	c 35	NASA-CASE-LAR-12966-1					US-PATENT-APPL-SN-183707
		US-PATENT-4,519,545			US-PATENT-APPL-SN-414237					US-PATENT-CLASS-549-335
N85-29284*	c 37	NASA-CASE-MS-20148-1			US-PATENT-CLASS-356-351					US-PATENT-4,528,386
		US-PATENT-APPL-SN-638465			US-PATENT-CLASS-356-358					NASA-CASE-LEW-14039-1
		US-PATENT-CLASS-251-325			US-PATENT-CLASS-73-657					US-PATENT-APPL-SN-580419
		US-PATENT-CLASS-251-349			US-PATENT-4,512,661					US-PATENT-CLASS-415-115
		US-PATENT-CLASS-251-353	N85-30305*	c 36	NASA-CASE-NPO-15980-1					US-PATENT-CLASS-416-97A
		US-PATENT-CLASS-277-135			US-PATENT-APPL-SN-385220					US-PATENT-4,529,358
		US-PATENT-CLASS-277-80			US-PATENT-CLASS-357-17					NASA-CASE-LEW-13914-1
		US-PATENT-4,523,741			US-PATENT-CLASS-357-40					US-PATENT-APPL-SN-537615
N85-29285*	c 37	NASA-CASE-LAR-13009-1			US-PATENT-CLASS-357-46					US-PATENT-CLASS-315-3.5
		US-PATENT-APPL-SN-495380			US-PATENT-CLASS-372-38					US-PATENT-CLASS-315-5.38
		US-PATENT-CLASS-403-28			US-PATENT-CLASS-372-46					US-PATENT-CLASS-445-35
		US-PATENT-CLASS-403-408			US-PATENT-CLASS-372-50					US-PATENT-4,527,092
		US-PATENT-CLASS-411-368			US-PATENT-4,513,423					NASA-CASE-LEW-13506-1
		US-PATENT-CLASS-411-378	N85-30333*	c 37	NASA-CASE-LEW-13717-1					US-PATENT-APPL-SN-596960
		US-PATENT-CLASS-411-426			US-PATENT-APPL-SN-463456					US-PATENT-CLASS-384-101
		US-PATENT-CLASS-411-501			US-PATENT-CLASS-310-77					US-PATENT-CLASS-384-99
		US-PATENT-CLASS-411-531			US-PATENT-CLASS-310-93					US-PATENT-4,527,910
		US-PATENT-4,512,699			US-PATENT-CLASS-318-611					NASA-CASE-MFS-25319-1
N85-29286*	c 37	NASA-CASE-LAR-13040-1			US-PATENT-CLASS-335-100					US-PATENT-APPL-SN-437917
		US-PATENT-APPL-SN-547176			US-PATENT-4,517,505					US-PATENT-CLASS-364-723
		US-PATENT-CLASS-219-201	N85-30334*	c 37	NASA-CASE-MS-20080-1					US-PATENT-CLASS-364-853
		US-PATENT-CLASS-219-221			US-PATENT-APPL-SN-393584					US-PATENT-4,528,639
		US-PATENT-CLASS-219-285			US-PATENT-CLASS-403-15					NASA-CASE-MS-20036-1
		US-PATENT-CLASS-414-217			US-PATENT-CLASS-403-16					US-PATENT-APPL-SN-569372
		US-PATENT-CLASS-73-863.11			US-PATENT-CLASS-403-322					US-PATENT-CLASS-204-192C
		US-PATENT-CLASS-73-864.81			US-PATENT-CLASS-89-1.57					US-PATENT-CLASS-204-192P
		US-PATENT-4,516,435			US-PATENT-4,512,678					US-PATENT-CLASS-350-342
N85-29693*	c 71	NASA-CASE-NPO-16147-1-CU	N85-30335*	c 37	NASA-CASE-LAR-12738-2					US-PATENT-CLASS-428-432
		US-PATENT-APPL-SN-559988			US-PATENT-APPL-SN-539230					US-PATENT-CLASS-428-698
		US-PATENT-CLASS-73-505			US-PATENT-CLASS-244-158-A					US-PATENT-CLASS-428-913
		US-PATENT-4,520,656			US-PATENT-CLASS-411-103					US-PATENT-4,522,469
N85-29749*	c 74	NASA-CASE-NPO-15464-1			US-PATENT-CLASS-411-108					NASA-CASE-ARC-11522-2
		US-PATENT-APPL-SN-342828			US-PATENT-CLASS-52-127.7					US-PATENT-APPL-SN-641143
		US-PATENT-CLASS-156-166			US-PATENT-CLASS-52-506					US-PATENT-CLASS-528-168
		US-PATENT-CLASS-350-320			US-PATENT-CLASS-52-745					US-PATENT-CLASS-528-229
		US-PATENT-CLASS-350-96.15			US-PATENT-4,520,601					US-PATENT-CLASS-528-352
		US-PATENT-4,523,810	N85-30336*	c 37	NASA-CASE-LAR-12864-1					US-PATENT-CLASS-528-353
N85-29750*	c 74	NASA-CASE-MS-18417-1			US-PATENT-APPL-SN-387646					US-PATENT-4,536,565
		US-PATENT-APPL-SN-523559			US-PATENT-CLASS-403-102					NASA-CASE-ARC-11424-1
		US-PATENT-CLASS-350-312			US-PATENT-CLASS-403-322					US-PATENT-APPL-SN-598777
		US-PATENT-CLASS-350-319			US-PATENT-CLASS-403-348					US-PATENT-CLASS-428-260
		US-PATENT-CLASS-350-321			US-PATENT-4,518,277					US-PATENT-CLASS-428-408
		US-PATENT-CLASS-52-171	N85-30474*	c 44	NASA-CASE-NPO-15419-2					US-PATENT-CLASS-428-413
		US-PATENT-4,521,077			US-PATENT-APPL-SN-259208					US-PATENT-CLASS-525-107
N85-29800*	c 76	NASA-CASE-NPO-15772-1			US-PATENT-APPL-SN-542557					US-PATENT-CLASS-525-113
		US-PATENT-APPL-SN-392944			US-PATENT-CLASS-126-DIG.1					US-PATENT-CLASS-525-119
		US-PATENT-CLASS-156-623Q			US-PATENT-CLASS-126-400					US-PATENT-CLASS-525-186
		US-PATENT-CLASS-23-295R			US-PATENT-CLASS-126-415					US-PATENT-CLASS-525-229
		US-PATENT-4,512,846			US-PATENT-CLASS-126-419					US-PATENT-CLASS-528-113
N85-29947*	c 05	NASA-CASE-ARC-11444-1			US-PATENT-CLASS-126-900					US-PATENT-CLASS-528-117
		US-PATENT-APPL-SN-489675			US-PATENT-4,512,332					US-PATENT-CLASS-528-407
		US-PATENT-CLASS-416-145	N85-30475*	c 44	NASA-CASE-NPO-16155-1					US-PATENT-CLASS-528-94
		US-PATENT-CLASS-416-23			US-PATENT-APPL-SN-578390					US-PATENT-4,537,834
		US-PATENT-CLASS-416-500			US-PATENT-CLASS-136-255					NASA-CASE-LAR-13226-1
		US-PATENT-4,514,143			US-PATENT-CLASS-136-256					US-PATENT-APPL-SN-548583
N85-29991*	c 18	NASA-CASE-MFS-25837-1			US-PATENT-CLASS-136-261					US-PATENT-CLASS-523-454
		US-PATENT-APPL-SN-401282			US-PATENT-CLASS-357-30					US-PATENT-CLASS-523-458
		US-PATENT-CLASS-244-118.1			US-PATENT-4,524,237					US-PATENT-CLASS-528-106
		US-PATENT-CLASS-244-158R	N85-30618*	c 52	NASA-CASE-LAR-13028-1					US-PATENT-CLASS-528-229
		US-PATENT-CLASS-248-503			US-PATENT-APPL-SN-582492					US-PATENT-CLASS-528-407
		US-PATENT-CLASS-248-555			US-PATENT-CLASS-128-660					US-PATENT-CLASS-528-92
		US-PATENT-CLASS-403-143			US-PATENT-CLASS-128-736					US-PATENT-4,510,277
		US-PATENT-CLASS-403-56			US-PATENT-CLASS-374-117					NASA-CASE-NPO-15704-1
		US-PATENT-CLASS-403-76			US-PATENT-CLASS-374-160					US-PATENT-APPL-SN-359382
		US-PATENT-CLASS-403-90			US-PATENT-4,513,750					US-PATENT-CLASS-343-17.2-PC
		US-PATENT-CLASS-410-79	N85-30765*	c 71	NASA-CASE-NPO-15559-1					US-PATENT-CLASS-343-5-CM
		US-PATENT-CLASS-410-90			US-PATENT-APPL-SN-379601					US-PATENT-CLASS-343-5-W
		US-PATENT-4,508,296			US-PATENT-CLASS-181-0.5					US-PATENT-4,509,048
N85-30027*	c 24	NASA-CASE-LEW-13828-1			US-PATENT-CLASS-209-422					NASA-CASE-NPO-15696-1
		US-PATENT-APPL-SN-560035			US-PATENT-CLASS-209-638					US-PATENT-APPL-SN-387647
		US-PATENT-CLASS-219-76.14			US-PATENT-4,523,682					US-PATENT-CLASS-364-571
		US-PATENT-CLASS-427-178	N85-30922*	c 76	NASA-CASE-NPO-15813-1					US-PATENT-CLASS-364-578
		US-PATENT-CLASS-427-37			US-PATENT-APPL-SN-507624					US-PATENT-CLASS-372-32
		US-PATENT-CLASS-427-422			US-PATENT-CLASS-148-DIG.26					US-PATENT-4,509,132
		US-PATENT-4,518,625			US-PATENT-CLASS-148-174					NAS 1.71:NPO-15493-2
N85-30039*	c 25	NASA-CASE-LEW-13770-6			US-PATENT-CLASS-148-175					NAS 1.71:NPO-15494-2

N85-34374*	c 35	US-PATENT-APPL-SN-563890	N86-19304*	c 04	US-PATENT-APPL-SN-633179	N86-19580*	c 35	US-PATENT-CLASS-357-59
		US-PATENT-CLASS-324-65-P			US-PATENT-CLASS-73-3			US-PATENT-4,531,143
N85-34375*	c 35	US-PATENT-CLASS-73-75	N86-19310*	c 05	US-PATENT-CLASS-73-861-07	N86-19581*	c 35	NASA-CASE-GSC-12795-1
		US-PATENT-4,532,797			US-PATENT-4,538,446			US-PATENT-APPL-SN-462508
N85-34401*	c 37	NASA-CASE-ARC-11503-1	N86-19376*	c 23	NASA-CASE-KSC-11155-1	N86-19603*	c 37	US-PATENT-CLASS-374-115
		US-PATENT-APPL-SN-582643			US-PATENT-APPL-SN-425201			US-PATENT-CLASS-374-120
N85-34403*	c 37	US-PATENT-CLASS-250-374	N86-19413*	c 25	US-PATENT-CLASS-343-6.8-R	N86-19604*	c 37	US-PATENT-CLASS-374-163
		US-PATENT-CLASS-250-379			US-PATENT-4,540,986			US-PATENT-4,556,327
N85-34441*	c 44	US-PATENT-4,538,066	N86-19455*	c 27	NASA-CASE-LAR-13155-1	N86-19605*	c 37	NASA-CASE-MSC-20250-1
		NASA-CASE-LAR-13243-1			US-PATENT-APPL-SN-469371			US-PATENT-APPL-SN-491113
N85-34629*	c 74	US-PATENT-APPL-SN-590923	N86-19456*	c 27	US-PATENT-CLASS-244-158-A	N86-19711*	c 43	US-PATENT-CLASS-73-862.01
		US-PATENT-CLASS-73-831			US-PATENT-CLASS-244-158-R			US-PATENT-CLASS-73-862.54
N85-35194*	c 07	US-PATENT-CLASS-73-856	N86-19457*	c 27	US-PATENT-CLASS-244-172	N86-19721*	c 44	US-PATENT-4,557,149
		US-PATENT-4,535,636			US-PATENT-4,557,444			NASA-CASE-MFS-25949-1
N85-35195*	c 07	NASA-CASE-MFS-25907-1	N86-19458*	c 27	NASA-CASE-ARC-11428-1	N86-20125*	c 74	US-PATENT-APPL-SN-538063
		US-PATENT-APPL-SN-510137			US-PATENT-APPL-SN-499126			US-PATENT-CLASS-414-730
N85-35200*	c 08	US-PATENT-CLASS-244-118.1	N86-19479*	c 31	US-PATENT-CLASS-260-927-N	N86-20126*	c 74	US-PATENT-CLASS-901-31
		US-PATENT-CLASS-244-158R			US-PATENT-CLASS-428-410			US-PATENT-CLASS-901-50
N85-35227*	c 23	US-PATENT-CLASS-248-550	N86-19515*	c 33	US-PATENT-CLASS-528-310	N86-20150*	c 76	US-PATENT-4,545,723
		US-PATENT-CLASS-267-150			US-PATENT-CLASS-548-413			NASA-CASE-NPO-15960-1
N85-35233*	c 24	US-PATENT-CLASS-267-8R	N86-19516*	c 33	US-PATENT-CLASS-564-113	N86-20389*	c 07	US-PATENT-APPL-SN-527613
		US-PATENT-CLASS-410-156			US-PATENT-4,550,177			US-PATENT-CLASS-337-140
N85-35253*	c 25	US-PATENT-4,536,114	N86-19547*	c 33	NASA-CASE-ARC-11427-1	N86-20469*	c 18	US-PATENT-CLASS-60-527
		NASA-CASE-MSC-20127-2			US-PATENT-APPL-SN-493865			US-PATENT-CLASS-60-528
N85-35267*	c 26	US-PATENT-APPL-SN-646044	N86-19548*	c 33	US-PATENT-CLASS-523-433	N86-20560*	c 27	US-PATENT-4,553,393
		US-PATENT-CLASS-137-116.3			US-PATENT-CLASS-523-445			NASA-CASE-NPO-16038-1
N86-12547*	c 34	US-PATENT-CLASS-137-99	N86-19549*	c 33	US-PATENT-CLASS-523-66468	N86-20560*	c 27	US-PATENT-APPL-SN-469864
		US-PATENT-4,509,548			US-PATENT-CLASS-525-423			US-PATENT-CLASS-16-294
		NASA-CASE-LEW-14077-1			US-PATENT-CLASS-525-527			US-PATENT-CLASS-403-113
		US-PATENT-APPL-SN-580573			US-PATENT-CLASS-528-102			US-PATENT-CLASS-403-120
		US-PATENT-CLASS-136-253			US-PATENT-CLASS-528-103			US-PATENT-4,558,967
		US-PATENT-4,528,417			US-PATENT-4,550,129			NASA-CASE-LEW-13670-1
		NASA-CASE-NPO-15865-1			NASA-CASE-MSC-20622-1			US-PATENT-APPL-SN-603374
		US-PATENT-APPL-SN-425202			US-PATENT-APPL-SN-571616			US-PATENT-CLASS-384-103
		US-PATENT-CLASS-343-13-R			US-PATENT-CLASS-374-46			US-PATENT-CLASS-384-106
		US-PATENT-CLASS-356-5			US-PATENT-CLASS-374-8			US-PATENT-4,552,466
		US-PATENT-4,533,242			US-PATENT-CLASS-422-78			NASA-CASE-NPO-15939-1
		NASA-CASE-NPO-15949-1			US-PATENT-CLASS-436-155			US-PATENT-APPL-SN-465365
		US-PATENT-APPL-SN-457990			US-PATENT-CLASS-73-7			US-PATENT-CLASS-343-5-CD
		US-PATENT-CLASS-414-288			US-PATENT-4,561,784			US-PATENT-CLASS-343-5-CM
		US-PATENT-CLASS-414-328			NASA-CASE-ARC-11405-2			US-PATENT-CLASS-343-5-VQ
		US-PATENT-CLASS-414-373			US-PATENT-APPL-SN-514117			US-PATENT-CLASS-367-88
		US-PATENT-CLASS-414-786			US-PATENT-CLASS-260-245.9			US-PATENT-4,551,724
		US-PATENT-4,537,554			US-PATENT-CLASS-260-245.9			NASA-CASE-LEW-14028-1
		NASA-CASE-LAR-13019-1			US-PATENT-CLASS-528-327			US-PATENT-APPL-SN-642310
		US-PATENT-APPL-SN-576308			US-PATENT-4,522,755			US-PATENT-CLASS-429-109
		US-PATENT-CLASS-244-199			NASA-CASE-LAR-13135-1			US-PATENT-CLASS-429-15
		US-PATENT-CLASS-244-55			US-PATENT-APPL-SN-649328			US-PATENT-CLASS-429-19
		US-PATENT-4,533,101			US-PATENT-CLASS-525-432			US-PATENT-CLASS-429-51
		NASA-CASE-LEW-13562-2			US-PATENT-CLASS-525-436			US-PATENT-4,543,302
		US-PATENT-APPL-SN-500651			US-PATENT-CLASS-528-179			NAS 1.71-GSC-12944-1
		US-PATENT-CLASS-239-402.5			US-PATENT-CLASS-528-182			NASA-CASE-GSC-12944-1
		US-PATENT-CLASS-60-39.23			US-PATENT-CLASS-528-185			US-PATENT-APPL-SN-793006
		US-PATENT-CLASS-60-748			US-PATENT-CLASS-528-352			NASA-CASE-MFS-25942-1
		US-PATENT-4,534,166			US-PATENT-CLASS-528-353			US-PATENT-APPL-SN-571613
		NASA-CASE-LAR-13076-1			US-PATENT-4,552,931			US-PATENT-CLASS-378-43
		US-PATENT-APPL-SN-532342			NASA-CASE-LEW-13864-1			US-PATENT-CLASS-378-85
		US-PATENT-CLASS-244-113			US-PATENT-APPL-SN-434087			US-PATENT-4,562,583
		US-PATENT-CLASS-244-139			US-PATENT-CLASS-528-229			NASA-CASE-ARC-11502-1
		US-PATENT-CLASS-244-75-R			US-PATENT-CLASS-528-322			US-PATENT-APPL-SN-594134
		US-PATENT-4,538,778			US-PATENT-CLASS-528-342			US-PATENT-CLASS-350-276-F
		NASA-CASE-NPO-16203-1			US-PATENT-CLASS-528-345			US-PATENT-CLASS-350-319
		US-PATENT-APPL-SN-493179			US-PATENT-4,560,742			US-PATENT-CLASS-350-448
		US-PATENT-CLASS-435-160			NASA-CASE-LEW-14072-1			US-PATENT-CLASS-350-537
		US-PATENT-CLASS-435-842			US-PATENT-APPL-SN-649330			US-PATENT-CLASS-350-580
		US-PATENT-4,539,293			US-PATENT-CLASS-204-192-C			US-PATENT-4,542,963
		NASA-CASE-LEW-14057-1			US-PATENT-CLASS-204-192-D			NASA-CASE-MSC-20418-1
		US-PATENT-APPL-SN-375784			US-PATENT-CLASS-204-192-R			US-PATENT-APPL-SN-438446
		US-PATENT-APPL-SN-523297			US-PATENT-CLASS-204-298			US-PATENT-CLASS-378-58
		US-PATENT-APPL-SN-640712			US-PATENT-CLASS-427-248.1			US-PATENT-CLASS-378-59
		US-PATENT-CLASS-428-633			US-PATENT-CLASS-427-38			US-PATENT-4,542,520
		US-PATENT-CLASS-428-656			US-PATENT-CLASS-428-446			NASA-CASE-GSC-12816-1
		US-PATENT-CLASS-428-678			US-PATENT-CLASS-428-446			US-PATENT-APPL-SN-507625
		US-PATENT-CLASS-428-679			US-PATENT-CLASS-428-473.5			US-PATENT-CLASS-136-255
		US-PATENT-CLASS-428-680			US-PATENT-CLASS-428-702			US-PATENT-CLASS-136-262
		US-PATENT-CLASS-428-681			US-PATENT-4,560,577			US-PATENT-CLASS-29-572
		US-PATENT-CLASS-428-682			NASA-CASE-LAR-13098-1			US-PATENT-CLASS-357-15
		US-PATENT-4,485,151			US-PATENT-APPL-SN-530339			US-PATENT-CLASS-357-30
		US-PATENT-4,535,033			US-PATENT-CLASS-16-242			US-PATENT-4,543,442
		NASA-CASE-NPO-15924-1			US-PATENT-CLASS-16-390			NASA-CASE-LEW-13142-2
		US-PATENT-APPL-SN-526768			US-PATENT-CLASS-403-171			US-PATENT-APPL-SN-413101
		US-PATENT-CLASS-201-17			US-PATENT-CLASS-403-64			US-PATENT-CLASS-60-39.02
		US-PATENT-CLASS-44-1-SR			US-PATENT-CLASS-52-632			US-PATENT-CLASS-60-39.07
		US-PATENT-4,511,362			US-PATENT-CLASS-52-637			US-PATENT-CLASS-60-736
		NASA-CASE-LEW-13923-1			US-PATENT-CLASS-52-646			US-PATENT-4,550,561
		US-PATENT-APPL-SN-571617			US-PATENT-CLASS-52-648			NASA-CASE-MFS-25429-1
		US-PATENT-CLASS-427-191			US-PATENT-4,557,097			US-PATENT-APPL-SN-596959
		US-PATENT-CLASS-427-228			NASA-CASE-GSC-12555-1			US-PATENT-CLASS-124-56
		US-PATENT-CLASS-427-294			US-PATENT-APPL-SN-153240			US-PATENT-CLASS-244-158-R
		US-PATENT-CLASS-427-376.2			US-PATENT-CLASS-331-116-FE			US-PATENT-CLASS-403-328
		US-PATENT-CLASS-427-380			US-PATENT-CLASS-331-117-FE			US-PATENT-4,554,905
		US-PATENT-CLASS-427-397.7			US-PATENT-4,553,110			NASA-CASE-ARC-11429-1-CU
		US-PATENT-CLASS-428-698			NASA-CASE-NPO-16112-1			US-PATENT-APPL-SN-553339
		US-PATENT-CLASS-428-704			US-PATENT-APPL-SN-542232			US-PATENT-CLASS-524-548
		US-PATENT-4,535,035			US-PATENT-CLASS-357-23.6			US-PATENT-CLASS-525-186
		NASA-CASE-LAR-13220-1			US-PATENT-CLASS-357-30			US-PATENT-CLASS-526-262
					US-PATENT-CLASS-357-58			



		US-PATENT-CLASS-526-265				NASA-CASE-NPO-16233-1			US-PATENT-CLASS-208-11
		US-PATENT-4,526,925				US-PATENT-APPL-SN-737018			US-PATENT-CLASS-48-197-R
N86-20561*	c 27	NASA-CASE-LAR-13384-1	N86-20841*	c 39	NASA-CASE-MFS-25910-1				US-PATENT-CLASS-8-DIG.9
		US-PATENT-APPL-SN-663840			US-PATENT-APPL-SN-548582				US-PATENT-4,582,590
		US-PATENT-CLASS-156-307			US-PATENT-CLASS-73-150-A		N86-25752*	c 35	NASA-CASE-MFS-28030-1
		US-PATENT-CLASS-156-309.9			US-PATENT-CLASS-73-827				US-PATENT-APPL-SN-719799
		US-PATENT-CLASS-156-331.5			US-PATENT-4,548,083				US-PATENT-CLASS-73-861.58
		US-PATENT-CLASS-256-308.2	N86-21154*	c 60	NASA-CASE-LAR-12968-1				US-PATENT-4,572,004
		US-PATENT-CLASS-427-385.5			US-PATENT-APPL-SN-523560		N86-25753*	c 35	NASA-CASE-NPO-16271-1
		US-PATENT-CLASS-427-388.1			US-PATENT-CLASS-364-728				US-PATENT-APPL-SN-556514
		US-PATENT-CLASS-428-458			US-PATENT-4,545,025				US-PATENT-CLASS-356-311
		US-PATENT-CLASS-428-473.5	N86-21276*	c 71	NASA-CASE-LAR-13153-1				US-PATENT-CLASS-356-318
		US-PATENT-4,543,295			US-PATENT-APPL-SN-590921		N86-25789*	c 37	US-PATENT-4,585,344
N86-20647*	c 32	NASA-CASE-MFS-25750-1			US-PATENT-CLASS-72-324				NASA-CASE-LAR-13117-1
		US-PATENT-APPL-SN-530185			US-PATENT-CLASS-72-341				US-PATENT-APPL-SN-556512
		US-PATENT-CLASS-250-225			US-PATENT-CLASS-73-1-DV				US-PATENT-CLASS-244-159
		US-PATENT-CLASS-350-354			US-PATENT-4,558,585				US-PATENT-CLASS-244-173
		US-PATENT-CLASS-358-168	N86-21348*	c 74	NASA-CASE-MFS-25752-1				US-PATENT-CLASS-343-881
		US-PATENT-4,546,248			US-PATENT-APPL-SN-473499				US-PATENT-CLASS-343-882
N86-20668*	c 33	NASA-CASE-GSC-12804-1			US-PATENT-CLASS-350-335				US-PATENT-CLASS-52-111
		US-PATENT-APPL-SN-529803			US-PATENT-CLASS-356-345				US-PATENT-CLASS-52-645
		US-PATENT-CLASS-331-1-A			US-PATENT-CLASS-356-4.5				US-PATENT-CLASS-52-648
		US-PATENT-CLASS-331-2			US-PATENT-CLASS-358-105				US-PATENT-4,578,920
		US-PATENT-4,550,292			US-PATENT-CLASS-358-125		N86-25790*	c 37	NASA-CASE-LEW-14170-1
N86-20669*	c 33	NASA-CASE-GSC-12899-1			US-PATENT-CLASS-358-88				US-PATENT-APPL-SN-672224
		US-PATENT-APPL-SN-613140			US-PATENT-CLASS-364-822				US-PATENT-CLASS-227-27
		US-PATENT-CLASS-191-12.2-R			US-PATENT-CLASS-382-42				US-PATENT-CLASS-227-28
		US-PATENT-CLASS-242-107			US-PATENT-4,556,986				US-PATENT-4,580,791
		US-PATENT-CLASS-242-54-R	N86-21582*	c 23	NASA-CASE-ARC-11402-3		N86-25791*	c 37	NASA-CASE-LAR-13169-1
		US-PATENT-4,542,858			US-PATENT-APPL-SN-741405				US-PATENT-APPL-SN-606431
N86-20670*	c 33	NASA-CASE-MFS-25868-1			US-PATENT-CLASS-564-243				US-PATENT-CLASS-343-DIG.2
		US-PATENT-APPL-SN-638584			US-PATENT-4,567,301				US-PATENT-CLASS-343-883
		US-PATENT-CLASS-330-258			US-PATENT-4,567,301				US-PATENT-CLASS-52-110
		US-PATENT-CLASS-330-261	N86-21590*	c 24	NASA-CASE-ARC-11538-1SB				US-PATENT-4,587,526
		US-PATENT-CLASS-330-311			US-PATENT-APPL-SN-719796				NASA-CASE-LEW-13822-1
		US-PATENT-4,551,687			US-PATENT-CLASS-526-262		N86-25874*	c 44	US-PATENT-APPL-SN-625077
N86-20671*	c 33	NASA-CASE-LEW-13773-2			US-PATENT-4,568,733				US-PATENT-CLASS-42-101
		US-PATENT-APPL-SN-638541	N86-21675*	c 27	NASA-CASE-LAR-12931-2				US-PATENT-CLASS-429-27
		US-PATENT-CLASS-244-134-D			US-PATENT-APPL-SN-527914				US-PATENT-CLASS-429-57
		US-PATENT-CLASS-310-324			US-PATENT-CLASS-260-544-D				US-PATENT-4,584,249
		US-PATENT-CLASS-39-25.35			US-PATENT-CLASS-556-436		N86-26190*	c 74	NASA-CASE-GSC-12849-1
		US-PATENT-4,545,553			US-PATENT-CLASS-585-24				US-PATENT-APPL-SN-556481
N86-20672*	c 33	NASA-CASE-LEW-13922-1			US-PATENT-4,565,886				US-PATENT-CLASS-250-228
		US-PATENT-APPL-SN-537614	N86-21718*	c 31	NASA-CASE-MFS-25905-2				US-PATENT-CLASS-356-236
		US-PATENT-CLASS-307-264			US-PATENT-APPL-SN-601130				US-PATENT-CLASS-356-244
		US-PATENT-CLASS-307-270			US-PATENT-CLASS-65-1				US-PATENT-CLASS-356-446
		US-PATENT-CLASS-307-566			US-PATENT-CLASS-65-11.1				US-PATENT-CLASS-56-73
		US-PATENT-CLASS-307-570			US-PATENT-CLASS-65-12				US-PATENT-4,583,860
		US-PATENT-CLASS-307-572			US-PATENT-CLASS-65-2		N86-26352*	c 16	NASA-CASE-MFS-25966-1
		US-PATENT-4,547,686			US-PATENT-4,565,557				US-PATENT-APPL-SN-643522
N86-20680* #	c 33	NAS 1.71:LEW-14127-1	N86-21742*	c 33	NASA-CASE-LEW-13981-2				US-PATENT-CLASS-244-161
		NASA-CASE-LEW-14127-1			US-PATENT-APPL-SN-714051				US-PATENT-4,582,277
		US-PATENT-APPL-SN-748536			US-PATENT-CLASS-315-3.5		N86-26368*	c 20	NASA-CASE-MFS-25946-1
N86-20681* #	c 33	NAS 1.71:NPO-16420-1			US-PATENT-CLASS-315-3.6				US-PATENT-APPL-SN-561432
		NASA-CASE-NPO-16420-1			US-PATENT-CLASS-315-39.3				US-PATENT-CLASS-244-158.R
		US-PATENT-APPL-SN-727838			US-PATENT-CLASS-330-43				US-PATENT-CLASS-244-169
N86-20750*	c 35	NASA-CASE-MFS-25963-1			US-PATENT-4,564,787				US-PATENT-CLASS-60-203.1
		US-PATENT-APPL-SN-571614	N86-21850*	c 37	NASA-CASE-MFS-25807-2				US-PATENT-CLASS-60-39.465
		US-PATENT-CLASS-165-30			US-PATENT-APPL-SN-685607				US-PATENT-4,585,191
		US-PATENT-CLASS-165-61			US-PATENT-CLASS-219-124.34		N86-26595*	c 35	NASA-CASE-MSC-20653-1
		US-PATENT-CLASS-165-65			US-PATENT-CLASS-318-577				US-PATENT-APPL-SN-659474
		US-PATENT-CLASS-219-390			US-PATENT-CLASS-358-101				US-PATENT-CLASS-73-863.21
		US-PATENT-CLASS-219-395			US-PATENT-CLASS-901-42				US-PATENT-CLASS-73-863.31
		US-PATENT-CLASS-219-396			US-PATENT-CLASS-901-47				US-PATENT-CLASS-73-863.72
		US-PATENT-CLASS-432-18			US-PATENT-4,567,348				US-PATENT-CLASS-73-864.34
		US-PATENT-4,544,025	N86-22112*	c 54	NASA-CASE-LAR-12259-2				US-PATENT-4,584,887
N86-20751*	c 35	NASA-CASE-ARC-11422-1			US-PATENT-APPL-SN-280152		N86-26598* #	c 35	NAS 1.71:MFS-26002-1-CU
		US-PATENT-APPL-SN-523991			US-PATENT-CLASS-128-80-E				NASA-CASE-MFS-26002-1-CU
		US-PATENT-CLASS-211-126	N86-22459* #	c 89	US-PATENT-4,566,447				US-PATENT-APPL-SN-765991
		US-PATENT-CLASS-211-74			NAS 1.71:MFS-28013-1		N86-27270*	c 04	NASA-CASE-NPO-16171-1CU
		US-PATENT-4,544,068			NASA-CASE-MFS-28013-1				US-PATENT-APPL-SN-551536
N86-20752*	c 35	NASA-CASE-NPO-16142-1-CU			US-PATENT-APPL-SN-765979				US-PATENT-CLASS-343-357
		US-PATENT-APPL-SN-561433	N86-24224* #	c 60	NAS 1.71:NPO-16464-1CU				US-PATENT-CLASS-343-418
		US-PATENT-CLASS-73-505			NASA-CASE-NPO-16464-1CU				US-PATENT-4,578,678
		US-PATENT-4,549,435			US-PATENT-APPL-SN-815099		N86-27280*	c 06	NASA-CASE-LAR-12518-1
N86-20756* #	c 35	NAS 1.71:MSC-20783-1			NASA-CASE-MSC-20676-1				US-PATENT-APPL-SN-578388
		NASA-CASE-MSC-20783-1			US-PATENT-APPL-SN-587764				US-PATENT-CLASS-244-181
		US-PATENT-APPL-SN-738931			US-PATENT-CLASS-244-159				US-PATENT-CLASS-340-968
N86-20788*	c 37	NASA-CASE-MFS-25842-2			US-PATENT-4,579,302				US-PATENT-CLASS-364-433
		US-PATENT-APPL-SN-692875	N86-24841* #	c 27	NAS 1.71:LAR-13292-1				US-PATENT-CLASS-364-435
		US-PATENT-CLASS-277-53			NASA-CASE-LAR-13292-1				US-PATENT-CLASS-73-178T
		US-PATENT-CLASS-415-174			US-PATENT-APPL-SN-834978				US-PATENT-4,586,140
		US-PATENT-4,545,586	N86-25269* #	c 76	NAS 1.71:NPO-16584-1-CU		N86-27288*	c 08	NASA-CASE-ARC-11372-1
N86-20789*	c 37	NASA-CASE-MFS-25906-1			NASA-CASE-NPO-16584-1-CU				US-PATENT-APPL-SN-415878
		US-PATENT-APPL-SN-537757			US-PATENT-APPL-SN-802769				US-PATENT-CLASS-200-157
		US-PATENT-CLASS-212-230	N86-25416*	c 24	NASA-CASE-ARC-11421-3				US-PATENT-CLASS-244-234
		US-PATENT-CLASS-414-4			US-PATENT-APPL-SN-771538				US-PATENT-CLASS-250-211K
		US-PATENT-CLASS-414-718			US-PATENT-CLASS-428-473.5				US-PATENT-CLASS-318-584
		US-PATENT-CLASS-414-753			US-PATENT-CLASS-428-474.4				US-PATENT-CLASS-318-640
		US-PATENT-CLASS-901-25			US-PATENT-CLASS-428-477.7				US-PATENT-4,584,510
		US-PATENT-CLASS-901-31			US-PATENT-CLASS-528-170		N86-27431*	c 25	NASA-CASE-MSC-20206-1
		US-PATENT-4,547,121			US-PATENT-CLASS-528-220				US-PATENT-APPL-SN-478129
N86-20797* #	c 37	NAS 1.71:ARC-11349-1			US-PATENT-CLASS-528-321				US-PATENT-CLASS-141-198
		NASA-CASE-ARC-11349-1			US-PATENT-CLASS-528-322				US-PATENT-CLASS-200-61.05
		US-PATENT-APPL-SN-746160			US-PATENT-4,579,782				US-PATENT-CLASS-340-605
N86-20801* #	c 37	NAS 1.71:NPO-16233-1	N86-25428*	c 25	NASA-CASE-NPO-16392-1				US-PATENT-4,591,838
					US-PATENT-APPL-SN-633363				

## N86-27450

N86-27450\* c 27 ..... NASA-CASE-LAR-13316-1  
 US-PATENT-APPL-SN-613139  
 US-PATENT-CLASS-260-544P  
 US-PATENT-CLASS-525-534  
 US-PATENT-CLASS-525-535  
 US-PATENT-CLASS-526-285  
 US-PATENT-CLASS-528-171  
 US-PATENT-CLASS-528-174  
 US-PATENT-CLASS-528-176  
 US-PATENT-4,587,312

N86-27451\* c 27 ..... NASA-CASE-ARC-11427-2  
 US-PATENT-APPL-SN-765980  
 US-PATENT-CLASS-523-434  
 US-PATENT-CLASS-523-445  
 US-PATENT-CLASS-523-461  
 US-PATENT-CLASS-525-108  
 US-PATENT-CLASS-525-115  
 US-PATENT-CLASS-525-119  
 US-PATENT-CLASS-525-122  
 US-PATENT-4,588,778

N86-27513\* c 32 ..... NASA-CASE-KSC-11285-1  
 US-PATENT-APPL-SN-655601  
 US-PATENT-CLASS-179-18BC  
 US-PATENT-CLASS-340-347DD  
 US-PATENT-CLASS-365-768  
 US-PATENT-4,588,986

N86-27593\* c 34 ..... NASA-CASE-MSC-20812-1  
 US-PATENT-APPL-SN-616002  
 US-PATENT-CLASS-122-366  
 US-PATENT-CLASS-165-104.14  
 US-PATENT-CLASS-165-104.26  
 US-PATENT-CLASS-165-41  
 US-PATENT-4,583,587

N86-27629\* c 37 ..... NASA-CASE-ARC-11525-1  
 US-PATENT-APPL-SN-681041  
 US-PATENT-CLASS-318-48  
 US-PATENT-CLASS-318-632  
 US-PATENT-CLASS-318-663  
 US-PATENT-CLASS-318-8  
 US-PATENT-4,591,772

N86-27630\* c 37 ..... NASA-CASE-LAR-13250-1  
 US-PATENT-APPL-SN-573162  
 US-PATENT-CLASS-403-312  
 US-PATENT-CLASS-403-388  
 US-PATENT-CLASS-403-408.1  
 US-PATENT-4,579,475

N86-27706\* c 44 ..... NASA-CASE-NPO-16236-1  
 US-PATENT-APPL-SN-582495  
 US-PATENT-CLASS-126-418  
 US-PATENT-CLASS-126-419  
 US-PATENT-CLASS-126-438  
 US-PATENT-4,586,487

N86-28131\* c 24 ..... NASA-CASE-ARC-11615-1SB  
 US-PATENT-APPL-SN-706682  
 US-PATENT-CLASS-428-116  
 US-PATENT-CLASS-428-408  
 US-PATENT-CLASS-428-921  
 US-PATENT-CLASS-526-265  
 US-PATENT-4,598,007

N86-28618\* c 54 ..... NASA-CASE-ARC-11616-1  
 US-PATENT-APPL-SN-684193  
 US-PATENT-CLASS-128-202.11  
 US-PATENT-CLASS-2-2.1A  
 US-PATENT-CLASS-2-2.1R  
 US-PATENT-CLASS-414-1  
 US-PATENT-CLASS-414-5  
 US-PATENT-CLASS-414-7  
 US-PATENT-CLASS-414-8  
 US-PATENT-4,593,415

N86-28619\* c 54 ..... NASA-CASE-ARC-11610-1  
 US-PATENT-APPL-SN-684190  
 US-PATENT-CLASS-138-120  
 US-PATENT-CLASS-2-2.1A  
 US-PATENT-CLASS-2-2.1R  
 US-PATENT-CLASS-285-168  
 US-PATENT-4,598,427

N86-28620\* c 54 ..... NASA-CASE-ARC-11543-1  
 US-PATENT-APPL-SN-684192  
 US-PATENT-CLASS-138-120  
 US-PATENT-CLASS-2-2.1A  
 US-PATENT-CLASS-285-168  
 US-PATENT-CLASS-414-7  
 US-PATENT-4,594,734

N86-28732\* c 74 ..... NASA-CASE-GSC-12825-1  
 US-PATENT-APPL-SN-698641  
 US-PATENT-CLASS-350-276R  
 US-PATENT-CLASS-350-505  
 US-PATENT-CLASS-354-479  
 US-PATENT-CLASS-358-222  
 US-PATENT-4,598,981

N86-28760\* c 76 ..... NASA-CASE-NPO-15904-1  
 US-PATENT-APPL-SN-465369  
 US-PATENT-CLASS-156-DIG.88  
 US-PATENT-CLASS-156-610  
 US-PATENT-CLASS-156-624  
 US-PATENT-4,596,626

N86-29039\* c 27 ..... NASA-CASE-LAR-13353-1  
 US-PATENT-APPL-SN-643524  
 US-PATENT-CLASS-264-204  
 US-PATENT-CLASS-264-216  
 US-PATENT-CLASS-264-236  
 US-PATENT-CLASS-264-347  
 US-PATENT-CLASS-528-183  
 US-PATENT-CLASS-528-222  
 US-PATENT-CLASS-528-341  
 US-PATENT-4,595,548

N86-29055\* c 31 ..... NASA-CASE-MFS-25825-1  
 US-PATENT-APPL-SN-657309  
 US-PATENT-CLASS-318-605  
 US-PATENT-CLASS-318-636  
 US-PATENT-CLASS-318-661  
 US-PATENT-CLASS-340-347CC  
 US-PATENT-CLASS-340-347SY  
 US-PATENT-4,594,540

N86-29174\* c 35 ..... NASA-CASE-LAR-13254-1CU  
 US-PATENT-APPL-SN-668432  
 US-PATENT-CLASS-261-78A  
 US-PATENT-CLASS-55-255  
 US-PATENT-CLASS-55-259  
 US-PATENT-CLASS-55-521  
 US-PATENT-CLASS-55-528  
 US-PATENT-4,595,399

N86-29204\* c 36 ..... NAS 1.71:LAR-13256-1  
 NASA-CASE-LAR-13256-1  
 US-PATENT-APPL-SN-745973  
 US-PATENT-CLASS-372-79  
 US-PATENT-4,594,720

N86-29507\* # c 54 ..... NASA-CASE-ARC-11534-1  
 US-PATENT-APPL-SN-642602  
 US-PATENT-CLASS-138-120  
 US-PATENT-CLASS-2-2.1A  
 US-PATENT-CLASS-285-168  
 US-PATENT-CLASS-285-184  
 US-PATENT-CLASS-285-227  
 US-PATENT-CLASS-403-164  
 US-PATENT-4,598,428

N86-29650\* # c 74 ..... NASA-CASE-GSC-12911-1  
 US-PATENT-APPL-SN-606426  
 US-PATENT-CLASS-350-315  
 US-PATENT-CLASS-350-318  
 US-PATENT-CLASS-356-402  
 US-PATENT-CLASS-356-419  
 US-PATENT-4,599,001

N86-31726\* # c 27 ..... NASA-CASE-ARC-11421-2  
 US-PATENT-APPL-SN-739760  
 US-PATENT-CLASS-428-473.5  
 US-PATENT-CLASS-528-170  
 US-PATENT-CLASS-528-220  
 US-PATENT-CLASS-528-321  
 US-PATENT-CLASS-528-322  
 US-PATENT-4,600,769

N86-31727\* c 27 ..... NASA-CASE-LAR-13351-1  
 US-PATENT-APPL-SN-643589  
 US-PATENT-CLASS-264-212  
 US-PATENT-CLASS-264-236  
 US-PATENT-CLASS-427-162  
 US-PATENT-CLASS-427-164  
 US-PATENT-CLASS-427-165  
 US-PATENT-CLASS-428-336  
 US-PATENT-CLASS-428-473.5  
 US-PATENT-4,603,061

N86-32266\* c 74 ..... NASA-CASE-GSC-12761-1  
 US-PATENT-APPL-SN-406820  
 US-PATENT-CLASS-356-4.5  
 US-PATENT-CLASS-356-5  
 US-PATENT-4,600,299

N86-32447\* c 09 ..... NASA-CASE-ARC-11504-1  
 US-PATENT-APPL-SN-565481  
 US-PATENT-CLASS-356-73  
 US-PATENT-4,605,303

N86-32525\* c 23 ..... NASA-CASE-ARC-11506-2  
 US-PATENT-APPL-SN-641142  
 US-PATENT-CLASS-528-108  
 US-PATENT-CLASS-528-124  
 US-PATENT-CLASS-528-337  
 US-PATENT-CLASS-528-352  
 US-PATENT-CLASS-528-399  
 US-PATENT-CLASS-528-406  
 US-PATENT-CLASS-528-407  
 US-PATENT-4,587,324

N86-32526\* # c 23 ..... NAS 1.71:LAR-13555-1  
 NASA-CASE-LAR-13555-1  
 US-PATENT-APPL-SN-871207  
 US-PATENT-CLASS-12880-1  
 US-PATENT-APPL-SN-590925  
 US-PATENT-CLASS-427-191  
 US-PATENT-CLASS-427-192  
 US-PATENT-CLASS-427-421  
 US-PATENT-CLASS-427-427  
 US-PATENT-4,552,784

N86-32551\* c 26 ..... NASA-CASE-NPO-15658-1  
 US-PATENT-APPL-SN-451896

## ACCESSION NUMBER INDEX

US-PATENT-CLASS-219-121LE  
 US-PATENT-CLASS-219-121LY  
 US-PATENT-CLASS-264-5  
 US-PATENT-CLASS-425-6  
 US-PATENT-CLASS-65-142  
 US-PATENT-CLASS-65-21.2  
 US-PATENT-CLASS-73-505  
 US-PATENT-4,553,917

N86-32568\* # c 27 ..... NASA-CASE-ARC-11512-2  
 US-PATENT-APPL-SN-641153  
 US-PATENT-CLASS-528-336  
 US-PATENT-CLASS-528-337  
 US-PATENT-CLASS-528-340  
 US-PATENT-CLASS-528-347  
 US-PATENT-CLASS-564-15  
 US-PATENT-CLASS-568-14  
 US-PATENT-4,602,081

N86-32569\* c 27 ..... NASA-CASE-LEW-14072-2  
 US-PATENT-APPL-SN-761235  
 US-PATENT-CLASS-204-192C  
 US-PATENT-CLASS-204-192D  
 US-PATENT-CLASS-204-298  
 US-PATENT-4,604,181

N86-32587\* c 31 ..... NASA-CASE-LEW-14130-1  
 US-PATENT-APPL-SN-659475  
 US-PATENT-CLASS-204-192C  
 US-PATENT-CLASS-204-192D  
 US-PATENT-CLASS-204-298  
 US-PATENT-CLASS-313-106  
 US-PATENT-CLASS-313-107  
 US-PATENT-CLASS-315-5.38  
 US-PATENT-CLASS-427-39  
 US-PATENT-4,607,193

N86-32589\* # c 31 ..... NAS 1.71:MFS-28153-1  
 NASA-CASE-MFS-28153-1  
 US-PATENT-APPL-SN-875891  
 NASA-CASE-GSC-12958-1  
 US-PATENT-APPL-SN-727035  
 US-PATENT-CLASS-331-108D  
 US-PATENT-CLASS-331-116R  
 US-PATENT-CLASS-331-66  
 US-PATENT-CLASS-374-183  
 US-PATENT-4,603,306

N86-32624\* c 33 ..... NASA-CASE-GSC-12958-1  
 US-PATENT-APPL-SN-727035  
 US-PATENT-CLASS-331-108D  
 US-PATENT-CLASS-331-116R  
 US-PATENT-CLASS-331-66  
 US-PATENT-CLASS-374-183  
 US-PATENT-4,603,306

N86-32695\* # c 35 ..... NASA-CASE-NPO-16479-ICU  
 US-PATENT-APPL-SN-719794  
 US-PATENT-CLASS-73-502  
 US-PATENT-CLASS-73-521  
 US-PATENT-4,602,509

N86-32696\* c 35 ..... NASA-CASE-LAR-13294-1  
 US-PATENT-APPL-SN-706681  
 US-PATENT-CLASS-73-147  
 US-PATENT-CLASS-73-862.04  
 US-PATENT-CLASS-73-862.61  
 US-PATENT-4,604,903

N86-32697\* c 35 ..... NAS 1.71:ARC-11510-1  
 NASA-CASE-ARC-11510-1  
 US-PATENT-APPL-SN-602049  
 US-PATENT-CLASS-356-28.5  
 US-PATENT-CLASS-356-73  
 US-PATENT-CLASS-356-73  
 US-PATENT-CLASS-434-4  
 US-PATENT-4,600,301

N86-32698\* c 35 ..... NASA-CASE-MFS-25833-1  
 US-PATENT-APPL-SN-473827  
 US-PATENT-CLASS-324-226  
 US-PATENT-CLASS-324-238  
 US-PATENT-CLASS-324-240  
 US-PATENT-CLASS-324-262  
 US-PATENT-CLASS-73-37.5  
 US-PATENT-4,551,677

N86-32736\* # c 37 ..... NASA-CASE-MFS-19796-1  
 US-PATENT-APPL-SN-770920  
 US-PATENT-CLASS-138-97  
 US-PATENT-CLASS-165-76  
 US-PATENT-CLASS-228-119  
 US-PATENT-CLASS-29-402.16  
 US-PATENT-4,605,155

N86-32737\* c 37 ..... NASA-CASE-LAR-13081-1  
 US-PATENT-APPL-SN-760378  
 US-PATENT-CLASS-52-111  
 US-PATENT-CLASS-52-632  
 US-PATENT-CLASS-52-645  
 US-PATENT-CLASS-52-646  
 US-PATENT-4,604,844

N86-32738\* c 37 ..... NASA-CASE-MFS-28059-1  
 US-PATENT-APPL-SN-709255  
 US-PATENT-CLASS-417-475  
 US-PATENT-4,604,038

N86-32875\* c 44 ..... NASA-CASE-LEW-14177-1  
 US-PATENT-APPL-SN-669140  
 US-PATENT-CLASS-136-261  
 US-PATENT-CLASS-148-1.5  
 US-PATENT-CLASS-29-572  
 US-PATENT-CLASS-29-576B  
 US-PATENT-CLASS-357-30  
 US-PATENT-CLASS-357-91

N86-33127*	c 72	US-PATENT-4,608,452	N87-14704* #	c 37	US-PATENT-CLASS-29-580	N87-17035*	c 37	US-PATENT-CLASS-305-36
		NASA-CASE-NPO-16372-1			US-PATENT-CLASS-29-591			US-PATENT-CLASS-305-51
		US-PATENT-APPL-SN-703847			US-PATENT-4,618,380			US-PATENT-CLASS-305-58PC
		US-PATENT-CLASS-250-336.1			NAS 1.71:NPO-16892-1-CU			US-PATENT-CLASS-305-58R
		US-PATENT-CLASS-250-338			NASA-CASE-NPO-16892-1-CU			US-PATENT-CLASS-474-220
N86-33138* #	c 74	US-PATENT-CLASS-250-340	N87-14863* #	c 60	US-PATENT-APPL-SN-921573	N87-17036*	c 37	US-PATENT-4,626,046
		US-PATENT-4,600,840			NAS 1.71:MSC-20964-1			NASA-CASE-MSC-20857-1
		NAS 1.71:NPO-16869			NASA-CASE-MSC-20964-1			US-PATENT-APPL-SN-783886
		NASA-CASE-NPO-16869-1CU			US-PATENT-APPL-SN-878916			US-PATENT-CLASS-134-166C
		US-PATENT-APPL-SN-867986			NASA-CASE-MFS-26000-1			US-PATENT-CLASS-134-93
N87-10231* #	c 33	NAS 1.71:NPO-16784-1	N87-14971*	c 74	US-PATENT-APPL-SN-571615	N87-17036*	c 37	US-PATENT-CLASS-210-282
		NASA-CASE-NPO-16784-1			US-PATENT-CLASS-356-246			US-PATENT-4,635,663
		US-PATENT-APPL-SN-879757			US-PATENT-CLASS-372-61			NASA-CASE-MSC-20162-1
		NASA-CASE-NPO-16045-1			US-PATENT-4,614,428			US-PATENT-APPL-SN-764805
		US-PATENT-APPL-SN-641146			NASA-CASE-ARC-11429-4CU			US-PATENT-CLASS-135-903
N87-13313*	c 76	US-PATENT-CLASS-250-338	N87-15304*	c 27	US-PATENT-APPL-SN-725686	N87-17037*	c 37	US-PATENT-CLASS-160-23R
		US-PATENT-CLASS-250-370			US-PATENT-CLASS-525-282			US-PATENT-CLASS-160-265
		US-PATENT-CLASS-357-23.1			US-PATENT-4,618,652			US-PATENT-CLASS-244-121
		US-PATENT-CLASS-357-23.12			NAS 1.71:NPO-16632-1-CU			US-PATENT-CLASS-244-158R
		US-PATENT-CLASS-357-29			NASA-CASE-NPO-16632-1-CU			US-PATENT-CLASS-296-100
N87-14314*	c 05	US-PATENT-CLASS-357-30	N87-15413* #	c 33	US-PATENT-CLASS-357-52	N87-17037*	c 37	US-PATENT-4,637,447
		US-PATENT-CLASS-357-52			NAS 1.71:NPO-16932-1			NASA-CASE-MSC-20475-1
		US-PATENT-4,605,946			NASA-CASE-NPO-16932-1CU			US-PATENT-APPL-SN-725689
		NASA-CASE-LAR-13173-1			US-PATENT-APPL-SN-913433			US-PATENT-CLASS-192-46
		US-PATENT-APPL-SN-690274			NAS 1.71:MSC-20761-1			US-PATENT-CLASS-192-67R
N87-14355*	c 09	US-PATENT-CLASS-244-118.1	N87-15465* #	c 37	NASA-CASE-MSC-20761-1	N87-17038*	c 37	US-PATENT-4,635,773
		US-PATENT-CLASS-244-137-A			US-PATENT-APPL-SN-913446			NASA-CASE-GSC-12957-1
		US-PATENT-CLASS-244-17.27			NASA-CASE-NPO-15813-2			US-PATENT-APPL-SN-800193
		US-PATENT-CLASS-248-638			US-PATENT-APPL-SN-706564			US-PATENT-CLASS-310-90.5
		US-PATENT-CLASS-89-1.54			US-PATENT-CLASS-148-174			US-PATENT-4,634,191
N87-14373*	c 18	US-PATENT-4,616,793	N87-15882*	c 76	US-PATENT-CLASS-148-175	N87-17039*	c 44	NASA-CASE-NPO-16526-1CU
		NASA-CASE-MFS-28057-1			US-PATENT-CLASS-29-575			US-PATENT-APPL-SN-809975
		US-PATENT-APPL-SN-729766			US-PATENT-CLASS-29-576-E			US-PATENT-CLASS-136-249
		US-PATENT-CLASS-350-319			US-PATENT-CLASS-29-576-J			US-PATENT-4,631,352
		US-PATENT-4,618,215			US-PATENT-CLASS-29-576-W			NASA-CASE-MFS-29134-1
N87-14420*	c 20	NASA-CASE-MSC-20635-1	N87-16793*	c 02	US-PATENT-CLASS-29-578	N87-17493*	c 74	US-PATENT-APPL-SN-783890
		US-PATENT-APPL-SN-588039			US-PATENT-4,612,072			US-PATENT-CLASS-219-124.34
		US-PATENT-CLASS-16-294			NASA-CASE-LAR-13255-1			US-PATENT-CLASS-219-130.01
		US-PATENT-CLASS-16-370			US-PATENT-APPL-SN-550681			US-PATENT-4,633,060
		US-PATENT-CLASS-403-102			US-PATENT-CLASS-244-130			NAS 1.71:MFS-28139-1
N87-14482*	c 26	US-PATENT-CLASS-403-119	N87-16828*	c 07	US-PATENT-CLASS-244-130	N87-18679* #	c 29	NASA-CASE-MFS-28139-1
		US-PATENT-CLASS-403-146			US-PATENT-CLASS-244-200			US-PATENT-APPL-SN-911851
		US-PATENT-CLASS-403-163			US-PATENT-CLASS-244-204			NAS 1.71:MSC-20865-1
		US-PATENT-CLASS-403-85			US-PATENT-CLASS-244-35R			NASA-CASE-MSC-20865-1
		US-PATENT-4,615,637			US-PATENT-4,619,423			US-PATENT-APPL-SN-924472
N87-14482*	c 26	NASA-CASE-MFS-25989-1	N87-16863*	c 17	NASA-CASE-LAR-13134-2	N87-18817* #	c 37	NAS 1.71:MFS-28161-1
		US-PATENT-APPL-SN-690273			US-PATENT-APPL-SN-846462			NASA-CASE-MFS-28161-1
		US-PATENT-CLASS-239-132.5			US-PATENT-CLASS-244-130			US-PATENT-APPL-SN-942159
		US-PATENT-CLASS-239-403			US-PATENT-CLASS-244-55			NAS 1.71:MSC-20907-1
		US-PATENT-CLASS-239-425			US-PATENT-4,629,147			NASA-CASE-MSC-20907-1
N87-14515*	c 27	US-PATENT-CLASS-60-258	N87-16875*	c 20	US-PATENT-APPL-SN-470113	N87-18818* #	c 37	US-PATENT-APPL-SN-927992
		US-PATENT-CLASS-60-746			US-PATENT-CLASS-340-825.5			NASA-CASE-LAR-13280-1
		US-PATENT-4,621,492			US-PATENT-CLASS-340-870.18			US-PATENT-APPL-SN-790556
		NASA-CASE-LEW-13834-1			US-PATENT-CLASS-371-63			US-PATENT-CLASS-244-76-R
		US-PATENT-APPL-SN-478131			US-PATENT-CLASS-375-88			US-PATENT-CLASS-340-967
N87-14516*	c 27	US-PATENT-CLASS-148-429	N87-16907*	c 27	US-PATENT-4,631,538	N87-20999*	c 08	US-PATENT-4,648,569
		US-PATENT-CLASS-420-460			NASA-CASE-LEW-14037-1			NASA-CASE-MFS-28090-1
		US-PATENT-4,610,736			US-PATENT-APPL-SN-636463			US-PATENT-APPL-SN-805012
		NASA-CASE-LAR-13316-2			US-PATENT-CLASS-219-275			US-PATENT-CLASS-65-134
		US-PATENT-APPL-SN-760791			US-PATENT-CLASS-60-203.1			US-PATENT-CLASS-65-136
N87-14559*	c 32	US-PATENT-CLASS-260-544-P	N87-16908*	c 27	US-PATENT-4,608,821	N87-21111*	c 27	US-PATENT-CLASS-65-2
		US-PATENT-4,622,182			NASA-CASE-LAR-13118-2			US-PATENT-4,654,065
		NASA-CASE-LAR-13318-1			US-PATENT-APPL-SN-760797			NASA-CASE-ARC-11511-2
		US-PATENT-APPL-SN-781813			US-PATENT-CLASS-560-104			US-PATENT-APPL-SN-754362
		US-PATENT-CLASS-428-262			US-PATENT-4,638,083			US-PATENT-CLASS-528-220
N87-14594*	c 33	US-PATENT-CLASS-428-447	N87-16909*	c 27	NASA-CASE-ARC-11429-3CU	N87-21159*	c 31	US-PATENT-CLASS-528-229
		US-PATENT-CLASS-528-26			US-PATENT-APPL-SN-725725			US-PATENT-CLASS-528-322
		US-PATENT-4,624,888			US-PATENT-CLASS-546-339			US-PATENT-CLASS-528-327
		NASA-CASE-LAR-13310-1			US-PATENT-CLASS-546-346			US-PATENT-CLASS-528-331
		US-PATENT-APPL-SN-709257			US-PATENT-CLASS-546-350			US-PATENT-CLASS-528-362
N87-14669*	c 35	US-PATENT-CLASS-356-5	N87-16918*	c 31	US-PATENT-4,626,593	N87-21160*	c 31	US-PATENT-4,649,189
		US-PATENT-CLASS-367-99			NASA-CASE-ARC-11428-2			NASA-CASE-NPO-16393-1-CU
		US-PATENT-CLASS-73-597			US-PATENT-APPL-SN-760374			US-PATENT-APPL-SN-701486
		US-PATENT-CLASS-73-615			US-PATENT-CLASS-428-421			US-PATENT-CLASS-62-384
		US-PATENT-4,624,142			US-PATENT-CLASS-428-473.5			US-PATENT-CLASS-62-48
N87-14670*	c 35	NASA-CASE-NPO-16299-1	N87-17026*	c 36	US-PATENT-CLASS-428-500	N87-21206*	c 32	US-PATENT-CLASS-62-514-R
		US-PATENT-APPL-SN-541526			US-PATENT-CLASS-428-704			US-PATENT-4,641,499
		US-PATENT-CLASS-356-389			US-PATENT-CLASS-528-168			NASA-CASE-LEW-13899-1
		US-PATENT-4,623,255			US-PATENT-CLASS-528-321			US-PATENT-APPL-SN-775968
		NASA-CASE-LAR-13268-1			US-PATENT-CLASS-528-322			US-PATENT-CLASS-156-345
N87-14671*	c 35	US-PATENT-APPL-SN-727034	N87-17034*	c 37	US-PATENT-4,634,759	N87-21207*	c 32	US-PATENT-CLASS-156-643
		US-PATENT-CLASS-356-28.5			NASA-CASE-ARC-11363-1			US-PATENT-CLASS-156-646
		US-PATENT-CLASS-356-301			US-PATENT-APPL-SN-500046			US-PATENT-CLASS-156-659.1
		US-PATENT-4,624,561			US-PATENT-CLASS-52-126.5			US-PATENT-CLASS-156-661.1
		NASA-CASE-MFS-25981-1			US-PATENT-CLASS-52-309.15			US-PATENT-CLASS-156-904
N87-14671*	c 35	US-PATENT-APPL-SN-657310	N87-17034*	c 37	US-PATENT-CLASS-52-391	N87-21207*	c 32	US-PATENT-CLASS-204-298
		US-PATENT-CLASS-73-462			US-PATENT-CLASS-52-511			US-PATENT-4,620,898
		US-PATENT-CLASS-73-473			US-PATENT-CLASS-52-814			NASA-CASE-LAR-13455-1
		US-PATENT-CLASS-73-477			US-PATENT-4,637,181			US-PATENT-APPL-SN-804040
		US-PATENT-4,619,142			NASA-CASE-ARC-11547-1			US-PATENT-CLASS-250-341
N87-14671*	c 35	NASA-CASE-GSC-12956-1	N87-17034*	c 37	US-PATENT-APPL-SN-692745	N87-21207*	c 32	US-PATENT-CLASS-374-122
		US-PATENT-APPL-SN-745977			US-PATENT-CLASS-356-28			US-PATENT-CLASS-374-9
		US-PATENT-CLASS-148-187			US-PATENT-CLASS-356-28.5			US-PATENT-4,645,358
		US-PATENT-CLASS-148-188			US-PATENT-4,632,548			NASA-CASE-NPO-16256-1
		US-PATENT-CLASS-148-189			NASA-CASE-NPO-16321-1CU			US-PATENT-APPL-SN-638586
N87-14671*	c 35	US-PATENT-CLASS-148-190	N87-17034*	c 37	US-PATENT-APPL-SN-692802	N87-21207*	c 32	US-PATENT-APPL-SN-638586
		US-PATENT-CLASS-148-190			US-PATENT-APPL-SN-692802			US-PATENT-APPL-SN-638586
		US-PATENT-CLASS-148-190			US-PATENT-APPL-SN-692802			US-PATENT-APPL-SN-638586
		US-PATENT-CLASS-148-190			US-PATENT-APPL-SN-692802			US-PATENT-APPL-SN-638586
		US-PATENT-CLASS-148-190			US-PATENT-APPL-SN-692802			US-PATENT-APPL-SN-638586

				US-PATENT-CLASS-329-107				US-PATENT-CLASS-313-361.1				US-PATENT-APPL-SN-853361
				US-PATENT-CLASS-375-110				US-PATENT-CLASS-313-362.1				US-PATENT-CLASS-285-305
				US-PATENT-CLASS-375-120				US-PATENT-4,649,278				US-PATENT-CLASS-285-81
				US-PATENT-CLASS-375-23				NASA-CASE-NPO-16640-1-CU				US-PATENT-CLASS-285-85
				US-PATENT-CLASS-455-608				US-PATENT-APPL-SN-852468				US-PATENT-CLASS-285-91
				US-PATENT-4,648,133				US-PATENT-CLASS-250-251				US-PATENT-4,655,482
N87-21232*	c 33			NASA-CASE-GSC-13018-1				US-PATENT-CLASS-250-396-R		N87-22985*	c 37	NASA-CASE-MS-20979-1
				US-PATENT-APPL-SN-862959				US-PATENT-CLASS-250-423-P				US-PATENT-APPL-SN-796053
				US-PATENT-CLASS-331-116-R				US-PATENT-CLASS-376-127				US-PATENT-CLASS-244/161
				US-PATENT-CLASS-331-117-R				US-PATENT-4,649,273				US-PATENT-4,664,344
				US-PATENT-CLASS-331-56				NASA-CASE-GSC-12897-1		N87-23259*	c 74	NASA-CASE-NPO-16558-1-CU
				US-PATENT-4,660,000				US-PATENT-APPL-SN-606432				US-PATENT-APPL-SN-779744
N87-21233*	c 33			NASA-CASE-MFS-28080-1				US-PATENT-CLASS-350-6.5				US-PATENT-CLASS-250-231-GY
				US-PATENT-APPL-SN-775548				US-PATENT-4,647,144				US-PATENT-CLASS-356-350
				US-PATENT-CLASS-318-138				NASA-CASE-KSC-11282-1				US-PATENT-4,662,751
				US-PATENT-CLASS-318-254				US-PATENT-APPL-SN-751644		N87-23286*	c 76	NASA-CASE-NPO-15800-2
				US-PATENT-CLASS-318-439				US-PATENT-CLASS-180-19.2				US-PATENT-APPL-SN-442815
				US-PATENT-4,644,234				US-PATENT-CLASS-180-305				US-PATENT-APPL-SN-674395
N87-21234*	c 33			NASA-CASE-LEW-13935-1				US-PATENT-CLASS-280-47.11				US-PATENT-CLASS-156-607
				US-PATENT-APPL-SN-700255				US-PATENT-CLASS-296-20				US-PATENT-CLASS-156-617-H
				US-PATENT-CLASS-250-423-R				US-PATENT-CLASS-5-81-R				US-PATENT-CLASS-156-617-SP
				US-PATENT-CLASS-315-111.81				US-PATENT-CLASS-60-415				US-PATENT-4,654,110
				US-PATENT-4,642,523				US-PATENT-4,646,860		N87-23631*	c 08	NASA-CASE-ARC-11633-1
N87-21235*	c 33			NASA-CASE-LAR-13151-1				NASA-CASE-LAR-12984-1				US-PATENT-APPL-SN-846439
				US-PATENT-APPL-SN-683101				US-PATENT-APPL-SN-578387				US-PATENT-CLASS-416-114
				US-PATENT-CLASS-307-261				US-PATENT-CLASS-244-1-R				US-PATENT-CLASS-416-158
				US-PATENT-CLASS-307-354				US-PATENT-CLASS-340-945				US-PATENT-4,669,958
				US-PATENT-CLASS-328-147				US-PATENT-CLASS-340-971		N87-23698*	c 23	NASA-CASE-ARC-11643-1-SB
				US-PATENT-CLASS-328-164				US-PATENT-CLASS-340-975				US-PATENT-APPL-SN-901496
				US-PATENT-CLASS-328-28				US-PATENT-CLASS-73-178-R				US-PATENT-CLASS-423-276
				US-PATENT-4,652,833				US-PATENT-4,663,627				US-PATENT-CLASS-423-284
N87-21255*	c 34			NASA-CASE-ARC-11631-1				NASA-CASE-ARC-11429-2-CU				US-PATENT-4,676,962
				US-PATENT-APPL-SN-846428				US-PATENT-APPL-SN-553339		N87-23713* #	c 25	NASA-CASE-LAR-13597-1-CU
				US-PATENT-CLASS-239-426				US-PATENT-APPL-SN-725727				US-PATENT-APPL-SN-008199
				US-PATENT-CLASS-239-434				US-PATENT-CLASS-524-404				NASA-CASE-LEW-14072-3
				US-PATENT-CLASS-239-545				US-PATENT-CLASS-524-548		N87-23736*	c 27	US-PATENT-APPL-SN-834977
				US-PATENT-CLASS-73-147				US-PATENT-CLASS-525-182				US-PATENT-CLASS-428-421
				US-PATENT-4,648,267				US-PATENT-CLASS-526-262				US-PATENT-CLASS-428-422
N87-21304*	c 35			NASA-CASE-NPO-15617-1				US-PATENT-4,526,925				US-PATENT-CLASS-428-447
				US-PATENT-APPL-SN-403849				US-PATENT-4,647,615				US-PATENT-CLASS-428-473.5
				US-PATENT-CLASS-74-424.8-R				NASA-CASE-LAR-13444-1-CU				US-PATENT-CLASS-428-702
				US-PATENT-CLASS-74-441				US-PATENT-APPL-SN-734366		N87-23737* #	c 27	US-PATENT-4,664,980
				US-PATENT-CLASS-74-458				US-PATENT-CLASS-528-229				NAS 1,71:ARC-11652-1
				US-PATENT-CLASS-74-468				US-PATENT-CLASS-546-262				NASA-CASE-ARC-11652-1
				US-PATENT-CLASS-74-89.15				US-PATENT-CLASS-546-264				US-PATENT-APPL-SN-008242
				US-PATENT-4,586,394				US-PATENT-CLASS-564-330		N87-23751*	c 27	NASA-CASE-ARC-11533-1
N87-21332*	c 37			NASA-CASE-MFS-28058-1				US-PATENT-CLASS-564-396				US-PATENT-APPL-SN-641147
				US-PATENT-APPL-SN-751691				US-PATENT-CLASS-564-430				US-PATENT-CLASS-548-413
				US-PATENT-CLASS-137-606				US-PATENT-4,663,483				US-PATENT-4,670,565
				US-PATENT-CLASS-251-165				NASA-CASE-LAR-13452-1		N87-23879*	c 33	NASA-CASE-NPO-16467-1-CU
				US-PATENT-4,657,044				US-PATENT-APPL-SN-838655				US-PATENT-APPL-SN-838648
N87-21333*	c 37			NASA-CASE-MFS-25956-1				US-PATENT-CLASS-525-36				US-PATENT-CLASS-136-249
				US-PATENT-APPL-SN-580397				US-PATENT-CLASS-528-176				US-PATENT-CLASS-136-255
				US-PATENT-CLASS-248-316.4				US-PATENT-CLASS-528-184				US-PATENT-CLASS-357-30
				US-PATENT-CLASS-248-550				US-PATENT-CLASS-528-192				US-PATENT-CLASS-357-35
				US-PATENT-4,582,289				US-PATENT-CLASS-528-193				US-PATENT-4,665,277
N87-21334*	c 37			NASA-CASE-NPO-16423-1-CU				US-PATENT-4,661,558		N87-23904*	c 33	NASA-CASE-GSC-12773-2
				US-PATENT-APPL-SN-765978				NASA-CASE-NPO-16337-1-CU				US-PATENT-APPL-SN-809851
				US-PATENT-CLASS-228-124				US-PATENT-APPL-SN-683111				US-PATENT-CLASS-290-1-R
				US-PATENT-CLASS-228-208				US-PATENT-CLASS-324-158-D				US-PATENT-CLASS-310-15
				US-PATENT-CLASS-228-209				US-PATENT-CLASS-324-158-R				US-PATENT-CLASS-310-30
				US-PATENT-CLASS-427-229				US-PATENT-4,661,770				US-PATENT-4,675,563
				US-PATENT-4,650,108				NASA-CASE-GSC-12961-1		N87-23941* #	c 35	NAS 1,71:LAR-13689-1
N87-21410*	c 44			NASA-CASE-MFS-25978-1				US-PATENT-APPL-SN-754707				NASA-CASE-LAR-13689-1-NP
				US-PATENT-APPL-SN-636459				US-PATENT-CLASS-307-490				US-PATENT-APPL-SN-929869
				US-PATENT-CLASS-307-131				US-PATENT-CLASS-330-107				NASA-CASE-MFS-28087-1
				US-PATENT-CLASS-307-31				US-PATENT-CLASS-330-294		N87-23944*	c 35	US-PATENT-APPL-SN-805010
				US-PATENT-CLASS-307-64				US-PATENT-CLASS-331-177-R				US-PATENT-CLASS-373-10
				US-PATENT-CLASS-307-66				US-PATENT-CLASS-333-214				US-PATENT-CLASS-373-15
				US-PATENT-CLASS-307-80				US-PATENT-CLASS-333-217				US-PATENT-4,677,642
				US-PATENT-CLASS-318-107				US-PATENT-4,644,306		N87-23960*	c 36	NASA-CASE-NPO-16542-1-CU
				US-PATENT-CLASS-318-161				NASA-CASE-MS-20841-1				US-PATENT-APPL-SN-781812
				US-PATENT-4,649,287				US-PATENT-APPL-SN-755288				US-PATENT-CLASS-350-3.73
N87-21591*	c 60			NASA-CASE-NPO-15982-1				US-PATENT-CLASS-165-1				US-PATENT-CLASS-350-3.81
				US-PATENT-APPL-SN-673685				US-PATENT-CLASS-165-104.14				US-PATENT-CLASS-372-103
				US-PATENT-CLASS-371-37				US-PATENT-CLASS-165-104.25				US-PATENT-CLASS-372-18
				US-PATENT-CLASS-371-40				US-PATENT-CLASS-165-104.26				US-PATENT-CLASS-372-43
				US-PATENT-4,649,541				US-PATENT-CLASS-165-34				US-PATENT-4,677,629
N87-21652*	c 71			NASA-CASE-LAR-13111-1-CU				US-PATENT-4,664,177		N87-23961*	c 36	NASA-CASE-NPO-16433-1
				US-PATENT-APPL-SN-751695				NASA-CASE-NPO-16544-1-CU				US-PATENT-APPL-SN-790594
				US-PATENT-CLASS-73-583				US-PATENT-APPL-SN-746809				US-PATENT-CLASS-372-68
				US-PATENT-CLASS-73-589				US-PATENT-CLASS-324-61-R				US-PATENT-CLASS-372-81
				US-PATENT-CLASS-73-599				US-PATENT-CLASS-73-336.5				US-PATENT-4,677,636
				US-PATENT-4,644,794				US-PATENT-4,662,220		N87-23970*	c 37	NASA-CASE-NPO-15482-1
N87-21633*	c 71			NASA-CASE-LAR-13440-1				NASA-CASE-LAR-13009-2				US-PATENT-APPL-SN-526739
				US-PATENT-APPL-SN-775989				US-PATENT-APPL-SN-495380				US-PATENT-CLASS-310-306
				US-PATENT-CLASS-73-1-DV				US-PATENT-APPL-SN-698279				US-PATENT-CLASS-337-393
				US-PATENT-CLASS-73-599				US-PATENT-CLASS-411-166				US-PATENT-4,665,334
				US-PATENT-4,649,750				US-PATENT-CLASS-411-368		N87-23981*	c 37	NASA-CASE-MS-20797-1
N87-21660*	c 72			NASA-CASE-NPO-16061-1-CU				US-PATENT-CLASS-411-424				US-PATENT-APPL-SN-771537
				US-PATENT-APPL-SN-729768				US-PATENT-CLASS-411-427				US-PATENT-CLASS-156-286
				US-PATENT-CLASS-250-288				US-PATENT-CLASS-411-531				US-PATENT-CLASS-156-289
				US-PATENT-CLASS-250-423-R				US-PATENT-4,572,699				US-PATENT-CLASS-156-298
				US-PATENT-CLASS-250-424				US-PATENT-4,650,385				US-PATENT-CLASS-156-307.1
				US-PATENT-CLASS-250-427				NASA-CASE-MFS-25964-2				US-PATENT-CLASS-156-307.2
				US-PATENT-CLASS-313-359.1				US-PATENT-APPL-SN-692801				US-PATENT-CLASS-156-307.7

N87-23982*	c 37	US-PATENT-CLASS-156-87	US-PATENT-CLASS-375-54	US-PATENT-CLASS-148-162
		US-PATENT-4,676,853	US-PATENT-CLASS-375-59	US-PATENT-CLASS-148-410
N87-23983*	c 37	NASA-CASE-LAR-13100-1	US-PATENT-CLASS-375-76	US-PATENT-4,676,846
		US-PATENT-APPL-SN-831377	US-PATENT-4,682,343	NASA-CASE-LEW-14392-1
N87-23983*	c 37	US-PATENT-CLASS-250-238	NASA-CASE-MSC-21166-1	US-PATENT-APPL-SN-886149
		US-PATENT-CLASS-250-352	US-PATENT-APPL-SN-032685	US-PATENT-CLASS-264-332
N87-23983*	c 37	US-PATENT-CLASS-62-514-R	NASA-CASE-LAR-13564-1	US-PATENT-CLASS-264-60
		US-PATENT-4,672,202	US-PATENT-APPL-SN-044180	US-PATENT-CLASS-264-63
N87-24564*	c 27	NASA-CASE-LAR-13198-1	NASA-CASE-LAR-13680-1	US-PATENT-CLASS-428-367
		US-PATENT-APPL-SN-729704	US-PATENT-APPL-SN-052941	US-PATENT-4,689,188
N87-24564*	c 27	US-PATENT-CLASS-60-634	NASA-CASE-NPO-16497-1-CU	NASA-CASE-LAR-13450-1
		US-PATENT-CLASS-60-638	US-PATENT-APPL-SN-783887	US-PATENT-APPL-SN-840816
N87-24564*	c 27	US-PATENT-CLASS-89-1.14	US-PATENT-CLASS-307-425	US-PATENT-CLASS-428-290
		US-PATENT-4,669,354	US-PATENT-CLASS-372-20	US-PATENT-CLASS-525-426
N87-24564*	c 27	NASA-CASE-ARC-11533-3	US-PATENT-CLASS-372-4	US-PATENT-CLASS-525-432
		US-PATENT-APPL-SN-852467	US-PATENT-CLASS-372-69	US-PATENT-CLASS-525-436
N87-24564*	c 27	US-PATENT-CLASS-528-413	US-PATENT-CLASS-372-99	US-PATENT-CLASS-525-903
		US-PATENT-4,675,379	US-PATENT-4,682,053	US-PATENT-4,695,610
N87-24575* #	c 27	NAS 1.71: LAR-13633-1	NASA-CASE-ARC-11620-1	NASA-CASE-LAR-13407-1
		NASA-CASE-LAR-13633-1	US-PATENT-APPL-SN-795945	US-PATENT-APPL-SN-804196
N87-24689*	c 37	US-PATENT-APPL-SN-011693	US-PATENT-CLASS-137-614.11	US-PATENT-CLASS-313-505
		NASA-CASE-MFS-28110-1	US-PATENT-CLASS-137-614.18	US-PATENT-CLASS-313-506
N87-24689*	c 37	US-PATENT-APPL-SN-852466	US-PATENT-CLASS-251-129.15	US-PATENT-CLASS-313-509
		US-PATENT-CLASS-239-433	US-PATENT-CLASS-251-175	US-PATENT-4,689,522
N87-24689*	c 37	US-PATENT-CLASS-239-596	US-PATENT-4,681,142	NASA-CASE-LEW-14108-1
		US-PATENT-CLASS-239-600	NASA-CASE-MSC-20910-1	US-PATENT-APPL-SN-732321
N87-24874*	c 52	US-PATENT-4,666,086	US-PATENT-APPL-SN-783888	US-PATENT-CLASS-313-237
		NASA-CASE-MFS-26011-1-SB	US-PATENT-CLASS-244-161	US-PATENT-CLASS-313-278
N87-24874*	c 52	US-PATENT-APPL-SN-655605	US-PATENT-CLASS-292-DIG.49	US-PATENT-4,687,964
		US-PATENT-CLASS-351-206	US-PATENT-CLASS-292-201	NASA-CASE-ARC-11613-1
N87-24874*	c 52	US-PATENT-CLASS-351-208	US-PATENT-CLASS-292-64	US-PATENT-APPL-SN-739792
		US-PATENT-CLASS-354-62	US-PATENT-4,682,745	US-PATENT-CLASS-244-134-D
N87-25334*	c 09	US-PATENT-4,669,836	NASA-CASE-LEW-14196-2	US-PATENT-CLASS-318-116
		NASA-CASE-LAR-13522-1-SB	US-PATENT-APPL-SN-054983	US-PATENT-4,690,353
N87-25334*	c 09	US-PATENT-APPL-SN-890575	NASA-CASE-MFS-28118-1	NASA-CASE-MSC-20946-1
		US-PATENT-CLASS-73-147	US-PATENT-APPL-SN-886121	US-PATENT-APPL-SN-875799
N87-25334*	c 09	US-PATENT-CLASS-73-856	US-PATENT-CLASS-73-809	US-PATENT-CASE-165-1
		US-PATENT-4,682,494	US-PATENT-CLASS-73-810	US-PATENT-CASE-165-104.25
N87-25344*	c 14	NASA-CASE-ARC-11646-1	US-PATENT-4,676,110	US-PATENT-CASE-165-104.26
		US-PATENT-APPL-SN-924398	NASA-CASE-NPO-17058-1-CU	US-PATENT-CASE-165-13
N87-25344*	c 14	US-PATENT-CLASS-434-34	US-PATENT-APPL-SN-060201	US-PATENT-CASE-165-32
		US-PATENT-4,678,438	NASA-CASE-MFS-29207-1	US-PATENT-CASE-165-41
N87-25348*	c 17	NASA-CASE-MSC-20821-1	US-PATENT-APPL-SN-713449	US-PATENT-4,687,048
		US-PATENT-APPL-SN-775990	US-PATENT-APPL-SN-783890	NASA-CASE-LAR-13512-1
N87-25348*	c 17	US-PATENT-CLASS-358-105	US-PATENT-CLASS-219-124.34	US-PATENT-APPL-SN-901113
		US-PATENT-CLASS-358-133	US-PATENT-CLASS-219-130.01	US-PATENT-CLASS-285-137.1
N87-25348*	c 17	US-PATENT-CLASS-358-138	US-PATENT-CLASS-219-74	US-PATENT-CLASS-285-901
		US-PATENT-4,682,225	US-PATENT-4,633,060	US-PATENT-CLASS-73-147
N87-25455*	c 26	NASA-CASE-LAR-13474-1-SB	US-PATENT-4,682,006	US-PATENT-CLASS-73-756
		US-PATENT-APPL-SN-840900	NASA-CASE-MFS-28060-1	US-PATENT-4,688,422
N87-25455*	c 26	US-PATENT-CLASS-148-6.3	US-PATENT-APPL-SN-708565	NASA-CASE-LAR-13393-1
		US-PATENT-CLASS-204-192.15	US-PATENT-CLASS-356-128	US-PATENT-APPL-SN-760799
N87-25455*	c 26	US-PATENT-CLASS-204-192.23	US-PATENT-CLASS-356-129	US-PATENT-CLASS-182-223
		US-PATENT-CLASS-428-607	US-PATENT-4,681,437	US-PATENT-CLASS-182-63
N87-25455*	c 26	US-PATENT-CLASS-428-632	NASA-CASE-NPO-16808-1-CU	US-PATENT-CLASS-182-82
		US-PATENT-CLASS-428-651	US-PATENT-APPL-SN-027981	US-PATENT-4,685,535
N87-25455*	c 26	US-PATENT-CLASS-428-660	NASA-CASE-LAR-13489-1	NASA-CASE-LAR-13476-1-CU
		US-PATENT-4,681-818	US-PATENT-APPL-SN-890445	US-PATENT-APPL-SN-933961
N87-25469*	c 27	NASA-CASE-ARC-11548-1	US-PATENT-CLASS-285-27	US-PATENT-CLASS-423-338
		US-PATENT-APPL-SN-806572	US-PATENT-CLASS-285-31	US-PATENT-CLASS-423-339
N87-25469*	c 27	US-PATENT-CLASS-428-413	US-PATENT-CLASS-285-373	US-PATENT-4,696,808
		US-PATENT-CLASS-428-417	US-PATENT-CLASS-285-421	NASA-CASE-LAR-13306-1
N87-25469*	c 27	US-PATENT-CLASS-528-108	US-PATENT-CLASS-285-86	US-PATENT-APPL-SN-846430
		US-PATENT-CLASS-528-168	US-PATENT-CLASS-403-341	US-PATENT-CLASS-340-407
N87-25474* #	c 27	US-PATENT-4,668,589	US-PATENT-4,684,156	US-PATENT-CLASS-434-114
		NASA-CASE-LAR-13732-1	NASA-CASE-LAR-13150-1	US-PATENT-4,687,444
N87-25474* #	c 27	US-PATENT-APPL-SN-035430	US-PATENT-APPL-SN-729767	NAS 1.71: LAR-13738-1
		NASA-CASE-NPO-17022-1-CU	US-PATENT-CLASS-29-156.5-R	US-PATENT-APPL-SN-073539
N87-25489* #	c 29	US-PATENT-APPL-SN-066450	US-PATENT-CLASS-92-208	NASA-CASE-LAR-13632-1
		NASA-CASE-MFS-28044-1	US-PATENT-4,683,809	US-PATENT-APPL-SN-079316
N87-25491*	c 31	US-PATENT-APPL-SN-804039	NASA-CASE-NPO-16567-1-CU	NAS 1.71: MSC-21082-1
		US-PATENT-CLASS-408-1-R	US-PATENT-APPL-SN-760790	NASA-CASE-MSC-21082-1
N87-25491*	c 31	US-PATENT-CLASS-51-281-R	US-PATENT-CLASS-250-339	US-PATENT-APPL-SN-079320
		US-PATENT-4,680,897	US-PATENT-CLASS-250-343	NASA-CASE-LAR-13286-1
N87-25492*	c 31	NASA-CASE-LAR-13113-1	US-PATENT-CLASS-250-373	US-PATENT-APPL-SN-686959
		US-PATENT-APPL-SN-831371	US-PATENT-CLASS-356-256	US-PATENT-CLASS-114-67R
N87-25492*	c 31	US-PATENT-CLASS-182-152	US-PATENT-CLASS-356-409	US-PATENT-CLASS-138-38
		US-PATENT-CLASS-52-108	US-PATENT-CLASS-356-51	US-PATENT-CLASS-244-130
N87-25492*	c 31	US-PATENT-CLASS-52-632	US-PATENT-4,684,258	US-PATENT-CLASS-244-199
		US-PATENT-CLASS-52-646	NASA-CASE-ARC-11611-1	US-PATENT-CLASS-244-200
N87-25495* #	c 31	US-PATENT-4,677,803	US-PATENT-APPL-SN-765981	US-PATENT-CLASS-296-1S
		NASA-CASE-MSC-21025-1	US-PATENT-CLASS-156-163	US-PATENT-4,706,910
N87-25511*	c 32	US-PATENT-APPL-SN-035401	US-PATENT-CLASS-156-229	NASA-CASE-LAR-13470-1
		NASA-CASE-NPO-16414-1-CU	US-PATENT-CLASS-156-286	US-PATENT-APPL-SN-855983
N87-25511*	c 32	US-PATENT-APPL-SN-729719	US-PATENT-CLASS-156-382	US-PATENT-CLASS-361-218
		US-PATENT-CLASS-332-23-A	US-PATENT-CLASS-156-494	US-PATENT-CLASS-361-222
N87-25511*	c 32	US-PATENT-CLASS-375-101	US-PATENT-CLASS-264-291	US-PATENT-4,698,723
		US-PATENT-CLASS-375-102	US-PATENT-4,684,424	NASA-CASE-LEW-14104-2
N87-25511*	c 32	US-PATENT-CLASS-375-39	NASA-CASE-ARC-11425-2	US-PATENT-APPL-SN-661481
		US-PATENT-CLASS-375-54	US-PATENT-APPL-SN-641152	US-PATENT-APPL-SN-823713
N87-25511*	c 32	US-PATENT-CLASS-455-65	US-PATENT-CLASS-558-145	US-PATENT-CLASS-148-16.6
		US-PATENT-4,675,880	US-PATENT-CLASS-558-190	US-PATENT-CLASS-204-192.31
N87-25531*	c 33	NASA-CASE-MSC-20187-1	US-PATENT-CLASS-558-193	US-PATENT-CLASS-427-38
		US-PATENT-APPL-SN-649327	US-PATENT-4,689,421	US-PATENT-4,704,168
N87-25531*	c 33	US-PATENT-CLASS-371-43	NASA-CASE-LEW-14262-1	
		US-PATENT-CLASS-375-120	US-PATENT-APPL-SN-832296	

## N88-14223

N88-14223\* c 31 ..... NASA-CASE-NPO-16734-1-CU  
US-PATENT-APPL-SN-855982  
US-PATENT-CLASS-62-467  
US-PATENT-CLASS-62-48  
US-PATENT-CLASS-62-514R  
US-PATENT-4,697,425

N88-14270\* c 33 ..... NASA-CASE-NPO-16764-1-CU  
US-PATENT-APPL-SN-904513  
US-PATENT-CLASS-439-271  
US-PATENT-CLASS-439-578  
US-PATENT-4,698,028

N88-14271\* c 33 ..... NASA-CASE-GSC-12782-1  
US-PATENT-APPL-SN-399074  
US-PATENT-CLASS-357-231  
US-PATENT-CLASS-357-24  
US-PATENT-CLASS-357-30  
US-PATENT-CLASS-357-30  
US-PATENT-CLASS-357-56  
US-PATENT-CLASS-357-61  
US-PATENT-CLASS-357-65  
US-PATENT-4,709,252

N88-14350\* c 36 ..... NASA-CASE-ARC-11634-1  
US-PATENT-APPL-SN-846427  
US-PATENT-CLASS-350-163  
US-PATENT-CLASS-350-174  
US-PATENT-CLASS-350-572  
US-PATENT-CLASS-350-573  
US-PATENT-CLASS-356-28.5  
US-PATENT-4,697,922

N88-14359\* c 37 ..... NASA-CASE-LAR-13662-1  
US-PATENT-APPL-SN-790597  
US-PATENT-APPL-SN-904812  
US-PATENT-CLASS-228-107  
US-PATENT-CLASS-228-109  
US-PATENT-CLASS-228-2.5  
US-PATENT-4,708,280

N88-14360\* c 37 ..... NASA-CASE-MFS-28001-2  
US-PATENT-APPL-SN-025039  
US-PATENT-APPL-SN-739788  
US-PATENT-CLASS-269-43  
US-PATENT-CLASS-269-71  
US-PATENT-CLASS-269-73  
US-PATENT-4,708,330

N88-14361\* c 37 ..... NASA-CASE-LAR-13453-1  
US-PATENT-APPL-SN-010950  
US-PATENT-CLASS-33-147D  
US-PATENT-CLASS-73-834  
US-PATENT-4,706,387

N88-14362\* c 37 ..... NASA-CASE-MFS-29177-1  
US-PATENT-APPL-SN-010942  
US-PATENT-CLASS-219-124.34  
US-PATENT-CLASS-219-130.01  
US-PATENT-CLASS-219-136  
US-PATENT-4,698,484

N88-14492\* c 44 ..... NASA-CASE-ARC-11622-1  
US-PATENT-APPL-SN-823712  
US-PATENT-CLASS-126-425  
US-PATENT-CLASS-250-203R  
US-PATENT-4,710,618

N88-14835\* c 76 ..... NASA-CASE-MFS-26008-1-CU  
US-PATENT-APPL-SN-800194  
US-PATENT-CLASS-156-621  
US-PATENT-CLASS-156-622  
US-PATENT-CLASS-156-624  
US-PATENT-CLASS-422-251  
US-PATENT-CLASS-422-260  
US-PATENT-4,711,697

N88-14836\* c 76 ..... NASA-CASE-NPO-16607-1-CU  
US-PATENT-APPL-SN-901114  
US-PATENT-CLASS-357-30  
US-PATENT-CLASS-437-128  
US-PATENT-CLASS-437-131  
US-PATENT-CLASS-437-3  
US-PATENT-CLASS-437-7  
US-PATENT-CLASS-437-8  
US-PATENT-CLASS-437-969  
US-PATENT-4,711,857

N88-18628\* c 24 ..... NAS 1.71:ARC-11641-1  
NASA-CASE-ARC-11641-1  
US-PATENT-APPL-SN-862925  
US-PATENT-CLASS-244-117-A  
US-PATENT-CLASS-244-158-A  
US-PATENT-CLASS-428-44  
US-PATENT-CLASS-428-74  
US-PATENT-CLASS-428-76  
US-PATENT-CLASS-428-920  
US-PATENT-4,713,275

N88-18725\* c 27 ..... NAS 1.71:LAR-13447-1  
NASA-CASE-LAR-13447-1  
US-PATENT-APPL-SN-855879  
US-PATENT-CLASS-525-197  
US-PATENT-CLASS-525-905  
US-PATENT-4,711,932

N88-23759\* c 02 ..... NASA-CASE-LAR-13436-1-CU  
US-PATENT-APPL-SN-003676  
US-PATENT-CLASS-73-147

US-PATENT-CLASS-73-178-R  
US-PATENT-4,727,751

N88-23765\* c 05 ..... NASA-CASE-LAR-13511-1  
US-PATENT-APPL-SN-013801  
US-PATENT-CLASS-244-119  
US-PATENT-CLASS-244-120  
US-PATENT-CLASS-244-130  
US-PATENT-CLASS-244-15  
US-PATENT-4,735,381

N88-23808\* c 08 ..... NASA-CASE-GSC-12970-1  
US-PATENT-APPL-SN-795805  
US-PATENT-CLASS-244-165  
US-PATENT-4,732,353

N88-23809\* c 08 ..... NASA-CASE-LAR-13630-1  
US-PATENT-APPL-SN-008895  
US-PATENT-CLASS-244-17.19  
US-PATENT-CLASS-244-91  
US-PATENT-4,708,305

N88-23827\* c 18 ..... NASA-CASE-MSC-21056-1  
US-PATENT-APPL-SN-934397  
US-PATENT-CLASS-16-292  
US-PATENT-CLASS-16-297  
US-PATENT-CLASS-16-326  
US-PATENT-CLASS-16-332  
US-PATENT-CLASS-16-345  
US-PATENT-CLASS-16-347  
US-PATENT-CLASS-16-349  
US-PATENT-4,736,490

N88-23828\* c 18 ..... NASA-CASE-LAR-13411-1-SB  
US-PATENT-APPL-SN-913432  
US-PATENT-CLASS-180-8.6  
US-PATENT-CLASS-414-735  
US-PATENT-CLASS-414-750  
US-PATENT-CLASS-901-1  
US-PATENT-CLASS-901-33  
US-PATENT-4,738,583

N88-23845\* c 25 ..... NASA-CASE-MFS-28142-1  
US-PATENT-APPL-SN-904128  
US-PATENT-CLASS-204-180.1  
US-PATENT-CLASS-204-299-R  
US-PATENT-4,752,372

N88-23846\* c 25 ..... NASA-CASE-NPO-15609-2  
US-PATENT-APPL-SN-511363  
US-PATENT-APPL-SN-761310  
US-PATENT-CLASS-159-3  
US-PATENT-CLASS-159-48.2  
US-PATENT-CLASS-159-900  
US-PATENT-CLASS-203-90  
US-PATENT-CLASS-203-91  
US-PATENT-CLASS-203-98  
US-PATENT-4,666,561

N88-23894\* c 27 ..... NASA-CASE-GSC-13008-1  
US-PATENT-APPL-SN-867987  
US-PATENT-CLASS-264-DIG.64  
US-PATENT-CLASS-264-50  
US-PATENT-CLASS-425-4-R  
US-PATENT-4,731,211

N88-23917\* # c 31 ..... NAS 1.71:NPO-17334-1-CU  
NASA-CASE-NPO-17334-1-CU  
US-PATENT-APPL-SN-149821

N88-23941\* c 33 ..... NASA-CASE-MSC-20181-1  
US-PATENT-APPL-SN-392093  
US-PATENT-CLASS-174-52-PE  
US-PATENT-CLASS-174-52-R  
US-PATENT-CLASS-174-52-S  
US-PATENT-CLASS-357-72  
US-PATENT-CLASS-357-74  
US-PATENT-CLASS-357-81  
US-PATENT-CLASS-525-425  
US-PATENT-4,750,031

N88-23942\* c 33 ..... NASA-CASE-LAR-13202-1  
US-PATENT-APPL-SN-879758  
US-PATENT-CLASS-315-200-R  
US-PATENT-CLASS-315-227-R  
US-PATENT-CLASS-315-241-R  
US-PATENT-CLASS-315-254  
US-PATENT-CLASS-315-255  
US-PATENT-CLASS-315-276  
US-PATENT-CLASS-315-277  
US-PATENT-4,723,096

N88-23946\* # c 34 ..... NAS 1.71:NPO-17291-1-CU  
NASA-CASE-NPO-17291-1-CU

N88-23958\* c 34 ..... NASA-CASE-MSC-20841-2  
US-PATENT-APPL-SN-032679  
US-PATENT-APPL-SN-755288  
US-PATENT-CLASS-126-423  
US-PATENT-CLASS-165-1  
US-PATENT-CLASS-165-104.14  
US-PATENT-CLASS-165-13  
US-PATENT-CLASS-165-41  
US-PATENT-4,664,177  
US-PATENT-4,750,543

N88-23959\* # c 35 ..... NAS 1.71:MFS-28287-1  
NASA-CASE-MFS-28287-1  
US-PATENT-APPL-SN-122740

N88-23963\* # c 35 ..... NAS 1.71:LAR-13519-1

## ACCESSION NUMBER INDEX

NASA-CASE-LAR-13519-1  
US-PATENT-APPL-SN-146938

N88-23966\* c 35 ..... NASA-CASE-MSC-20467-1  
US-PATENT-APPL-SN-874319  
US-PATENT-CLASS-73-587  
US-PATENT-CLASS-73-801  
US-PATENT-4,738,137

N88-23967\* c 35 ..... NASA-CASE-LAR-13458-1  
US-PATENT-APPL-SN-013802  
US-PATENT-CLASS-73-794  
US-PATENT-CLASS-73-810  
US-PATENT-4,718,281

N88-23973\* # c 37 ..... NAS 1.71:MSC-21171-1  
NASA-CASE-MSC-21171-1  
US-PATENT-APPL-SN-135120

N88-23974\* # c 37 ..... NAS 1.71:MFS-28273-1  
NASA-CASE-MFS-28273-1  
US-PATENT-APPL-SN-149830

N88-23978\* c 37 ..... NASA-CASE-LEW-14212-1  
US-PATENT-APPL-SN-875798  
US-PATENT-CLASS-415-136  
US-PATENT-CLASS-415-170-R  
US-PATENT-4,728,257

N88-23979\* c 37 ..... NASA-CASE-MFS-28185-1  
US-PATENT-APPL-SN-056930  
US-PATENT-CLASS-294-106  
US-PATENT-CLASS-294-113  
US-PATENT-CLASS-294-119.2  
US-PATENT-CLASS-294-16  
US-PATENT-4,723,800

N88-23980\* c 37 ..... NASA-CASE-MFS-29252-1  
US-PATENT-APPL-SN-044181  
US-PATENT-CLASS-219-137.42  
US-PATENT-CLASS-219-75  
US-PATENT-4,749,839

N88-23981\* c 37 ..... NASA-CASE-LAR-13435-1  
US-PATENT-APPL-SN-890683  
US-PATENT-CLASS-123-193-P  
US-PATENT-CLASS-92-176  
US-PATENT-CLASS-92-212  
US-PATENT-CLASS-92-214  
US-PATENT-CLASS-92-222  
US-PATENT-CLASS-92-224  
US-PATENT-4,736,676

N88-23982\* c 37 ..... NASA-CASE-LAR-12801-1  
US-PATENT-APPL-SN-309291  
US-PATENT-CLASS-188-373  
US-PATENT-CLASS-248-548  
US-PATENT-CLASS-248-608  
US-PATENT-CLASS-297-216  
US-PATENT-4,720,139

N88-24163\* c 54 ..... NASA-CASE-MFS-26009-1-SB  
US-PATENT-APPL-SN-805011  
US-PATENT-CLASS-108-3  
US-PATENT-CLASS-108-7  
US-PATENT-CLASS-312-196  
US-PATENT-CLASS-312-208  
US-PATENT-CLASS-312-300  
US-PATENT-4,725,106

N88-24169\* c 60 ..... NASA-CASE-NPO-16462-1-CU  
US-PATENT-APPL-SN-815106  
US-PATENT-CLASS-364-728  
US-PATENT-CLASS-364-757  
US-PATENT-CLASS-382-42  
US-PATENT-4,750,144

N88-24241\* c 71 ..... NASA-CASE-NPO-16675-1-CU  
US-PATENT-APPL-SN-627537  
US-PATENT-APPL-SN-789266  
US-PATENT-CLASS-181-0.5  
US-PATENT-CLASS-367-191  
US-PATENT-CLASS-373-505  
US-PATENT-4,573,356  
US-PATENT-4,736,815

N88-24253\* c 72 ..... NASA-CASE-MFS-28122-1  
US-PATENT-APPL-SN-021100  
US-PATENT-CLASS-250-251  
US-PATENT-CLASS-250-423-R  
US-PATENT-CLASS-250-427  
US-PATENT-CLASS-315-111.41  
US-PATENT-CLASS-315-111.71  
US-PATENT-CLASS-315-111.81  
US-PATENT-4,742,232

N88-24543\* c 76 ..... NASA-CASE-NPO-16681-1-CU  
US-PATENT-APPL-SN-764812  
US-PATENT-CLASS-204-192.15  
US-PATENT-CLASS-204-192.24  
US-PATENT-4,726,890

N88-24544\* c 76 ..... NASA-CASE-MFS-28137-1  
US-PATENT-APPL-SN-925189  
US-PATENT-CLASS-156-DIG.70  
US-PATENT-CLASS-156-DIG.72  
US-PATENT-CLASS-156-DIG.82  
US-PATENT-CLASS-156-607  
US-PATENT-CLASS-156-621  
US-PATENT-CLASS-156-624



## ACCESSION NUMBER INDEX

N89-12621

		US-PATENT-CLASS-422-246				US-PATENT-APPL-SN-924474				US-PATENT-APPL-SN-054980
		US-PATENT-4,738,831				US-PATENT-CLASS-260-386				US-PATENT-APPL-SN-846429
N88-24545*	c 76	NASA-CASE-MFS-28144-1				US-PATENT-CLASS-260-389				US-PATENT-CLASS-244-134-F
		US-PATENT-APPL-SN-924399				US-PATENT-CLASS-260-395				US-PATENT-CLASS-324-61-R
		US-PATENT-CLASS-156-DIG.70				US-PATENT-CLASS-549-241				US-PATENT-CLASS-340-580
		US-PATENT-CLASS-156-DIG.72				US-PATENT-4,758,380				US-PATENT-4,766,369
		US-PATENT-CLASS-156-DIG.82	N88-26541* #	c 32	NAS 1.71:NPO-17184-1-CU		N88-29150*	c 35	NASA-CASE-LAR-13826-1	
		US-PATENT-CLASS-156-DIG.84			NASA-CASE-NPO-17184-1-CU				US-PATENT-APPL-SN-102705	
		US-PATENT-CLASS-156-DIG.89			US-PATENT-APPL-SN-195225				US-PATENT-APPL-SN-684186	
		US-PATENT-CLASS-156-DIG.92	N88-26568*	c 32	NASA-CASE-MSC-20912-1				US-PATENT-APPL-SN-890982	
		US-PATENT-CLASS-156-620.76			US-PATENT-APPL-SN-831193				US-PATENT-CLASS-73-290-R	
		US-PATENT-4,740,264			US-PATENT-CLASS-342-125				US-PATENT-CLASS-73-304-R	
N88-24660* #	c 16	NAS 1.71:MSC-21330-1			US-PATENT-CLASS-342-127				US-PATENT-4,765,187	
		NASA-CASE-MSC-21330-1			US-PATENT-CLASS-342-43		N88-29151*	c 35	NASA-CASE-NPO-17068-1-CU	
		US-PATENT-APPL-SN-182000			US-PATENT-CLASS-342-51				US-PATENT-APPL-SN-076956	
N88-24684* #	c 20	NAS 1.71:MSC-21299-1			US-PATENT-4,757,315				US-PATENT-CLASS-60-527	
		NASA-CASE-MSC-21299-1	N88-26596*	c 33	NASA-CASE-NPO-17157-1-CU				US-PATENT-4,765,139	
		US-PATENT-APPL-SN-176587			US-PATENT-APPL-SN-116810		N88-29180*	c 37	NASA-CASE-MSC-21207-1	
N88-24692*	c 23	NASA-CASE-ARC-11428-3			US-PATENT-CLASS-331-162				US-PATENT-APPL-SN-032818	
		US-PATENT-APPL-SN-599126			US-PATENT-CLASS-331-3				US-PATENT-CLASS-403-171	
		US-PATENT-APPL-SN-760374			US-PATENT-CLASS-331-94.1				US-PATENT-CLASS-403-217	
		US-PATENT-APPL-SN-924467			US-PATENT-4,757,278				US-PATENT-CLASS-52-646	
		US-PATENT-CLASS-558-80	N88-28914*	c 05	NASA-CASE-ARC-11636-1				US-PATENT-CLASS-52-648	
		US-PATENT-CLASS-564-13			US-PATENT-APPL-SN-933963		N88-29181*	c 37	US-PATENT-4,763,459	
		US-PATENT-4,550,177			US-PATENT-CLASS-244-12.3				NASA-CASE-MSC-21132-1	
		US-PATENT-4,634,759			US-PATENT-CLASS-244-12.4				US-PATENT-APPL-SN-118992	
		US-PATENT-4,748,263			US-PATENT-CLASS-244-207				US-PATENT-CLASS-188-218-XL	
N88-24732*	c 25	NASA-CASE-NPO-16907-1-CU			US-PATENT-CLASS-244-45-A				US-PATENT-CLASS-188-251-A	
		US-PATENT-APPL-SN-930217			US-PATENT-CLASS-244-55				US-PATENT-4,763,762	
		US-PATENT-CLASS-204-157.22			US-PATENT-4,767,083		N88-29310*	c 60	NASA-CASE-NPO-16116-2	
		US-PATENT-CLASS-250-423-P	N88-28939*	c 09	NASA-CASE-LEW-14374-1				US-PATENT-APPL-SN-004282	
		US-PATENT-CLASS-250-427			US-PATENT-APPL-SN-060200				US-PATENT-APPL-SN-587749	
		US-PATENT-4,704,197			US-PATENT-CLASS-219-383				US-PATENT-CLASS-364-200	
N88-24817* #	c 31	NAS 1.71:MFS-28248-1			US-PATENT-CLASS-363-97		N88-29602* #	c 76	US-PATENT-4,766,533	
		NASA-CASE-MFS-28248-1			US-PATENT-CLASS-60-203.1				NAS 1.71:MFS-28282-1	
		US-PATENT-APPL-SN-176545			US-PATENT-4,766,724				NASA-CASE-MFS-28282-1	
N88-24862*	c 33	NASA-CASE-NPO-16402-2	N88-28946* #	c 17	NAS 1.71:NPO-17310-1-CU				US-PATENT-APPL-SN-217533	
		US-PATENT-APPL-SN-013803			NASA-CASE-NPO-17310-1-CU		N88-30108*	c 35	NASA-CASE-LAR-13797-1	
		US-PATENT-APPL-SN-727931			US-PATENT-APPL-SN-200874				US-PATENT-APPL-SN-074792	
		US-PATENT-CLASS-307-106	N88-28958*	c 18	NASA-CASE-MSC-21117-1				US-PATENT-APPL-SN-831372	
		US-PATENT-CLASS-315-172			US-PATENT-APPL-SN-929875				US-PATENT-CLASS-156-233	
		US-PATENT-CLASS-315-173			US-PATENT-CLASS-52-646				US-PATENT-CLASS-156-247	
		US-PATENT-CLASS-328-67			US-PATENT-CLASS-52-648				US-PATENT-CLASS-156-272.4	
		US-PATENT-4,698,518	N88-29002*	c 25	US-PATENT-4,765,114				US-PATENT-CLASS-156-274.8	
N88-24863* #	c 33	NAS 1.71:NPO-16882-1-CU			NASA-CASE-LAR-13528-1				US-PATENT-CLASS-156-275.5	
		NASA-CASE-NPO-16882-1-CU			US-PATENT-APPL-SN-933962				US-PATENT-CLASS-156-307.7	
		US-PATENT-APPL-SN-154711			US-PATENT-CLASS-236-15-E		N88-30131*	c 37	US-PATENT-4,767,484	
N88-24927*	c 35	NASA-CASE-MSC-20549-2			US-PATENT-CLASS-364-500				NASA-CASE-MSC-20900-1	
		US-PATENT-APPL-SN-045743			US-PATENT-CLASS-364-557				US-PATENT-APPL-SN-079317	
		US-PATENT-APPL-SN-790596			US-PATENT-CLASS-364-571				US-PATENT-CLASS-219-121.54	
		US-PATENT-CLASS-254-93-H			US-PATENT-CLASS-374-36				US-PATENT-CLASS-219-121.56	
		US-PATENT-CLASS-254-93-R			US-PATENT-CLASS-431-13				US-PATENT-CLASS-219-121.57	
		US-PATENT-CLASS-269-147			US-PATENT-CLASS-431-76				US-PATENT-CLASS-219-124.02	
		US-PATENT-CLASS-269-246			US-PATENT-4,761,744				US-PATENT-CLASS-219-130.4	
		US-PATENT-CLASS-72-750	N88-29040*	c 27	NASA-CASE-ARC-11649-1-SB				US-PATENT-4,766,286	
		US-PATENT-4,736,927			US-PATENT-APPL-SN-890577		N88-30160* #	c 39	NAS 1.71:LAR-13889-1	
N88-24941* #	c 35	NAS 1.71:MSC-21094-1			US-PATENT-CLASS-501-88				NASA-CASE-LAR-13889-1	
		NASA-CASE-MSC-21094-1			US-PATENT-CLASS-501-91				US-PATENT-APPL-SN-210277	
		US-PATENT-APPL-SN-156393			US-PATENT-CLASS-501-92		N89-11738*	c 05	NASA-CASE-LAR-12852-1	
N88-24943* #	c 35	NAS 1.71:NPO-17024-1-CU			US-PATENT-CLASS-501-93				US-PATENT-APPL-SN-028832	
		NASA-CASE-NPO-17024-1-CU			US-PATENT-CLASS-528-10				US-PATENT-CLASS-244-75-R	
		US-PATENT-APPL-SN-159613			US-PATENT-CLASS-528-30				US-PATENT-CLASS-244-78	
N88-24958*	c 36	NASA-CASE-MSC-20867-1			US-PATENT-CLASS-528-4				US-PATENT-4,773,620	
		US-PATENT-APPL-SN-045984			US-PATENT-4,767,728		N89-11814* #	c 23	NAS 1.71:LAR-13988-1	
		US-PATENT-CLASS-356-1	N88-29052*	c 31	NASA-CASE-MSC-18172-3				NASA-CASE-LAR-13988-1	
		US-PATENT-CLASS-356-376			US-PATENT-APPL-SN-119334				US-PATENT-APPL-SN-250661	
		US-PATENT-CLASS-356-4			US-PATENT-APPL-SN-755960		N89-11961*	c 32	NASA-CASE-MSC-20873-1-SB	
		US-PATENT-CLASS-358-107			US-PATENT-APPL-SN-898449				US-PATENT-APPL-SN-060196	
		US-PATENT-CLASS-364-561			US-PATENT-CLASS-210-500.25				US-PATENT-CLASS-342-374	
		US-PATENT-4,736,247			US-PATENT-CLASS-210-500.35				US-PATENT-CLASS-342-375	
N88-24969* #	c 37	NAS 1.71:MSC-21354-1			US-PATENT-CLASS-210-639				US-PATENT-CLASS-343-777	
		NASA-CASE-MSC-21354-1			US-PATENT-CLASS-210-653				US-PATENT-CLASS-343-778	
		US-PATENT-APPL-SN-154712			US-PATENT-CLASS-427-245				US-PATENT-CLASS-343-779	
N88-25011* #	c 39	NAS 1.71:LAR-13705-1			US-PATENT-4,762,619				US-PATENT-4,772,893	
		US-PATENT-APPL-SN-203177	N88-29076*	c 32	NASA-CASE-NPO-17196-1-CU		N89-12048*	c 35	NASA-CASE-LEW-14297-1	
N88-25301* #	c 74	NAS 1.71:NPO-17139-1-CU			US-PATENT-APPL-SN-084770				US-PATENT-APPL-SN-917125	
		NASA-CASE-NPO-17139-1-CU			US-PATENT-CLASS-328-155				US-PATENT-CLASS-126-443	
		US-PATENT-APPL-SN-154718			US-PATENT-CLASS-331-17				US-PATENT-CLASS-126-901	
N88-25302* #	c 74	NAS 1.71:LAR-13387-1			US-PATENT-CLASS-331-25				US-PATENT-CLASS-165-41	
		NASA-CASE-LAR-13387-1			US-PATENT-4,771,250				US-PATENT-CLASS-165-904	
		US-PATENT-APPL-SN-154716	N88-29095* #	c 33	NAS 1.71:NPO-17233-1-CU				US-PATENT-4,770,232	
N88-25304* #	c 74	NAS 1.71:NPO-17207-1-CU			NASA-CASE-NPO-17233-1-CU		N89-12551*	c 02	NASA-CASE-LAR-13554-1	
		NASA-CASE-NPO-17207-1-CU			US-PATENT-APPL-SN-231025				US-PATENT-APPL-SN-929865	
		US-PATENT-APPL-SN-190185	N88-29132*	c 34	NASA-CASE-MSC-20840-1				US-PATENT-CLASS-116-DIG.43	
N88-25305* #	c 74	NAS 1.71:NPO-17144-1-CU			US-PATENT-APPL-SN-943346				US-PATENT-CLASS-116-265	
		NASA-CASE-NPO-17144-1-CU			US-PATENT-CLASS-165-170				US-PATENT-CLASS-73-147	
		US-PATENT-APPL-SN-187716			US-PATENT-CLASS-165-81				US-PATENT-4,774,835	
N88-26398*	c 18	NASA-CASE-MSC-20985-1	N88-29133*	c 34	US-PATENT-4,762,173		N89-12621*	c 18	NASA-CASE-MSC-21096-1	
		US-PATENT-APPL-SN-904134			NASA-CASE-GSC-13019-1				US-PATENT-APPL-SN-929865	
		US-PATENT-CLASS-104-172.1			US-PATENT-APPL-SN-942158				US-PATENT-CLASS-182-103	
		US-PATENT-CLASS-104-35			US-PATENT-CLASS-122-366				US-PATENT-CLASS-212-225	
		US-PATENT-CLASS-104-49			US-PATENT-CLASS-138-38				US-PATENT-CLASS-212-257	
		US-PATENT-CLASS-244-159			US-PATENT-CLASS-165-104.26				US-PATENT-CLASS-414-689	
		US-PATENT-4,757,767			US-PATENT-CLASS-165-905				US-PATENT-CLASS-414-718	
N88-26404*	c 23	NASA-CASE-LEW-14345-1	N88-29149*	c 35	US-PATENT-4,765,396				US-PATENT-CLASS-414-735	
					NASA-CASE-LAR-13776-1				US-PATENT-4,772,175	

## N89-12667

N89-12667\* c 23 ..... NASA-CASE-LAR-13444-2-CU  
US-PATENT-APPL-SN-000692  
US-PATENT-CLASS-564-315  
US-PATENT-CLASS-564-323  
US-PATENT-CLASS-564-330  
US-PATENT-CLASS-564-342  
US-PATENT-CLASS-564-344  
US-PATENT-CLASS-564-396  
US-PATENT-CLASS-564-430  
US-PATENT-4,774,359

N89-12741\* c 27 ..... NASA-CASE-LAR-13506-1  
US-PATENT-APPL-SN-060182  
US-PATENT-CLASS-156-297  
US-PATENT-CLASS-156-299  
US-PATENT-CLASS-428-44  
US-PATENT-CLASS-428-47  
US-PATENT-CLASS-428-58  
US-PATENT-CLASS-428-71  
US-PATENT-CLASS-428-76  
US-PATENT-4,774,118

N89-12785\* c 31 ..... NASA-CASE-NPO-17085-1-CU  
US-PATENT-APPL-SN-087282  
US-PATENT-CLASS-165-61  
US-PATENT-CLASS-165-96  
US-PATENT-CLASS-62-467  
US-PATENT-CLASS-62-514-R  
US-PATENT-4,771,823

N89-12786\* c 31 ..... NASA-CASE-LAR-13438-1  
US-PATENT-APPL-SN-022298  
US-PATENT-CLASS-428-182  
US-PATENT-CLASS-52-814  
US-PATENT-CLASS-52-821  
US-PATENT-4,769,968

N89-12841\* c 35 ..... NASA-CASE-LAR-13569-1  
US-PATENT-APPL-SN-010943  
US-PATENT-CLASS-73-147  
US-PATENT-CLASS-73-180  
US-PATENT-4,770,032

N89-12842\* # c 35 ..... NAS 1.71:MSC-21372-1  
NASA-CASE-MSC-21372-1  
US-PATENT-APPL-SN-246595

N89-12866\* # c 37 ..... NAS 1.71:MSC-21095-1  
NASA-CASE-MSC-21095-1  
US-PATENT-APPL-SN-248010

N89-12867\* # c 37 ..... NAS 1.71:LAR-13719-1  
NASA-CASE-LAR-13719-1  
US-PATENT-APPL-SN-239260

N89-12868\* # c 37 ..... NAS 1.71:MFS-29291-1  
NASA-CASE-MFS-29291-1  
US-PATENT-APPL-SN-250196

N89-13236\* c 71 ..... NASA-CASE-NPO-16896-1-CU  
US-PATENT-APPL-SN-087283  
US-PATENT-CLASS-73-505  
US-PATENT-4,773,266

N89-13253\* # c 74 ..... NAS 1.71:MFS-28183-1  
NASA-CASE-MFS-28183-1  
US-PATENT-APPL-SN-244367

N89-13785\* c 37 ..... NASA-CASE-NPO-16766-1-CU  
US-PATENT-APPL-SN-921577  
US-PATENT-CLASS-194-902  
US-PATENT-CLASS-269-267  
US-PATENT-CLASS-294-88  
US-PATENT-4,770,455

N89-13786\* c 37 ..... NASA-CASE-KSC-11368-1  
US-PATENT-APPL-SN-052940  
US-PATENT-CLASS-285-107  
US-PATENT-CLASS-285-108  
US-PATENT-CLASS-285-109  
US-PATENT-CLASS-285-133.1  
US-PATENT-CLASS-285-351  
US-PATENT-CLASS-285-39  
US-PATENT-CLASS-285-97  
US-PATENT-4,772,050

N89-13889\* # c 54 ..... NAS 1.71:MSC-21364-1  
NASA-CASE-MSC-21364-1  
US-PATENT-APPL-SN-221472  
US-PATENT-CLASS-250-216  
US-PATENT-CLASS-350-354  
US-PATENT-4,772,785

N89-14078\* c 74 ..... NASA-CASE-NPO-16750-1-CU  
US-PATENT-APPL-SN-927972  
US-PATENT-CLASS-350-162.13  
US-PATENT-CLASS-350-331-R  
US-PATENT-CLASS-350-337  
US-PATENT-CLASS-350-342  
US-PATENT-CLASS-382-31  
US-PATENT-4,772,101

N89-14120\* # c 76 ..... NAS 1.71:NPO-17399-1-CU  
NASA-CASE-NPO-17399-1-CU  
US-PATENT-APPL-SN-248019

N89-14224\* c 02 ..... NASA-CASE-LAR-13215-1  
US-PATENT-APPL-SN-904132  
US-PATENT-CLASS-244-35-R  
US-PATENT-CLASS-416-223-R

N89-14303\* c 26 ..... US-PATENT-4,776,531  
NASA-CASE-LEW-14134-2  
US-PATENT-APPL-SN-108331  
US-PATENT-CLASS-420-54  
US-PATENT-CLASS-420-62  
US-PATENT-CLASS-420-79  
US-PATENT-CLASS-420-80  
US-PATENT-CLASS-420-81  
US-PATENT-4,780,276

N89-14337\* c 27 ..... NASA-CASE-LAR-13601-1-CU  
US-PATENT-APPL-SN-028831  
US-PATENT-CLASS-528-125  
US-PATENT-CLASS-528-128  
US-PATENT-4,788,271

N89-14351\* c 31 ..... NASA-CASE-NPO-17143-1-CU  
US-PATENT-APPL-SN-105847  
US-PATENT-CLASS-62-467  
US-PATENT-CLASS-62-514-JT  
US-PATENT-4,779,428

N89-14374\* c 32 ..... NASA-CASE-GSC-12892-1  
US-PATENT-APPL-SN-655606  
US-PATENT-CLASS-455-115  
US-PATENT-CLASS-455-117  
US-PATENT-CLASS-455-67  
US-PATENT-CLASS-455-98  
US-PATENT-4,777,656

N89-14384\* c 33 ..... NASA-CASE-ARC-11536-1  
US-PATENT-APPL-SN-725714  
US-PATENT-CLASS-342-195  
US-PATENT-CLASS-356-28.5  
US-PATENT-CLASS-364-900  
US-PATENT-4,779,222

N89-14385\* c 33 ..... NASA-CASE-LAR-13552-1-CU  
US-PATENT-APPL-SN-933941  
US-PATENT-CLASS-324-77-E  
US-PATENT-CLASS-324-77-R  
US-PATENT-CLASS-324-78-D  
US-PATENT-CLASS-324-78-F  
US-PATENT-CLASS-356-28.5  
US-PATENT-CLASS-364-484  
US-PATENT-CLASS-377-39  
US-PATENT-4,786,168

N89-14392\* c 34 ..... NASA-CASE-MFS-28217-1  
US-PATENT-APPL-SN-067844  
US-PATENT-CLASS-122-366  
US-PATENT-CLASS-165-104.14  
US-PATENT-CLASS-165-104.26  
US-PATENT-4,770,238

N89-14407\* c 35 ..... NASA-CASE-LAR-13300-1-CU  
US-PATENT-APPL-SN-829042  
US-PATENT-CLASS-310-338  
US-PATENT-CLASS-367-908  
US-PATENT-CLASS-73-290-V  
US-PATENT-4,770,038

N89-14422\* c 35 ..... NASA-CASE-NPO-17086-1-CU  
US-PATENT-APPL-SN-087359  
US-PATENT-CLASS-73-505  
US-PATENT-4,777,823

N89-14423\* c 35 ..... NASA-CASE-LAR-13853-1  
US-PATENT-APPL-SN-143436  
US-PATENT-CLASS-73-147  
US-PATENT-CLASS-73-861.65  
US-PATENT-4,783,994

N89-15379\* c 35 ..... NASA-CASE-MSC-20906-2  
US-PATENT-APPL-SN-021569  
US-PATENT-CLASS-244-164  
US-PATENT-CLASS-244-165  
US-PATENT-CLASS-74-572  
US-PATENT-4,776,541

N89-16042\* c 27 ..... NASA-CASE-ARC-11533-2  
US-PATENT-APPL-SN-852461  
US-PATENT-CLASS-528-220  
US-PATENT-CLASS-528-228  
US-PATENT-CLASS-528-321  
US-PATENT-CLASS-528-322  
US-PATENT-CLASS-528-353  
US-PATENT-CLASS-528-72  
US-PATENT-CLASS-528-73  
US-PATENT-4,775,740

N89-16256\* c 52 ..... NASA-CASE-ARC-11426-2  
US-PATENT-APPL-SN-827185  
US-PATENT-CLASS-351-203  
US-PATENT-CLASS-351-237  
US-PATENT-4,778,268

N89-23466\* # c 07 ..... NAS 1.71:LAR-14049-1  
NASA-CASE-LAR-14049-1  
US-PATENT-APPL-SN-270189

N89-23623\* # c 24 ..... NAS 1.71:LEW-14734-1  
NASA-CASE-LEW-14734-1  
US-PATENT-APPL-SN-279624

N89-25242\* c 09 ..... NASA-CASE-MFS-25962-1  
US-PATENT-APPL-SN-633180  
US-PATENT-CLASS-239-14.1  
US-PATENT-CLASS-239-2.1  
US-PATENT-4,781,326

N89-25266\* c 18 ..... NASA-CASE-ARC-11505-2

## ACCESSION NUMBER INDEX

US-PATENT-APPL-SN-159072  
US-PATENT-CLASS-244-159  
US-PATENT-CLASS-244-161  
US-PATENT-CLASS-285-302  
US-PATENT-4,807,834

N89-25279\* c 20 ..... NASA-CASE-MSC-20476-2  
US-PATENT-APPL-SN-046341  
US-PATENT-CLASS-239-265.17  
US-PATENT-CLASS-60-202  
US-PATENT-CLASS-60-264  
US-PATENT-4,815,279

N89-25363\* c 32 ..... NASA-CASE-LAR-13798-1  
US-PATENT-APPL-SN-118995  
US-PATENT-CLASS-343-DIG.2  
US-PATENT-CLASS-343-880  
US-PATENT-CLASS-343-915  
US-PATENT-4,811,033

N89-25689\* c 74 ..... NASA-CASE-MFS-29348-1  
US-PATENT-APPL-SN-156518  
US-PATENT-CLASS-350-96.21  
US-PATENT-CLASS-350-96.25  
US-PATENT-4,798,433

N89-26202\* c 35 ..... NASA-CASE-MFS-28242-1  
US-PATENT-APPL-SN-149822  
US-PATENT-CLASS-356-347  
US-PATENT-CLASS-356-361  
US-PATENT-4,810,094

N89-26400\* c 60 ..... NASA-CASE-NPO-16481-1-CU  
US-PATENT-APPL-SN-815103  
US-PATENT-CLASS-364-131  
US-PATENT-CLASS-382-41  
US-PATENT-CLASS-382-42  
US-PATENT-CLASS-382-49  
US-PATENT-4,790,026

N89-28553\* c 18 ..... NASA-CASE-MSC-21211-1  
US-PATENT-APPL-SN-105841  
US-PATENT-CLASS-244-159  
US-PATENT-CLASS-244-161  
US-PATENT-CLASS-285-226  
US-PATENT-CLASS-403-51  
US-PATENT-4,809,936

N89-28554\* c 18 ..... NASA-CASE-MSC-21117-2  
US-PATENT-APPL-SN-184233  
US-PATENT-APPL-SN-929875  
US-PATENT-CLASS-248-DIG-1  
US-PATENT-CLASS-403-30  
US-PATENT-CLASS-403-4  
US-PATENT-CLASS-52-573  
US-PATENT-CLASS-52-648  
US-PATENT-4,805,368

N89-28556\* # c 18 ..... NAS 1.71:MFS-28327-1  
NASA-CASE-MFS-28327-1  
US-PATENT-APPL-SN-361200

N89-28603\* # c 25 ..... NAS 1.71:MFS-26049-1-NP  
NASA-CASE-MFS-26049-1-NP  
US-PATENT-APPL-SN-376487

N89-28621\* c 26 ..... NASA-CASE-LAR-13924-1-CU  
US-PATENT-APPL-SN-172102  
US-PATENT-CLASS-148-159  
US-PATENT-CLASS-148-416  
US-PATENT-CLASS-148-417  
US-PATENT-CLASS-420-529  
US-PATENT-CLASS-420-533  
US-PATENT-4,820,488

N89-28672\* c 32 ..... NASA-CASE-LAR-13747-1-CU  
US-PATENT-APPL-SN-197191  
US-PATENT-CLASS-342-1  
US-PATENT-CLASS-342-165  
US-PATENT-CLASS-342-5  
US-PATENT-4,809,003

N89-28676\* c 32 ..... NASA-CASE-NPO-17249-1-CU  
US-PATENT-APPL-SN-125666  
US-PATENT-CLASS-358-88  
US-PATENT-CLASS-358-91  
US-PATENT-CLASS-358-92  
US-PATENT-4,819,064

N89-28713\* c 33 ..... NASA-CASE-NPO-17108-1-CU  
US-PATENT-APPL-SN-032819  
US-PATENT-CLASS-364-724.01  
US-PATENT-CLASS-364-724.05  
US-PATENT-CLASS-364-735  
US-PATENT-CLASS-364-754  
US-PATENT-4,823,299

N89-28795\* # c 35 ..... NAS 1.71:NPO-17596-1-CU  
NASA-CASE-NPO-17596-1-CU  
US-PATENT-APPL-SN-361531

N89-28817\* # c 36 ..... NAS 1.71:LAR-14203-1  
NASA-CASE-LAR-14203-1  
US-PATENT-APPL-SN-359459

N89-28831\* c 37 ..... NASA-CASE-MFS-28253-1  
US-PATENT-APPL-SN-165943  
US-PATENT-CLASS-33-536  
US-PATENT-4,809,441

N89-28842\* # c 37 ..... NAS 1.71:MFS-28345-2  
NASA-CASE-MFS-28345-2  
US-PATENT-APPL-SN-358028

## ACCESSION NUMBER INDEX

N90-20254

N89-28846* #	c 37	NAS 1.71:NPO-17785-1-CU NASA-CASE-NPO-17785-1-CU US-PATENT-APPL-SN-353411	N90-16860*	c 18	NASA-CASE-ARC-11635-1 US-PATENT-APPL-SN-110388 US-PATENT-CLASS-2-2.1A US-PATENT-CLASS-244-159 US-PATENT-4,842,224	US-PATENT-APPL-SN-921574 US-PATENT-CLASS-264-114 US-PATENT-CLASS-264-311 US-PATENT-CLASS-425-425 US-PATENT-CLASS-425-435 US-PATENT-CLASS-425-73 US-PATENT-CLASS-425-75 US-PATENT-4,839,121		
N89-29169*	c 72	NASA-CASE-NPO-16789-1-CU US-PATENT-APPL-SN-154713 US-PATENT-CLASS-250-252 US-PATENT-CLASS-250-397 US-PATENT-4,818,868	N90-16949*	c 27	NASA-CASE-GSC-13008-2 US-PATENT-APPL-SN-163928 US-PATENT-CLASS-521-145 US-PATENT-CLASS-521-178 US-PATENT-CLASS-521-189 US-PATENT-CLASS-521-82 US-PATENT-CLASS-521-97 US-PATENT-CLASS-521-98 US-PATENT-4,843,123	N90-19427*	c 31	NASA-CASE-LAR-13638-1 US-PATENT-APPL-SN-223124 US-PATENT-CLASS-156-344 US-PATENT-CLASS-244-133 US-PATENT-CLASS-427-272 US-PATENT-4,851,071
N89-29538*	c 27	NASA-CASE-LEW-14392-2 US-PATENT-APPL-SN-038560 US-PATENT-APPL-SN-886149 US-PATENT-CLASS-428-288 US-PATENT-CLASS-428-367 US-PATENT-CLASS-428-375 US-PATENT-CLASS-428-390 US-PATENT-CLASS-428-408 US-PATENT-CLASS-428-698 US-PATENT-4,781,993	N90-16950*	c 27	NASA-CASE-LAR-13821-1 US-PATENT-APPL-SN-071686 US-PATENT-CLASS-524-233 US-PATENT-CLASS-524-366 US-PATENT-CLASS-524-378 US-PATENT-CLASS-524-600 US-PATENT-CLASS-524-607 US-PATENT-CLASS-528-125 US-PATENT-CLASS-528-353 US-PATENT-4,837,300	N90-19492*	c 33	NASA-CASE-MFS-29149-1 US-PATENT-APPL-SN-073541 US-PATENT-CLASS-323-353 US-PATENT-CLASS-324-61 US-PATENT-CLASS-364-481 US-PATENT-CLASS-364-482 US-PATENT-4,849,903
N89-29539*	c 27	NASA-CASE-MS-21169-1 US-PATENT-APPL-SN-044183 US-PATENT-CLASS-264-DIG-59 US-PATENT-CLASS-264-236 US-PATENT-CLASS-264-257 US-PATENT-CLASS-264-347 US-PATENT-CLASS-264-40.1 US-PATENT-CLASS-264-40.5 US-PATENT-CLASS-264-40.6 US-PATENT-4,810,438	N90-17005*	c 32	NASA-CASE-NPO-17325-1-CU US-PATENT-APPL-SN-184235 US-PATENT-CLASS-324-78D US-PATENT-CLASS-324-78Z US-PATENT-4,843,328	N90-19534*	c 34	NASA-CASE-LAR-13952-1-SB US-PATENT-APPL-SN-203178 US-PATENT-CLASS-73-432.1 US-PATENT-4,848,153
N89-29577* #	c 31	NAS 1.71:NPO-17630-1-CU NASA-CASE-NPO-17630-1-CU US-PATENT-APPL-SN-304149	N90-17010* #	c 33	NAS 1.71:NPO-17621-1-CU NASA-CASE-NPO-17621-1-CU US-PATENT-APPL-SN-414820	N90-19602*	c 37	NASA-CASE-MFS-29260-1 US-PATENT-APPL-SN-156059 US-PATENT-CLASS-219-72 US-PATENT-CLASS-219-74 US-PATENT-4,839,489
N89-29578*	c 31	NASA-CASE-GSC-13112-1 US-PATENT-APPL-SN-205771 US-PATENT-CLASS-206-0.7 US-PATENT-CLASS-220-5A US-PATENT-CLASS-220-901 US-PATENT-CLASS-62-45 US-PATENT-CLASS-62-48 US-PATENT-4,821,907	N90-17104* #	c 35	NAS 1.71:NPO-17786-1-CU NASA-CASE-NPO-17786-1-CU US-PATENT-APPL-SN-414812	N90-19776*	c 62	NASA-CASE-NPO-16949-1-CU US-PATENT-APPL-SN-927987 US-PATENT-CLASS-370-16 US-PATENT-CLASS-371-8 US-PATENT-4,847,837
N89-29679* #	c 33	NAS 1.71:NPO-17393-1-CU NASA-CASE-NPO-17393-1-CU US-PATENT-APPL-SN-279676	N90-17117*	c 35	NASA-CASE-LAR-13710-1 US-PATENT-APPL-SN-210487 US-PATENT-CLASS-73-147 US-PATENT-CLASS-73,862.61 US-PATENT-4,836,035	N90-19884*	c 76	NASA-CASE-NPO-17259-1-CU US-PATENT-APPL-SN-184234 US-PATENT-CLASS-148-13 US-PATENT-CLASS-148-13.1 US-PATENT-CLASS-428-641 US-PATENT-CLASS-437-903 US-PATENT-4,849,033
N89-29681*	c 33	NASA-CASE-NPO-16888-1-CU US-PATENT-APPL-SN-133412 US-PATENT-CLASS-324-117 US-PATENT-CLASS-324-127 US-PATENT-CLASS-330-8 US-PATENT-4,823,074	N90-17118*	c 35	NASA-CASE-NPO-16617-2-CU US-PATENT-APPL-SN-125676 US-PATENT-CLASS-357-13 US-PATENT-CLASS-357-30 US-PATENT-CLASS-357-4 US-PATENT-CLASS-357-61 US-PATENT-4,843,439	N90-20078*	c 05	NASA-CASE-LAR-13777-1 US-PATENT-APPL-SN-210480 US-PATENT-CLASS-244-130 US-PATENT-CLASS-244-54 US-PATENT-CLASS-244-55 US-PATENT-4,867,394
N89-29750* #	c 37	NAS 1.71:NPO-17275-1-CU NASA-CASE-NPO-17275-1-CU US-PATENT-APPL-SN-292047	N90-17132*	c 36	NASA-CASE-NPO-17824-1-CU US-PATENT-APPL-SN-159613 US-PATENT-CLASS-356-43 US-PATENT-CLASS-374-124 US-PATENT-CLASS-374-126 US-PATENT-CLASS-374-130 US-PATENT-4,840,496	N90-20079*	c 05	NASA-CASE-LAR-14031-1 US-PATENT-APPL-SN-252081 US-PATENT-CLASS-244-130 US-PATENT-CLASS-244-137.4 US-PATENT-4,863,118
N89-29953*	c 54	NASA-CASE-KSC-11322-1 US-PATENT-APPL-SN-894541 US-PATENT-CLASS-2-201 US-PATENT-CLASS-24-68B US-PATENT-CLASS-381-183 US-PATENT-CLASS-381-187 US-PATENT-4,783,822	N90-17153*	c 37	NASA-CASE-NPO-17354-1-CU US-PATENT-APPL-SN-184236 US-PATENT-CLASS-280-677 US-PATENT-CLASS-280-682 US-PATENT-4,840,394	N90-20096*	c 09	NASA-CASE-LAR-13734-1-CU US-PATENT-APPL-SN-082766 US-PATENT-CLASS-364-427 US-PATENT-CLASS-73-178-T US-PATENT-4,843,554
N90-10261* #	c 27	NAS 1.71:NPO-17524-1-CU NASA-CASE-NPO-17524-1-CU US-PATENT-APPL-SN-366957	N90-17154*	c 37	NASA-CASE-MFS-28192-1 US-PATENT-APPL-SN-093417 US-PATENT-CLASS-24-635 US-PATENT-CLASS-292-27 US-PATENT-CLASS-403-322 US-PATENT-CLASS-403-325 US-PATENT-CLASS-403-328 US-PATENT-4,836,707	N90-20126*	c 18	NASA-CASE-MS-21386-1 US-PATENT-APPL-SN-292123 US-PATENT-CLASS-166-343 US-PATENT-CLASS-244-159 US-PATENT-CLASS-244-161 US-PATENT-CLASS-405-188 US-PATENT-4,858,857
N90-10717* #	c 75	NAS 1.71:MFS-28368-1 NASA-CASE-MFS-28368-1 US-PATENT-APPL-SN-386174	N90-17454* #	c 76	NAS 1.71:LEW-14676-2 NASA-CASE-LEW-14676-2 US-PATENT-APPL-SN-458467	N90-20133*	c 23	NASA-CASE-ARC-11425-4 US-PATENT-APPL-SN-054985 US-PATENT-APPL-SN-493864 US-PATENT-APPL-SN-522629 US-PATENT-APPL-SN-641152 US-PATENT-CLASS-558-190 US-PATENT-4,864,050
N90-11798* #	c 18	NAS 1.71:MSC-21327-1 NASA-CASE-MS-21327-1 US-PATENT-APPL-SN-292121	N90-17456* #	c 76	NAS 1.71:NPO-17812-1-CU NASA-CASE-NPO-17812-1-CU US-PATENT-APPL-SN-387928	N90-20154*	c 25	NASA-CASE-LAR-13542-2-SB US-PATENT-APPL-SN-145719 US-PATENT-CLASS-204-157.51 US-PATENT-CLASS-372-59 US-PATENT-CLASS-502-339 US-PATENT-CLASS-502-352 US-PATENT-CLASS-502-38 US-PATENT-CLASS-502-53 US-PATENT-4,839,330
N90-11824*	c 25	NASA-CASE-LEW-13609-1 US-PATENT-APPL-SN-452465 US-PATENT-CLASS-165-156 US-PATENT-CLASS-165-81 US-PATENT-CLASS-165-83 US-PATENT-CLASS-431-352 US-PATENT-CLASS-60-730 US-PATENT-CLASS-60-732 US-PATENT-4,819,438	N90-19278*	c 18	NASA-CASE-MS-21356-1 US-PATENT-APPL-SN-165956 US-PATENT-CLASS-114-112 US-PATENT-CLASS-114-201R US-PATENT-CLASS-244-129.5 US-PATENT-CLASS-244-158R US-PATENT-CLASS-49-253 US-PATENT-4,842,223	N90-20180*	c 25	NASA-CASE-LAR-13741-1-SB US-PATENT-APPL-SN-090874 US-PATENT-CLASS-502-325 US-PATENT-CLASS-502-339 US-PATENT-CLASS-502-344 US-PATENT-4,855,274
N90-12289*	c 71	NASA-CASE-NPO-16995-1-CU US-PATENT-APPL-SN-924297 US-PATENT-CLASS-73-505 US-PATENT-CLASS-73-571 US-PATENT-4,800,756	N90-19300*	c 23	NASA-CASE-LEW-14346-1 US-PATENT-APPL-SN-924470 US-PATENT-CLASS-528-188 US-PATENT-CLASS-528-229 US-PATENT-CLASS-528-352 US-PATENT-CLASS-528-353 US-PATENT-4,845,167	N90-20236*	c 29	NASA-CASE-KSC-11387-1 US-PATENT-APPL-SN-232734 US-PATENT-CLASS-141-45 US-PATENT-CLASS-55-160 US-PATENT-CLASS-55-182 US-PATENT-CLASS-55-205 US-PATENT-4,848,987
N90-15148* #	c 24	NAS 1.71:LAR-14194-1 NASA-CASE-LAR-14194-1 US-PATENT-APPL-SN-344877	N90-19298*	c 20	NASA-CASE-LAR-13773-1 US-PATENT-APPL-SN-165946 US-PATENT-CLASS-60-204 US-PATENT-CLASS-60-259 US-PATENT-CLASS-60-260 US-PATENT-4,831,818	N90-20254*	c 31	NASA-CASE-MS-21253-1 US-PATENT-APPL-SN-251439
N90-15161* #	c 25	NAS 1.71:LAR-13996-1-SB NASA-CASE-LAR-13996-1-SB US-PATENT-APPL-SN-426345						
N90-15259* #	c 27	NAS 1.71:LAR-14162-1 NASA-CASE-LAR-14162-1 US-PATENT-APPL-SN-410572						
N90-16104* #	c 32	NAS 1.71:NPO-17548-1-CU NASA-CASE-NPO-17548-1-CU US-PATENT-APPL-SN-404293						
N90-16781* #	c 16	NAS 1.71:LAR-14156-1 NASA-CASE-LAR-14156-1 US-PATENT-APPL-SN-433804						



				NASA-CASE-MFS-28281-1	US-PATENT-CLASS-264-11	US-PATENT-CLASS-356-73.1
				US-PATENT-APPL-SN-205898	US-PATENT-CLASS-264-28	US-PATENT-CLASS-4,890,915
				US-PATENT-CLASS-148-149	US-PATENT-CLASS-264-43	INT-PATENT-CLASS-B328-15/08
				US-PATENT-CLASS-148-4	US-PATENT-CLASS-264-6	INT-PATENT-CLASS-B328-7/02
				US-PATENT-CLASS-148-902	US-PATENT-4,919,852	NASA-CASE-LAR-13678-1
				US-PATENT-CLASS-148-903	INT-PATENT-CLASS-B23K-9/16	US-PATENT-APPL-SN-176547
				US-PATENT-4,902,354	NASA-CASE-MFS-29489-1	US-PATENT-CLASS-340-692
N90-23475*	c 23	....	INT-PATENT-CLASS-C07S-9/40	US-PATENT-APPL-SN-279625	US-PATENT-CLASS-219-136	US-PATENT-CLASS-428-216
			NASA-CASE-ARC-11425-3	US-PATENT-CLASS-219-136	US-PATENT-CLASS-219-75	US-PATENT-CLASS-428-450
			US-PATENT-APPL-SN-054982	US-PATENT-4,879,446	US-PATENT-CLASS-428-457	US-PATENT-CLASS-428-901
			US-PATENT-APPL-SN-493864	NASA-CASE-NPO-17301-1-CU	US-PATENT-4,917,940	US-PATENT-CLASS-428-901
			US-PATENT-APPL-SN-522629	US-PATENT-APPL-SN-337767	NASA-CASE-MFS-28182-1	US-PATENT-APPL-SN-161681
			US-PATENT-APPL-SN-641152	US-PATENT-CLASS-122-366	US-PATENT-CLASS-156-DIG. 113	US-PATENT-CLASS-156-DIG. 62
			US-PATENT-CLASS-558-193	US-PATENT-CLASS-165-104.26	US-PATENT-CLASS-156-600	US-PATENT-CLASS-156-601
			US-PATENT-4,886,896	US-PATENT-CLASS-165-41	US-PATENT-CLASS-156-607	US-PATENT-CLASS-422-245
N90-23480*	c 24	.....	NASA-CASE-MFS-29241-1	US-PATENT-CLASS-222-187	US-PATENT-CLASS-422-50	US-PATENT-4,919,899
			US-PATENT-APPL-SN-252078	US-PATENT-CLASS-239-145	NASA-CASE-LAR-13562-1	US-PATENT-APPL-SN-921572
			US-PATENT-CLASS-244-158A	US-PATENT-CLASS-417-53	US-PATENT-CLASS-138-141	US-PATENT-CLASS-138-149
			US-PATENT-CLASS-428-607	US-PATENT-CLASS-417-572	US-PATENT-CLASS-138-153	US-PATENT-CLASS-428-35.9
			US-PATENT-CLASS-428-623	US-PATENT-4,877,082	US-PATENT-CLASS-428-367	US-PATENT-CLASS-428-376
			US-PATENT-CLASS-428-627	INT-PATENT-CLASS-H03B-5/12	US-PATENT-CLASS-428-379	US-PATENT-CLASS-428-379
			US-PATENT-CLASS-428-632	NASA-CASE-GSC-13173-1	US-PATENT-4,923,751	NASA-CASE-LAR-13225-1
			US-PATENT-CLASS-428-666	US-PATENT-APPL-SN-292037	US-PATENT-APPL-SN-248018	US-PATENT-CLASS-156-153
			US-PATENT-CLASS-428-680	US-PATENT-CLASS-331-116FE	US-PATENT-CLASS-156-249	US-PATENT-CLASS-156-289
			US-PATENT-4,877,689	US-PATENT-CLASS-331-117FE	US-PATENT-CLASS-156-344	US-PATENT-CLASS-427-272
N90-23493*	c 24	.....	NASA-CASE-LEW-14719-1	US-PATENT-4,873,498	US-PATENT-CLASS-427-282	US-PATENT-CLASS-427-290
			US-PATENT-APPL-SN-326757	INT-PATENT-CLASS-G06F-1/02	US-PATENT-4,923,545	US-PATENT-4,923,545
			US-PATENT-CLASS-419-24	NASA-CASE-NPO-17241-1-CU	INT-PATENT-CLASS-G01P-3/36	NASA-CASE-ARC-11876-1
			US-PATENT-CLASS-419-36	US-PATENT-APPL-SN-113954	US-PATENT-APPL-SN-257593	US-PATENT-CLASS-356-28
			US-PATENT-CLASS-419-37	US-PATENT-CLASS-364-717	US-PATENT-CLASS-356-28.5	US-PATENT-4,925,297
			US-PATENT-CLASS-419-8	US-PATENT-CLASS-364-746.1	NASA-CASE-MSC-21366-1	US-PATENT-APPL-SN-213880
			US-PATENT-CLASS-428-551	US-PATENT-4,890,252	US-PATENT-CLASS-428-252	US-PATENT-CLASS-428-290
			US-PATENT-CLASS-428-552	INT-PATENT-CLASS-B29B-9/10	US-PATENT-CLASS-428-328	US-PATENT-CLASS-428-422
			US-PATENT-CLASS-75-228	NASA-CASE-NPO-17203-1-CU	US-PATENT-CLASS-428-447	US-PATENT-CLASS-428-458
			US-PATENT-4,904,538	US-PATENT-APPL-SN-250195	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
N90-23497*	c 25	.....	NASA-CASE-LEW-14345-2	US-PATENT-CLASS-264-4	INT-PATENT-CLASS-H02L-9/04	NASA-CASE-NPO-17525-1-CU
			US-PATENT-APPL-SN-159071	US-PATENT-CLASS-425-5	NASA-CASE-NPO-17970-1-CU	US-PATENT-APPL-SN-279630
			US-PATENT-APPL-SN-924474	US-PATENT-CLASS-425-6	US-PATENT-CLASS-380-25	US-PATENT-CLASS-380-45
			US-PATENT-CLASS-260-386	US-PATENT-CLASS-425-804	US-PATENT-CLASS-380-49	US-PATENT-CLASS-428-481
			US-PATENT-CLASS-260-395	US-PATENT-4,902,450	US-PATENT-CLASS-428-447	US-PATENT-CLASS-428-458
			US-PATENT-CLASS-549-241	INT-PATENT-CLASS-A61B-5/00	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-CLASS-562-413	NASA-CASE-LAR-13775-1	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-CLASS-562-415	US-PATENT-APPL-SN-248020	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-CLASS-562-417	US-PATENT-CLASS-128-675	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-4,885,116	US-PATENT-CLASS-128-748	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
N90-23517*	c 25	.....	NASA-CASE-LAR-14155-1-SB	US-PATENT-CLASS-128-778	US-PATENT-4,873,990	US-PATENT-CLASS-428-474.4
			US-PATENT-APPL-SN-298150	US-PATENT-4,873,990	INT-PATENT-CLASS-G01M-9/00	US-PATENT-APPL-SN-213880
			US-PATENT-CLASS-502-217	NASA-CASE-LAR-13628-1	US-PATENT-APPL-SN-251438	US-PATENT-CLASS-428-290
			US-PATENT-CLASS-502-218	US-PATENT-CLASS-13628-1	US-PATENT-CLASS-340-825.69	US-PATENT-CLASS-428-328
			US-PATENT-CLASS-502-226	US-PATENT-APPL-SN-251438	US-PATENT-CLASS-73-147	US-PATENT-CLASS-428-422
			US-PATENT-CLASS-502-239	US-PATENT-CLASS-340-825.69	US-PATENT-CLASS-428-422	US-PATENT-CLASS-428-447
			US-PATENT-CLASS-502-241	US-PATENT-CLASS-73-147	US-PATENT-CLASS-428-447	US-PATENT-CLASS-428-458
			US-PATENT-CLASS-502-245	US-PATENT-4,896,533	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-CLASS-502-324	INT-PATENT-CLASS-G01N-3/32	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-4,912,082	NASA-CASE-LEW-14124-1	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
N90-23541*	c 27	..	INT-PATENT-CLASS-F28D-15/02	US-PATENT-APPL-SN-396263	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			NASA-CASE-GSC-13199-1	US-PATENT-CLASS-73-799	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-APPL-SN-304147	US-PATENT-CLASS-73-845	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-CLASS-122-366	US-PATENT-4,916,954	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-CLASS-165-104.26	NASA-CASE-LAR-14056-1	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-CLASS-165-41	US-PATENT-APPL-SN-010949	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-CLASS-165-905	US-PATENT-APPL-SN-251073	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-4,883,116	US-PATENT-CLASS-364-578	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
N90-23544*	c 27	..	INT-PATENT-CLASS-G01N-27/72	US-PATENT-CLASS-364-900	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			INT-PATENT-CLASS-G01R-27/00	US-PATENT-CLASS-364-924.4	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			INT-PATENT-CLASS-G01R-33/12	US-PATENT-CLASS-364-925.1	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			NASA-CASE-LAR-13465-1	US-PATENT-CLASS-364-933.8	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-APPL-SN-133413	US-PATENT-CLASS-364-934	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-CLASS-264-40.1	US-PATENT-4,918,652	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-CLASS-324-234	INT-PATENT-CLASS-F03D-9/00	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-CLASS-324-236	NASA-CASE-LAR-13434-1	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-CLASS-526-60	US-PATENT-APPL-SN-246594	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-4,891,591	US-PATENT-CLASS-290-44	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
N90-23545*	c 27	.....	NASA-CASE-LAR-14188-1	US-PATENT-CLASS-290-55	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-APPL-SN-087375	US-PATENT-CLASS-416-9	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-APPL-SN-328392	US-PATENT-4,894,554	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-CLASS-528-125	INT-PATENT-CLASS-B64D-33/04	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-CLASS-528-126	INT-PATENT-CLASS-F16J-15/46	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-CLASS-528-128	NASA-CASE-LEW-14695-1	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-CLASS-528-171	US-PATENT-APPL-SN-292146	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-CLASS-528-212	US-PATENT-CLASS-239-265.11	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-CLASS-548-520	US-PATENT-CLASS-277-158	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-4,889,912	US-PATENT-CLASS-277-34	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
N90-23546*	c 27	.....	NASA-CASE-LAR-13902-1	US-PATENT-4,917,302	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-APPL-SN-239259	INT-PATENT-CLASS-G01B-15/06	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-CLASS-528-125	NASA-CASE-LAR-13724-1	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-CLASS-528-126	US-PATENT-APPL-SN-125678	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-CLASS-528-128	US-PATENT-CLASS-378-51	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-CLASS-528-172	US-PATENT-CLASS-378-58	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-CLASS-528-185	US-PATENT-4,899,356	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-CLASS-528-188	INT-PATENT-CLASS-G01N-21/64	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-CLASS-528-353	INT-PATENT-CLASS-G01N-21/84	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-4,895,972	NASA-CASE-LAR-13963-1	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
N90-23566*	c 27	..	INT-PATENT-CLASS-B29B-33/02	US-PATENT-APPL-SN-232782-1	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			NASA-CASE-MSC-20782-1	US-PATENT-CLASS-356-73	US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741
			US-PATENT-APPL-SN-213392		US-PATENT-CLASS-428-474.4	US-PATENT-4,923,741

N90-27340* #	c 61	NASA-CASE-LAR-14142-1 US-PATENT-APPL-SN-473030 NAS 1.71:MSC-21379-1-SB NASA-CASE-MSC-21379-1-SB US-PATENT-APPL-SN-545170	N91-14345* #	c 05	INT-PATENT-CLASS-B640-33/00 NASA-CASE-LAR-14116-1 US-PATENT-APPL-SN-004304 US-PATENT-APPL-SN-243685 US-PATENT-APPL-SN-264993 US-PATENT-CLASS-244-199 US-PATENT-CLASS-244-58 US-PATENT-CLASS-290-44 US-PATENT-CLASS-290-55 US-PATENT-4,917,332	N91-14536* #	c 33	INT-PATENT-CLASS-H07M-10/39 INT-PATENT-CLASS-H07M-4/60 NASA-CASE-NPO-17604-1-CU US-PATENT-APPL-SN-404288 US-PATENT-CLASS-252-62.2 US-PATENT-CLASS-429-104 US-PATENT-CLASS-429-213 US-PATENT-4,966,823
N90-27518* #	c 76	NAS 1.71:NPO-17835-1-CU NASA-CASE-NPO-17835-1-CU US-PATENT-APPL-SN-524959	N91-14356* #	c 09	NASA-CASE-LAR-13629-1 US-PATENT-APPL-SN-251411 US-PATENT-CLASS-33-263 US-PATENT-CLASS-342-54 US-PATENT-CLASS-356-1 US-PATENT-CLASS-356-141 US-PATENT-CLASS-356-152 US-PATENT-CLASS-364-433 US-PATENT-CLASS-73-147 US-PATENT-4,932,777	N91-14537* #	c 33	INT-PATENT-CLASS-H01L-43/00 NASA-CASE-MSC-21428-1 US-PATENT-APPL-SN-343652 US-PATENT-CLASS-320-51 US-PATENT-CLASS-338-221 US-PATENT-CLASS-338-32 US-PATENT-4,973,936
N90-27594* #	c 89	NAS 1.71:MFS-28013-3 NASA-CASE-MFS-28013-3 US-PATENT-APPL-SN-545089	N91-14357* #	c 09	INT-PATENT-CLASS-G01M-9/00 NASA-CASE-ARC-11877-1-SB US-PATENT-APPL-SN-195563 US-PATENT-CLASS-73-147 US-PATENT-4,845,993	N91-14538* #	c 33	INT-PATENT-CLASS-H01M-6/20 NASA-CASE-NPO-17640-1-CU US-PATENT-APPL-SN-405169 US-PATENT-CLASS-429-103 US-PATENT-CLASS-429-120 US-PATENT-4,945,012
N91-13502* #	c 24	NAS 1.71:LEW-14921-1 NASA-CASE-LEW-14921-1 US-PATENT-APPL-SN-571059	N91-14371* #	c 17	INT-PATENT-CLASS-G06F-15/20 NASA-CASE-MSC-21170-1 US-PATENT-APPL-SN-182266 US-PATENT-CLASS-324-115 US-PATENT-CLASS-364-487 US-PATENT-CLASS-364-550 US-PATENT-4,974,181	N91-14539* #	c 33	INT-PATENT-CLASS-H01F-27/30 NASA-CASE-NPO-17830-1-CU US-PATENT-APPL-SN-443297 US-PATENT-CLASS-336-198 US-PATENT-CLASS-336-205 US-PATENT-CLASS-336-229 US-PATENT-4,975,672
N91-13558* #	c 27	NAS 1.71:LAR-14271-1-CU NASA-CASE-LAR-14271-1-CU US-PATENT-APPL-SN-567025	N91-14374* #	c 18	INT-PATENT-CLASS-B64G-1/64 NASA-CASE-MSC-21360-1 US-PATENT-APPL-SN-292131 US-PATENT-CLASS-14-71.5 US-PATENT-CLASS-244-137.2 US-PATENT-CLASS-244-161 US-PATENT-CLASS-405-188 US-PATENT-4,860,975	N91-14550* #	c 33	INT-PATENT-CLASS-H03D-1/00 NASA-CASE-GSC-13237-1 US-PATENT-APPL-SN-418612 US-PATENT-CLASS-328-151 US-PATENT-CLASS-329-363 US-PATENT-4,973,914
N91-13562* #	c 27	NAS 1.71:LAR-14036-1 NASA-CASE-LAR-14036-1 US-PATENT-APPL-SN-418372	N91-14412* #	c 19	INT-PATENT-CLASS-G01W-1/00 NASA-CASE-LAR-13392-1-CU US-PATENT-APPL-SN-369490 US-PATENT-CLASS-73-170R US-PATENT-4,964,300	N91-14551* #	c 33	INT-PATENT-CLASS-H01L-27/14 NASA-CASE-NPO-17258-1-CU US-PATENT-APPL-SN-283673 US-PATENT-CLASS-357-15 US-PATENT-CLASS-357-29 US-PATENT-CLASS-357-30 US-PATENT-CLASS-357-32 US-PATENT-CLASS-357-58 US-PATENT-4,954,864
N91-13566* #	c 27	NAS 1.71:LEW-15027-1 NASA-CASE-LEW-15027-1 US-PATENT-APPL-SN-603055	N91-14418* #	c 23	INT-PATENT-CLASS-C08G-73/10 NASA-CASE-LAR-13965-2-CU US-PATENT-APPL-SN-221386 US-PATENT-APPL-SN-311551 US-PATENT-CLASS-526-262 US-PATENT-CLASS-528-322 US-PATENT-4,895,915	N91-14552* #	c 33	INT-PATENT-CLASS-G01R-1/04 NASA-CASE-LEW-14746-1 US-PATENT-APPL-SN-392239 US-PATENT-CLASS-324-158F US-PATENT-CLASS-324-158P US-PATENT-CLASS-324-601 US-PATENT-CLASS-333-247 US-PATENT-4,980,636
N91-13594* #	c 32	NAS 1.71:NPO-17904-1-CU NASA-CASE-NPO-17904-1-CU US-PATENT-APPL-SN-544293	N91-14419* #	c 23	INT-PATENT-CLASS-C07D-207/44 NASA-CASE-LAR-14188-2 US-PATENT-APPL-SN-087375 US-PATENT-APPL-SN-328392 US-PATENT-APPL-SN-391692 US-PATENT-CLASS-548-549 US-PATENT-4,937,356	N91-14562* #	c 34	INT-PATENT-CLASS-B64B-21/00 NASA-CASE-LAR-13532-1 US-PATENT-APPL-SN-838649 US-PATENT-CLASS-114-67A US-PATENT-CLASS-244-130 US-PATENT-CLASS-244-203 US-PATENT-CLASS-244-204 US-PATENT-4,932,610
N91-13595* #	c 32	NAS 1.71:NPO-17941-1-CU NASA-CASE-NPO-17941-1-CU US-PATENT-APPL-SN-550775	N91-14430* #	c 24	INT-PATENT-CLASS-G01N-3/00 NASA-CASE-LAR-13985-1 US-PATENT-APPL-SN-386172 US-PATENT-CLASS-73-794 US-PATENT-4,926,694	N91-14563* #	c 34	INT-PATENT-CLASS-F16K-3/316 INT-PATENT-CLASS-F16K-3/32 INT-PATENT-CLASS-F16K-37/00 NASA-CASE-MFS-28383-1 US-PATENT-APPL-SN-404290 US-PATENT-CLASS-137-556 US-PATENT-CLASS-251-212 US-PATENT-4,957,139
N91-13598* #	c 32	NAS 1.71:LEW-14945-1 NASA-CASE-LEW-14945-1 US-PATENT-APPL-SN-540976	N91-14462* #	c 26	INT-PATENT-CLASS-B22D-27/04 NASA-CASE-MFS-28314-1 US-PATENT-APPL-SN-404289 US-PATENT-CLASS-164-122.1 US-PATENT-CLASS-164-338.1 US-PATENT-4,964,453	N91-14587* #	c 35	NASA-CASE-NPO-16989-1-CU US-PATENT-APPL-SN-358027 US-PATENT-CLASS-250-281 US-PATENT-CLASS-250-282 US-PATENT-CLASS-250-286 US-PATENT-CLASS-250-287 US-PATENT-CLASS-250-288 US-PATENT-CLASS-250-305 US-PATENT-CLASS-250-423 US-PATENT-4,973,840
N91-13622* #	c 33	NAS 1.71:NPO-18075-1-CU NASA-CASE-NPO-18075-1-CU US-PATENT-APPL-SN-555865	N91-14489* #	c 27	INT-PATENT-CLASS-H02K-44/10 NASA-CASE-NPO-17122-1-CU US-PATENT-APPL-SN-087376 US-PATENT-CLASS-310-11 US-PATENT-4,928,027	N91-14588* #	c 35	NASA-CASE-NPO-17526-1-CU US-PATENT-APPL-SN-369403 US-PATENT-CLASS-250-338.1 US-PATENT-CLASS-250-338.2 US-PATENT-CLASS-250-370.12 US-PATENT-CLASS-250-370.13 US-PATENT-CLASS-250-493.1 US-PATENT-CLASS-357-27 US-PATENT-CLASS-357-30 US-PATENT-4,952,811
N91-13658* #	c 34	NAS 1.71:NPO-17479-1-CU NASA-CASE-NPO-17479-1-CU US-PATENT-APPL-SN-568127	N91-14495* #	c 28	NASA-CASE-KSC-11304-2 US-PATENT-APPL-SN-603375 US-PATENT-APPL-SN-798713 US-PATENT-CLASS-423-655 US-PATENT-CLASS-48-197R US-PATENT-CLASS-48-203 US-PATENT-CLASS-48-77 US-PATENT-CLASS-60-39.12 US-PATENT-CLASS-60-39.182 US-PATENT-4,936,869	N91-14590* #	c 35	INT-PATENT-CLASS-G02B-27/64 INT-PATENT-CLASS-G02B-7/18 NASA-CASE-LAR-14207-1
N91-13668* #	c 34	NAS 1.71:LEW-14162-1 NASA-CASE-LEW-14162-1 US-PATENT-APPL-SN-501893						
N91-13691* #	c 35	NAS 1.71:SSC-00006-1 NASA-CASE-SSC-00006-1 US-PATENT-APPL-SN-489997						
N91-13694* #	c 35	INT-PATENT-CLASS-G03H-1/02 NASA-CASE-LAR-13989-1 US-PATENT-APPL-SN-318217 US-PATENT-CLASS-350-3.64 US-PATENT-CLASS-350-320 US-PATENT-CLASS-350-354 US-PATENT-4,913,534						
N91-13729* #	c 37	NAS 1.71:MFS-28406-1 NASA-CASE-MFS-28406-1 US-PATENT-APPL-SN-524110						
N91-13731* #	c 37	NAS 1.71:MFS-28328-1 NASA-CASE-MFS-28328-1 US-PATENT-APPL-SN-458065						
N91-13732* #	c 37	NAS 1.71:LEW-14965-1 NASA-CASE-LEW-14965-1 US-PATENT-APPL-SN-571062						
N91-13733* #	c 37	NAS 1.71:SSC-00008-1 NASA-CASE-SSC-00008-1 US-PATENT-APPL-SN-545178						
N91-13767* #	c 39	NAS 1.71:NPO-17914-1-CU NASA-CASE-NPO-17914-1-CU US-PATENT-APPL-SN-575697						
N91-13879* #	c 54	NAS 1.71:MSC-21460-1 NASA-CASE-MSC-21460-1 US-PATENT-APPL-SN-587919						
N91-13890* #	c 60	NAS 1.71:MSC-21481-1 NASA-CASE-MSC-21481-1 US-PATENT-APPL-SN-506136						
N91-13911* #	c 61	NAS 1.71:MSC-21737-1 NASA-CASE-MSC-21737-1 US-PATENT-APPL-SN-587922						
N91-13944* #	c 63	NAS 1.71:MSC-21381-1 NASA-CASE-MSC-21381-1 US-PATENT-APPL-SN-545235						
N91-13998* #	c 74	NAS 1.71:NPO-17784-1-CU NASA-CASE-NPO-17784-1-CU US-PATENT-APPL-SN-568129						
N91-13999* #	c 74	NAS 1.71:MFS-28295-1 NASA-CASE-MFS-28295-1 US-PATENT-APPL-SN-503408						
N91-14066* #	c 76	NAS 1.71:GSC-13265-1 NASA-CASE-GSC-13265-1 US-PATENT-APPL-SN-575694						
N91-14096* #	c 89	NAS 1.71:MFS-28013-2 NASA-CASE-MFS-28013-2 US-PATENT-APPL-SN-545220						
N91-14321* #	c 04	INT-PATENT-CLASS-G01S-5/02 NASA-CASE-NPO-17820-1-CU US-PATENT-APPL-SN-429734 US-PATENT-CLASS-329-306 US-PATENT-CLASS-342-352 US-PATENT-CLASS-342-357						



**N91-15544**

**F-95**

				US-PATENT-CLASS-403-146				US-PATENT-CLASS-403-176				US-PATENT-CLASS-248-677
				US-PATENT-CLASS-403-147				US-PATENT-CLASS-403-252				US-PATENT-CLASS-254-101
				US-PATENT-CLASS-403-156				US-PATENT-CLASS-52-646				US-PATENT-CLASS-403-131
				US-PATENT-CLASS-403-334				US-PATENT-4,998,842				US-PATENT-5,000,416
				US-PATENT-4,932,807		N91-21222*	c 18	INT-PATENT-CLASS-B24G-1/00		N91-21544*	c 37	NASA-CASE-NPO-17801-1-CU
N91-15661*	#	c 47		NAS 1.71:MFS-26102-1-CU				NASA-CASE-MSC-21534-1				US-PATENT-APPL-SN-459029
				NASA-CASE-MFS-26102-1-CU				US-PATENT-APPL-SN-480985				US-PATENT-CLASS-318-561
				US-PATENT-APPL-SN-571687				US-PATENT-CLASS-244-14				US-PATENT-CLASS-318-628
N91-15898*	#	c 76		NASA-CASE-NPO-16306-1-CU				US-PATENT-CLASS-244-158R				US-PATENT-CLASS-318-646
				US-PATENT-APPL-SN-718798				US-PATENT-4,991,788				US-PATENT-CLASS-318-648
				US-PATENT-CLASS-118-405		N91-21270*	c 25	INT-PATENT-CLASS-H01S-3/22				US-PATENT-CLASS-364-478
				US-PATENT-CLASS-118-407				NASA-CASE-LAR-14155-2-SB				US-PATENT-CLASS-364-513
				US-PATENT-CLASS-118-419				US-PATENT-APPL-SN-298150				US-PATENT-CLASS-901-9
				US-PATENT-CLASS-118-428				US-PATENT-APPL-SN-443406				US-PATENT-4,999,553
				US-PATENT-CLASS-156-608				US-PATENT-CLASS-372-59		N91-21545*	c 37	INT-PATENT-CLASS-B25B-11/00
				US-PATENT-CLASS-156-617.1				US-PATENT-CLASS-423-247				INT-PATENT-CLASS-G02B-21/26
				US-PATENT-CLASS-156-620.1				US-PATENT-CLASS-502-324				INT-PATENT-CLASS-G02B-21/32
				US-PATENT-4,861,416				US-PATENT-CLASS-502-34				NASA-CASE-MFS-28420-1
N91-16815*	#	c 76		NAS 1.71:MFS-26061-1				US-PATENT-4,991,181				US-PATENT-APPL-SN-523675
				NASA-CASE-MFS-26061-1		N91-21434*	c 33	INT-PATENT-CLASS-H01L-27/14				US-PATENT-CLASS-269-21
				US-PATENT-APPL-SN-575708				NASA-CASE-NPO-17426-1-CU				US-PATENT-CLASS-350-529
N91-17141*	#	c 23		INT-PATENT-CLASS-C07C-15/16				US-PATENT-APPL-SN-363815				US-PATENT-4,981,345
				NASA-CASE-LEW-14345-3				US-PATENT-CLASS-357-15		N91-21621*	c 43	INT-PATENT-CLASS-G01S-13/86
				US-PATENT-APPL-SN-159071				US-PATENT-CLASS-357-30				INT-PATENT-CLASS-G01S-13/89
				US-PATENT-APPL-SN-292049				US-PATENT-CLASS-357-67S				NASA-CASE-NPO-17937-1-CU
				US-PATENT-APPL-SN-924474				US-PATENT-CLASS-357-71S				US-PATENT-APPL-SN-493190
				US-PATENT-CLASS-552-101				US-PATENT-4,990,988				US-PATENT-CLASS-342-26
N91-17145*	#	c 24		US-PATENT-4,912,238		N91-21473*	c 34	INT-PATENT-CLASS-F28D-15/02				US-PATENT-CLASS-342-357
				NASA-CASE-LEW-14990-1-CU				NASA-CASE-KSC-11395-1-CU				US-PATENT-CLASS-342-52
				US-PATENT-APPL-SN-326757				US-PATENT-APPL-SN-473065				US-PATENT-4,990,922
				US-PATENT-APPL-SN-433863				US-PATENT-CLASS-165-104.14		N91-21700*	c 51	NASA-CASE-MSC-21293-1
				US-PATENT-CLASS-419-24				US-PATENT-CLASS-165-86				US-PATENT-APPL-SN-213559
				US-PATENT-CLASS-419-36				US-PATENT-CLASS-165-96				US-PATENT-CLASS-435-284
				US-PATENT-CLASS-419-37				US-PATENT-CLASS-62-333				US-PATENT-CLASS-435-285
				US-PATENT-CLASS-419-48				US-PATENT-CLASS-62-384				US-PATENT-CLASS-435-286
				US-PATENT-CLASS-419-49				US-PATENT-CLASS-62-90				US-PATENT-CLASS-435-292
				US-PATENT-CLASS-419-8				US-PATENT-4,971,139				US-PATENT-CLASS-435-311
				US-PATENT-4,980,126		N91-21493*	c 35	INT-PATENT-CLASS-G01F-17/00				US-PATENT-CLASS-435-312
N91-17250*	#	c 29		NAS 1.71:MFS-28422-1				NASA-CASE-MSC-21500-1				US-PATENT-CLASS-435-316
				NASA-CASE-MFS-28422-1				US-PATENT-APPL-SN-458258				US-PATENT-4,988,623
				US-PATENT-APPL-SN-629740				US-PATENT-CLASS-73-149		N91-21701*	c 51	INT-PATENT-CLASS-C12M-03/06
N91-17350*	#	c 35		INT-PATENT-CLASS-G01L-3/00				US-PATENT-5,001,924				NASA-CASE-MSC-21361-1
				NASA-CASE-NPO-17461-1-CU		N91-21494*	c 35	INT-PATENT-CLASS-F01B-19/00				US-PATENT-APPL-SN-278137
				US-PATENT-APPL-SN-326820				NASA-CASE-MSC-20797-2				US-PATENT-CLASS-210-396
				US-PATENT-CLASS-73-862.33				US-PATENT-APPL-SN-041389				US-PATENT-CLASS-435-286
				US-PATENT-CLASS-73-862.36				US-PATENT-APPL-SN-771537				US-PATENT-CLASS-435-289
				US-PATENT-4,932,270				US-PATENT-CLASS-92-103F				US-PATENT-CLASS-435-311
N91-17360*	#	c 36		INT-PATENT-CLASS-H01S-3/098				US-PATENT-CLASS-92-103SD				US-PATENT-CLASS-435-315
				NASA-CASE-NPO-17355-1-CU				US-PATENT-4,989,497				US-PATENT-CLASS-435-316
				US-PATENT-APPL-SN-283431		N91-21495*	c 35	INT-PATENT-CLASS-G01F-17/00				US-PATENT-5,002,890
				US-PATENT-CLASS-372-19				NASA-CASE-MSC-21059-3		N91-21824*	c 70	INT-PATENT-CLASS-H02K-7/09
				US-PATENT-CLASS-372-39				US-PATENT-APPL-SN-396726				NASA-CASE-LAR-13785-1
				US-PATENT-CLASS-372-66				US-PATENT-APPL-SN-486455				US-PATENT-APPL-SN-405168
				US-PATENT-CLASS-372-70				US-PATENT-CLASS-73-149				US-PATENT-CLASS-310-90.5
				US-PATENT-4,860,295				US-PATENT-4,984,457				US-PATENT-5,003,211
N91-17387*	#	c 37		INT-PATENT-CLASS-F16D-3/02		N91-21496*	c 35	INT-PATENT-CLASS-B01F-3/02				INT-PATENT-CLASS-G01B-9/02
				NASA-CASE-GSC-13153-1				NASA-CASE-MFS-28177-1		N91-21871*	c 74	INT-PATENT-CLASS-G02B-6/02
				US-PATENT-APPL-SN-326863				US-PATENT-APPL-SN-283092				INT-PATENT-CLASS-G02B-6/16
				US-PATENT-CLASS-403-113				US-PATENT-CLASS-165-20				NASA-CASE-LEW-14795-1
				US-PATENT-CLASS-403-291				US-PATENT-CLASS-236-44A				US-PATENT-APPL-SN-404291
				US-PATENT-CLASS-403-57				US-PATENT-CLASS-236-94				US-PATENT-CLASS-250-227
				US-PATENT-CLASS-464-132				US-PATENT-CLASS-417-190				US-PATENT-CLASS-350-96.29
				US-PATENT-CLASS-464-56				US-PATENT-4,909,436				US-PATENT-CLASS-356-345
				US-PATENT-4,932,806		N91-21539*	c 37	INT-PATENT-CLASS-H02K-41/00				US-PATENT-4,995,697
N91-17388*	#	c 37		INT-PATENT-CLASS-F16D-3/50				NASA-CASE-LAR-13981-1		N91-21911*	c 76	INT-PATENT-CLASS-H05B-33/14
				NASA-CASE-GSC-13127-1				US-PATENT-APPL-SN-405154				NASA-CASE-LAR-14181-1
				US-PATENT-APPL-SN-193612				US-PATENT-CLASS-310-90.5				US-PATENT-APPL-SN-140185
				US-PATENT-CLASS-464-56				US-PATENT-CLASS-318-135				US-PATENT-APPL-SN-338379
				US-PATENT-CLASS-901-28				US-PATENT-5,003,235				US-PATENT-CLASS-313-502
				US-PATENT-4,946,421		N91-21540*	c 37	INT-PATENT-CLASS-G01N-3/20				US-PATENT-CLASS-313-503
N91-21157*	#	c 09		INT-PATENT-CLASS-G01N-31/12				NASA-CASE-LEW-14776-1				US-PATENT-CLASS-313-506
				NASA-CASE-MSC-21470-1				US-PATENT-APPL-SN-458274				US-PATENT-CLASS-428-690
				US-PATENT-APPL-SN-381239				US-PATENT-CLASS-73-852				US-PATENT-4,987,339
				US-PATENT-CLASS-374-8				US-PATENT-4,986,132		N91-23271*	#	c 25
				US-PATENT-CLASS-422-104		N91-21541*	c 37	INT-PATENT-CLASS-F16M-13/00				NAS 1.71:MSC-21577-1-SB
				US-PATENT-CLASS-422-78				NASA-CASE-LAR-13580-1				NASA-CASE-MSC-21577-1-SB
				US-PATENT-CLASS-422-80				US-PATENT-APPL-SN-441673				US-PATENT-APPL-SN-748933
				US-PATENT-CLASS-73-865.6				US-PATENT-CLASS-248-593		N91-23410*	#	c 34
				US-PATENT-4,990,312				US-PATENT-CLASS-248-604				NAS 1.71:LAR-13563-1
N91-21175*	#	c 14		INT-PATENT-CLASS-G01M-3/28				US-PATENT-4,997,158		N91-23976*	#	c 82
				NASA-CASE-MFS-28376-1		N91-21542*	c 37	NASA-CASE-MSC-21476-1				NAS 1.71:SSC-00010-1
				US-PATENT-APPL-SN-361479				US-PATENT-APPL-SN-392235				NASA-CASE-SSC-00010-1
				US-PATENT-CLASS-73-49.8				US-PATENT-CLASS-318-568.16				US-PATENT-APPL-SN-591643
				US-PATENT-5,000,033				US-PATENT-CLASS-318-568.20		N91-25155*	#	c 09
N91-21176*	#	c 14		INT-PATENT-CLASS-G01M-19/00				US-PATENT-CLASS-318-568.21				NAS 1.71:MFS-28493-1
				INT-PATENT-CLASS-G01M-7/02				US-PATENT-CLASS-364-513				NASA-CASE-MFS-28493-1
				NASA-CASE-LAR-14149-1-SB				US-PATENT-CLASS-901-33		N91-25167*	#	c 18
				US-PATENT-APPL-SN-357757				US-PATENT-CLASS-901-37				NAS 1.71:MFS-28524-1
				US-PATENT-CLASS-73-663				US-PATENT-CLASS-901-47				NASA-CASE-MFS-28524-1
				US-PATENT-CLASS-73-865.6				US-PATENT-CLASS-901-7				US-PATENT-APPL-SN-691610
				US-PATENT-CLASS-73-866.4				US-PATENT-4,980,626		N91-25185*	#	c 23
				US-PATENT-4,995,272		N91-21543*	c 37	INT-PATENT-CLASS-F16M-13/00				INT-PATENT-CLASS-C07C-15/16
N91-21221*	#	c 18		INT-PATENT-CLASS-B25G-3/00				NASA-CASE-MSC-21502-1				NASA-CASE-LEW-14345-4
				NASA-CASE-MSC-21504-1				US-PATENT-APPL-SN-470663				US-PATENT-APPL-SN-292049
				US-PATENT-APPL-SN-516856				US-PATENT-CLASS-DIG.4				US-PATENT-APPL-SN-419554
				US-PATENT-CLASS-403-171				US-PATENT-CLASS-248-181				US-PATENT-CLASS-552-101
								US-PATENT-CLASS-248-650				US-PATENT-CLASS-552-108
												US-PATENT-CLASS-552-110
												US-PATENT-CLASS-552-113

## ACCESSION NUMBER INDEX

N91-27561

N91-25199*	c 24	US-PATENT-CLASS-552-115	US-PATENT-CLASS-357-16	N91-27201*	c 18	INT-PATENT-CLASS-B64G-1/42
		US-PATENT-5,011,955	US-PATENT-CLASS-357-17			NASA-CASE-GSC-13197-1
		NASA-CASE-LAR-13562-2	US-PATENT-CLASS-357-30			US-PATENT-APPL-SN-344872
		US-PATENT-APPL-SN-486668	US-PATENT-CLASS-357-34			US-PATENT-CLASS-244-159
		US-PATENT-APPL-SN-921572	US-PATENT-CLASS-357-46			US-PATENT-5,020,743
		US-PATENT-CLASS-156-172	US-PATENT-5,027,182			INT-PATENT-CLASS-C08G-14/00
		US-PATENT-CLASS-156-187	INT-PATENT-CLASS-B23K-9/00			INT-PATENT-CLASS-C08G-8/02
		US-PATENT-CLASS-156-625	NASA-CASE-LEW-14901-1			NASA-CASE-LAR-13992-1-CU
		US-PATENT-CLASS-156-634	US-PATENT-APPL-SN-376488			US-PATENT-APPL-SN-248009
		US-PATENT-CLASS-264-257	US-PATENT-CLASS-219-121.47			US-PATENT-CLASS-528-125
N91-25200*	c 24	US-PATENT-CLASS-264-261	US-PATENT-CLASS-219-121.48	N91-27220*	c 23	US-PATENT-CLASS-528-126
		US-PATENT-5,008,061	US-PATENT-CLASS-219-121.52			US-PATENT-CLASS-528-128
		NASA-CASE-LAR-14107-1	US-PATENT-CLASS-219-75			US-PATENT-CLASS-528-219
		US-PATENT-APPL-SN-105846	US-PATENT-CLASS-219-76.16			US-PATENT-CLASS-528-220
		US-PATENT-APPL-SN-262268	US-PATENT-CLASS-427-34			US-PATENT-4,902,769
		US-PATENT-CLASS-264-136	US-PATENT-4,990,739			NASA-CASE-LEW-14902-1
		US-PATENT-CLASS-264-257	NAS 1.71:14846-2			US-PATENT-APPL-SN-571058
		US-PATENT-CLASS-264-331.12	NASA-CASE-LEW-14846-2			US-PATENT-CLASS-419-14
		US-PATENT-CLASS-525-432	US-PATENT-APPL-SN-709907			US-PATENT-CLASS-419-30
		US-PATENT-CLASS-528-350	INT-PATENT-CLASS-H03D-1/04			US-PATENT-CLASS-419-32
N91-25296*	c 27	US-PATENT-CLASS-528-352	NASA-CASE-GSC-13179-1	N91-27244*	c 24	US-PATENT-CLASS-419-36
		US-PATENT-5,004,575	US-PATENT-APPL-SN-414815			US-PATENT-CLASS-419-38
		INT-PATENT-CLASS-B23H-9/00	US-PATENT-CLASS-307-353			US-PATENT-CLASS-419-39
		NASA-CASE-LEW-14679-1	US-PATENT-CLASS-329-349			US-PATENT-CLASS-419-49
		US-PATENT-APPL-SN-381240	US-PATENT-CLASS-329-361			US-PATENT-5,034,187
		US-PATENT-CLASS-219-69.11	US-PATENT-5,015,963			NASA-CASE-NPO-17633-1-CU
		US-PATENT-5,012,062	NAS 1.71:MFS-28458-1			US-PATENT-APPL-SN-418611
		NAS 1.71:LEW-15164-1	NASA-CASE-MFS-28458-1			US-PATENT-CLASS-528-220
		NASA-CASE-LEW-15164-1	US-PATENT-APPL-SN-710192			US-PATENT-CLASS-528-222
		US-PATENT-APPL-SN-699130	NAS 1.71:MFS-28521-1			US-PATENT-CLASS-528-225
N91-25305*	c 31	INT-PATENT-CLASS-F16L-55/04	NASA-CASE-MFS-28521-1	N91-27372*	c 27	US-PATENT-CLASS-528-227
		NASA-CASE-MSC-21703-1	US-PATENT-APPL-SN-657586			US-PATENT-CLASS-528-228
		US-PATENT-APPL-SN-603052	NASA-CASE-MSC-21025-3			US-PATENT-CLASS-528-230
		US-PATENT-CLASS-138-26	US-PATENT-APPL-SN-035401			US-PATENT-CLASS-528-233
		US-PATENT-CLASS-138-30	US-PATENT-APPL-SN-392174			US-PATENT-5,011,907
		US-PATENT-5,027,860	US-PATENT-CLASS-83-203			INT-PATENT-CLASS-F28F-7/00
		NAS 1.71:MFS-28545-1	US-PATENT-CLASS-83-206			NASA-CASE-NPO-17806-1-CU
		NASA-CASE-MFS-28545-1	US-PATENT-CLASS-83-277			US-PATENT-APPL-SN-560908
		US-PATENT-APPL-SN-674636	US-PATENT-CLASS-83-282			US-PATENT-CLASS-136-204
		INT-PATENT-CLASS-H04B-1/10	US-PATENT-CLASS-83-614			US-PATENT-CLASS-165-1
N91-25316*	c 32	NASA-CASE-NPO-16987-1-CU	US-PATENT-CLASS-83-649	N91-27385*	c 31	US-PATENT-CLASS-165-185
		US-PATENT-APPL-SN-203374	US-PATENT-5,005,457			US-PATENT-5,031,689
		US-PATENT-CLASS-375-53	NASA-CASE-NPO-17512-1-CU			INT-PATENT-CLASS-H04L-27/22
		US-PATENT-CLASS-375-56	US-PATENT-APPL-SN-310992			NASA-CASE-NPO-17896-1-CU
		US-PATENT-CLASS-375-85	US-PATENT-CLASS-350-353			US-PATENT-APPL-SN-560691
		US-PATENT-CLASS-375-97	US-PATENT-CLASS-350-354			US-PATENT-CLASS-329-304
		US-PATENT-5,007,068	US-PATENT-CLASS-350-358			US-PATENT-CLASS-375-53
		INT-PATENT-CLASS-G06F-15/20	US-PATENT-CLASS-364-713			US-PATENT-CLASS-375-56
		NASA-CASE-MSC-21334-1	US-PATENT-CLASS-364-822			US-PATENT-CLASS-375-85
		US-PATENT-APPL-SN-292130	US-PATENT-CLASS-364-837			US-PATENT-CLASS-375-86
N91-25317*	c 32	US-PATENT-CLASS-364-578	US-PATENT-CLASS-364-841	N91-27439*	c 32	US-PATENT-5,017,883
		US-PATENT-5,005,147	US-PATENT-5,005,954			INT-PATENT-CLASS-H01M-4/04
		INT-PATENT-CLASS-H04L-27/18	NAS 1.71:LEW-15222-1			INT-PATENT-CLASS-H01M-4/58
		NASA-CASE-NPO-17853-1-CU	NASA-CASE-LEW-15222-1			NASA-CASE-NPO-17809-1-CU
		US-PATENT-APPL-SN-443529	US-PATENT-APPL-SN-718315			US-PATENT-APPL-SN-503409
		US-PATENT-CLASS-329-304	NAS 1.71:LEW-15223-1			US-PATENT-CLASS-29-623.5
		US-PATENT-CLASS-375-53	NASA-CASE-LEW-15223-1			US-PATENT-CLASS-429-223
		US-PATENT-CLASS-375-86	US-PATENT-APPL-SN-718314			US-PATENT-5,019,470
		US-PATENT-5,025,455	INT-PATENT-CLASS-B64C-17/00			INT-PATENT-CLASS-G05F-1/12
		INT-PATENT-CLASS-B64G-1/28	NASA-CASE-LAR-14322-1			NASA-CASE-GSC-13280-1
N91-25380*	c 34	NASA-CASE-NPO-17204-1-CU	US-PATENT-APPL-SN-603335	N91-27478*	c 33	US-PATENT-APPL-SN-418373
		US-PATENT-APPL-SN-473242	US-PATENT-CLASS-244-113			US-PATENT-CLASS-323-311
		US-PATENT-CLASS-114-122	US-PATENT-CLASS-244-139			US-PATENT-CLASS-323-312
		US-PATENT-CLASS-114-125	US-PATENT-CLASS-244-75R			US-PATENT-5,021,729
		US-PATENT-CLASS-244-164	US-PATENT-5,020,739			INT-PATENT-CLASS-F16K-3/32
		US-PATENT-CLASS-244-165	INT-PATENT-CLASS-B64C-7/00			INT-PATENT-CLASS-F16K-31/06
		US-PATENT-5,026,008	INT-PATENT-CLASS-B64D-1/02			NASA-CASE-MSC-21549-1
		NAS 1.71:MFS-28563-1	NASA-CASE-LAR-13875-1			US-PATENT-APPL-SN-507553
		NASA-CASE-MFS-28563-1	US-PATENT-APPL-SN-250468			US-PATENT-CLASS-251-129.15
		US-PATENT-APPL-SN-710193	US-PATENT-CLASS-244-118.1			US-PATENT-CLASS-251-148
N91-25392*	c 36	NAS 1.71:LEW-14556-1	US-PATENT-CLASS-244-130	N91-27504*	c 34	US-PATENT-CLASS-251-205
		NASA-CASE-LAR-14556-1	US-PATENT-CLASS-244-137.4			US-PATENT-CLASS-251-326
		US-PATENT-APPL-SN-699289	US-PATENT-5,018,688			US-PATENT-CLASS-251-363
		INT-PATENT-CLASS-G06F-12/00	INT-PATENT-CLASS-F27B-5/14			US-PATENT-5,020,774
		NASA-CASE-NPO-17197-1-CU	INT-PATENT-CLASS-F27D-11/10			INT-PATENT-CLASS-H04R-25/00
		US-PATENT-APPL-SN-292124	INT-PATENT-CLASS-G01N-3/08			NASA-CASE-GSC-13027-1-CU
		US-PATENT-CLASS-364-200	NASA-CASE-LEW-14848-1			US-PATENT-APPL-SN-363807
		US-PATENT-CLASS-364-281	US-PATENT-APPL-SN-382885			US-PATENT-CLASS-381-26
		US-PATENT-CLASS-364-281.3	US-PATENT-CLASS-219-390			US-PATENT-CLASS-381-68.1
		US-PATENT-CLASS-364-281.6	US-PATENT-CLASS-374-49			US-PATENT-CLASS-381-92
N91-25480*	c 74	US-PATENT-CLASS-364-281.8	US-PATENT-CLASS-374-50	N91-27560*	c 37	US-PATENT-5,029,216
		US-PATENT-5,031,089	US-PATENT-CLASS-73-826			INT-PATENT-CLASS-B64D-33/04
		NASA-CASE-MSC-21509-1	US-PATENT-CLASS-73-826			INT-PATENT-CLASS-F16J-15/46
		US-PATENT-APPL-SN-560924	US-PATENT-5,015,825			NASA-CASE-LEW-14672-1
		US-PATENT-CLASS-350-162.13	NASA-CASE-LAR-13490-1			US-PATENT-APPL-SN-441672
		US-PATENT-CLASS-350-3.68	US-PATENT-APPL-SN-899683			US-PATENT-CLASS-239-265.11
		US-PATENT-CLASS-382-31	US-PATENT-CLASS-403-72			US-PATENT-CLASS-277-157
		US-PATENT-CLASS-382-32	US-PATENT-CLASS-52-646			US-PATENT-CLASS-277-226
		US-PATENT-CLASS-382-43	US-PATENT-5,016,418			US-PATENT-CLASS-277-229
		US-PATENT-CLASS-382-49	INT-PATENT-CLASS-G02B-5/122			US-PATENT-CLASS-277-34
N91-25481*	c 74	US-PATENT-CLASS-382-6	NASA-CASE-MFS-28419-1	N91-27561*	c 37	US-PATENT-5,014,917
		US-PATENT-5,029,220	US-PATENT-APPL-SN-431538			INT-PATENT-CLASS-B60P-7/15
		INT-PATENT-CLASS-H01L-27/02	US-PATENT-CLASS-350-102			INT-PATENT-CLASS-E05C-5/04
		INT-PATENT-CLASS-H01L-29/161	US-PATENT-CLASS-350-107			NASA-CASE-LEW-14887-1
		NASA-CASE-NPO-18101-1-CU	US-PATENT-CLASS-350-97			US-PATENT-APPL-SN-503418
		US-PATENT-APPL-SN-596133	US-PATENT-5,020,876			US-PATENT-CLASS-292-60

		US-PATENT-CLASS-292-61			US-PATENT-APPL-SN-418320	N91-31655*	c 37	INT-PATENT-CLASS-B23D-21/006
		US-PATENT-CLASS-410-80			US-PATENT-CLASS-244-137.2			INT-PATENT-CLASS-B26B-27/00
		US-PATENT-CLASS-410-84			US-PATENT-CLASS-441-83			INT-PATENT-CLASS-B26D-37/16
		US-PATENT-5,032,045			US-PATENT-5,020,742			NASA-CASE-MS-C-21469-1
N91-27562*	c 37	NASA-CASE-LAR-14489-1	N91-31120*	c 04	INT-PATENT-CLASS-G06F-15/50			US-PATENT-APPL-SN-486458
		US-PATENT-APPL-SN-543926			NASA-CASE-LAR-13854-1-CU			US-PATENT-CLASS-30-388
		US-PATENT-CLASS-264-184			US-PATENT-APPL-SN-082766			US-PATENT-CLASS-30-92
		US-PATENT-CLASS-264-211.15			US-PATENT-APPL-SN-192562	N91-31656*	c 37	US-PATENT-5,038,473
		US-PATENT-CLASS-264-211.16			US-PATENT-CLASS-364-427			INT-PATENT-CLASS-B23Q-3/155
		US-PATENT-CLASS-264-211.17			US-PATENT-CLASS-364-428			NASA-CASE-GSC-13239-1
		US-PATENT-CLASS-264-234			US-PATENT-CLASS-73-178T			US-PATENT-APPL-SN-608657
		US-PATENT-CLASS-264-236			US-PATENT-5,047,9421-CU			US-PATENT-CLASS-29-568
		US-PATENT-CLASS-264-345	N91-31140*	c 05	INT-PATENT-CLASS-B64C-19/00			US-PATENT-CLASS-294-86.4
		US-PATENT-5,023,034			NASA-CASE-LAR-14212-1-CU			US-PATENT-CLASS-901-30
N91-27614*	c 44	INT-PATENT-CLASS-H01L-31/18			US-PATENT-APPL-SN-565090			US-PATENT-5,044,063
		INT-PATENT-CLASS-H01L-31/42			US-PATENT-CLASS-244-120	N91-31755*	c 51	NASA-CASE-MS-C-21585-1
		NASA-CASE-LEW-14959-1			US-PATENT-CLASS-244-199			US-PATENT-APPL-SN-493529
		US-PATENT-APPL-SN-495969			US-PATENT-CLASS-244-75R			US-PATENT-CLASS-422-101
		US-PATENT-CLASS-136-244			US-PATENT-CLASS-244-87			US-PATENT-CLASS-422-99
		US-PATENT-CLASS-136-249			US-PATENT-CLASS-244-88			US-PATENT-CLASS-435-30
		US-PATENT-CLASS-136-256			US-PATENT-5,050,819			US-PATENT-CLASS-73-863.22
		US-PATENT-CLASS-357-30	N91-31236*	c 24	INT-PATENT-CLASS-B32B-7/08			US-PATENT-CLASS-73-863.41
		US-PATENT-CLASS-437-2			NASA-CASE-ARC-11907-1-NP			US-PATENT-CLASS-73-863.85
		US-PATENT-5,019,176			US-PATENT-APPL-SN-410576			US-PATENT-CLASS-73-863.86
N91-27913*	c 71	NASA-CASE-LAR-13968-1			US-PATENT-CLASS-112-440			US-PATENT-5,049,492
		US-PATENT-APPL-SN-392165			US-PATENT-CLASS-428-285	N91-31803* #	c 54	INT-PATENT-CLASS-B64G-1/46
		US-PATENT-CLASS-181-206			US-PATENT-5,038,693			NASA-CASE-MS-C-21629-1
		US-PATENT-CLASS-181-286	N91-31258*	c 25	INT-PATENT-CLASS-H01L-21/306			US-PATENT-APPL-SN-378548
		US-PATENT-CLASS-181-290			NASA-CASE-ARC-11873-2			US-PATENT-CLASS-210-748
		US-PATENT-CLASS-181-295			US-PATENT-APPL-SN-150169			US-PATENT-CLASS-244-159
		US-PATENT-CLASS-381-71			US-PATENT-APPL-SN-347591			US-PATENT-CLASS-244-163
		US-PATENT-CLASS-381-94			US-PATENT-CLASS-156-345			US-PATENT-CLASS-47-1.4
		US-PATENT-CLASS-52-144			US-PATENT-CLASS-156-643			US-PATENT-CLASS-47-62
		US-PATENT-5,024,288			US-PATENT-CLASS-156-668			US-PATENT-CLASS-55-75
N91-27914*	c 71	INT-PATENT-CLASS-A61B-8/00			US-PATENT-CLASS-204-192.32			US-PATENT-5,005,787
		NASA-CASE-LAR-13966-1			US-PATENT-CLASS-437-229	N91-31810*	c 60	INT-PATENT-CLASS-G11C-29/00
		US-PATENT-APPL-SN-422726			US-PATENT-5,007,983			INT-PATENT-CLASS-H03M-13/00
		US-PATENT-CLASS-128-660.06	N91-31307*	c 27	INT-PATENT-CLASS-C08F-283/00			NASA-CASE-NPO-17394-1-CU
		US-PATENT-CLASS-73-631			INT-PATENT-CLASS-C08F-283/04			US-PATENT-APPL-SN-311024
		US-PATENT-5,031,627			INT-PATENT-CLASS-C08G-16/00			US-PATENT-CLASS-365-156
N91-27936*	c 72	INT-PATENT-CLASS-H01J-37/00			INT-PATENT-CLASS-C08G-73/10			US-PATENT-CLASS-365-200
		NASA-CASE-LAR-14250-1-SB			NASA-CASE-LAR-13910-2-CU			US-PATENT-CLASS-371-40.1
		US-PATENT-APPL-SN-531372			US-PATENT-APPL-SN-218792			US-PATENT-5,048,023
		US-PATENT-CLASS-250-306			US-PATENT-APPL-SN-347558	N91-31885*	c 63	INT-PATENT-CLASS-G05B-19/24
		US-PATENT-CLASS-250-307			US-PATENT-CLASS-525-422			INT-PATENT-CLASS-G06F-15/46
		US-PATENT-CLASS-250-358.1			US-PATENT-CLASS-525-471			NASA-CASE-NPO-17401-1-CU
		US-PATENT-5,015,851			US-PATENT-5,021,518			US-PATENT-APPL-SN-172105
N91-27957*	c 74	INT-PATENT-CLASS-H04B-10/00	N91-31476*	c 31	INT-PATENT-CLASS-B23K-20/08			US-PATENT-APPL-SN-264326
		NASA-CASE-NPO-17703-1-CU			NASA-CASE-LAR-14096-1			US-PATENT-CLASS-318-568.11
		US-PATENT-APPL-SN-359801			US-PATENT-APPL-SN-591644			US-PATENT-CLASS-318-573
		US-PATENT-CLASS-356-5			US-PATENT-CLASS-228-107			US-PATENT-CLASS-364-513
		US-PATENT-CLASS-455-605			US-PATENT-CLASS-228-2.5			US-PATENT-5,038,089
		US-PATENT-5,031,234			US-PATENT-5,050,789	N91-31950*	c 74	INT-PATENT-CLASS-H05B-33/14
N91-28014*	c 76	INT-PATENT-CLASS-H01L-21/324	N91-31528*	c 33	INT-PATENT-CLASS-G05B-19/42			NASA-CASE-LAR-13616-1
		NASA-CASE-NPO-17678-1-CU			NASA-CASE-NPO-17134-1-CU			US-PATENT-APPL-SN-140185
		US-PATENT-APPL-SN-357758			US-PATENT-APPL-SN-172105			US-PATENT-CLASS-313-502
		US-PATENT-CLASS-357-82			US-PATENT-CLASS-318-568.1			US-PATENT-CLASS-313-503
		US-PATENT-CLASS-437-187			US-PATENT-CLASS-318-568.2			US-PATENT-CLASS-313-506
		US-PATENT-CLASS-437-197			US-PATENT-CLASS-318-573			US-PATENT-CLASS-313-509
		US-PATENT-CLASS-437-199			US-PATENT-CLASS-364-513			US-PATENT-5,047,686
		US-PATENT-CLASS-437-247			US-PATENT-CLASS-901-19	N91-32196*	c 25	INT-PATENT-CLASS-G01N-25/50
		US-PATENT-CLASS-437-248			US-PATENT-5,047,700			NASA-CASE-LAR-14454-1
		US-PATENT-5,019,533	N91-31529*	c 33	NASA-CASE-LEW-14676-1			US-PATENT-APPL-SN-426345
N91-28175* #	c 09	NAS 1.71:LAR-13548-1			US-PATENT-APPL-SN-305675			US-PATENT-APPL-SN-593412
		NASA-CASE-LAR-13548-1			US-PATENT-CLASS-421-209			US-PATENT-CLASS-102-200
		US-PATENT-APPL-SN-721039			US-PATENT-CLASS-421-457			US-PATENT-CLASS-374-8
N91-28184* #	c 14	NAS 1.71:LAR-14272-1-CU			US-PATENT-CLASS-505-1			US-PATENT-CLASS-73-167
		NASA-CASE-LAR-14272-1-CU			US-PATENT-CLASS-505-701			US-PATENT-5,052,817
		US-PATENT-APPL-SN-678553			US-PATENT-CLASS-505-702	N91-32230* #	c 27	NAS 1.71:LEW-15043-1
N91-28186* #	c 16	NAS 1.71:MSC-21793-1			US-PATENT-CLASS-505-703			NASA-CASE-LEW-15043-1
		NASA-CASE-MS-C-21793-1			US-PATENT-CLASS-505-704			US-PATENT-APPL-SN-772181
		US-PATENT-APPL-SN-731829			US-PATENT-5,049,539	N91-32240*	c 31	NASA-CASE-NPO-16635-1-CU
N91-28423* #	c 27	NAS 1.71:LEW-14474-1	N91-31530*	c 33	INT-PATENT-CLASS-H04K-3/00			US-PATENT-APPL-SN-858054
		NASA-CASE-LEW-14474-1			NASA-CASE-GSC-12821-2			US-PATENT-CLASS-264-12
		US-PATENT-APPL-SN-720133			US-PATENT-APPL-SN-242254			US-PATENT-CLASS-264-5
N91-28490* #	c 33	NAS 1.71:LAR-14395-1-CU			US-PATENT-APPL-SN-921576			US-PATENT-CLASS-65-21.4
		NASA-CASE-LAR-14395-1-CU			US-PATENT-CLASS-455-1			US-PATENT-CLASS-75-331
		US-PATENT-APPL-SN-666536			US-PATENT-CLASS-455-102			US-PATENT-CLASS-75-338
N91-28557* #	c 36	NAS 1.71:GSC-13343-1			US-PATENT-CLASS-455-99			US-PATENT-CLASS-75-340
		NASA-CASE-GSC-13343-1			US-PATENT-5,014,340			US-PATENT-CLASS-75-342
		US-PATENT-APPL-SN-702529	N91-31596*	c 34	INT-PATENT-CLASS-G01F-1/00			US-PATENT-5,055,240
N91-30667*	c 51	INT-PATENT-CLASS-C12M-3/02			NASA-CASE-LAR-13952-2-SB	N91-32498*	c 37	INT-PATENT-CLASS-B64D-1/12
		NASA-CASE-MS-C-21294-1			US-PATENT-APPL-SN-203178			NASA-CASE-MS-C-21671-1
		US-PATENT-APPL-SN-213558			US-PATENT-APPL-SN-348223			US-PATENT-APPL-SN-603337
		US-PATENT-CLASS-261-83			US-PATENT-CLASS-73-432.1			US-PATENT-CLASS-102-378
		US-PATENT-CLASS-435-285			US-PATENT-4,936,146			US-PATENT-CLASS-294-82.16
		US-PATENT-CLASS-435-286	N91-31608*	c 35	INT-PATENT-CLASS-G01K-17/06			US-PATENT-CLASS-89-1.14
		US-PATENT-CLASS-435-312			INT-PATENT-CLASS-G01K-17/16			US-PATENT-CLASS-89-1.57
		US-PATENT-CLASS-435-313			NASA-CASE-LEW-14967-1			US-PATENT-5,046,395
		US-PATENT-CLASS-435-818			US-PATENT-APPL-SN-531433	N91-32508*	c 37	INT-PATENT-CLASS-B23K-26/00
		US-PATENT-5,026,650			US-PATENT-CLASS-136-200			NASA-CASE-MS-C-21299-2
N91-31113*	c 03	INT-PATENT-CLASS-B63C-9/01			US-PATENT-CLASS-250-356.1			US-PATENT-APPL-SN-176587
		INT-PATENT-CLASS-B64C-1/22			US-PATENT-CLASS-374-180			US-PATENT-APPL-SN-358029
		INT-PATENT-CLASS-B64D-1/08			US-PATENT-CLASS-374-208			US-PATENT-CLASS-219-121.72
		INT-PATENT-CLASS-B64D-9/00			US-PATENT-CLASS-374-29			US-PATENT-CLASS-219-69.12
		NASA-CASE-ARC-11909-1			US-PATENT-5,048,973			US-PATENT-CLASS-29-555

## ACCESSION NUMBER INDEX

N92-16122

N91-32509* #	c 37	US-PATENT-5,051,559 NAS 1.71:NPO-18116-1-CU NASA-CASE-NPO-18116-1-CU US-PATENT-APPL-SN-699299	N92-15081* c 14	INT-PATENT-CLASS-F41B-6/00 NASA-CASE-MFS-28323-1 US-PATENT-APPL-SN-429515 US-PATENT-CLASS-124-3 US-PATENT-CLASS-244-63 US-PATENT-CLASS-505-1 US-PATENT-CLASS-89-8 US-PATENT-5,017,549	
N91-32510* #	c 37	NAS 1.71:NPO-18134-1-CU NASA-CASE-NPO-18134-1-CU US-PATENT-APPL-SN-744118	N92-15114* c 18	INT-PATENT-CLASS-F41H-5/04 NASA-CASE-MSC-21420-1 US-PATENT-APPL-SN-516573 US-PATENT-CLASS-244-158R US-PATENT-CLASS-89-36.02 US-PATENT-CLASS-89-36.11 US-PATENT-5,067,388	
N91-32514* c 37	INT-PATENT-CLASS-B61D-15/08 NASA-CASE-MSC-21540-1 US-PATENT-APPL-SN-527508 US-PATENT-CLASS-105-124 US-PATENT-CLASS-105-141 US-PATENT-CLASS-105-142 US-PATENT-CLASS-105-87 US-PATENT-CLASS-188-24.11 US-PATENT-5,058,506	N92-10105* # c 27	NAS 1.71:LAR-14773-1 NASA-CASE-LAR-14773-1-CU US-PATENT-APPL-SN-755207	N92-15122* c 20	INT-PATENT-CLASS-F02K-9/58 NASA-CASE-MSC-21542-1 US-PATENT-APPL-SN-470480 US-PATENT-CLASS-60-204 US-PATENT-CLASS-60-240 US-PATENT-CLASS-60-243 US-PATENT-CLASS-60-259 US-PATENT-5,063,734
N91-32515* # c 38	NAS 1.71:SSC-00013-1 NASA-CASE-SSC-00013-1 US-PATENT-APPL-SN-740675	N92-10126* # c 32	NAS 1.71:NPO-17836-1-CU NASA-CASE-NPO-17836-1-CU US-PATENT-APPL-SN-716150	N92-15203* c 31	INT-PATENT-CLASS-F17C-11/00 NASA-CASE-NPO-17569-1-CU US-PATENT-APPL-SN-545236 US-PATENT-CLASS-62-461 US-PATENT-CLASS-624-3.2 US-PATENT-CLASS-624-467 US-PATENT-CLASS-624-500 US-PATENT-CLASS-624-51.2 US-PATENT-5,063,747
N91-32546* c 43	INT-PATENT-CLASS-G01S-13/89 NASA-CASE-GSC-13212-1 US-PATENT-APPL-SN-391896 US-PATENT-CLASS-342-191 US-PATENT-CLASS-342-25 US-PATENT-CLASS-342-26 US-PATENT-5,053,778	N92-10146* # c 33	NAS 1.71:NPO-17734-1-CU NASA-CASE-NPO-17734-1-CU US-PATENT-APPL-SN-700830	N92-15331* c 33	INT-PATENT-CLASS-H04R-15/00 NASA-CASE-GSC-13369-1 US-PATENT-APPL-SN-645972 US-PATENT-CLASS-310-26 US-PATENT-CLASS-310-265 US-PATENT-CLASS-310-83 US-PATENT-CLASS-367-156 US-PATENT-5,079,460
N91-32795* c 54	INT-PATENT-CLASS-A61F-2/58 INT-PATENT-CLASS-A61F-2/68 NASA-CASE-MFS-28426-1 US-PATENT-APPL-SN-508154 US-PATENT-CLASS-623-62 US-PATENT-CLASS-623-63 US-PATENT-5,021,065	N92-10185* c 35	INT-PATENT-CLASS-G01L-5/16 INT-PATENT-CLASS-G01M-9/00 NASA-CASE-LAR-14419-1 US-PATENT-APPL-SN-584018 US-PATENT-CLASS-73-147 US-PATENT-CLASS-73-862.04 US-PATENT-CLASS-73-862.65 US-PATENT-5,056,361	N92-15620* # c 62	INT-PATENT-CLASS-G06F-15/20 INT-PATENT-CLASS-G06G-7/48 NASA-CASE-NPO-17716-1-CU US-PATENT-APPL-SN-357759 US-PATENT-CLASS-364-402 US-PATENT-5,072,379
N91-32805* # c 60	NAS 1.71:NPO-17632-1-CU NASA-CASE-NPO-17632-1-CU US-PATENT-APPL-SN-712796	N92-10186* c 35	INT-PATENT-CLASS-B43L-13/24 NASA-CASE-GSC-13240-1 US-PATENT-APPL-SN-571344 US-PATENT-CLASS-33-19.2 US-PATENT-CLASS-33-23.02 US-PATENT-5,058,281	N92-16007* c 16	INT-PATENT-CLASS-B64G-1/14 NASA-CASE-MSC-21562-1 US-PATENT-APPL-SN-658911 US-PATENT-CLASS-244-121 US-PATENT-CLASS-244-129.4 US-PATENT-CLASS-244-158R US-PATENT-5,071,091
N91-32852* c 62	INT-PATENT-CLASS-G06G-7/12 NASA-CASE-NPO-17664-1-CU US-PATENT-APPL-SN-463720 US-PATENT-CLASS-364-513 US-PATENT-CLASS-364-807 US-PATENT-5,056,037	N92-10197* c 37	INT-PATENT-CLASS-F16L-15/00 NASA-CASE-MSC-21434-1 US-PATENT-APPL-SN-433881 US-PATENT-CLASS-285-23 US-PATENT-CLASS-285-353 US-PATENT-CLASS-285-39 US-PATENT-CLASS-285-912 US-PATENT-5,058,929	N92-16025* c 24	NASA-CASE-LEW-15077-1 US-PATENT-APPL-SN-608493 US-PATENT-CLASS-118-416 US-PATENT-CLASS-252-502 US-PATENT-CLASS-423-447.2 US-PATENT-CLASS-423-460 US-PATENT-CLASS-427-294 US-PATENT-CLASS-427-443.2 US-PATENT-5,073,412
N91-32922* c 74	INT-PATENT-CLASS-G01B-11/00 NASA-CASE-MSC-21416-1 US-PATENT-APPL-SN-545177 US-PATENT-CLASS-356-375 US-PATENT-CLASS-356-399 US-PATENT-5,052,807	N92-10331* # c 61	NAS 1.71:MSC-21613-1 NASA-CASE-MSC-21613-1 US-PATENT-APPL-SN-761566	N92-16026* c 24	INT-PATENT-CLASS-B32B-5/14 NASA-CASE-ARC-11888-1 US-PATENT-APPL-SN-298149 US-PATENT-CLASS-428-307.7 US-PATENT-CLASS-428-325 US-PATENT-CLASS-428-446 US-PATENT-CLASS-428-920 US-PATENT-CLASS-501-39 US-PATENT-CLASS-501-54 US-PATENT-5,079,082
N91-32924* # c 74	NAS 1.71:NPO-18194-1-CU NASA-CASE-NPO-18194-1-CU US-PATENT-APPL-SN-700379	N92-10681* c 76	INT-PATENT-CLASS-B05D-5/12 INT-PATENT-CLASS-C23F-1/00 NASA-CASE-NPO-17949-1-CU US-PATENT-APPL-SN-545016 US-PATENT-CLASS-156-637 US-PATENT-CLASS-427-343 US-PATENT-CLASS-427-62 US-PATENT-CLASS-505-1 US-PATENT-CLASS-505-728 US-PATENT-5,059,581	N92-16043* c 25	NASA-CASE-LAR-14481-1 US-PATENT-APPL-SN-035430 US-PATENT-APPL-SN-516489 US-PATENT-CLASS-528-125 US-PATENT-CLASS-528-126 US-PATENT-CLASS-528-128 US-PATENT-CLASS-528-172 US-PATENT-CLASS-528-173 US-PATENT-CLASS-528-179 US-PATENT-5,061,783
N91-32925* # c 74	NAS 1.71:NPO-18278-1-CU NASA-CASE-NPO-18278-1-CU US-PATENT-APPL-SN-747059	N92-11186* # c 27	NAS 1.71:LEW-14474-2 NASA-CASE-LEW-14474-2 US-PATENT-APPL-SN-760670	N92-16121* c 27	INT-PATENT-CLASS-H01B-1/00 NASA-CASE-NPO-17826-1-CU US-PATENT-APPL-SN-479485 US-PATENT-CLASS-252-500 US-PATENT-CLASS-252-518 US-PATENT-CLASS-526-258 US-PATENT-CLASS-528-22 US-PATENT-5,066,748
N91-32947* # c 75	NAS 1.71:MSC-21631-1 NASA-CASE-MSC-21631-1 US-PATENT-APPL-SN-729107	N92-11201* # c 27	NAS 1.71:LAR-14538-1 NASA-CASE-LAR-14538-1 US-PATENT-APPL-SN-736880	N92-16122* c 27	INT-PATENT-CLASS-C04B-35/10 NASA-CASE-LEW-14984-1 US-PATENT-APPL-SN-610883 US-PATENT-CLASS-264-63 US-PATENT-CLASS-423-630
N92-10035* # c 16	NAS 1.71:LAR-13586-1 NASA-CASE-LAR-13586-1 US-PATENT-APPL-SN-743469	N92-11286* # c 34	NAS 1.71:ARC-11921-1 NASA-CASE-ARC-11921-1 US-PATENT-APPL-SN-703649		
N92-10054* c 20	INT-PATENT-CLASS-F02R-9/52 NASA-CASE-LEW-14846-1 US-PATENT-APPL-SN-443523 US-PATENT-CLASS-60-240 US-PATENT-CLASS-60-258 US-PATENT-CLASS-60-39.281 US-PATENT-5,054,287	N92-11336* # c 35	NAS 1.71:LAR-13944-1 NASA-CASE-LAR-13944-1 US-PATENT-APPL-SN-747152		
N92-10066* # c 23	NAS 1.71:LAR-14440-1 NASA-CASE-LAR-14440-1 US-PATENT-APPL-SN-650336	N92-11384* # c 39	NAS 1.71:LAR-14741-1 NASA-CASE-LAR-14741-1 US-PATENT-APPL-SN-720153		
N92-10070* c 24	INT-PATENT-CLASS-B05D-1/24 NASA-CASE-LAR-14231-1 US-PATENT-APPL-SN-524109 US-PATENT-CLASS-118-DIG.5 US-PATENT-CLASS-156-166 US-PATENT-CLASS-156-283 US-PATENT-CLASS-427-185 US-PATENT-CLASS-427-195 US-PATENT-CLASS-427-375 US-PATENT-5,057,338	N92-11621* c 52	INT-PATENT-CLASS-A61B-8/00 NASA-CASE-LAR-13901-2 US-PATENT-APPL-SN-118993 US-PATENT-APPL-SN-358213 US-PATENT-APPL-SN-529869 US-PATENT-CLASS-128-661.03 US-PATENT-5,058,591		
N92-10073* c 25	INT-PATENT-CLASS-B01J-29/10 NASA-CASE-NPO-17480-1-CU US-PATENT-APPL-SN-508386 US-PATENT-CLASS-502-73 US-PATENT-5,057,473	N92-11627* # c 52	NAS 1.71:MSC-21775-1 NASA-CASE-MSC-21775-1 US-PATENT-APPL-SN-760633		
N92-10090* c 27	INT-PATENT-CLASS-C01B-31/04 NASA-CASE-LEW-14698-2 US-PATENT-APPL-SN-219016 US-PATENT-APPL-SN-443289 US-PATENT-CLASS-252-502 US-PATENT-CLASS-423-439 US-PATENT-CLASS-423-448 US-PATENT-CLASS-423-460 US-PATENT-5,059,409	N92-11628* # c 52	NAS 1.71:MSC-21858-1 NASA-CASE-MSC-21858-1 US-PATENT-APPL-SN-765615		
N92-10091* c 27	NASA-CASE-MSC-21503-1 US-PATENT-APPL-SN-443414	N92-11791* # c 74	NAS 1.71:NPO-18007-1-CU NASA-CASE-NPO-18007-1-CU US-PATENT-APPL-SN-703238		
		N92-12121* # c 27	NAS 1.71:LAR-14763-1 NASA-CASE-LAR-14763-1 US-PATENT-APPL-SN-736667		
		N92-12438* # c 60	NAS 1.71:NPO-17998-1-CU NASA-CASE-NPO-17998-1-CU US-PATENT-APPL-SN-653578		

### ACCESSION NUMBER INDEX

N92-16123*	c 27	US-PATENT-CLASS-501-123	N92-16808*	c 74	US-PATENT-CLASS-358-22	N92-21500*	c 37	US-PATENT-CLASS-156-620.3
		US-PATENT-CLASS-501-127			US-PATENT-5,067,019			US-PATENT-CLASS-156-620.4
		US-PATENT-5,066,625			INT-PATENT-CLASS-G02B-1/01			US-PATENT-5,092,956
		NASA-CASE-MFS-28372-1			INT-PATENT-CLASS-G02B-1/12			INT-PATENT-CLASS-E05C-5/02
		US-PATENT-APPL-SN-618854			INT-PATENT-CLASS-G02B-5/23			NASA-CASE-GSC-13200-1
		US-PATENT-CLASS-521-109.1			NASA-CASE-NPO-17612-1-CU			US-PATENT-APPL-SN-654454
		US-PATENT-CLASS-521-135			US-PATENT-APPL-SN-480385			US-PATENT-CLASS-292-DIG.39
		US-PATENT-CLASS-521-136			US-PATENT-CLASS-359-11			US-PATENT-CLASS-292-110
		US-PATENT-CLASS-521-178			US-PATENT-CLASS-359-240			US-PATENT-5,087,088
		US-PATENT-CLASS-521-54			US-PATENT-CLASS-359-241			INT-PATENT-CLASS-G01L-19/04
N92-16161*	c 31	US-PATENT-CLASS-521-84.1	N92-16809*	c 74	US-PATENT-5,062,693	N92-21586*	c 35	NASA-CASE-LAR-14340-1-CU
		US-PATENT-CLASS-521-907			INT-PATENT-CLASS-H04N-13/00			US-PATENT-APPL-SN-575695
		US-PATENT-5,064,868			NASA-CASE-NPO-18028-1-CU			US-PATENT-CLASS-73-147
		INT-PATENT-CLASS-B25G-3/18			US-PATENT-APPL-SN-608452			US-PATENT-CLASS-73-182
		NASA-CASE-MSC-21517-1			US-PATENT-CLASS-358-88			US-PATENT-CLASS-73-708
		US-PATENT-APPL-SN-654704			US-PATENT-CLASS-358-91			US-PATENT-5,076,103
		US-PATENT-CLASS-292-251.5			US-PATENT-CLASS-358-92			INT-PATENT-CLASS-B64C-21/10
		US-PATENT-CLASS-403-DIG.1			US-PATENT-5,065,236			NASA-CASE-LAR-13870-1-CU
		US-PATENT-CLASS-403-328			INT-PATENT-CLASS-G02B-23/00			US-PATENT-APPL-SN-429516
		US-PATENT-CLASS-411-348			INT-PATENT-CLASS-G02B-3/00			US-PATENT-CLASS-244-198
N92-16162*	c 31	US-PATENT-5,061,112	N92-16810*	c 74	NASA-CASE-ARC-11892-1-SB	N92-21587*	c 05	US-PATENT-CLASS-244-200
		INNT-PATENT-CLASS-B23K-20/08			US-PATENT-APPL-SN-472939			US-PATENT-CLASS-244-212
		NASA-CASE-LAR-13825-1			US-PATENT-CLASS-359-362			US-PATENT-CLASS-244-215
		US-PATENT-APPL-SN-591645			US-PATENT-CLASS-359-572			US-PATENT-5,088,665
		US-PATENT-CLASS-228-107			US-PATENT-CLASS-359-744			INT-PATENT-CLASS-G01M-9/00
		US-PATENT-CLASS-228-2.5			US-PATENT-5,040,886			NASA-CASE-LAR-13742-1
		US-PATENT-5,064,111			INT-PATENT-CLASS-G02B-27/64			US-PATENT-APPL-SN-621144
		NASA-CASE-NPO-17573-2-CU			INT-PATENT-CLASS-G02B-7/02			US-PATENT-CLASS-116-201
		US-PATENT-APPL-SN-311552			NASA-CASE-ARC-11916-1-SB			US-PATENT-CLASS-116-207
		US-PATENT-APPL-SN-692801			US-PATENT-APPL-SN-531373			US-PATENT-CLASS-73-147
N92-16196*	c 33	US-PATENT-CLASS-307-272.1	N92-16811*	c 74	US-PATENT-CLASS-359-557	N92-21589*	c 54	US-PATENT-5,070,729
		US-PATENT-CLASS-307-296.2			US-PATENT-CLASS-359-813			NASA-CASE-MSC-21868-1
		US-PATENT-CLASS-307-296.7			US-PATENT-CLASS-359-819			US-PATENT-APPL-SN-765273
		US-P						



			US-PATENT-APPL-SN-648772				US-PATENT-APPL-SN-387928			N92-24053* #	c 27	.....	NAS 1.71:LEW-15027-2
			US-PATENT-CLASS-411-354				US-PATENT-APPL-SN-641798						NASA-CASE-LEW-15027-2
			US-PATENT-CLASS-411-385				US-PATENT-CLASS-357-4						US-PATENT-APPL-SN-824858
			US-PATENT-CLASS-411-65				US-PATENT-CLASS-357-5			N92-24055* #	c 37	.....	NAS 1.71:MFS-28634-1
			US-PATENT-CLASS-411-901				US-PATENT-CLASS-505-862						NASA-CASE-MFS-28634-1
			US-PATENT-CLASS-411-908				US-PATENT-CLASS-505-871						US-PATENT-APPL-SN-825895
			US-PATENT-5,090,857				US-PATENT-5,099,294			N92-24057* #	c 44	.....	NAS 1.71:LEW-15308-1
N92-21727* #	c 37	.....	NASA-CASE-MSC-21748-1	N92-22042* #	c 33	...	INT-PATENT-CLASS-H02N-1/08						NASA-CASE-LEW-15308-1
			US-PATENT-APPL-SN-657598				NASA-CASE-NPO-17684-1-CU			N92-24243* #	c 37	.....	US-PATENT-APPL-SN-862113
			US-PATENT-CLASS-277-3				US-PATENT-APPL-SN-443522						NAS 1.71:GSC-13356-1
			US-PATENT-CLASS-277-34				US-PATENT-CLASS-310-308						NASA-CASE-GSC-13356-1
			US-PATENT-CLASS-277-34.3				US-PATENT-CLASS-310-309			N92-24244* #	c 18	.....	US-PATENT-APPL-SN-760634
			US-PATENT-CLASS-285-223				US-PATENT-5,084,645						NAS 1.71:GSC-13408-1
			US-PATENT-CLASS-285-346	N92-22043* #	c 37	..	INT-PATENT-CLASS-F16J-15/46						NASA-CASE-GSC-13408-1
			US-PATENT-CLASS-285-910				NASA-CASE-LEW-15085-1			N92-24245* #	c 63	.....	US-PATENT-APPL-SN-781625
			US-PATENT-CLASS-285-97				US-PATENT-APPL-SN-610879						NAS 1.71:NPO-18497-1-CU
N92-21728* #	c 37	..	INT-PATENT-CLASS-B60T-13/04				US-PATENT-CLASS-239-265.11						NASA-CASE-NPO-18497-1-CU
			NASA-CASE-GSC-13376-1				US-PATENT-CLASS-277-229			N92-24246* #	c 33	.....	US-PATENT-APPL-SN-845283
			US-PATENT-APPL-SN-677008				US-PATENT-CLASS-277-234						NAS 1.71:NPO-18552-1-CU
			US-PATENT-CLASS-188-171				US-PATENT-CLASS-277-3						NASA-CASE-NPO-18552-1-CU
			US-PATENT-CLASS-188-82.84				US-PATENT-CLASS-277-34			N92-25397* #	c 27	..	US-PATENT-APPL-SN-854124
			US-PATENT-CLASS-188-82.9				US-PATENT-CLASS-277-76						INT-PATENT-CLASS-B01D-13/02
			US-PATENT-5,103,941				US-PATENT-5,082,293						INT-PATENT-CLASS-C25D-13/00
N92-21999* #	c 18	...	INT-PATENT-CLASS-B64G-1/62	N92-22044* #	c 27	.....	NASA-CASE-LAR-14346-1						NASA-CASE-MFS-26050-1
			NASA-CASE-MSC-21536-1				US-PATENT-APPL-SN-250480						US-PATENT-APPL-SN-808981
			US-PATENT-APPL-SN-458476				US-PATENT-APPL-SN-434195						US-PATENT-CLASS-204-299R
			US-PATENT-CLASS-244-160				US-PATENT-CLASS-525-275						US-PATENT-CLASS-204-300EC
			US-PATENT-CLASS-244-162				US-PATENT-CLASS-525-421						US-PATENT-CLASS-428-403
			US-PATENT-CLASS-244-163				US-PATENT-CLASS-525-422						US-PATENT-CLASS-428-405
			US-PATENT-5,064,151				US-PATENT-CLASS-526-248						US-PATENT-CLASS-428-407
N92-22033* #	c 32	...	INT-PATENT-CLASS-G06G-7/12				US-PATENT-CLASS-526-249			N92-25398* #	c 76	....	US-PATENT-4,690,749
			NASA-CASE-NPO-17564-1-CU				US-PATENT-CLASS-526-262						INT-PATENT-CLASS-B01D-9/00
			US-PATENT-APPL-SN-414811				US-PATENT-5,081,198						NASA-CASE-MFS-26088-1-CU
			US-PATENT-CLASS-307-201	N92-23377* #	c 37	.....	NAS 1.71:GSC-13360-1						US-PATENT-APPL-SN-5757360-1
			US-PATENT-CLASS-364-807				NASA-CASE-GSC-13360-1						US-PATENT-CLASS-156-DIG.113
			US-PATENT-CLASS-395-24				US-PATENT-APPL-SN-772200						US-PATENT-CLASS-156-DIG.62
			US-PATENT-5,101,361	N92-23378* #	c 37	.....	NAS 1.71:GSC-13359-1						US-PATENT-CLASS-422-245
N92-22034* #	c 74	...	INT-PATENT-CLASS-G01B-9/02				NASA-CASE-GSC-13359-1						US-PATENT-CLASS-422-247
			NASA-CASE-NPO-17913-1-CU				US-PATENT-APPL-SN-796496						US-PATENT-5,013,531
			US-PATENT-APPL-SN-527509	N92-23461* #	c 27	.....	NAS 1.71:LEW-15314-1			N92-25399* #	c 25	....	INT-PATENT-CLASS-B44C-1/22
			US-PATENT-CLASS-356-351				NASA-CASE-LEW-15314-1						INT-PATENT-CLASS-C09K-13/00
			US-PATENT-CLASS-356-360				US-PATENT-APPL-SN-842313						INT-PATENT-CLASS-C23F-1/00
			US-PATENT-CLASS-356-363	N92-23462* #	c 33	.....	NAS 1.71:GSC-13422-1						NASA-CASE-MFS-29576-1
			US-PATENT-5,080,490				NASA-CASE-GSC-13422-1						US-PATENT-APPL-SN-587890
N92-22035* #	c 76	.....	NASA-CASE-NPO-17724-1-CU	N92-23463* #	c 44	.....	US-PATENT-APPL-SN-772741						US-PATENT-CLASS-156-656
			US-PATENT-APPL-SN-488578				NAS 1.71:GSC-13450-1						US-PATENT-CLASS-156-664
			US-PATENT-CLASS-148-DIG.22				NASA-CASE-GSC-13450-1						US-PATENT-CLASS-252-79.2
			US-PATENT-CLASS-437-105	N92-23464* #	c 33	.....	US-PATENT-APPL-SN-787993						US-PATENT-CLASS-252-79.4
			US-PATENT-CLASS-437-107				NAS 1.71:NPO-18428-1-CU						US-PATENT-5,034,093
			US-PATENT-CLASS-437-133				NASA-CASE-NPO-18428-1-CU			N92-28571* #	c 74	....	INT-PATENT-CLASS-H01P-1/18
			US-PATENT-CLASS-437-85				US-PATENT-APPL-SN-842297						NASA-CASE-LEW-14878-1
			US-PATENT-CLASS-437-936	N92-23544* #	c 37	.....	NAS 1.71:MSC-21864-1						US-PATENT-APPL-SN-587921
			US-PATENT-CLASS-437-945				NASA-CASE-MSC-21864-1						US-PATENT-CLASS-333-161
			US-PATENT-5,094,974				US-PATENT-APPL-SN-799460						US-PATENT-CLASS-333-995
N92-22036* #	c 37	..	INT-PATENT-CLASS-G06F-15/00	N92-23545* #	c 35	.....	NAS 1.71:MSC-21951-1						US-PATENT-CLASS-505-1
			NASA-CASE-NPO-17800-1-CU				NASA-CASE-MSC-21951-1						US-PATENT-CLASS-505-703
			US-PATENT-APPL-SN-522949				US-PATENT-APPL-SN-834451						US-PATENT-CLASS-505-848
			US-PATENT-CLASS-395-86	N92-23546* #	c 60	.....	NAS 1.71:NPO-18491-1-CU						US-PATENT-CLASS-505-866
			US-PATENT-CLASS-395-95				NASA-CASE-NPO-18491-1-CU						US-PATENT-5,116,807
			US-PATENT-CLASS-901-6				US-PATENT-APPL-SN-880210			N92-28727* #	c 37	...	INT-PATENT-CLASS-B64G-1/62
			US-PATENT-5,086,400	N92-23547* #	c 37	.....	NAS 1.71:GSC-13442-1						NASA-CASE-MSC-21906-1
N92-22037* #	c 44	..	INT-PATENT-CLASS-H01C-31/58				NASA-CASE-GSC-13442-1						US-PATENT-APPL-SN-813558
			NASA-CASE-LEW-14731-1				US-PATENT-APPL-SN-843861						US-PATENT-CLASS-244-161
			US-PATENT-APPL-SN-503486	N92-23548* #	c 37	.....	NAS 1.71:GSC-13141-1						US-PATENT-CLASS-294-65.5
			US-PATENT-CLASS-136-253				NASA-CASE-GSC-13141-1						US-PATENT-CLASS-294-86.4
			US-PATENT-5,080,724				US-PATENT-APPL-SN-754875						US-PATENT-CLASS-901-30
N92-22038* #	c 35	....	INT-PATENT-CLASS-B23H-9/00	N92-23549* #	c 39	.....	NAS 1.71:GSC-13451-1						US-PATENT-CLASS-901-46
			NASA-CASE-LEW-14967-2				NASA-CASE-GSC-13451-1						US-PATENT-5,125,601
			US-PATENT-APPL-SN-531433				US-PATENT-APPL-SN-801141			N92-28728* #	c 25	..	INT-PATENT-CLASS-G01N-27/26
			US-PATENT-APPL-SN-685062				NAS 1.71:SSC-00010-2						NASA-CASE-MFS-26049-2-NP
			US-PATENT-CLASS-219-69.17	N92-23550* #	c 82	.....	NASA-CASE-SSC-00010-2						US-PATENT-APPL-SN-376487
			US-PATENT-CLASS-374-29				US-PATENT-APPL-SN-842956						US-PATENT-APPL-SN-599601
			US-PATENT-CLASS-40-703	N92-23551* #	c 74	.....	NAS 1.71:NPO-18702-1-CU						US-PATENT-CLASS-204-180.1
			US-PATENT-5,086,204				NASA-CASE-NPO-18702-1-CU						US-PATENT-CLASS-204-183.3
N92-22039* #	c 35	..	INT-PATENT-CLASS-G01B-5/02				US-PATENT-APPL-SN-842300						US-PATENT-CLASS-204-299R
			NASA-CASE-MSC-21700-1	N92-23553* #	c 37	.....	NAS 1.71:NPO-18607-1-CU						US-PATENT-5,108,568
			US-PATENT-APPL-SN-640775				NASA-CASE-NPO-18607-1-CU			N92-28729* #	c 02	....	INT-PATENT-CLASS-B64C-3/14
			US-PATENT-CLASS-33-10				US-PATENT-APPL-SN-849629						NASA-CASE-LAR-14281-1
			US-PATENT-CLASS-33-15D	N92-24042* #	c 37	.....	NAS 1.71:NPO-18499-1-CU						US-PATENT-APPL-SN-560923
			US-PATENT-CLASS-33-520				NASA-CASE-NPO-18499-1-CU						US-PATENT-CLASS-244-35R
			US-PATENT-CLASS-33-644				US-PATENT-APPL-SN-862861						US-PATENT-CLASS-244-36
			US-PATENT-5,083,378	N92-24043* #	c 37	.....	NAS 1.71:NPO-18498-1-CU						US-PATENT-5,112,120
N92-22040* #	c 76	.....	NASA-CASE-NPO-17812-2-CU				NASA-CASE-NPO-18498-1-CU			N92-28750* #	c 18	....	INT-PATENT-CLASS-B64G-1/64
			US-PATENT-APPL-SN-387928				US-PATENT-APPL-SN-866779						NASA-CASE-MFS-28421-1
			US-PATENT-APPL-SN-642765	N92-24044* #	c 54	.....	NAS 1.71:MFS-28430-1						US-PATENT-APPL-SN-481537
			US-PATENT-CLASS-156-643				NASA-CASE-MFS-28430-1						US-PATENT-CLASS-244-161
			US-PATENT-CLASS-357-5				US-PATENT-APPL-SN-832569						US-PATENT-CLASS-358-103
			US-PATENT-CLASS-427-419.1	N92-24045* #	c 62	.....	NAS 1.71:NPO-18414-1-CU						US-PATENT-CLASS-364-459
			US-PATENT-CLASS-427-419.2				NASA-CASE-NPO-18414-1-CU						US-PATENT-5,109,345
			US-PATENT-CLASS-427-62				US-PATENT-APPL-SN-880211						NASA-CASE-LAR-14145-1
			US-PATENT-CLASS-427-63	N92-24051* #	c 37	.....	NAS 1.71:MSC-21648-1						US-PATENT-APPL-SN-508316
			US-PATENT-5,100,694				NASA-CASE-MSC-21648-1						US-PATENT-APPL-SN-732884
N92-22041* #	c 76	..	INT-PATENT-CLASS-H01L-27/12	N92-24052* #	c 51	.....	US-PATENT-APPL-SN-824806						US-PATENT-CLASS-528-125
			INT-PATENT-CLASS-H01L-39/22				NAS 1.71:MSC-21843-1-NP						US-PATENT-CLASS-528-126
			NASA-CASE-NPO-17812-3-CU				NASA-CASE-MSC-21843-1-NP						US-PATENT-CLASS-528-127
							US-PATENT-APPL-SN-803828						US-PATENT-CLASS-528-128

				US-PATENT-CLASS-528-220				US-PATENT-CLASS-324-239				US-PATENT-CLASS-294-119.1
				US-PATENT-CLASS-528-224				US-PATENT-5,117,184				US-PATENT-CLASS-294-902
				US-PATENT-5,116,934				INT-PATENT-CLASS-G02F-1/01				US-PATENT-CLASS-901-39
N92-28752*	c 34	..	INT-PATENT-CLASS-F28D-17/00		N92-29117*	c 74	....	NASA-CASE-LAR-14588-1-CU		N92-29140*	c 37	... INT-PATENT-CLASS-B25G-3/00
			NASA-CASE-LAR-14033-1					US-PATENT-APPL-SN-653605				NASA-CASE-GSC-13220-1
			US-PATENT-APPL-SN-501909					US-PATENT-CLASS-356-370				US-PATENT-5,120,101
			US-PATENT-CLASS-165-104.31					US-PATENT-CLASS-356-414				US-PATENT-APPL-SN-636532
			US-PATENT-CLASS-165-104.34					US-PATENT-CLASS-359-246				US-PATENT-CLASS-403-13
			US-PATENT-CLASS-165-109.1					US-PATENT-CLASS-359-281				US-PATENT-CLASS-403-24
			US-PATENT-CLASS-165-110					US-PATENT-5,128,797				US-PATENT-5,112,154
			US-PATENT-CLASS-165-4		N92-29120*	c 37	....	INT-PATENT-CLASS-F16C-9/00		N92-29141*	c 23	INT-PATENT-CLASS-C07D-271/10
			US-PATENT-CLASS-165-41					NASA-CASE-GSC-13251-1				INT-PATENT-CLASS-C08G-73/08
			US-PATENT-5,107,920					US-PATENT-APPL-SN-714814				NASA-CASE-LAR-14427-1
N92-28753*	c 33	..	INT-PATENT-CLASS-H01M-10/40					US-PATENT-CLASS-285-381				US-PATENT-APPL-SN-645089
			NASA-CASE-NPO-17922-1-CU					US-PATENT-CLASS-292-DIG.66				US-PATENT-CLASS-528-185
			US-PATENT-APPL-SN-596139					US-PATENT-CLASS-403-28				US-PATENT-CLASS-548-143
			US-PATENT-CLASS-252-62.2					US-PATENT-CLASS-403-404				US-PATENT-5,118,781
			US-PATENT-CLASS-429-192					US-PATENT-CLASS-411-909		N92-29143*	c 44	.... INT-PATENT-CLASS-F03G-6/00
			US-PATENT-5,110,694					US-PATENT-5,108,214				NASA-CASE-LEW-14949-1
N92-28754*	c 37	..	INT-PATENT-CLASS-B05C-17/02		N92-29122*	c 74	....	INT-PATENT-CLASS-G01J-1/20				US-PATENT-APPL-SN-676910
			NASA-CASE-GSC-13230-1					NASA-CASE-NPO-18095-1-CU				US-PATENT-CLASS-126-433
			US-PATENT-APPL-SN-531374					US-PATENT-APPL-SN-665509				US-PATENT-CLASS-126-436
			US-PATENT-CLASS-15-230.11					US-PATENT-CLASS-250-201.9				US-PATENT-CLASS-60-641.8
			US-PATENT-CLASS-29-110.5					US-PATENT-CLASS-359-849				US-PATENT-CLASS-60-659
			US-PATENT-CLASS-29-123					US-PATENT-5,113,064				US-PATENT-5,113,659
			US-PATENT-CLASS-29-132		N92-29124*	c 32	..	INT-PATENT-CLASS-G01R-23/16		N92-29148*	c 47	.. INT-PATENT-CLASS-G01C-21/00
			US-PATENT-5,068,951					NASA-CASE-NPO-17759-1-CU				NASA-CASE-NPO-18115-1-CU
N92-28755*	c 52	....	INT-PATENT-CLASS-A61B-3/14					US-PATENT-APPL-SN-660371				US-PATENT-APPL-SN-618790
			NASA-CASE-MS-C-21675-1					US-PATENT-CLASS-324-77C				US-PATENT-CLASS-364-443
			US-PATENT-APPL-SN-562095					US-PATENT-CLASS-324-77C				US-PATENT-CLASS-374-112
			US-PATENT-CLASS-351-206					US-PATENT-CLASS-324-78D				US-PATENT-CLASS-73-178R
			US-PATENT-CLASS-351-221					US-PATENT-CLASS-324-78F				US-PATENT-5,117,689
			US-PATENT-5,125,730					US-PATENT-5,122,731		N92-29150*	c 37	.. INT-PATENT-CLASS-F16B-37/08
N92-28756*	c 25	....	INT-PATENT-CLASS-C25B-1/04		N92-29125*	c 34	..	INT-PATENT-CLASS-F28D-15/02				NASA-CASE-MS-C-21799-1
			INT-PATENT-CLASS-C25B-1/12					NASA-CASE-LEW-15235-1				US-PATENT-APPL-SN-759367
			NASA-CASE-MS-C-21572-1-SB					US-PATENT-APPL-SN-736145				US-PATENT-CLASS-411-14
			US-PATENT-APPL-SN-648933					US-PATENT-CLASS-165-104.14				US-PATENT-CLASS-411-267
			US-PATENT-CLASS-204-129					US-PATENT-CLASS-165-104.22				US-PATENT-CLASS-411-433
			US-PATENT-5,110,436					US-PATENT-CLASS-165-41				US-PATENT-5,118,237
N92-28757*	c 39	..	INT-PATENT-CLASS-G01N-27/80					US-PATENT-CLASS-417-209		N92-29151*	c 37	.. INT-PATENT-CLASS-G02B-26/02
			INT-PATENT-CLASS-G01R-33/12					US-PATENT-5,127,471				NASA-CASE-GSC-13189-2
			NASA-CASE-LAR-13817-5		N92-29129*	c 54	....	INT-PATENT-CLASS-G06K-9/00				US-PATENT-APPL-SN-331119
			US-PATENT-APPL-SN-210486					NASA-CASE-NPO-17552-1-CU				US-PATENT-APPL-SN-613188
			US-PATENT-APPL-SN-449211					US-PATENT-APPL-SN-251500				US-PATENT-CLASS-359-230
			US-PATENT-APPL-SN-686263					US-PATENT-CLASS-358-105				US-PATENT-CLASS-359-236
			US-PATENT-CLASS-324-226					US-PATENT-CLASS-364-424.01		N92-29153*	c 33	.... INT-PATENT-CLASS-G05G-9/00
			US-PATENT-CLASS-324-235					US-PATENT-CLASS-382-1				NASA-CASE-GSC-13187-1
			US-PATENT-CLASS-73-601					US-PATENT-CLASS-382-22				US-PATENT-APPL-SN-657790
			US-PATENT-5,121,058					US-PATENT-CLASS-901-1				US-PATENT-CLASS-248-65
N92-29090*	c 27	..	INT-PATENT-CLASS-B32B-15/01					US-PATENT-5,109,425				US-PATENT-CLASS-248-68.1
			INT-PATENT-CLASS-B32B-15/20		N92-29130*	c 70	..	INT-PATENT-CLASS-G01N-27/72				US-PATENT-CLASS-273-148B
			INT-PATENT-CLASS-B32B-5/02					NASA-CASE-NPO-18187-1-CU				US-PATENT-CLASS-338-128
			NASA-CASE-LEW-15155-1					US-PATENT-APPL-SN-618789				US-PATENT-CLASS-74-471XY
			US-PATENT-APPL-SN-682160					US-PATENT-CLASS-324-205				US-PATENT-5,113,714
			US-PATENT-CLASS-428-614					US-PATENT-CLASS-324-244		N92-29154*	c 38	.. INT-PATENT-CLASS-G01R-35/00
			US-PATENT-CLASS-428-660					US-PATENT-CLASS-324-261				NASA-CASE-GSC-13386-1
			US-PATENT-CLASS-428-661					US-PATENT-CLASS-361-148				US-PATENT-APPL-SN-758977
			US-PATENT-5,116,690					US-PATENT-CLASS-361-149				US-PATENT-CLASS-324-224
N92-29092*	c 37	..	INT-PATENT-CLASS-A47H-1/144					US-PATENT-CLASS-361-267				US-PATENT-CLASS-324-226
			NASA-CASE-LEW-15196-1					US-PATENT-5,126,669				US-PATENT-CLASS-324-262
			US-PATENT-APPL-SN-687606		N92-29132*	c 60	..	INT-PATENT-CLASS-G11B-17/22				US-PATENT-CLASS-356-432
			US-PATENT-CLASS-16-111R					INT-PATENT-CLASS-G11B-3/74				US-PATENT-CLASS-374-4
			US-PATENT-CLASS-16-114R					INT-PATENT-CLASS-G11B-5/09				US-PATENT-CLASS-374-45
			US-PATENT-CLASS-248-222.1					NASA-CASE-GSC-13196-1				US-PATENT-5,124,640
			US-PATENT-CLASS-248-251					US-PATENT-APPL-SN-357928		N92-29155*	c 39	..... NASA-CASE-LAR-13817-2
			US-PATENT-CLASS-256-59					US-PATENT-CLASS-360-48				US-PATENT-APPL-SN-210486
			US-PATENT-5,126,131					US-PATENT-CLASS-360-98.01				US-PATENT-APPL-SN-449209
N92-29094*	c 26	....	INT-PATENT-CLASS-B23K-1/00					US-PATENT-CLASS-369-32				US-PATENT-CLASS-324-209
			NASA-CASE-GSC-13344-1					US-PATENT-CLASS-369-95				US-PATENT-CLASS-324-226
			US-PATENT-APPL-SN-718046					US-PATENT-5,111,345				US-PATENT-CLASS-324-227
			US-PATENT-CLASS-219-85.15		N92-29133*	c 74	..	INT-PATENT-CLASS-G01D-5/34				US-PATENT-CLASS-324-235
			US-PATENT-CLASS-219-85.19					NASA-CASE-GSC-13175-1				US-PATENT-CLASS-324-239
			US-PATENT-5,126,527					US-PATENT-APPL-SN-506636				US-PATENT-CLASS-73-801
N92-29097*	c 35	....	INT-PATENT-CLASS-G01L-7/08					US-PATENT-CLASS-250-231.14				US-PATENT-5,109,195
			INT-PATENT-CLASS-G01L-9/06					US-PATENT-CLASS-369-44.26		N92-29156*	c 35	.. INT-PATENT-CLASS-F25B-19/02
			NASA-CASE-LAR-14579-1					US-PATENT-5,107,107				NASA-CASE-NPO-18184-1-CU
			US-PATENT-APPL-SN-690198					INT-PATENT-CLASS-G21K-7/00				US-PATENT-APPL-SN-636076
			US-PATENT-CLASS-338-4		N92-29135*	c 35	....	NASA-CASE-MFS-28485-1				US-PATENT-CLASS-62-224
			US-PATENT-CLASS-73-708					US-PATENT-APPL-SN-606988				US-PATENT-CLASS-62-51.2
			US-PATENT-CLASS-73-721					US-PATENT-CLASS-378-210				US-PATENT-5,119,637
			US-PATENT-CLASS-73-727					US-PATENT-CLASS-378-43		N92-29157*	c 27	INT-PATENT-CLASS-C08F-283/04
			US-PATENT-CLASS-73-756					US-PATENT-5,107,526				NASA-CASE-LAR-13669-1
			US-PATENT-5,116,331					US-PATENT-5,107,526				US-PATENT-APPL-SN-084064
N92-29099*	c 37	..	INT-PATENT-CLASS-F16C-32/04		N92-29137*	c 54	.....	NASA-CASE-MS-C-21589-1				US-PATENT-CLASS-525-420
			INT-PATENT-CLASS-H02K-1/14					US-PATENT-APPL-SN-529427				US-PATENT-CLASS-525-432
			NASA-CASE-GSC-13346-1					US-PATENT-CLASS-252-DIG.13				US-PATENT-CLASS-528-179
			US-PATENT-APPL-SN-691609					US-PATENT-CLASS-252-DIG.14				US-PATENT-CLASS-528-185
			US-PATENT-CLASS-310-90.5					US-PATENT-CLASS-252-DIG.5				US-PATENT-CLASS-528-352
			US-PATENT-CLASS-505-876					US-PATENT-CLASS-252-547				US-PATENT-CLASS-528-353
			US-PATENT-5,117,139					US-PATENT-CLASS-424-70				US-PATENT-5,116,939
N92-29101*	c 39	..	INT-PATENT-CLASS-G01R-27/72					US-PATENT-CLASS-424-70		N92-29158*	c 74	..... NASA-CASE-LAR-13616-3
			INT-PATENT-CLASS-G01R-33/12					US-PATENT-5,116,433				US-PATENT-APPL-SN-140185
			NASA-CASE-LAR-13817-4					INT-PATENT-CLASS-B66C-1/62				US-PATENT-APPL-SN-337768
			US-PATENT-APPL-SN-210486		N92-29138*	c 37	....	NASA-CASE-GSC-13261-1				US-PATENT-APPL-SN-693049
			US-PATENT-APPL-SN-449211					US-PATENT-APPL-SN-628529				US-PATENT-CLASS-427-108
			US-PATENT-APPL-SN-608504									

**N92-33030**

**F-103**

		US-PATENT-CLASS-219-72			US-PATENT-CLASS-356-28			NASA-CASE-MSC-21294-2
		US-PATENT-CLASS-219-75			US-PATENT-CLASS-356-318			US-PATENT-APPL-SN-213558
		US-PATENT-5,149,932			US-PATENT-CLASS-73-861.05			US-PATENT-APPL-SN-687605
N92-33031*	c 37	INT-PATENT-CLASS-F16H-21/16	N92-34173*	c 37	INT-PATENT-CLASS-F16M-13/00			US-PATENT-CLASS-435-240.24
		INT-PATENT-CLASS-F16H-49/00			NASA-CASE-LAR-14352-1			US-PATENT-CLASS-435-240.241
		NASA-CASE-LAR-14515-1-CU			US-PATENT-APPL-SN-735149			US-PATENT-CLASS-435-240.25
		US-PATENT-APPL-SN-678551			US-PATENT-CLASS-188-378			US-PATENT-CLASS-435-240.46
		US-PATENT-CLASS-74-25			US-PATENT-CLASS-248-550			US-PATENT-CLASS-435-818
		US-PATENT-CLASS-74-437			US-PATENT-5,150,875	N93-11056*	c 76	INT-PATENT-CLASS-H01L-29/205
		US-PATENT-5,146,803			US-PATENT-5,150,875			INT-PATENT-CLASS-H01L-31/10
N92-33032*	c 52	INT-PATENT-CLASS-A61M-1/00	N92-34174*	c 39	INT-PATENT-CLASS-F16B-31/02			NASA-CASE-NPO-17880-1-CU
		NASA-CASE-GSC-13306-1			NASA-CASE-LAR-14168-1			US-PATENT-APPL-SN-651882
		US-PATENT-APPL-SN-674828			US-PATENT-APPL-SN-717755			US-PATENT-CLASS-357-16
		US-PATENT-CLASS-148-402			US-PATENT-CLASS-73-761			US-PATENT-CLASS-357-30
		US-PATENT-CLASS-606-106			US-PATENT-CLASS-73-862.59			US-PATENT-CLASS-357-4
		US-PATENT-CLASS-606-127			US-PATENT-5,150,620			US-PATENT-5,132,763
		US-PATENT-CLASS-606-78	N92-34205* #	c 37	NAS 1.71:NPO-18690-1-CU	N93-11057*	c 09	INT-PATENT-CLASS-G01N-25/72
		US-PATENT-5,133,721			NASA-CASE-NPO-18690-1-CU			NASA-CASE-LAR-13508-3-CU
N92-33057*	c 60	NASA-CASE-NPO-17997-1-CU	N92-34206* #	c 25	NAS 1.71:LEW-15360-1			US-PATENT-APPL-SN-146939
		US-PATENT-APPL-SN-481013			NASA-CASE-LEW-15360-1			US-PATENT-APPL-SN-524108
		US-PATENT-CLASS-359-107			US-PATENT-APPL-SN-884097			US-PATENT-APPL-SN-768094
		US-PATENT-CLASS-359-108	N92-34210* #	c 54	NAS 1.71:MSC-21632-1			US-PATENT-CLASS-374-4
		US-PATENT-CLASS-359-559			NASA-CASE-MSC-21632-1			US-PATENT-CLASS-374-5
		US-PATENT-CLASS-359-561			US-PATENT-APPL-SN-929556			US-PATENT-CLASS-374-57
		US-PATENT-CLASS-365-49	N92-34212* #	c 37	NAS 1.71:LAR-14565-1-CU			US-PATENT-CLASS-73-147
		US-PATENT-CLASS-382-31			NASA-CASE-LAR-14565-1-CU			US-PATENT-5,131,758
		US-PATENT-CLASS-382-32	N92-34213* #	c 09	NAS 1.71:LAR-14232-1	N93-11058*	c 74	INT-PATENT-CLASS-G01B-11/02
		US-PATENT-5,131,055			NASA-CASE-LAR-14232-1			NASA-CASE-LEW-14996-1
N92-33611*	c 25	NASA-CASE-LAR-13388-1	N92-34214* #	c 24	NAS 1.71:LAR-14954-1			US-PATENT-APPL-SN-703435
		US-PATENT-APPL-SN-628062			US-PATENT-APPL-SN-914905			US-PATENT-CLASS-356-356
		US-PATENT-CLASS-210-222			NASA-CASE-LAR-14954-1			US-PATENT-CLASS-356-360
		US-PATENT-CLASS-210-223	N92-34229*	c 51	US-PATENT-APPL-SN-924689			US-PATENT-CLASS-356-376
		US-PATENT-CLASS-210-695			NASA-CASE-MSC-21560-1			US-PATENT-CLASS-364-575
		US-PATENT-CLASS-210-748			US-PATENT-APPL-SN-213558			US-PATENT-CLASS-382-26
		US-PATENT-CLASS-210-767			US-PATENT-APPL-SN-213559	N93-11059*	c 27	INT-PATENT-CLASS-C08L-79/08
		US-PATENT-CLASS-55-15			US-PATENT-APPL-SN-317776			NASA-CASE-LAR-13925-2
		US-PATENT-CLASS-55-277			US-PATENT-APPL-SN-317931			US-PATENT-APPL-SN-301925
N92-33612*	c 31	INT-PATENT-CLASS-B65D-83/10			US-PATENT-CLASS-435-240.24			US-PATENT-APPL-SN-665371
		NASA-CASE-MSC-21776-1			US-PATENT-CLASS-435-240.25			US-PATENT-CLASS-525-422
		US-PATENT-APPL-SN-772763			US-PATENT-CLASS-435-286			US-PATENT-CLASS-525-432
		US-PATENT-CLASS-206-364			US-PATENT-CLASS-435-3			US-PATENT-CLASS-525-903
		US-PATENT-CLASS-206-366			US-PATENT-5,153,132	N93-11172* #	c 34	NAS 1.71:LEW-15218-1
		US-PATENT-CLASS-206-370	N92-34231* #	c 51	NASA-CASE-MSC-21559-1			NASA-CASE-LEW-15218-1
		US-PATENT-CLASS-206-818			US-PATENT-APPL-SN-213558			US-PATENT-APPL-SN-889003
		US-PATENT-CLASS-220-908			US-PATENT-APPL-SN-213559	N93-11174* #	c 63	NAS 1.71:NPO-18579-1-CU
		US-PATENT-5,145,063			US-PATENT-APPL-SN-317776			NASA-CASE-NPO-18579-1-CU
N92-33614*	c 35	INT-PATENT-CLASS-G01K-7/00			US-PATENT-CLASS-435-240.24			US-PATENT-APPL-SN-937335
		INT-PATENT-CLASS-G01K-7/16			US-PATENT-CLASS-435-286	N93-11177* #	c 37	NAS 1.71:NPO-18584-1-CU
		NASA-CASE-GSC-13406-1			US-PATENT-CLASS-435-3			NASA-CASE-NPO-18584-1-CU
		US-PATENT-APPL-SN-765070			US-PATENT-CLASS-435-312			US-PATENT-APPL-SN-921192
		US-PATENT-CLASS-338-22SD			US-PATENT-5,155,034	N93-11456* #	c 33	NAS 1.71:NPO-18343-1-CU
		US-PATENT-CLASS-338-25			NASA-CASE-MSC-21662-1			NASA-CASE-NPO-18343-1-CU
		US-PATENT-CLASS-357-28	N92-34232* #	c 51	US-PATENT-APPL-SN-625345			US-PATENT-APPL-SN-942491
		US-PATENT-CLASS-374-178			US-PATENT-CLASS-435-240.240	N93-11543* #	c 24	NAS 1.71:LEW-15263-1
		US-PATENT-CLASS-374-185			US-PATENT-CLASS-435-284			NASA-CASE-LEW-15263-1
		US-PATENT-5,141,334			US-PATENT-CLASS-435-286			US-PATENT-APPL-SN-892054
N92-33616*	c 37	INT-PATENT-CLASS-A47B-97/04			US-PATENT-CLASS-435-311	N93-11664* #	c 61	NAS 1.71:NPO-18771-1-CU
		NASA-CASE-GSC-13415-1			US-PATENT-CLASS-435-312			NASA-CASE-NPO-18771-1-CU
		US-PATENT-APPL-SN-812932			US-PATENT-CLASS-435-313			US-PATENT-APPL-SN-942500
		US-PATENT-CLASS-248-453			US-PATENT-CLASS-435-315	N93-11676* #	c 02	NAS 1.71:LAR-14470-1
		US-PATENT-CLASS-248-455			US-PATENT-5,153,131			NASA-CASE-LAR-14470-1
		US-PATENT-CLASS-248-463	N92-34239* #	c 26	NAS 1.71:MFS-28496-1			US-PATENT-APPL-SN-823809
		US-PATENT-5,149,046			NASA-CASE-MFS-28496-1	N93-11912* #	c 27	NAS 1.71:LAR-14448-1
N92-33634*	c 37	INT-PATENT-CLASS-B25J-17/00			US-PATENT-APPL-SN-929553			NASA-CASE-LAR-14448-1
		NASA-CASE-GSC-13161-1	N92-34240* #	c 63	NAS 1.71:NPO-18645-1-CU			US-PATENT-APPL-SN-912960
		US-PATENT-APPL-SN-754828			NASA-CASE-NPO-18645-1-CU	N93-12202* #	c 31	NAS 1.71:NPO-18817-1-CU
		US-PATENT-CLASS-310-112			US-PATENT-APPL-SN-941335			NASA-CASE-NPO-18817-1-CU
		US-PATENT-CLASS-310-82			NAS 1.71:NPO-18433-1-CU			US-PATENT-APPL-SN-942499
		US-PATENT-CLASS-74-479	N92-34241* #	c 74	NASA-CASE-NPO-18433-1-CU	N93-12203* #	c 37	NAS 1.71:LEW-14906-1
		US-PATENT-CLASS-901-23			US-PATENT-APPL-SN-936417			NASA-CASE-LEW-14906-1
		US-PATENT-CLASS-901-28			NAS 1.71:MSC-21950-1	N93-12204* #	c 38	US-PATENT-APPL-SN-889572
		US-PATENT-CLASS-901-9	N92-34242* #	c 37	NASA-CASE-MSC-21950-1			NAS 1.71:LAR-14581-1-SB
		US-PATENT-5,142,932			US-PATENT-APPL-SN-902265			NASA-CASE-LAR-14581-1-SB
N92-34160*	c 27	INT-PATENT-CLASS-C04B-35/56			NAS 1.71:LEW-14791-1	N93-12205* #	c 35	US-PATENT-APPL-SN-873407
		NASA-CASE-ARC-11891-2-SB			NASA-CASE-LEW-14791-1			NAS 1.71:LAR-14776-1
		US-PATENT-APPL-SN-361471			US-PATENT-APPL-SN-943659			NASA-CASE-LAR-14776-1
		US-PATENT-APPL-SN-643629	N93-10108*	c 47	INT-PATENT-CLASS-G01R-31/02			US-PATENT-APPL-SN-928865
		US-PATENT-CLASS-501-92			INT-PATENT-CLASS-G01W-1/00	N93-12327* #	c 37	NAS 1.71:LEW-15345-1
		US-PATENT-CLASS-501-93			NASA-CASE-MFS-26102-2-CU			NASA-CASE-LEW-15345-1
		US-PATENT-CLASS-501-96			US-PATENT-APPL-SN-776710	N93-13416*	c 24	INT-PATENT-CLASS-C08J-5/08
		US-PATENT-CLASS-501-97			US-PATENT-CLASS-324-72			INT-PATENT-CLASS-C08L-49/08
		US-PATENT-5,130,278			US-PATENT-CLASS-340-601			NASA-CASE-LAR-14338-1
N92-34171*	c 76	NASA-CASE-MFS-28507-1			US-PATENT-5,153,508			US-PATENT-APPL-SN-429514
		US-PATENT-APPL-SN-601954			US-PATENT-7,571,687			US-PATENT-CLASS-525-421
		US-PATENT-CLASS-156-600	N93-10109*	c 51	INT-PATENT-CLASS-C12N-5/02			US-PATENT-CLASS-525-426
		US-PATENT-CLASS-156-621			NASA-CASE-MSC-21293-2			US-PATENT-CLASS-525-432
		US-PATENT-CLASS-422-102			US-PATENT-APPL-SN-213559			US-PATENT-CLASS-525-436
		US-PATENT-CLASS-422-245			US-PATENT-APPL-SN-545233			US-PATENT-CLASS-525-903
		US-PATENT-CLASS-422-254			US-PATENT-CLASS-435-240.24			US-PATENT-5,159,029
		US-PATENT-CLASS-422-56			US-PATENT-CLASS-435-240.25	N93-13417*	c 37	INT-PATENT-CLASS-N66L-1/66
		US-PATENT-CLASS-422-99			US-PATENT-CLASS-435-240.46			NASA-CASE-MSC-21730-1
		US-PATENT-5,130,105			US-PATENT-5,155,035			US-PATENT-APPL-SN-660755
N92-34172*	c 02	INT-PATENT-CLASS-G01P-3/36	N93-10110*	c 51	INT-PATENT-CLASS-C12N-5/02			
		NASA-CASE-LAR-14685-1						
		US-PATENT-APPL-SN-718313						

## ACCESSION NUMBER INDEX

N93-17088

N93-13418*	c 36	INT-PATENT-CLASS-H01S-3/19	US-PATENT-CLASS-294-89	N93-14704*	c 60	INT-PATENT-CLASS-G11C-11/15	N93-14841* #	c 35	US-PATENT-APPL-SN-947597
			US-PATENT-CLASS-294-94						
N93-13419*	c 74	INT-PATENT-CLASS-G01N-21/27	US-PATENT-CLASS-158,331	N93-14705*	c 26	INT-PATENT-CLASS-G01B-33/12	N93-14842* #	c 37	US-PATENT-APPL-SN-924213
			NASA-CASE-NPO-18243-1-CU						
N93-13420*	c 39	INT-PATENT-CLASS-G05D-15/01	US-PATENT-APPL-SN-710424	N93-14706*	c 24	INT-PATENT-CLASS-B05D-1/02	N93-14843* #	c 37	US-PATENT-APPL-SN-931468
			US-PATENT-CLASS-372-45						
N93-13421*	c 71	INT-PATENT-CLASS-G01N-29/00	US-PATENT-CLASS-372-46	N93-14707*	c 76	INT-PATENT-CLASS-B01D-9/02	N93-14882*	c 61	NASA-CASE-MFS-28481-1
			US-PATENT-5,159,603						
N93-13422*	c 31	INT-PATENT-CLASS-F25B-1/00	US-PATENT-CLASS-G02B-5/20	N93-14708*	c 52	INT-PATENT-CLASS-B62D-51/04	N93-15151* #	c 76	NASA-CASE-NPO-17845-2-CU
			NASA-CASE-NPO-18317-1-CU						
N93-13423*	c 37	INT-PATENT-CLASS-F16B-37/08	US-PATENT-APPL-SN-744197	N93-14709*	c 27	NASA-CASE-LAR-14639-1	N93-17039* #	c 34	NASA 1.71:MFS-28658-1
			US-PATENT-CLASS-250-339						
N93-13711*	c 74	INT-PATENT-CLASS-H04N-5/74	US-PATENT-CLASS-356-328	N93-14710*	c 37	INT-PATENT-CLASS-B23B-31/10	N93-17041* #	c 35	NASA 1.71:LAR-14817-1
			US-PATENT-CLASS-357-30						
N93-14404* #	c 74	NASA 1.71:NPO-18521-1-CU	US-PATENT-CLASS-359-859	N93-14711*	c 74	INT-PATENT-CLASS-G21K-1/06	N93-17042* #	c 54	NASA 1.71:MFS-28632-1
			US-PATENT-5,159,199						
N93-14700*	c 24	NASA-CASE-NPO-17858-1-CU	US-PATENT-CLASS-372-108	N93-14712*	c 37	INT-PATENT-CLASS-H01R-13/54	N93-17043* #	c 76	NASA 1.71:MFS-28688-1
			US-PATENT-CLASS-372-20						
N93-14702*	c 37	INT-PATENT-CLASS-B65D-39/12	US-PATENT-CLASS-372-96	N93-14713*	c 54	INT-PATENT-CLASS-B64G-1/60	N93-17045* #	c 54	NASA 1.71:MFS-28610-1
N93-14703*	c 36	INT-PATENT-CLASS-H01S-3/19		N93-14840* #	c 35	NASA-CASE-LEW-15444-1	N93-17048* #	c 38	NASA 1.71:LAR-14850-1-CU

N93-17271* #	c 37	NASA-CASE-MSC-21842-1 US-PATENT-APPL-SN-971116 NAS 1.71:MSC-21953-1-NP NASA-CASE-MSC-21953-1-NP US-PATENT-APPL-SN-963348	N93-18284* #	c 32	US-PATENT-5,182,356 INT-PATENT-CLASS-H04N-7/00 INT-PATENT-CLASS-H04N-7/18 NASA-CASE-NPO-17836-1-CU US-PATENT-APPL-SN-716150 US-PATENT-CLASS-358-101 US-PATENT-CLASS-358-103 US-PATENT-CLASS-358-108 US-PATENT-CLASS-358-181 US-PATENT-5,182,641	N93-19026* #	c 72	US-PATENT-APPL-SN-991003 NAS 1.71:LEW-15614-1 NASA-CASE-LEW-15614-1 US-PATENT-APPL-SN-008026 NAS 1.71:LEW-15570-1 NASA-CASE-LEW-15570-1 US-PATENT-APPL-SN-007874
N93-17272* #	c 37	NAS 1.71:NPO-18764-1-CU NASA-CASE-NPO-18764-1-CU US-PATENT-APPL-SN-956684	N93-17273* #	c 74	NAS 1.71:NPO-17837-1-CU NASA-CASE-NPO-17837-1-CU US-PATENT-APPL-SN-954109 NAS 1.71:NPO-18568-1-CU NASA-CASE-NPO-18568-1-CU US-PATENT-APPL-SN-953391	N93-19027* #	c 37	NAS 1.71:MSC-22060-1 NASA-CASE-MSC-22060-1 US-PATENT-APPL-SN-996283 NAS 1.71:LAR-14047-1 NASA-CASE-LAR-14047-1 US-PATENT-APPL-SN-953562
N93-17273* #	c 74	NAS 1.71:NPO-18608-1-CU NASA-CASE-NPO-18608-1-CU US-PATENT-APPL-SN-967083	N93-17274* #	c 33	NAS 1.71:NPO-18586-1-CU NASA-CASE-NPO-18586-1-CU US-PATENT-APPL-SN-969868	N93-19038* #	c 31	NAS 1.71:MFS-29764-1 NASA-CASE-MFS-29764-1 US-PATENT-APPL-SN-977469 NAS 1.71:LAR-14729-1-CU NASA-CASE-LAR-14729-1-CU US-PATENT-APPL-SN-999695
N93-17275* #	c 63	NAS 1.71:NPO-18551-1-CU NASA-CASE-NPO-18551-1-CU US-PATENT-APPL-SN-963974	N93-17276* #	c 63	NAS 1.71:NPO-18580-1-CU NASA-CASE-NPO-18580-1-CU US-PATENT-APPL-SN-959858	N93-19049* #	c 37	NAS 1.71:LAR-14785-1 NASA-CASE-LAR-14785-1 US-PATENT-APPL-SN-963170 NAS 1.71:LAR-14744-1 NASA-CASE-LAR-14744-1 US-PATENT-APPL-SN-886998
N93-17277* #	c 33	NAS 1.71:LEW-14345-7 NASA-CASE-LEW-14345-7 US-PATENT-APPL-SN-982350	N93-17278* #	c 33	NAS 1.71:LEW-15222-3 NASA-CASE-LEW-15222-3 US-PATENT-APPL-SN-973505	N93-19051* #	c 33	NAS 1.71:MSC-21954-1-NP NASA-CASE-MSC-21954-1-NP US-PATENT-APPL-SN-963349
N93-17412* #	c 23	NAS 1.71:LEW-15222-3 NASA-CASE-LEW-15222-3 US-PATENT-APPL-SN-973505	N93-17413* #	c 76	NAS 1.71:LEW-15222-3 NASA-CASE-LEW-15222-3 US-PATENT-APPL-SN-973505	N93-19052* #	c 74	NAS 1.71:LAR-14785-1 NASA-CASE-LAR-14785-1 US-PATENT-APPL-SN-963170 NAS 1.71:LAR-14744-1 NASA-CASE-LAR-14744-1 US-PATENT-APPL-SN-886998
N93-17625* #	c 37	INT-PATENT-CLASS-B25J-15/08 NASA-CASE-GSC-13356-2 US-PATENT-APPL-SN-899145 US-PATENT-CLASS-269-270 US-PATENT-CLASS-294-86.4 US-PATENT-CLASS-294-902 US-PATENT-CLASS-901-39 US-PATENT-5,178,431	N93-17626* #	c 35	INT-PATENT-CLASS-G01N-35/08 NASA-CASE-MSC-21384-2 US-PATENT-APPL-SN-737756 US-PATENT-CLASS-422-110 US-PATENT-CLASS-422-83 US-PATENT-CLASS-422-93 US-PATENT-CLASS-436-117 US-PATENT-CLASS-436-52 US-PATENT-CLASS-436-9 US-PATENT-5,179,025	N93-18287* #	c 36	INT-PATENT-CLASS-H04B-10/00 NASA-CASE-GSC-13194-1 US-PATENT-APPL-SN-369171 US-PATENT-CLASS-359-161 US-PATENT-CLASS-367-904 US-PATENT-5,184,241
N93-18274* #	c 28	INT-PATENT-CLASS-F42B-3/11 NASA-CASE-LAR-13832-1 US-PATENT-APPL-SN-682151 US-PATENT-CLASS-102-202.14 US-PATENT-CLASS-102-275.11 US-PATENT-5,179,249	N93-18275* #	c 02	INT-PATENT-CLASS-G01M-9/00 NASA-CASE-LAR-14520-1-SB US-PATENT-APPL-SN-742238 US-PATENT-CLASS-73-147 US-PATENT-CLASS-73-9 US-PATENT-5,178,004	N93-18288* #	c 37	INT-PATENT-CLASS-B25J-15/08 NASA-CASE-GSC-13370-2 US-PATENT-APPL-SN-656924 US-PATENT-APPL-SN-938577 US-PATENT-CLASS-294-119.1 US-PATENT-CLASS-294-907 US-PATENT-CLASS-901-41 US-PATENT-5,184,861
N93-18276* #	c 74	INT-PATENT-CLASS-H04N-13/00 INT-PATENT-CLASS-H04N-7/133 NASA-CASE-NPO-18593-1-CU US-PATENT-APPL-SN-812901 US-PATENT-CLASS-358-133 US-PATENT-CLASS-358-88 US-PATENT-5,179,441	N93-18277* #	c 36	INT-PATENT-CLASS-H01S-3/08 NASA-CASE-NPO-18386-1-CU US-PATENT-APPL-SN-751440 US-PATENT-CLASS-372-95 US-PATENT-5,179,568	N93-18351* #	c 51	NASA-CASE-MSC-21763-1-SB US-PATENT-APPL-SN-671603 US-PATENT-CLASS-210-140 US-PATENT-CLASS-210-190 US-PATENT-CLASS-210-670 US-PATENT-CLASS-210-739 US-PATENT-CLASS-210-753 US-PATENT-CLASS-210-764 US-PATENT-CLASS-210-96.1 US-PATENT-5,176,836
N93-18278* #	c 33	INT-PATENT-CLASS-H02M-3/07 NASA-CASE-NPO-17994-1-CU US-PATENT-APPL-SN-791759 US-PATENT-CLASS-307-110 US-PATENT-CLASS-363-60 US-PATENT-5,179,289	N93-18279* #	c 61	INT-PATENT-CLASS-G06K-9/00 NASA-CASE-MSC-21737-1 US-PATENT-APPL-SN-587922 US-PATENT-CLASS-382-1 US-PATENT-CLASS-382-36 US-PATENT-CLASS-382-6 US-PATENT-5,181,259	N93-18855* #	c 61	NASA-CASE-MSC-21387-1 US-PATENT-APPL-SN-323748 US-PATENT-CLASS-364-DIG.1 US-PATENT-CLASS-364-187 US-PATENT-CLASS-364-229 US-PATENT-CLASS-364-240 US-PATENT-CLASS-364-243 US-PATENT-CLASS-395-500 US-PATENT-CLASS-395-800 US-PATENT-5,187,794
N93-18282* #	c 61	INT-PATENT-CLASS-G06K-9/00 NASA-CASE-MSC-21737-1 US-PATENT-APPL-SN-587922 US-PATENT-CLASS-382-1 US-PATENT-CLASS-382-36 US-PATENT-CLASS-382-6 US-PATENT-5,181,259	N93-18283* #	c 23	NASA-CASE-LAR-14440-1 US-PATENT-APPL-SN-650336 US-PATENT-CLASS-528-125 US-PATENT-CLASS-528-126 US-PATENT-CLASS-528-128 US-PATENT-CLASS-528-168 US-PATENT-CLASS-528-169 US-PATENT-CLASS-528-172 US-PATENT-CLASS-528-174	N93-18856* #	c 20	INT-PATENT-CLASS-G01J-3/00 INT-PATENT-CLASS-G01N-21/00 NASA-CASE-LEW-15200-1 US-PATENT-APPL-SN-722446 US-PATENT-CLASS-356-300 US-PATENT-CLASS-356-311 US-PATENT-CLASS-356-36 US-PATENT-CLASS-60-223 US-PATENT-CLASS-73-86 US-PATENT-5,187,542
N93-18284* #	c 32	US-PATENT-5,182,356 INT-PATENT-CLASS-H04N-7/00 INT-PATENT-CLASS-H04N-7/18 NASA-CASE-NPO-17836-1-CU US-PATENT-APPL-SN-716150 US-PATENT-CLASS-358-101 US-PATENT-CLASS-358-103 US-PATENT-CLASS-358-108 US-PATENT-CLASS-358-181 US-PATENT-5,182,641	N93-18285* #	c 33	INT-PATENT-CLASS-B32B-31/00 NASA-CASE-NPO-18454-1-CU US-PATENT-APPL-SN-781521 US-PATENT-CLASS-156-279 US-PATENT-CLASS-156-64 US-PATENT-5,185,046	N93-18857* #	c 31	INT-PATENT-CLASS-D03D-47/14 NASA-CASE-LAR-14046-1 US-PATENT-APPL-SN-766597 US-PATENT-CLASS-139-DIG.1 US-PATENT-CLASS-139-11 US-PATENT-CLASS-139-429 US-PATENT-CLASS-139-436 US-PATENT-5,188,153
N93-18286* #	c 37	INT-PATENT-CLASS-B25J-15/08 NASA-CASE-GSC-13359-1 US-PATENT-APPL-SN-796496 US-PATENT-CLASS-279-23.1 US-PATENT-CLASS-279-79 US-PATENT-CLASS-408-124 US-PATENT-CLASS-408-239R US-PATENT-CLASS-408-241R US-PATENT-CLASS-901-41 US-PATENT-5,180,259	N93-18287* #	c 36	INT-PATENT-CLASS-H04B-10/00 NASA-CASE-GSC-13194-1 US-PATENT-APPL-SN-369171 US-PATENT-CLASS-359-161 US-PATENT-CLASS-367-904 US-PATENT-5,184,241	N93-18858* #	c 61	INT-PATENT-CLASS-G06K-9/00 NASA-CASE-MSC-21415-1-SB US-PATENT-APPL-SN-749819 US-PATENT-CLASS-381-43 US-PATENT-CLASS-382-10 US-PATENT-CLASS-382-30 US-PATENT-5,189,709
N93-18288* #	c 37	INT-PATENT-CLASS-B25J-15/08 NASA-CASE-GSC-13370-2 US-PATENT-APPL-SN-656924 US-PATENT-APPL-SN-938577 US-PATENT-CLASS-294-119.1 US-PATENT-CLASS-294-907 US-PATENT-CLASS-901-41 US-PATENT-5,184,861	N93-18289* #	c 51	NASA-CASE-MSC-21763-1-SB US-PATENT-APPL-SN-671603 US-PATENT-CLASS-210-140 US-PATENT-CLASS-210-190 US-PATENT-CLASS-210-670 US-PATENT-CLASS-210-739 US-PATENT-CLASS-210-753 US-PATENT-CLASS-210-764 US-PATENT-CLASS-210-96.1 US-PATENT-5,176,836	N93-19022* #	c 24	NAS 1.71:MFS-28796-1 NASA-CASE-MFS-28796-1 US-PATENT-APPL-SN-002002 NAS 1.71:LAR-14221-1 NASA-CASE-LAR-14221-1 US-PATENT-APPL-SN-000064 NAS 1.71:LAR-14004-1 NASA-CASE-LAR-14004-1 US-PATENT-APPL-SN-647097 NAS 1.71:NPO-18409-1-CU NASA-CASE-NPO-18409-1-CU
N93-19026* #	c 72	US-PATENT-APPL-SN-991003 NAS 1.71:LEW-15614-1 NASA-CASE-LEW-15614-1 US-PATENT-APPL-SN-008026 NAS 1.71:LEW-15570-1 NASA-CASE-LEW-15570-1 US-PATENT-APPL-SN-007874	N93-19027* #	c 37	NAS 1.71:MSC-22060-1 NASA-CASE-MSC-22060-1 US-PATENT-APPL-SN-996283 NAS 1.71:LAR-14047-1 NASA-CASE-LAR-14047-1 US-PATENT-APPL-SN-953562	N93-19028* #	c 31	NAS 1.71:MFS-29764-1 NASA-CASE-MFS-29764-1 US-PATENT-APPL-SN-977469 NAS 1.71:LAR-14729-1-CU NASA-CASE-LAR-14729-1-CU US-PATENT-APPL-SN-999695
N93-19029* #	c 37	NAS 1.71:LAR-14785-1 NASA-CASE-LAR-14785-1 US-PATENT-APPL-SN-963170 NAS 1.71:LAR-14744-1 NASA-CASE-LAR-14744-1 US-PATENT-APPL-SN-886998	N93-19030* #	c 33	NAS 1.71:MSC-21954-1-NP NASA-CASE-MSC-21954-1-NP US-PATENT-APPL-SN-963349	N93-19031* #	c 33	NAS 1.71:LAR-14785-1 NASA-CASE-LAR-14785-1 US-PATENT-APPL-SN-963170 NAS 1.71:LAR-14744-1 NASA-CASE-LAR-14744-1 US-PATENT-APPL-SN-886998
N93-19032* #	c 35	NAS 1.71:LAR-14835-1 NASA-CASE-LAR-14835-1 US-PATENT-APPL-SN-988077 NAS 1.71:LAR-14816-1-SB NASA-CASE-LAR-14816-1-SB US-PATENT-APPL-SN-988084	N93-19033* #	c 37	NAS 1.71:MSC-22020-1 NASA-CASE-MSC-22020-1 US-PATENT-APPL-SN-998062 NAS 1.71:LEW-15154-1 NASA-CASE-LEW-15154-1 US-PATENT-APPL-SN-993743	N93-19034* #	c 36	NAS 1.71:LAR-14790-1 NASA-CASE-LAR-14790-1 US-PATENT-APPL-SN-988082 NAS 1.71:LAR-14857-1-SB NASA-CASE-LAR-14857-1-SB US-PATENT-APPL-SN-994593
N93-19035* #	c 35	INT-PATENT-CLASS-H01L-27/12 INT-PATENT-CLASS-H01L-27/14 INT-PATENT-CLASS-H01L-29/161 NASA-CASE-NPO-17543-2-CU US-PATENT-APPL-SN-283443 US-PATENT-APPL-SN-562176 US-PATENT-CLASS-257-17 US-PATENT-CLASS-257-21 US-PATENT-CLASS-257-23 US-PATENT-5,185,647	N93-19036* #	c 27	INT-PATENT-CLASS-C08F-222/40 NASA-CASE-LAR-14774-1 US-PATENT-APPL-SN-528666 US-PATENT-APPL-SN-801867 US-PATENT-CLASS-526-262 US-PATENT-CLASS-526-285 US-PATENT-CLASS-528-322 US-PATENT-5,189,127	N93-19037* #	c 35	NAS 1.71:LAR-14810-1-SB NASA-CASE-LAR-14810-1-SB US-PATENT-APPL-SN-999696 NAS 1.71:LAR-14591-1 NASA-CASE-LAR-14591-1 US-PATENT-APPL-SN-957014
N93-19038* #	c 31	NAS 1.71:MFS-29764-1 NASA-CASE-MFS-29764-1 US-PATENT-APPL-SN-977469 NAS 1.71:LAR-14729-1-CU NASA-CASE-LAR-14729-1-CU US-PATENT-APPL-SN-999695	N93-19039* #	c 08	NAS 1.71:LAR-14747-1 NASA-CASE-LAR-14747-1 US-PATENT-APPL-SN-948057 NAS 1.71:LEW-15269-1 NASA-CASE-LEW-15269-1 US-PATENT-APPL-SN-986399	N93-19040* #	c 24	NAS 1.71:LAR-14471-1 NASA-CASE-LAR-14471-1 US-PATENT-APPL-SN-950580 NAS 1.71:MSC-22015-1 NASA-CASE-MSC-22015-1 US-PATENT-APPL-SN-996763
N93-19041* #	c 27	NAS 1.71:LAR-14471-1 NASA-CASE-LAR-14471-1 US-PATENT-APPL-SN-950580 NAS 1.71:MSC-22015-1 NASA-CASE-MSC-22015-1 US-PATENT-APPL-SN-996763	N93-19042* #	c 18	NAS 1.71:MSC-22015-1 NASA-CASE-MSC-22015-1 US-PATENT-APPL-SN-996763 INT-PATENT-CLASS-B64D-27/02 NASA-CASE-LAR-13586-1 US-PATENT-APPL-SN-743469	N93-19043* #	c 16	INT-PATENT-CLASS-B64D-27/02 NASA-CASE-LAR-13586-1 US-PATENT-APPL-SN-743469



**F-107**

			US-PATENT-CLASS-501-89				NASA-CASE-NPO-18662-1-CU				US-PATENT-CLASS-89-36.02
			US-PATENT-CLASS-501-95				US-PATENT-APPL-SN-020813				US-PATENT-5,217,185
N93-26101*	c 31		US-PATENT-5,214,004		N93-28501*	c 37	NAS 1.71:MSC-22046-1		N93-29172*	c 26	NAS 1.71:LEW-15697-1
			NASA-CASE-LAR-14179-1				NASA-CASE-MSC-22046-1				NASA-CASE-LEW-15697-1
			US-PATENT-APPL-SN-740526		N93-28950*	c 20	US-PATENT-APPL-SN-038748		N93-29173*	c 33	US-PATENT-APPL-SN-067184
			US-PATENT-CLASS-118-308				NAS 1.71:MFS-28728-1				NAS 1.71:LAR-14429-1
			US-PATENT-CLASS-118-325				NASA-CASE-MFS-28728-1				NASA-CASE-LAR-14429-1
			US-PATENT-CLASS-427-180		N93-28951*	c 37	US-PATENT-APPL-SN-034452		N93-29174*	c 51	US-PATENT-APPL-SN-030894
			US-PATENT-CLASS-427-195				NAS 1.71:MFS-26216-1				NAS 1.71:MFS-26124-1-NPO
			US-PATENT-CLASS-427-294				NASA-CASE-MFS-26216-1				NASA-CASE-MFS-26124-1-NPO
			US-PATENT-CLASS-427-295		N93-28952*	c 51	US-PATENT-APPL-SN-070132		N93-29175*	c 37	US-PATENT-APPL-SN-045142
			US-PATENT-CLASS-427-296				NAS 1.71:MFS-28402-1				NAS 1.71:LAR-14738-1
			US-PATENT-5,213,843				NASA-CASE-MFS-28402-1				NASA-CASE-LAR-14738-1
N93-26102*	c 39		INT-PATENT-CLASS-G01N-3/00		N93-28953*	c 71	US-PATENT-APPL-SN-024547		N93-29176*	c 63	US-PATENT-APPL-SN-064324
			NASA-CASE-LAR-14399-1				NAS 1.71:LEW-15170-1				NAS 1.71:NPO-18492-1-CU
			US-PATENT-APPL-SN-797507				NASA-CASE-LEW-15170-1				NASA-CASE-NPO-18492-1-CU
			US-PATENT-CLASS-73-641		N93-28954*	c 37	US-PATENT-APPL-SN-046256		N93-29503*	c 35	US-PATENT-APPL-SN-023253
			US-PATENT-CLASS-73-788				NAS 1.71:NPO-18738-1-CU				INT-PATENT-CLASS-F16K-37/00
			US-PATENT-5,209,123				NASA-CASE-NPO-18738-1-CU				NASA-CASE-MFS-29904-1
N93-26103*	c 35		INT-PATENT-CLASS-G01B-5/20		N93-28955*	c 32	US-PATENT-APPL-SN-034608				US-PATENT-APPL-SN-957127
			INT-PATENT-CLASS-G01B-7/28				NAS 1.71:NPO-18772-1-CU				US-PATENT-CLASS-116-70
			INT-PATENT-CLASS-G01N-27/72				NASA-CASE-NPO-18772-1-CU				US-PATENT-CLASS-137-554
			NASA-CASE-GSC-13506-1		N93-28974*	c 44	US-PATENT-APPL-SN-999794				US-PATENT-CLASS-137-557
			US-PATENT-APPL-SN-904308				INT-PATENT-CLASS-H01M-8/14				US-PATENT-CLASS-340-611
			US-PATENT-CLASS-324-207.16				NASA-CASE-LEW-14973-1				US-PATENT-5,226,447
			US-PATENT-CLASS-324-220				US-PATENT-APPL-SN-766593		N93-29504*	c 60	INT-PATENT-CLASS-G06F-15/18
			US-PATENT-CLASS-324-262				US-PATENT-CLASS-429-103				NASA-CASE-NPO-18004-1-CU
			US-PATENT-CLASS-33-542				US-PATENT-CLASS-429-103				US-PATENT-APPL-SN-677059
			US-PATENT-5,214,379				US-PATENT-CLASS-429-27				US-PATENT-CLASS-395-11
N93-26104*	c 33		INT-PATENT-CLASS-G01R-27/26				US-PATENT-CLASS-429-29				US-PATENT-CLASS-395-51
			NASA-CASE-GSC-13460-1		N93-29023*	c 24	US-PATENT-CLASS-429-30		N93-29505*	c 37	US-PATENT-5,226,110
			US-PATENT-APPL-SN-889577				US-PATENT-CLASS-429-46				INT-PATENT-CLASS-B23Q-3/155
			US-PATENT-CLASS-324-662				US-PATENT-5,213,908				INT-PATENT-CLASS-B25J-15/04
			US-PATENT-CLASS-324-681				NASA-CASE-MSC-21487-2				NASA-CASE-GSC-13435-1
			US-PATENT-CLASS-324-683				US-PATENT-APPL-SN-429739				US-PATENT-APPL-SN-918746
			US-PATENT-CLASS-324-690				US-PATENT-APPL-SN-894505				US-PATENT-CLASS-414-729
			US-PATENT-CLASS-340-870.37				US-PATENT-CLASS-427-244				US-PATENT-CLASS-483-16
			US-PATENT-5,214,388				US-PATENT-CLASS-427-269				US-PATENT-CLASS-483-901
N93-28126*	c 32		NAS 1.71:NPO-18970-1-CU				US-PATENT-CLASS-427-270				US-PATENT-CLASS-901-30
			NASA-CASE-NPO-18970-1-CU				US-PATENT-CLASS-427-287				US-PATENT-CLASS-901-41
			US-PATENT-APPL-SN-039783				US-PATENT-CLASS-427-377		N93-29506*	c 25	US-PATENT-5,219,318
N93-28127*	c 37		NAS 1.71:LEW-15345-2				US-PATENT-CLASS-427-535				INT-PATENT-CLASS-C07C-323/09
			NASA-CASE-LEW-15345-2				US-PATENT-5,215,790				NASA-CASE-LAR-14773-2-CU
			US-PATENT-APPL-SN-039735		N93-29083*	c 27	NASA-CASE-LAR-14206-1				US-PATENT-APPL-SN-755207
N93-28128*	c 53		NAS 1.71:LAR-15022-1				US-PATENT-APPL-SN-429574				US-PATENT-CLASS-562-827
			NASA-CASE-LAR-15022-1				US-PATENT-CLASS-528-125				US-PATENT-CLASS-564-417
			US-PATENT-APPL-SN-029808				US-PATENT-CLASS-528-128				US-PATENT-CLASS-564-440
N93-28129*	c 37		NAS 1.71:NPO-18902-1-CU				US-PATENT-CLASS-528-170		N93-29507*	c 32	US-PATENT-5,220,070
			NASA-CASE-NPO-18902-1-CU				US-PATENT-CLASS-528-172				INT-PATENT-CLASS-H01Q-1/380
			US-PATENT-APPL-SN-034607				US-PATENT-CLASS-528-26				INT-PATENT-CLASS-H01Q-19/300
N93-28130*	c 82		NAS 1.71:LEW-15700-1				US-PATENT-CLASS-528-28				NASA-CASE-NPO-17873-2-CU
			NASA-CASE-LEW-15700-1				US-PATENT-CLASS-528-353				US-PATENT-APPL-SN-501892
			US-PATENT-APPL-SN-029520				US-PATENT-5,218,083				US-PATENT-APPL-SN-664445
N93-28131*	c 37		NAS 1.71:NPO-18786-1-CU		N93-29084*	c 35	NASA-CASE-LAR-13823-1				US-PATENT-CLASS-343-700MS
			NASA-CASE-NPO-18786-1-CU				US-PATENT-APPL-SN-749737				US-PATENT-CLASS-343-819
			US-PATENT-APPL-SN-048871				US-PATENT-CLASS-374-119				US-PATENT-CLASS-343-833
N93-28132*	c 36		NAS 1.71:NPO-18596-1-CU				US-PATENT-CLASS-73-24.05				US-PATENT-CLASS-343-834
			NASA-CASE-NPO-18596-1-CU				US-PATENT-CLASS-73-32A				US-PATENT-5,220,335
			US-PATENT-APPL-SN-023252				US-PATENT-CLASS-73-597		N93-29608*	c 60	INT-PATENT-CLASS-G06F-15/16
N93-28133*	c 74		NAS 1.71:NPO-18769-1-CU				US-PATENT-CLASS-73-61.75				INT-PATENT-CLASS-G06F-9/00
			NASA-CASE-NPO-18769-1-CU				US-PATENT-CLASS-73-61.79				NASA-CASE-NPO-17629-1-CU
			US-PATENT-APPL-SN-046331				US-PATENT-CLASS-73-64.53				US-PATENT-APPL-SN-458280
N93-28135*	c 74		NAS 1.71:MSC-22255-1				US-PATENT-5,214,955				US-PATENT-CLASS-364-DIG.1
			NASA-CASE-MSC-22255-1		N93-29085*	c 27	NASA-CASE-LAR-14487-1				US-PATENT-CLASS-364-231.9
			US-PATENT-APPL-SN-977302				US-PATENT-APPL-SN-750158				US-PATENT-CLASS-395-800
N93-28136*	c 31		NAS 1.71:MSC-22091-1				US-PATENT-CLASS-528-125				US-PATENT-5,218,709
			NASA-CASE-MSC-22091-1				US-PATENT-CLASS-528-126		N93-29609*	c 24	INT-PATENT-CLASS-B01J-19/28
			US-PATENT-APPL-SN-039602				US-PATENT-CLASS-528-128				NASA-CASE-LEW-15077-2
N93-28322*	c 35		NAS 1.71:NPO-18655-1-CU				US-PATENT-CLASS-528-172				US-PATENT-APPL-SN-608493
			NASA-CASE-NPO-18655-1-CU				US-PATENT-CLASS-528-173				US-PATENT-APPL-SN-735548
			US-PATENT-APPL-SN-044449				US-PATENT-CLASS-528-179				US-PATENT-CLASS-422-136
N93-28324*	c 20		NAS 1.71:MFS-28739-1				US-PATENT-CLASS-528-188				US-PATENT-CLASS-422-209
			NASA-CASE-MFS-28739-1				US-PATENT-5,218,077				US-PATENT-5,225,171
			US-PATENT-APPL-SN-010034		N93-29086*	c 74	INT-PATENT-CLASS-G01J-3/12		N93-29610*	c 53	INT-PATENT-CLASS-G06F-15/18
N93-28326*	c 37		NAS 1.71:MFS-28491-1				NASA-CASE-NPO-18410-1-CU				NASA-CASE-MSC-21625-1
			NASA-CASE-MFS-28491-1				US-PATENT-APPL-SN-805341				US-PATENT-APPL-SN-716182
			US-PATENT-APPL-SN-010030				US-PATENT-CLASS-250-339				US-PATENT-CLASS-395-23
N93-28422*	c 32		NAS 1.71:NPO-18678-1-CU				US-PATENT-CLASS-356-326				US-PATENT-5,228,113
			NASA-CASE-NPO-18678-1-CU				US-PATENT-CLASS-356-51		N93-29611*	c 31	INT-PATENT-CLASS-D03C-13/00
			US-PATENT-APPL-SN-056018				US-PATENT-CLASS-359-308				INT-PATENT-CLASS-D03D-13/00
N93-28423*	c 27		NAS 1.71:LEW-15314-2				US-PATENT-5,216,484				INT-PATENT-CLASS-D03D-41/00
			NASA-CASE-LEW-15314-2				INT-PATENT-CLASS-G01S-3/02				NASA-CASE-LAR-14048-1
			US-PATENT-APPL-SN-081180		N93-29087*	c 32	INT-PATENT-CLASS-H01L-23/02				US-PATENT-APPL-SN-766609
N93-28424*	c 20		NAS 1.71:NPO-18391-1-CU				INT-PATENT-CLASS-H05K-5/00				US-PATENT-CLASS-139-DIG.1
			NASA-CASE-NPO-18391-1-CU				NASA-CASE-NPO-18713-1-CU				US-PATENT-CLASS-139-11
			US-PATENT-APPL-SN-066829				US-PATENT-APPL-SN-802078				US-PATENT-CLASS-428-225
N93-28425*	c 27		NAS 1.71:LEW-15306-2				US-PATENT-CLASS-257-712				US-PATENT-5,224,519
			NASA-CASE-LEW-15306-2				US-PATENT-CLASS-342-351		N93-29612*	c 39	INT-PATENT-CLASS-G01N-19/08
			US-PATENT-APPL-SN-065794				US-PATENT-CLASS-343-700				INT-PATENT-CLASS-G01R-27/02
N93-28426*	c 27		NAS 1.71:NPO-18501-1-CU				US-PATENT-CLASS-361-394				NASA-CASE-LAR-14480-1-CU
			NASA-CASE-NPO-18501-1-CU				US-PATENT-5,218,357				US-PATENT-APPL-SN-705474
			US-PATENT-APPL-SN-052419		N93-29088*	c 27	INT-PATENT-CLASS-B64D-7/00				US-PATENT-CLASS-324-699
N93-28427*	c 62		NAS 1.71:NPO-18727-1-CU				NASA-CASE-MSC-21884-1				US-PATENT-CLASS-324-718
			NASA-CASE-NPO-18727-1-CU				US-PATENT-APPL-SN-887674				US-PATENT-CLASS-73-799
			US-PATENT-APPL-SN-042486				US-PATENT-CLASS-244-121				US-PATENT-5,227,731
N93-28428*	c 74		NAS 1.71:NPO-18662-1-CU				US-PATENT-CLASS-244-158R		N93-29613*	c 39	NASA-CASE-LAR-14654-1-CU

## ACCESSION NUMBER INDEX

N93-31459

		US-PATENT-APPL-SN-849612			US-PATENT-APPL-SN-828612
		US-PATENT-CLASS-359-67	N93-31314* #	c 37	NAS 1.71:LEW-14906-2
		US-PATENT-CLASS-359-74			NASA-CASE-LEW-14906-2
		US-PATENT-CLASS-359-82			US-PATENT-APPL-SN-104951
		US-PATENT-CLASS-428-1	N93-31316* #	c 27	NAS 1.71:LEW-15576-1
		US-PATENT-CLASS-428-409			NASA-CASE-LEW-15576-1
		US-PATENT-CLASS-428-480			US-PATENT-APPL-SN-081910
		US-PATENT-CLASS-428-913	N93-31317* #	c 37	NAS 1.71:GSC-13370-1
		US-PATENT-5,223,310			NASA-CASE-GSC-13370-1
N93-29614*	c 24	INT-PATENT-CLASS-H05K-7/20	N93-31459* #	c 25	US-PATENT-APPL-SN-656924
		NASA-CASE-LEW-14162-3			NAS 1.71:LAR-14796-1
		US-PATENT-APPL-SN-501893			NASA-CASE-LAR-14796-1
		US-PATENT-APPL-SN-657238			US-PATENT-APPL-SN-045343
		US-PATENT-APPL-SN-880851			
		US-PATENT-CLASS-165-185			
		US-PATENT-CLASS-174-16.3			
		US-PATENT-CLASS-361-386			
		US-PATENT-CLASS-428-614			
		US-PATENT-5,224,030			
N93-29617*	c 25	INT-PATENT-CLASS-C25B-1/02			
		INT-PATENT-CLASS-C25B-1/22			
		INT-PATENT-CLASS-C25C-1/06			
		NASA-CASE-MSC-21759-1			
		US-PATENT-APPL-SN-764581			
		US-PATENT-CLASS-204-104			
		US-PATENT-CLASS-204-105R			
		US-PATENT-CLASS-204-112			
		US-PATENT-CLASS-204-129			
		US-PATENT-5,227,032			
N93-29618*	c 37	INT-PATENT-CLASS-G01N-19/02			
		NASA-CASE-MFS-28589-1			
		US-PATENT-APPL-SN-813628			
		US-PATENT-CLASS-73-9			
		US-PATENT-5,226,308			
N93-29845* #	c 54	NAS 1.71:MFS-28772-1			
		NASA-CASE-MFS-28772-1			
		US-PATENT-APPL-SN-035345			
N93-29846* #	c 37	NAS 1.71:MFS-28833-1			
		NASA-CASE-MFS-28833-1			
		US-PATENT-APPL-SN-069481			
N93-29847* #	c 20	NAS 1.71:MFS-28547-1			
		NASA-CASE-MFS-28547-1			
		US-PATENT-APPL-SN-010037			
N93-29848* #	c 74	NAS 1.71:NPO-18357-1-CU			
		NASA-CASE-NPO-18357-1-CU			
		US-PATENT-APPL-SN-033512			
N93-30413* #	c 38	NAS 1.71:NPO-18982-1-CU			
		NASA-CASE-NPO-18982-1-CU			
		US-PATENT-APPL-SN-047135			
N93-30414* #	c 38	NAS 1.71:LAR-15063-1			
		NASA-CASE-LAR-15063-1			
		US-PATENT-APPL-SN-060617			
N93-30415* #	c 36	NAS 1.71:NPO-18611-1-CU			
		NASA-CASE-NPO-18611-1-CU			
		US-PATENT-APPL-SN-044668			
N93-30416* #	c 06	NAS 1.71:NPO-18733-1-CU			
		NASA-CASE-NPO-18733-1-CU			
		US-PATENT-APPL-SN-056503			
N93-30565* #	c 27	NAS 1.71:MFS-28569-1			
		NASA-CASE-MFS-28569-1			
		US-PATENT-APPL-SN-009908			
N93-30566* #	c 54	NAS 1.71:MFS-28707-1			
		NASA-CASE-MFS-28707-1			
		US-PATENT-APPL-SN-912953			
N93-30567* #	c 37	NAS 1.71:MFS-28720-1			
		NASA-CASE-MFS-28720-1			
		US-PATENT-APPL-SN-009909			
N93-31292* #	c 37	NAS 1.77:MFS-28844-1			
		NASA-CASE-MFS-28844-1			
		US-PATENT-APPL-SN-081890			
N93-31293* #	c 24	NAS 1.71:LEW-15264-1			
		NASA-CASE-LEW-15264-1			
		US-PATENT-APPL-SN-872262			
N93-31294* #	c 26	NAS 1.71:LEW-15535-1			
		NASA-CASE-LEW-15535-1			
		US-PATENT-APPL-SN-970669			
N93-31295* #	c 20	NAS 1.71:LAR-14172-1			
		NASA-CASE-LAR-14172-1			
		US-PATENT-APPL-SN-090838			
N93-31296* #	c 24	NAS 1.71:LEW-15241-2			
		NASA-CASE-LEW-15241-2			
		US-PATENT-APPL-SN-094732			
N93-31297* #	c 35	NAS 1.71:LAR-14791-1			
		NASA-CASE-LAR-14791-1			
		US-PATENT-APPL-SN-879480			
N93-31298* #	c 35	NAS 1.71:LEW-15515-1			
		NASA-CASE-LEW-15515-1			
		US-PATENT-APPL-SN-086584			
N93-31299* #	c 24	NAS 1.71:LEW-15264-2			
		NASA-CASE-LEW-15264-2			
		US-PATENT-APPL-SN-084058			
N93-31300* #	c 27	NAS 1.71:LEW-15154-2			
		NASA-CASE-LEW-15154-2			
		US-PATENT-APPL-SN-083246			
N93-31313* #	c 37	NAS 1.71:MFS-28522-1			
		NASA-CASE-MFS-28522-1			

## **PUBLIC AVAILABILITY OF COPIES OF PATENTS AND PATENT APPLICATIONS**

Copies of U.S. patents may be purchased directly from the U.S. Patent and Trademark Office, Washington, D.C. 20231 at \$1.50 per copy. When ordering patents, the U.S. Patent Number should be used, and payment must be remitted in advance, preferably by money order or check payable to the Commissioner of Patents and Trademarks. Prepaid purchase coupons for ordering are also available from the Patent and Trademark Office.

NASA *patent application specifications* are sold in paper copy and microfiche by the NASA Center for AeroSpace Information (CASI). The N accession number should be used in ordering either paper copy or microfiche from CASI.

## **LICENSES FOR COMMERCIAL USE: INQUIRIES AND APPLICATIONS FOR LICENSE**

NASA inventions, abstracted in *NASA PAB*, are available for nonexclusive or exclusive licensing in accordance the NASA Patent Licensing Regulations. It is significant that all licenses for NASA inventions shall be by express written instruments and that no license will be granted or implied in a NASA invention except as provided in the NASA Patent Licensing Regulations.

Inquiries concerning the NASA Patent Licensing Program or the availability of licenses for the commercial use of NASA-owned inventions covered by U.S. patents or pending applications for patent should be forwarded to the NASA Patent Counsel of the NASA installation having cognizance of the specific invention, or the Associate General Counsel for Intellectual Property, code GP, National Aeronautics and Space Administration, Washington, D.C. 20546. Inquiries should refer to the NASA Case Number, the Title of the invention, and the U.S. Patent Number or the U.S. Application Serial Number assigned to the invention as shown in *NASA PAB*.

The NASA Patent Counsel having cognizance of the invention is determined by the first three letters or prefix of the NASA Case Number assigned to the invention. The addresses of NASA Patent Counsels are listed alongside the NASA Case Number prefix letters in the following table.

## **STANDING ORDER SUBSCRIPTIONS**

NASA SP-7039, Section 2 and its supplements are available from the NASA Center for AeroSpace Information on standing order subscription. Standing order subscriptions do not terminate at the end of a year, as do regular subscriptions, but continue indefinitely unless specifically terminated by the subscriber.

**NASA Case  
Number  
Prefix Letters**

**Address of Cognizant  
NASA Patent Counsel**

ARC-xxxxx  
XAR-xxxxx

Ames Research Center  
Mail Code: 200-11A  
Moffett Field, California 94035  
Telephone: (415) 694-5104

ERC-xxxxx  
XER-xxxxx  
HQN-xxxxx  
XHQ-xxxxx

NASA Headquarters  
Mail Code: GP  
Washington, DC 20546  
Telephone: (202) 358-2066

GSC-xxxxx  
XGS-xxxxx

Goddard Space Flight Center  
Mail Code: 204  
Greenbelt, Maryland 20771  
Telephone: (301) 286-7351

KSC-xxxxx  
XKS-xxxxx

John F. Kennedy Space Center  
Mail Code: PT-PAT  
Kennedy Space Center, Florida 32899  
Telephone: (305) 867-2544

LAR-xxxxx  
XLA-xxxxx

Langley Research Center  
Mail Code: 279  
Hampton, Virginia 23365  
Telephone: (804) 865-3725

LEW-xxxxx  
XLE-xxxxx

Lewis Research Center  
Mail Code: 500-318  
21000 Brookpark Road  
Cleveland, Ohio 44135  
Telephone: (216) 433-5753

MSC-xxxxx  
XMS-xxxxx

Lyndon B. Johnson Space Center  
Mail Code: AL3  
Houston, Texas 77058  
Telephone: (713) 483-4871

MFS-xxxxx  
XMF-xxxxx

George C. Marshall Space Flight Center  
Mail Code: CC01  
Huntsville, Alabama 35812  
Telephone: (205) 544-0024

NPO-xxxxx  
XNP-xxxxx  
FRC-xxxxx  
XFR-xxxxx  
WOO-xxxxx

NASA Resident Legal Office  
Mail Code: 180-801  
4800 Oak Grove Drive  
Pasadena, California 91103  
Telephone: (818) 354-2700

# PATENT LICENSING REGULATIONS

## NATIONAL AERONAUTICS AND SPACE ADMINISTRATION 14 CFR Part 1245 Licensing of NASA Inventions

**AGENCY:** National Aeronautics and Space Administration  
**ACTION:** Interim regulation with comments requested.

**SUMMARY:** The National Aeronautics and Space Administration (NASA) is revising its patent licensing regulations to conform with Pub. L. 96-517. This interim regulation provides policies and procedures applicable to the licensing of federally owned inventions in the custody of the National Aeronautics and Space Administration, and implements Pub. L. 96-517. The object of this subpart is to use the patent system to promote the utilization of inventions arising from NASA supported research and development.

**EFFECTIVE DATE:** July 1, 1981. Comments must be received in writing by December 2, 1981. Unless a notice is published in the **Federal Register** after the comment period indicating changes to be made, this interim regulation shall become a final regulation.

**ADDRESS:** Mr. John G. Mannix, Director of Patent Licensing, GP-4, NASA, Washington, D.C. 20546

**FOR FURTHER INFORMATION CONTACT:**  
Mr. John G. Mannix, (202) 755-3954.

### SUPPLEMENTARY INFORMATION:

#### PART 1245—PATENTS AND OTHER INTELLECTUAL PROPERTY RIGHTS

Subpart 2 of Part 1245 is revised to read as follows:

\* \* \* \* \*

#### Subpart 2—Licensing of NASA Inventions

Sec.  
1245.200 Scope of subpart.  
1245.201 Policy and objective.  
1245.202 Definitions.  
1245.203 Authority to grant licenses.

#### Restrictions and Conditions

1245.204 All licenses granted under this subpart.

#### Types of Licenses

1245.205 Nonexclusive licenses.  
1245.206 Exclusive and partially exclusive licenses.

#### Procedures

1245.207 Application for a license.  
1245.208 Processing applications.  
1245.209 Notice to Attorney General.  
1245.210 Modification and termination of licenses.  
1245.211 Appeals.  
1245.212 Protection and administration of inventions.  
1245.213 Transfer of custody.  
1245.214 Confidentiality of information.

**Authority:** 35 U.S.C. Section 207 and 208.94 Stat 3023 and 3024.

\* \* \* \* \*

#### Subpart 2—Licensing of NASA Inventions

##### § 1245.200 Scope of subpart.

This subpart prescribes the terms, conditions and procedures upon which a NASA invention may be licensed. It does not affect licenses which (a) were in effect prior to July 1, 1981; (b) may exist at the time of the Government's acquisition of title to the invention, including those resulting from the allocation of rights to inventions made under Government research and development contracts; (c) are the result of an authorized exchange of rights in the settlement of patent disputes; or (d) are otherwise authorized by law or treaty.

##### §1245.201 Policy and objective.

It is the policy and objective of this subpart to use the patent system to promote the utilization of inventions arising from NASA supported research and development.

##### § 1245.202 Definitions

(a) "Federally owned invention" means an invention, plant, or design which is covered by a patent, or patent application in the United States, or a patent, patent application, plant variety protection, or other form of protection, in a foreign country, title to which has been assigned to or otherwise vested in the United States Government.

(b) "Federal agency" means an executive department, military department, Government corporation, or independent establishment, except the Tennessee Valley Authority, which has custody of a Federally owned invention.

(c) "NASA Invention" means a Federally owned invention with respect to which NASA maintains custody and administration, in whole or in part, of the right, title or interest in such invention on behalf of the United States Government.

(d) "Small business firm" means a small business concern as defined at section 2 of Pub. L. 85-536 ( 15 U.S.C. 632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of these regulations, the size standard for small business concerns involved in Government procurement, contained in 13 CFR 121.3-8, and in subcontracting, contained in 13 CFR 121.3-12, will be used.

(e) "Practical application" means to manufacture in the case of a composition or product, to practice in the case of a process or method, or to operate in the case of a machine or system; and, in each case, under such condition, as to establish that the invention is being utilized and that its benefits are to the extent permitted by law or Government regulations available to the public on reasonable terms.

(f) "United States" means the United States of America, its territories and possessions, the District of Columbia, and the Commonwealth of Puerto Rico.

##### §1245.203 Authority to grant licenses.

NASA inventions shall be made available for licensing as deemed appropriate in the public interest. NASA may grant nonexclusive, partially exclusive, or exclusive licenses thereto under this subpart on inventions in its custody.

#### Restrictions and Conditions

##### §1245.204 All licenses granted under this subpart.

(a) *Restrictions.* (1) A license may be granted only if the applicant has supplied NASA with a satisfactory plan for development or marketing of the invention, or both, and with information about the applicant's capability to fulfill the plan.

(2) A license granting rights to use or sell under a NASA invention in the United States shall normally be granted only to a licensee who agrees that any products embodying the invention or produced through the use of the invention will be manufactured substantially in the United States.

(b) *Conditions.* Licenses shall contain such terms and conditions as NASA determines are appropriate for the protection of the interests of the Federal Government and the public and are not in conflict with law or this subpart. The following terms and conditions apply to any license:

(1) The duration of the license shall be for a period specified in the license agreement, unless sooner terminated in accordance with this subpart.

(2) The license may be granted for all or less than all fields of use of the invention or in specified geographical areas, or both.

(3) The license may extend to subsidiaries of the licensee or other parties if provided for in the license but shall be nonassignable without approval of NASA, except to the successor of that part of the licensee's business to which the invention pertains.

(4) The license may provide the licensee the right to grant sublicenses under the license, subject to the approval of NASA. Each sublicense shall make reference to the license, including the rights retained by the Government, and a copy of such sublicense shall be furnished to NASA.

(5) The license shall require the licensee to carry out the plan for development or marketing of the invention, or both, to bring the invention to practical application within a period specified in the license, and to continue to make the benefits of the invention reasonably accessible to the public.



## PATENT LICENSING REGULATIONS

(6) The license shall require the licensee to report periodically on the utilization or efforts at obtaining utilization that are being made by the licensee, with particular reference to the plan submitted.

(7) All licenses shall normally require royalties or other consideration.

(8) Where an agreement is obtained pursuant to §1245.204(a)(2) that any products embodying the invention or produced through use of the invention will be manufactured substantially in the United States, the license shall recite such agreement.

(9) The license shall provide for the right of NASA to terminate the license, in whole or in part, if:

(i) NASA determines that the licensee is not executing the plan submitted with its request for a license and the licensee cannot otherwise demonstrate to the satisfaction of NASA that it has taken or can be expected to take within a reasonable time effective steps to achieve practical application of the invention;

(ii) NASA determines that such action is necessary to meet requirements for public use specified by Federal regulations issued after the date of the license and such requirements are not reasonably satisfied by the licensee;

(iii) The licensee has willfully made a false statement of or willfully omitted a material fact in the license application or in any report required by the license agreement; or

(iv) The licensee commits a substantial breach of a covenant or agreement contained in the license.

(10) The license may be modified or terminated, consistent with this subpart, upon mutual agreement of NASA and the licensee.

(11) Nothing relating to the grant of a license, nor the grant itself, shall be construed to confer upon any person any immunity from or defenses under the antitrust laws or from a charge of patent misuse, and the acquisition and use of rights pursuant to this subpart shall not be immunized from the operation of state or Federal law by reason of the source of the grant.

### Types of Licenses

#### §1245.205 Nonexclusive licenses.

(a) *Availability of licenses.* Nonexclusive licenses may be granted under NASA inventions without publication of availability or notice of a prospective license.

(b) *Conditions.* In addition to the provisions of §1245.204, the nonexclusive license may also provide that, after termination of a period specified in the license agreement, NASA may restrict the license to the fields of use or geographic areas, or both, in which the licensee has brought the invention to practical application and continues to make the benefits of the invention reasonably accessible to the public. However, such restriction shall be made only in order to grant an exclusive or partially exclusive license in accordance with this subpart.

#### §1245.206 Exclusive and partially exclusive licenses.

(a) Domestic licenses.

(1) *Availability of licenses.* Exclusive or partially exclusive licenses may be granted on NASA inventions: (i) 3 months after notice of the invention's availability has been announced in the **Federal Register**; or (ii) without such notice where NASA determines that expeditious granting of such a license will best serve the interests of the Federal Government and the public; and (iii) in either situation, specified in (a)(1)(i) or (ii) of this section only if:

(A) Notice of a prospective license, identifying the invention and the prospective licensee, has been published in the **Federal Register**, providing opportunity for filing written objections within a 60-day period;

(B) After expiration of the period in §1245.206(a)(1)(iii)(A) and consideration of any written objections received during the period, NASA has determined that:

(1) The interests of the Federal Government and the public will best be served by the proposed license, in view of the applicants' intentions, plans, and ability to bring the invention to practical application or otherwise promote the invention's utilization by the public;

(2) The desired practical application has not been achieved, or is not likely expeditiously to be achieved, under any nonexclusive license which has been granted, or which may be granted, on the invention;

(3) Exclusive or partially exclusive licensing is a reasonable and necessary incentive to call forth the investment of risk capital and expenditures to bring the invention to practical application or otherwise promote the invention's utilization by the public; and

(4) The proposed terms and scope of exclusivity are not greater than reasonably necessary to provide the incentive for bringing the invention to practical application or otherwise promote the invention's utilization by the public;

(C) NASA has not determined that the grant of such license will tend substantially to lessen competition or result in undue concentration in any section of the country in any line of commerce to which the technology to be licensed relates, or to create or maintain other situations inconsistent with the antitrust laws; and

(D) NASA has given first preference to any small business firms submitting plans that are determined by the agency to be within the capabilities of the firms and as equally likely, if executed, to bring the invention to practical application as any plans submitted by applicants that are not small business firms.

(2) *Conditions.* In addition to the provisions of §1245.204, the following terms and conditions apply to domestic exclusive and partially exclusive licenses:

(i) The license shall be subject to the irrevocable, royalty-free right of the Government of the United States to practice and have practiced the invention on behalf of the United States and on behalf of any foreign government or international organization pursuant to any existing or future treaty or agreement with the United States.

(ii) The license shall reserve to NASA the right to require the licensee to grant sublicenses to responsible applicants, on reasonable terms, when necessary to fulfill health or safety needs.

(iii) The license shall be subject to any licenses in force at the time of the grant of the exclusive or partially exclusive license.

(iv) The license may grant the licensee the right of enforcement of the licensed patent pursuant to the provisions of Chapter 29 of Title 35, United States Code, or other statutes, as determined appropriate in the public interest.

(b) Foreign licenses.

(1) *Availability of licenses.* Exclusive or partially exclusive licenses may be granted on a NASA invention covered by a foreign patent, patent application, or other form of protection, provided that:

(i) Notice of a prospective license, identifying the invention and prospective licensee, has been published in the **Federal Register**, providing opportunity for filing written objections within a 60-day period and following consideration of such objections;

(ii) NASA has considered whether the interests of the Federal Government or United States industry in foreign commerce will be enhanced; and

(iii) NASA has not determined that the grant of such license will tend substantially to lessen competition or result in undue concentration in any section of the United States in any line of commerce to which the technology to be licensed relates, or to create or maintain other situations inconsistent with antitrust laws.

(2) *Conditions.* In addition to the provisions of §1245.204, the following terms and conditions apply to foreign exclusive and partially exclusive licenses:

(i) The license shall be subject to the irrevocable, royalty-free right of the Government of the United States to practice and have practiced the invention on behalf of the United States and on behalf of any foreign government or international organization pursuant to any existing or future treaty or agreement with the United States.

(ii) The license shall be subject to any licenses in force at the time of the grant of the exclusive or partially exclusive license.

(iii) The license may grant the licensee the right to take any suitable and necessary actions to protect the licensed property, on behalf of the Federal Government.

(c) *Record of determinations.* NASA shall maintain a record of determinations to grant exclusive or partially exclusive licenses.

### Procedures

#### §1245.207 Application for a license.

An application for a license should be addressed to the Patent Counsel at the NASA installation having responsibility for the invention and shall normally include:

(a) Identification of the invention for which the license is desired, including the patent application serial number or patent number, title, and date, if known;

(b) Identification of the type of license for which the application is submitted;

(c) Name and address of the person, company, or organization applying for the license and the citizenship or place of incorporation of the applicant;

(d) Name, address, and telephone number of representative of applicant to whom correspondence should be sent;

## REPORT DOCUMENTATION PAGE

1. Report No. NASA SP-7039 (44)	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle NASA Patent Abstracts Bibliography A Continuing Bibliography Section 2: Indexes (Supplement 44)		5. Report Date January 1994	
		6. Performing Organization Code. JTT	
7. Author(s)		8. Performing Organization Report No.	
		10. Work Unit No.	
9. Performing Organization Name and Address NASA Scientific and Technical Information Program		11. Contract or Grant No.	
		13. Type of Report and Period Covered Special Publication	
12. Sponsoring Agency Name and Address National Aeronautics and Space Administration Washington, DC 20546-0001		14. Sponsoring Agency Code	
15. Supplementary Notes Section 2: Indexes			
16. Abstract  A subject index is provided for over 5500 patents and patent applications for the period May 1969 through December 1993. Additional indexes list personal authors, corporate authors, contract numbers, NASA case numbers, U.S. patent class numbers, U.S. patent numbers, and NASA accession numbers.			
17. Key Words (Suggested by Author(s)) Bibliographies Patent Policy NASA Programs		18. Distribution Statement Unclassified - Unlimited Subject Category - 82	
19. Security Classif. (of this report) Unclassified	20. Security Classif. (of this page) Unclassified	21. No. of Pages 620	22. Price * A99/HC

POSTMASTER  
*Address Correction Requested*  
*(Sections 137 and 159 Post Manual)*

National Aeronautics and  
Space Administration  
Code JTT  
Washington, DC 20546-0001

*Official Business*  
*Penalty for Private Use, \$300*

**SPECIAL FOURTH-CLASS RATE**  
**POSTAGE & FEES PAID**  
NASA  
Permit No. G-27